2017 Registration Document

including the Annual Financial Report —

vallourec
SMART TUBULAR SOLUTIONS

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2017

REGISTRATION DOCUMENT

including the annual financial report

AUTORITÉ DES MARCHÉS FINANCIERS
AMF

The original version of this Registration Document in French was filed with the French securities regulator (*Autorité des Marchés Financiers*) on 21 March 2018 in accordance with Article 212-13 of its General Regulations. It may be used in connection with a financial transaction if supplemented by an Information Notice authorized by the French securities regulator. This document was prepared by the issuer and is the responsibility of those who signed it.

Copies of this Registration Document are available free of charge from Vallourec, at 27, avenue du Général-Leclerc, 92100, Boulogne-Billancourt, Cedex – France, Vallourec's website (http://www.vallourec.com) and on the website of the French securities regulator (Autorité des Marchés Financiers) (http://www.amf-france.org).

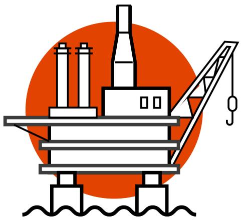
This Registration Document includes all the elements of the annual financial report mentioned in Section I of Article L. 451-1-2 of the French *Code monétaire et financier* and Article 222-3 of the General Regulations of the French securities regulator (*Autorité des Marchés Financiers*). A concordance table showing the documents referred to in Article 222-3 of the General Regulations of the French securities regulator and the corresponding sections of this Registration Document is included on page 328.

VALLOUREC: A WORLD LEADER SERVING THREE MARKETS

Vallourec provides tubular solutions that are the benchmark for the energy sectors and other applications that present the most demanding challenges. A world leader in its markets, Vallourec makes it possible for its customers to achieve even the most complex projects

2017 REVENUE: €3.8 BILLION

OIL & GAS, PETROCHEMICALS



68% of revenue

Premium tubes, connections and services for exploration and operation of oil and gas fields, including the most complex ones.

Exploration and production

- Casing, tubing and VAM® premium connections
- Drill pipes
- Risers
- Services
- Accessories

The most reliable solutions for extreme conditions: deep wells, corrosive environments, deviated and horizontal wells, HP/HT (high pressure/high temperature, etc.)

Transport for oil and gas

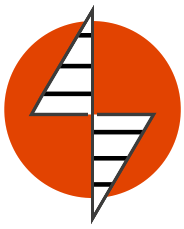
- Offshore and onshore line pipes
- Welding solutions and services for offshore and onshore projects

Tubes for umbilicals
Premium welded stainless steel tubes with high-performance technical characteristics

Hydrocarbon processing
Pipes and fittings for the industrial fluids and hydrocarbon processing industry

Renewables: OCTG tubes for geothermal

POWER GENERATION



11% of revenue

A wide range of tubes needed to build conventional and nuclear power plants.

A market leader in conventional thermal and nuclear power plants with a complete range of tubes

- Seamless carbon and alloy steel tubes
- Seamless nickel-alloy tubes
- Services

Strong commitment to reducing CO_2 emissions in next-generation conventional power plants (supercritical and ultra-supercritical)

Renewables: tubes for biomass power plants

INDUSTRY

21% of revenue

Lightweight and resistant tubes for a wide range of applications.

Hollow sections, tubes and hollow bars for industrial markets:

- Mechanical engineering: cranes, hydraulic cylinders, agricultural machinery, OCTG mechanical parts, etc.
- Automotive: all types of vehicles, both light and heavy
- Construction: bridges, stadiums, offshore jack-up platforms, airport terminals, exhibition halls, etc.

Development of steel grades suited to a wide range of applications for the industry markets

Renewables: innovation projects for solar power and hydrogen energy

A TRANSFORMED GROUP READY TO BENEFIT FROM RECOVERY

The ambitious Transformation Plan that we have deployed since early 2016 is allowing us to increase our competitiveness and to prepare ourselves to fully benefit from the recovery of the Oil & Gas market. Vallourec is benefiting from the balanced industrial footprint of its four regions. This new structure is strengthening the Group's local presence and proximity to its customers, and is allowing us to optimize global use of resources and to boost our development.

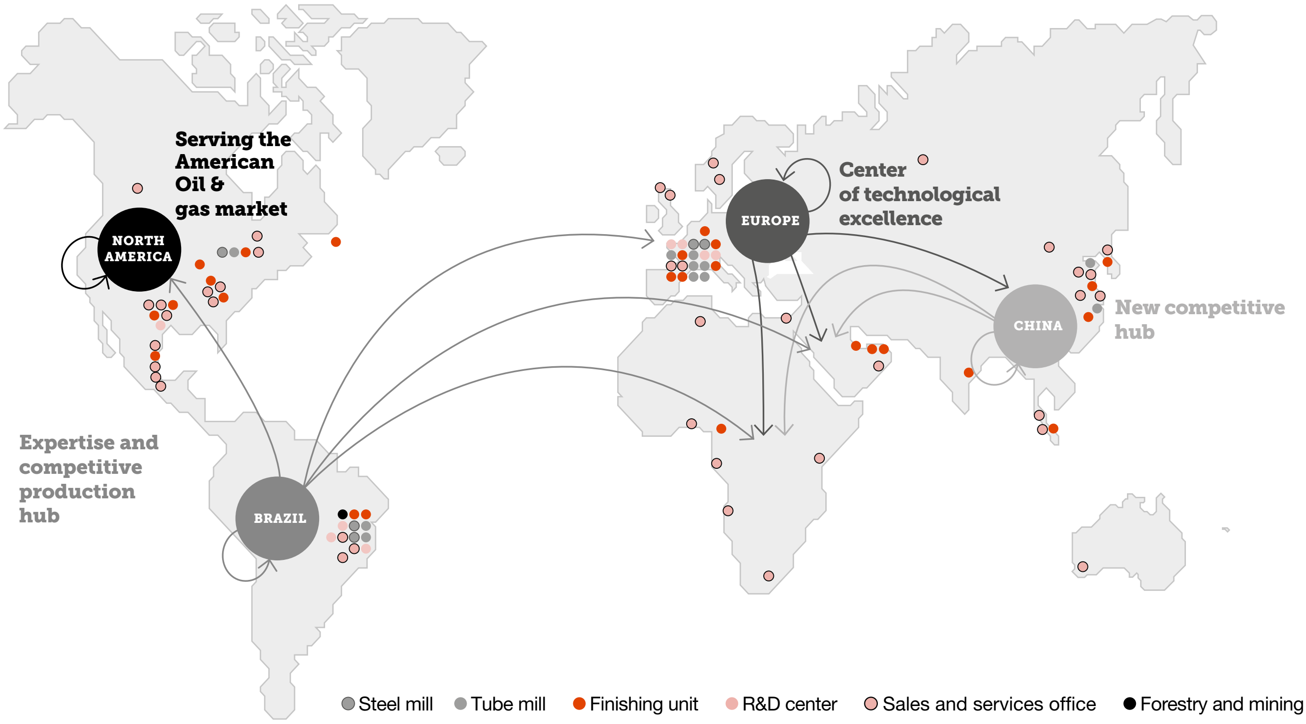
Present in more than
20 countries

More than **50** production sites

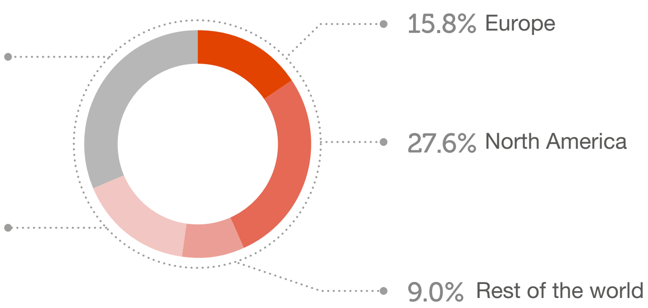
19,500 employees

6 research and test centers

An industrial footprint balanced around its four regions with the establishment of new competitive production channels



REVENUE BY REGION



A RESPONSIBLE, DEMANDING AND INNOVATIVE INDUSTRIAL PLAYER

Industrial excellence is our priority. We have integrated the highest standards of responsibility and excellence into our strategy, in terms of safety, quality, social and environmental policies. Our culture of innovation allows us to offer our customers increasingly high-performing solutions which exceed their expectations.

44% reduction
in the Total Recordable Injury Rate (TRIR) between 2013 and 2017

2017 opinion survey: **81%**
of **employees satisfied**

€47 million
in **R&D expenses**

28 patents
filed (+75% compared to 2016)

77%
of steel from **recycled scrap** used

94%
of **recovered waste**

FINANCIAL AND ACTIVITY INDICATORS IMPROVING

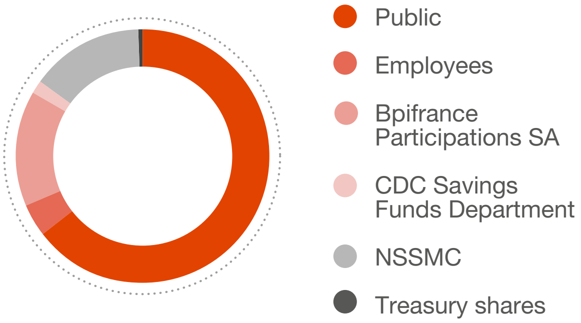
	Unit	2015	2016	2017
Sales volumes	*kt*	1,411	1,281	2,256
Revenue	*€ million*	3,803	2,965	3,750
EBITDA	*€ million*	(77)	(219)	2
EBITDA margin	*%*	-2.0	-7.4	0.1
Operating income	*€ million*	(838)	(749)	(483)
Net income, Group share	*€ million*	(865)	(758)	(537)
Net earnings per share	*€*	(6.6)	(2.3)	(1.2)
Gross capital expenditure	*€ million*	268	175	152
Free cash flow*	*€ million*	135	(395)	(423)
Net debt	*€ million*	1,519	1,287	1,542
Equity	*€ million*	3,038	3,778	2,885

* *Free cash flow (FCF) is a non-GAAP measure and is defined as cash flow from operating activities minus gross capital expenditure and +/- change in operating working capital requirement.*

STABLE SHAREHOLDING

Vallourec benefits from the support of its two shareholders, Bpifrance and Nippon Steel Sumitomo Metal Corporation, who both hold nearly 15% of the capital.

As at 31 December 2017, employees represented 4% of the capital. The free float percentage was 65%.



1

Persons responsible for the Registration Document and financial audit

1.1 Person responsible for the Registration Document

Mr. Philippe Crouzet

Chairman of the Management Board of Vallourec (hereinafter “Vallourec” or “the Company”)

1.2 Statement by the person responsible for the Registration Document

I certify that, having taken all reasonable care to ensure that such is the case, the information contained in this Registration Document is, to the best of my knowledge, in accordance with the facts and contains no omission likely to affect its import.

I certify that, to the best of my knowledge, the financial statements have been prepared in accordance with applicable accounting standards and give a true and fair view of the assets and liabilities, financial position and results of the Company and all consolidated companies, and that the management report, the various headings of which are provided in the concordance table on page 329 of this Registration Document (Section 8.2.3), presents a true and fair view of the business trends, results and financial position of the Company and all consolidated companies, as well as a description of the main risks and uncertainties to which they are exposed.

I have obtained a completion letter from the Statutory Auditors in which they indicate that they have verified the information relating to the financial position and the financial statements included in this document, and have read the document in its entirety.

Boulogne-Billancourt, 21 March 2018

Chairman of the Management Board

Philippe Crouzet

1.3 Persons responsible for the financial audit

1.3.1 Statutory Auditors

KPMG SA

Represented by:

Ms. Catherine Porta

2, avenue Gambetta – Tour Eqho
92066 Paris-La Défense Cedex – France

Date of first appointment: 1 June 2006
Date renewed: 31 May 2012

The Ordinary and Extraordinary Shareholders' Meeting of 31 May 2012 reappointed KPMG SA as Statutory Auditor for a term of six (6) years expiring at the close of the Ordinary Shareholders' Meeting called to approve the financial statements for the year ending 31 December 2017.

Deloitte & Associés

Represented by:

Mr. Christophe Patrier

185, avenue Charles de Gaulle
92524 Neuilly-sur-Seine Cedex – France

Date of first appointment: 1 June 2006
Date renewed: 31 May 2012

The Ordinary and Extraordinary Shareholders' Meeting of 31 May 2012 reappointed Deloitte & Associés as Statutory Auditor for a term of six (6) years expiring at the close of the Ordinary Shareholders' Meeting called to approve the financial statements for the year ending 31 December 2017.

1.3.2 Alternate Statutory Auditors

KPMG AUDIT IS

Alternate Auditor for KPMG SA

2, avenue Gambetta – Tour Eqho
92066 Paris-La Défense Cedex – France

Date of first appointment: 31 May 2012

The Ordinary and Extraordinary Shareholders' Meeting of 31 May 2012 appointed KPMG AUDIT IS as Alternate Auditor for KPMG SA, replacing SCP Jean-Claude André & Autres, for a term of six (6) years expiring at the close of the Ordinary Shareholders' Meeting called to approve the financial statements for the year ending 31 December 2017.

BEAS

Alternate Auditor for Deloitte & Associés

195, avenue Charles de Gaulle
92524 Neuilly-sur-Seine Cedex – France

Date of first appointment: 11 June 2002
Date renewed: 31 May 2012

The Ordinary and Extraordinary Shareholders' Meeting of 31 May 2012 reappointed BEAS as Alternate Auditor for Deloitte & Associés for a term of six (6) years expiring at the close of the Ordinary Shareholders' Meeting called to approve the financial statements for the year ending 31 December 2017.

1.4 Person responsible for the Group's legal affairs

Ms. Stéphanie Fougou

Group General Counsel

Vallourec

27, avenue du Général-Leclerc
92660 Boulogne-Billancourt Cedex – France

Tel.: +33 (0)1 49 09 37 22
Fax: +33 (0)1 49 09 37 85

E-mail: stephanie.fougou@vallourec.com

1.5 Person responsible for the communication of financial information

Ms. Alexandra Fichelson

Director of Investor Relations

Vallourec

27, avenue du Général-Leclerc
92660 Boulogne-Billancourt Cedex – France

Tel.: +33 (0)1 49 09 39 77
Fax: +33 (0)1 49 09 36 94

E-mail: alexandra.fichelson@vallourec.com

Vallourec website: www.vallourec.com

2

General information on Vallourec and its capital

2.1 General information on Vallourec

2.1.1 Company name and registered office

Vallourec
27, avenue du Général-Leclerc
92100 Boulogne-Billancourt – France
Tel.: +33 (0)1 49 09 35 00

2.1.2 Legal form – Legislation – Trade and Companies Register

Vallourec is a French corporation *(société anonyme)* that opted on 14 June 1994 for a governance structure comprising a Management Board and a Supervisory Board. The Company is registered in the Nanterre (Hauts-de-Seine) Trade and Companies Register under no. 552 142 200 and recorded under APE Code (Principal Activity Code) 7010Z.

2.1.3 Date of incorporation and term

Vallourec was formed in 1899.

It will be wound up on 17 June 2067, unless its life is extended or it is wound up earlier.

2.1.4 Corporate purpose (Article 3 of the bylaws)

Vallourec's purpose, in any country, acting on its own behalf or for a third party, or directly or indirectly with or through third parties, includes:

- all industrial and commercial transactions relating to all means for the preparation and manufacture, by all processes known or that might be subsequently discovered, of metals and any materials that may replace them in all their applications; and
- in general, all commercial, industrial and financial transactions, and transactions in movable and fixed property, directly or indirectly associated with the above purpose.

2.1.5 Consultation of legal documents

The Company bylaws, minutes of Shareholders' Meetings and other Company documents may be consulted at the registered office.

2.1.6 Fiscal year

The fiscal year is 12 months long. It begins on 1 January and ends on 31 December.

2.1.7 Distribution of profits (Article 15 of the bylaws)

Distributable profit, as defined by law, is allocated by the Shareholders' Meeting.

Unless otherwise required by law, the Shareholders' Meeting decides how net profit is allocated.

The Shareholders' Meeting may also decide to grant each shareholder, for all or part of the dividend to be distributed, the choice of receiving payment of the dividend in cash or in shares [(1)], in accordance with the laws and regulations in force.

2.1.8 Shareholders' Meetings (Article 12 of the bylaws)

Shareholders' Meetings are convened in accordance with the conditions provided for by law.

A Shareholders' Meeting is open to all shareholders, regardless of the number of shares held.

Each shareholder attending the Shareholders' Meeting has as many votes as shares owned or represented, unless otherwise provided for by law. However, fully paid-up shares duly registered in the name of the same shareholder for four (4) consecutive years carry twice as many voting rights as other shares (Article 12, paragraph 4 of the bylaws).

The Shareholders' Meeting of 19 January 1988 resolved to establish double the voting rights for shares that have been duly registered in the name of the same shareholder for four (4) years. The free registered shares awarded to a shareholder in respect of existing shares for which the shareholder has a double voting right also have a double voting right. The double voting right ceases for any share that has been converted to bearer shares or transferred, except for any transferred to another registered shareholder by succession or family bequest. The double voting right may be removed by a decision of the Extraordinary Shareholders' Meeting after ratification by a Special Meeting of the shareholder beneficiaries.

2.1.9 Disclosure of thresholds crossed and identification of shareholders (Article 8 of the bylaws)

The Extraordinary Shareholders' Meeting of 1 June 2006, in its second resolution, amended Article 8 of the bylaws to set an additional disclosure requirement for exceeding thresholds other than those prescribed by the legal provisions in force.

Consequently:

"In addition to the disclosure of thresholds crossed as expressly provided for in Article L.233-7-I and II of the French Commercial Code (Code de commerce), any individual or legal entity who, directly or indirectly through companies he, she or it controls within the meaning of Article L.233-3 of the French Commercial Code, alone or in concert, acquires a number of bearer shares in the Company equal to or greater than three percent (3%), four percent (4%), six percent (6%), seven percent (7%), eight percent (8%), nine percent (9%) or twelve and a half percent (12.5%) of the total number of shares comprising the share capital shall, within five (5) trading days after crossing said threshold, disclose to the Company the total number of shares thus held, via registered letter with request for acknowledgment of receipt sent to the Company's registered office.

The information mentioned in the previous paragraph shall also be disclosed within the same time frame and under the same conditions when the shareholding falls below the thresholds referred to therein."

The penalties provided for by law for failure to comply with the legal obligation to disclose thresholds crossed under the French Commercial Code shall also apply in case of non-compliance with the obligation set out in the bylaws to disclose the above threshold crossings at the request of one or more shareholders holding at least 5% of the Company's shares, as recorded in the minutes of the Shareholders' Meeting.

In addition, under current regulations, the Company is entitled to request the identification of holders of securities conferring immediate or future voting rights at its Shareholders' Meetings, as well as quantities held.

(1) This power was introduced by the Shareholders' Meeting of 14 June 1994.

2.2 General information on share capital

2.2.1 Conditions in the bylaws for changes in share capital or rights in the Company

An Extraordinary Shareholders' Meeting may, in accordance with the conditions provided for by law, increase or reduce the share capital or delegate to the Management Board the necessary powers to do so.

However, under the Company's internal structure (Article 9, paragraph 3 of the bylaws), the Management Board may not carry out the following transactions without the prior approval of the Supervisory Board:

- any capital increase in cash or by capitalization of reserves authorized by a Shareholders' Meeting;
- any other issue of securities that could later give access to share capital, authorized by a Shareholders' Meeting.

The shares are freely negotiable and transferable in accordance with applicable laws and regulations.

2.2.2 Share capital

As at 1 January 2017, the start of the 2017 fiscal year, subscribed, fully paid-up share capital amounted to €902,476,010 divided into 451,238,005 shares with a par value of €2.00 each.

At the end of the clearing period for subscriptions to the Value 17 international employee share ownership plan (see Chapter 7 below), at its meeting on 14 December 2017, the Management Board, under the terms of the twenty-second, twenty-third and twenty-fourth resolutions of the Ordinary and Extraordinary Shareholders' Meeting of 12 May 2017, recorded the final completion of three capital increases in the nominal amounts of €6,783,230 €5,517,106 and €1,199,174 or an aggregate nominal amount of €13,499,510 through the respective issue of 3,391,615, 2,758,553 and 599,587 new shares for an aggregate total of 6,749,755 new shares with a par value of €2.00 each at a unit price of €3.77 for the standard plan and €4 for the leveraged plan. These transactions had the cumulative effect of increasing share capital from €902,476,010 to €915,975,520.

As at 31 December 2017, the subscribed, fully paid-up share capital amounted to €915,975,520 divided into 457,987,760 shares with a par value of €2.00 each.

2.2.3 Authorized capital not issued

2.2.3.1 Financial authorizations to issue shares and securities providing access to the Company's capital valid as at 31 December 2017

Authorizations to issue shares and securities providing access to the Company's capital valid as at 31 December 2017 were as follows:

	Maximum caps on capital increases *(in € or a percentage of the share capital)*	**Maximum nominal amounts of debt securities** *(in €)*	**Date of the Shareholders' Meeting that authorized the transaction**	**Term of authorization**	**Expiration date**
CAPITAL INCREASES WITH PREFERENTIAL SUBSCRIPTION RIGHTS					
Capital increases with preferential subscription rights (13th resolution)	360.990 million	1.5 billion	12 May 2017	26 months	12 July 2019
Increase in the amount of the initial issue with preferential subscription rights (17th resolution)	15% of the initial issue [a] [b]	15% of the initial issue [d] [e]	12 May 2017	26 months	12 July 2019
Capital increases through the capitalization of reserves, profits or additional paid-in capital (21st resolution)	270.743 million [a]	N/A	12 May 2017	26 months	12 July 2019
CAPITAL INCREASES WITHOUT PREFERENTIAL SUBSCRIPTION RIGHTS					
Capital increases without preferential subscription rights through a public offering or offerings (14th resolution)	90.247 million [a]	1.5 billion	12 May 2017	26 months	12 July 2019
Capital increases without preferential subscription rights through one or more private placements (15th resolution)	90.247 million [a] [c]	1.5 billion	12 May 2017	26 months	12 July 2019
Capital increases without preferential subscription rights, carried out under the 14th and/or 15th resolutions, at a price to be freely set by the Shareholders' Meeting (16th resolution)	10% of the share capital per year within the limit of 90.247 million over 26 months [a] [b] [c]	1.5 billion	12 May 2017	26 months	12 July 2019
Increase in the amount of the initial issue without preferential subscription rights (17th resolution)	15% of the initial issue [a] [b] [c]	15% of the initial issue [d]	12 May 2017	26 months	12 July 2019
Capital increases without preferential subscription rights in consideration for contributions in kind, except in the case of a public exchange offer initiated by the Company (18th resolution)	10% of the share capital [a] [c]	1.5 billion	12 May 2017	26 months	12 July 2019
Capital increases without preferential subscription rights in consideration for securities contributed in a public exchange offer initiated by the Company (19th resolution)	90.247 million [a] [c]	1.5 billion	12 May 2017	26 months	12 July 2019
Capital increases without preferential subscription rights, carried out as a result of the issue by the Company's subsidiaries of securities providing access to the Company's share capital (20th resolution)	90.247 million [a] [c]	N/A	12 May 2017	26 months	12 July 2019
EMPLOYEE SHARE OWNERSHIP PLAN					
Capital increase reserved for members of the Company savings plan as part of an employee share ownership plan (22nd resolution)	2% of the share capital [a] [d]	N/A	12 May 2017	26 months	12 July 2019

	Maximum caps on capital increases *(in € or a percentage of the share capital)*	Maximum nominal amounts of debt securities *(in €)*	Date of the Shareholders' Meeting that authorized the transaction	Term of authorization	Expiration date
Capital increase reserved for employees and those with similar rights of Vallourec Group companies outside France as part of an employee share ownership plan (23rd resolution)	2% of the share capital [(a) (d)]	N/A	12 May 2017	18 months	12 November 2019
Capital increase reserved for lending institutions and all entities whose purpose is to hold, acquire or dispose of shares as part of an employee share ownership plan (24th resolution)	2% of the share capital [(a) (d)]	N/A	12 May 2017	18 months	12 November 2019
Allocation of shares free of charge as part of an employee share ownership plan to replace the employer matching contributions given to French employees (25th resolution)	0.3% of the share capital [(a)]	N/A	12 May 2017	18 months	12 November 2019
SHARE SUBSCRIPTION OR SHARE PURCHASE OPTIONS AND PERFORMANCE SHARES					
Share subscription or share purchase options granted to employees and corporate officers of the Vallourec Group (26th resolution)	3% of the share capital [(a)]	N/A	12 May 2017	38 months	12 July 2020
Performance shares allocated to employees and corporate officers of the Vallourec Group (27th resolution)	3% of the share capital [(a) (e)]	N/A	12 May 2017	38 months	12 July 2020

(a) This amount or this percentage counts towards the total capital increase cap, maintaining the preferential subscription right of €360.990 million.

(b) This percentage is limited by the cap on the authorization pursuant to which the initial issue was made.

(c) This amount or this percentage counts towards the total capital increase cap, eliminating the preferential subscription right of €90.247 million.

(d) The aggregate capital increases carried out as part of an employee share ownership offer may not exceed 2% of the share capital.

(e) This percentage counts towards the 3% share capital cap at the date of the decision to allot the share subscription or share purchase options.

2.2.3.2 Use of financial authorizations to issue shares and securities providing access to the Company's capital as at 31 December 2017

EMPLOYEE SHARE OWNERSHIP PLAN (twenty-second to twenty-fifth resolutions of the shareholders' meeting of 12 May 2017)

Under the authorizations for employee share ownership plans, the Management Board, with the approval of the Supervisory Board, extended the Value 17 international employee share ownership plan in 2017, for the tenth year running (for a description of this plan, see Chapter 7, Section 7.3.3, "Employee share ownership"). Under the terms of the twenty-second, twenty-third and twenty-fourth resolutions of the Ordinary and Extraordinary Shareholders' Meeting of 12 May 2017, the Management Board, at its meeting of 14 December 2017, recorded the final completion of three capital increases, in the nominal amounts of €6,783,230 €5,517,106 and €1,199,174, or an aggregate nominal amount of €13,499,510, representing 1.49% of the share capital at this date, through the respective issue of 3,391,615, 2,758,553 and 599,587 new shares, for an aggregate total of 6,749,755 new shares with a par value of €2.00 each, and a unit price of €3.77 for the standard plan and €4.00 for the leveraged plan. These transactions had the cumulative effect of increasing share capital from €902,476,010 to €915,975,520.

In place of the employer matching contribution benefiting employees and those with similar rights in French Vallourec Group companies and Group companies headquartered in Germany, Brazil, Mexico, the United Arab Emirates and the United Kingdom who are invested in the Value 17 plan, the Management Board, using the twenty-fifth resolution of the Shareholders' Meeting of 12 May 2017, simultaneously implemented, under the Value 17 plan, a free share allocation plan for new or existing shares for a maximum of 3,409 shares, or 0.0007% of the share capital at that date, for employees who are not French residents for tax purposes and who are employed at Vallourec Group companies that are headquartered in Canada, the United States (excluding employees of VAM USA LLC), Malaysia and Singapore who have invested in a "Shares + SAR" plan under the Value 17 plan.

The terms of this plan are set out in Section 7.3.1.2, "Performance share and free share allocation plans" of this Registration Document.

PERFORMANCE SHARES
(twentieth resolution of the shareholders' meeting of 12 May 2017)

Under the twentieth resolution, relating to performance shares, which was adopted by the Ordinary and Extraordinary Shareholders' Meeting of 12 May 2017, the Management Board decided on 18 May 2017, in accordance with the Supervisory Board, to allocate, subject to attendance and performance conditions, a target number of 820,275 performance shares (1), or 0.18% of the share capital as at 31 December 2017, to benefit 551 managers and two members of the Management Board.

The terms and conditions of these plans are set out in Section 7.3.1.2, "Performance share and free share allocation plans" of this Registration Document.

SHARE SUBSCRIPTION OR PURCHASE OPTIONS
(nineteenth resolution of the shareholders' meeting of 12 May 2017)

Under the nineteenth resolution, relating to share subscription or purchase options, which was adopted by the Shareholders' Meeting of 12 May 2017, on 18 May 2017 the Management Board, in agreement with the Supervisory Board, set up a share subscription option plan, subject to continuous service and performance conditions, which provides for the allocation of a target number of 292,500 options (2), or 0.06% of the share capital as at 31 December 2017, to nine members of the Executive Committee and two Management Board members.

The terms of this plan are set out in Section 7.3.1.1, "Share purchase and/or subscription options" of this Registration Document.

BONDS CONVERTIBLE INTO NEW SHARES AND/OR EXCHANGEABLE FOR EXISTING SHARES (OCEANES) OF THE COMPANY
(fifteenth resolution of the shareholders' meeting of 12 May 2017)

On 27 September 2017, the Chairman of the Management Board, acting by virtue of the delegation of authority and powers granted to the Management Board by the Shareholders' Meeting of 12 May 2017 in its fifteenth resolution and the subdelegation by the Management Board to the Chairman of the Management Board dated 22 September 2017, decided to proceed with the issue, eliminating the preferential subscription right of shareholders, through a private placement under the conditions provided for in Article L.411-2-II of the French Monetary and Financial Code *(Code monétaire et financier)*, of 36,284,470 Bonds Convertible into New Shares and/or Exchangeable for Existing Shares of the Company with a unit par value of €6.89, or a total par value of €249,999,998.30, with a maturity date of 4 October 2022 (the "October 2022 OCEANEs"). The October 2022 OCEANEs bear interest at the annual fixed rate of 4.125%, payable semi-annually in arrears on 4 April and 4 October of each year. They are admitted for trading on the free market of Euronext Paris ("Euronext Access").

2.2.3.3 Potential dilution as at 31 December 2017

On 27 September 2017, Vallourec issued 36,284,470 Bonds Convertible into New Shares and/or Exchangeable for Existing Shares of the Company with a unit par value of €6.89, or a total par value of €249,999,998.30, with a maturity date of 4 October 2022 (the "October 2022 OCEANEs"). The conversion/exchange ratio of the October 2022 OCEANEs is one share per October 2022 OCEANE, subject to subsequent adjustments. Should they exercise their share allocation right, holders of October 2022 OCEANEs will receive new and/or existing shares of the Company at the Company's discretion. The potential dilution as at 31 December 2017 amounted to 7.92%.

Performance share and free share allocation plans (see Section 7.3.1.2 below) are covered by existing shares, so they have no dilutive impact.

Only the award of share subscription options (see Section 7.3.1.1 below) could, if the options came to be exercised, entail a dilution of shareholders. Based on the number of options currently outstanding, net of those canceled or that have lapsed, potential dilution to shareholders as at 31 December 2017 was 0.88%.

2.2.4 Share buyback

2.2.4.1 Information on transactions under the share buyback program during the 2017 fiscal year

SHARE BUYBACK (excluding liquidity contract)

As at 1 January 2017, Vallourec held 437,846 Vallourec shares with a nominal value of €2.00, or 0.097% of the share capital at that date, all assigned to cover free share or performance share allocation plans.

From 1 January to 31 December 2017, Vallourec transferred 265,239 shares under its free share and performance share allocation plans.

Total gross cash flows relating to purchases and disposals/transfers of shares (excluding liquidity contract) from 1 January to 31 December 2017 were as follows:

	Purchases	Transfers/sales
Number of shares	0	265,239
Average unit price *(in €)*	0	32.6194
AGGREGATE AMOUNT *(in €)*	**0**	**8,651,945**

(1) This is equivalent to 1,277,265 performance shares based on the highest performance coefficient of 1.40 or 2, as applicable.

(2) Based on a target coefficient of 1, or 585,000 options based on the maximum coefficient of 2.

TREASURY SHARES (excluding liquidity contract) AS AT 31 DECEMBER 2017

As at 31 December 2017, Vallourec held 172,607 Vallourec shares, or 0.037% of the share capital at that date, all assigned to cover free share or performance share allocation plans. The carrying amount of the portfolio as at 31 December 2017 was €3,834,100.91, including a nominal value of €345,214 and a market value on the same date of €869,076.24.

LIQUIDITY CONTRACT

Vallourec has a liquidity contract with Rothschild & Cie Banque, which has been in effect since 2 July 2012. The contract has a term of 12 months and is automatically renewable for successive 12-month terms. It complies with the Code of Conduct *(Charte de déontologie)* issued by the French Association of Financial Markets *(Association Française des Marchés Financiers)*, which was approved by the French securities regulator *(Autorité des Marchés Financiers)* on 21 March 2011.

In 2017, under the liquidity contract, total purchases were for 106,000 shares, i.e. 0.02% of the share capital as at 31 December 2017, for a total amount of €713,795 and a weighted average price of €6.7339 per share. Cumulative sales impacted 25,000 shares, for a total amount of €182,775 and an average weighted price of €7.311 per share.

On 18 December 2017, Vallourec and Rothschild & Cie Banque ended the liquidity contract that had been signed on 26 June 2012, effective immediately.

As at 15 December 2017, the balance on the liquidity account comprised:

- 2,481,000 shares;
- €7,997,763.

As at 31 December 2017, the liquidity account was clear.

The management fee for the liquidity contract in 2017 was €98,333 (excluding tax).

TREASURY SHARES

None.

OPEN DERIVATIVE POSITIONS AS AT 31 DECEMBER 2017

None.

2.2.4.2 Description of the 2017-2018 share buyback program, submitted to the Ordinary and Extraordinary Shareholders' Meeting of 25 May 2018 (18th resolution)

This description of the program's purpose, under Articles 241-1 *et seq.* of the General Regulations of the French securities regulator *(Autorité des Marchés Financiers)*, is to explain the objectives and the terms and conditions of Vallourec's share buyback program, which will be submitted to the Ordinary and Extraordinary Shareholders' Meeting on 25 May 2018.

ALLOCATION OF VALLOUREC SHARES HELD BY THE COMPANY AS AT 28 FEBRUARY 2018

As at 28 February 2018, Vallourec held 172.597 Vallourec shares, or 0.037% of the share capital at that date, all allocated to cover free share or performance share allocation plans.

OBJECTIVES OF THE SHARE BUYBACK PROGRAM SUBMITTED TO THE ORDINARY AND EXTRAORDINARY SHAREHOLDERS' MEETING OF 25 MAY 2018

In accordance with the provisions of European Regulation No. 596/2014 of 16 April 2014 and the market practices accepted by the French securities regulator *(Autorité des Marchés Financiers)*, the objectives of the share buyback program submitted for the approval of the Ordinary and Extraordinary Shareholders' Meeting of 25 May 2018 are as follows:

1. to implement any Company share purchase options plan in accordance with the provisions of Article L.225-177 *et seq.* of the French Commercial Code *(Code de commerce)*, or any similar plan;
2. to allocate or transfer shares to employees for their investment in the Company's development and/or to implement any Company or Group savings plan (or similar plan) as provided for by law, in particular Articles L.3332-1 *et seq.* of the French Labor Code *(Code du travail)*;
3. to allocate shares free of charge or to allocate performance shares under the provisions of Articles L.225-197-1 *et seq.* of the French Commercial Code;
4. to cover all awards of shares to employees and/or corporate officers of the Group, particularly in the context of international employee share ownership plans or variable compensation;
5. for market making in the secondary market or to increase the liquidity of Vallourec's shares through an investment services provider, under the terms of a liquidity contract that complies with the Code of Conduct *(Charte de déontologie)* issued by the French Association of Financial Markets *(Association Française des Marchés Financiers)*, approved by the French securities regulator and in accordance with the market practices accepted by it;
6. to hold and subsequently deliver shares (in payment, exchange or otherwise) in connection with any later transactions involving acquisitions, and, in particular, mergers, split-offs or contributions;
7. to deliver shares upon the exercise of rights attached to securities giving access to share capital by means of redemption, conversion, exchange, exercise of a warrant or by any other means; or
8. to cancel some or all of the shares so repurchased, provided that the Management Board has a valid authorization from the Extraordinary Shareholders' Meeting allowing it to reduce share capital by canceling shares acquired as part of a share buyback program.

TERMS OF THE SHARE BUYBACK PROGRAM SUBMITTED TO THE SHAREHOLDERS' MEETING ON 25 MAY 2018

The table below shows the maximum percentage of capital, the maximum number, and the characteristics of the shares that the Company could acquire under its share buyback program as submitted to the Ordinary and Extraordinary Shareholders' Meeting of 25 May 2018, as well as the maximum unit purchase price:

Share characteristics	Maximum percentage of capital [(a)]	Maximum number of shares [(b)]	Maximum unit purchase price *(per share)*
Ordinary shares	10%	45,798,776	€15

(a) *It is noted that this percentage applies to capital that will be adjusted, where applicable, to take account of any transactions affecting share capital that may occur after the Shareholders' Meeting of 25 May 2018, and that, in all circumstances, the number of shares that the Company holds at any given time may not exceed 10% of the shares comprising the Company's capital on the date in question.*

(b) *This number corresponds to the theoretical number of ordinary shares that the Company could acquire, calculated based on the share capital as at 28 February 2018, i.e. €915,975,520, divided into 457,987,760 shares. Based on the number of ordinary shares owned by Vallourec at that date (i.e. 172.597 shares), Vallourec could acquire 45.626.179 of its own shares.*

TERM OF THE SHARE BUYBACK PROGRAM SUBMITTED TO THE SHAREHOLDERS' MEETING OF 25 MAY 2018

The authorization given to the Management Board to implement the share buyback program will be granted for a term of 18 months from the date of the Shareholders' Meeting of 25 May 2018, i.e. until 25 November 2019, subject to the program's approval by the Ordinary Shareholders' Meeting.

2.2.5 Changes in share capital over the past five years

Transaction date	Exercise of subscription options	Number of shares subscribed in cash	Total number of shares after transaction	Nominal amount of capital increase *(in €)*	Paid-in capital *(in €)*	Total share capital after transaction *(in €)*
25/06/2013	–	1,338,791	126,285,147	2,677,582	46,442,660	252,570,294
10/12/2013	–	1,874,453	128,159,600	3,748,906	65,474,830	256,319,200
25/06/2014	–	518,416	128,678,016	1,036,832	17,465,435	257,356,032
16/12/2014	–	1,919,959	130,597,975	3,839,918	45,325,754	261,195,950
25/06/2015	–	3,090,460	133,688,435	6,180,920	53,774,004	267,376,870
15/12/2015	–	1,999,997	135,688,432	3,999,994	13,647,426	271,376,864
03/05/2016	–	217,101,488	352,789,920	434,202,976	45,591,312	705,579,840
03/05/2016	–	30,282,564	383,072,484	60,565,128	108,737,646	766,144,968
20/06/2016	–	61,565,565	444,638,049	123,131,130	221,067,653	889,276,098
14/12/2016	–	6,599,956	451,238,005	13,199,912	13,118,608	902,476,010
14/12/2017	–	6,749,755	457,987,760	13,499,510	13,486,494	915,975,520

2.2.6 Non-equity instruments

Securities entitling the allocation of debt securities

As at 31 December 2017, the Management Board has not decided to issue any securities entitling their bearers to be allocated debt securities.

Plan to issue negotiable short-term securities

On 12 October 2011 Vallourec established a commercial paper issue program to meet its short-term financing requirements. This program, updated on 8 June 2017, has the following main characteristics:

Maximum cap on the program	€1 billion
Duration	> 1 day < 365 days
Minimum unit amount	€150,000
Currency of issue	Euros (€), US dollars ($)
Paying agent	Crédit Industriel et Commercial
Underwriters	Aurel BGC BNP Paribas BRED Banque Populaire Crédit Agricole CIB CM – CIC Crédit du Nord GFI Securities Limited HPC ING Bank NV Kepler Capital Markets Natixis Newedge Group Société Générale CIB TSAF OTC
Short-term rating (Standard & Poor's)	B

The financial prospectus for the commercial paper issue program and the outstanding amounts of the issues are available on the websites of the Company (www.vallourec.com) and the Banque de France (www.banque-france.fr).

Bond issues

Vallourec successfully issued:

- on 30 July 2012, a €55 million fixed-rate bond issue maturing on 2 August 2027 (the "August 2027 Bonds"). The August 2027 Bonds have a unit par value of €100,000 and bear interest at an annual fixed rate of 4.125%, payable in arrears on 2 August each year;
- on 3 August 2012, a €400 million fixed-rate bond issue maturing on 2 August 2019 (the "August 2019 Bonds"). The August 2019 Bonds have a unit par value of €100,000 and are admitted to trading on the Euronext Paris stock market. They bear interest at an annual fixed rate of 3.25%, payable in arrears on 2 August each year, and are rated B by Standard & Poor's;
- on 30 September 2014, a €500 million fixed-rate bond issue maturing on 30 September 2024, (the "September 2024 Bonds"). The September 2024 bonds have a unit par value of €100,000 and are admitted to trading on the Euronext Paris stock market. They bear interest at an annual fixed rate of 2.25%, payable in arrears on 30 September each year, and are rated B by Standard & Poor's;
- on 27 September 2017, a €250 million fixed-rate bond issue, consisting of Bonds Convertible into New Shares and/or Exchangeable for Existing Shares of the Company ("OCEANEs"), reaching maturity on 4 October 2022 (the "October 2022 OCEANEs"). The October 2022 OCEANEs have a unit par value of €6.89 and are admitted to trading on the free Euronext Paris stock market ("Euronext Access"). They bear interest at the annual fixed rate of 4.125%, payable semi-annually in arrears on 4 April and 4 October of each year;
- on 11 October 2017, a €400 million fixed-rate bond issue maturing on 15 October 2022, (the "October 2022 Bonds"). The October 2022 Bonds have a unit par value of €100,000 and are admitted to trading on the Euro MTF stock market of the Luxembourg Stock Exchange. They bear interest at an annual fixed rate of 6.625%, payable semi-annually in arrears on 15 April and 15 October of each year, and were rated "B" by Standard & Poor's. On 23 October 2017, this bond issue was matched for €150 million under the same conditions.

The nominal value and interest on the August 2027 Bonds, August 2019 Bonds, September 2024 Bonds, October 2022 Bonds, and October 2022 OCEANEs (the "Bonds") represent direct, unconditional, unsubordinated liabilities, not backed by Vallourec assets, ranked *pari passu*, without preference among them, with the other present and future unsubordinated Vallourec bonds not backed by assets. Throughout the Bonds' maturity period, Vallourec has undertaken not to grant any security or guarantee (mortgage, lien, pledge, real surety, etc.) on its assets, income or rights, present or future, to holders of bonds, warrants or transferable securities listed or traded (or that may be listed or traded) on a regulated market, multilateral trading system, over-the-counter market or any other market, unless the same ranking or same surety or guarantee is granted to the Bonds.

These five bond issues specifically include a change-of-control clause that would trigger the mandatory prepayment of the bonds at the request of each bondholder in the event of a change of control of the Company (in favor of a person or a group of people acting in concert) leading to a downgrade of Vallourec's financial rating.

In addition, prepayment of the Bonds may be requested by the bondholder or the Company, depending on the case, should any of the common default scenarios for this type of transaction arise or in respect of a change in the Company's position or in tax regulations.

The October 2022 OCEANEs may be subject to prepayment at the discretion of the Company, at any time as of 20 October 2020, under the conditions described in the terms and conditions of the October 2022 OCEANEs. The October 2022 Bonds may be subject to prepayment at the Company's discretion under the conditions described in the document entitled "*Offering Memorandum*" as of 15 October 2020.

The prospectuses for listing the August 2019 Bonds and the September 2024 Bonds on the Euronext Paris stock market may be consulted on the websites of the Company (www.vallourec.com) and the French securities regulator *(Autorité des Marchés Financiers)* (www.amf-france.org). The terms and conditions of the October 2022 OCEANEs and those of the October 2022 Bonds appearing in the document entitled "*Offering Memorandum*" may be consulted on the Company's website (www.vallourec.com).

Rating

As at 1 January 2017, the opening date of the 2017 fiscal year, Vallourec's debt was rated B+/negative/B by Standard & Poor's. On 27 February 2017, this agency downgraded Vallourec's rating to B/negative/B. Consequently, as at 31 December 2017, Vallourec's debt had a rating of B/negative/B from Standard & Poor's.

2.3 Distribution of share capital and voting rights

2.3.1 Changes in the distribution of the share capital in the last three years

FY 2015 (as at 31 December)

Shareholders	Number of shares	% of share capital	Number of theoretical voting rights	% of theoretical voting rights	% of exercisable voting rights at Shareholders' Meetings
Public [(a) (b) (c)]	111,123,633	81.90%	113,338,744	77.13%	78.23%
Group employees	10,355,867	7.63%	10,958,019	7.46%	7.56%
Bpifrance Participations SA	7,249,182	5.34%	13,720,260	9.34%	9.47%
CDC Savings Funds Department	2,917,562	2.15%	2,917,562	1.99%	2.01%
GROUP SUBTOTAL, CDC [(d)]	**10,166,744**	**7.49%**	**16,637,822**	**11.32%**	**11.48%**
Nippon Steel & Sumitomo Metal Corporation [(e)]	1,973,134	1.45%	3,946,268	2.69%	2.72%
Treasury shares [(f)]	2,069,054	1.52%	2,069,054	1.41%	0.00%
TOTAL	**135,688,432**	**100.00%**	**146,949,907**	**100.00%**	**100.00%**

(a) The "Public" part includes the position of Tweedy Browne Company LLC (TBC). According to a letter received by the AMF on 29 January 2015, which was supplemented by a letter received on 2 February 2015, TBC, acting on behalf of clients and the funds it manages, declared that it had exceeded Vallourec's 5% capital threshold on 26 January 2015, holding, on behalf of said clients and funds, 6,534,596 shares and the same number of voting rights, representing, at 31 December 2014, 5.004% of Vallourec's capital and 4.62% of its voting rights. According to a letter received by the AMF on 4 August 2015, TBC, acting on behalf of clients and the funds it manages, declared that it had fallen below Vallourec's 5% capital threshold on 30 July 2015, holding, on behalf of said clients and funds, 6,294,298 shares and the same number of voting rights, representing 4.71% of the capital and 4.35% of the voting rights as at 30 June 2015.

To the Company's knowledge, TBC is registered with the Securities and Exchange Commission as an investment advisor and as such would not hold any shares for its own account and would not exercise, barring a specific agreement with its clients, the voting rights attached to the shares recorded in the individual accounts of its clients.

(b) The "Public" part includes the Deutsche Bank AG position. According to a letter received by the AMF on 4 December 2015, which was supplemented by a letter that was received on 7 December 2015, Deutsche Bank AG declared that it had exceeded Vallourec's 5% capital threshold on 30 November 2015 after acquiring Vallourec shares on the market, holding 7,206,835 Vallourec shares, representing, as at 30 June 2015, 5.39% of the capital and 4.97% of the voting rights, distributed as follows: 2,905,075 shares held directly, or 2.17% of the capital and 2.00% of the voting rights, and 4,301,760 shares held by assimilation of derivatives contracts, or 3.32% of the capital and 2.97% of the voting rights.

(c) The "Public" part includes the Crédit Agricole SA position. According to a letter which the AMF received on 9 December 2015, which was supplemented with a letter received on 10 December 2015, Crédit Agricole SA declared that, on 7 December 2015, it had indirectly, through its Crédit Agricole Corporate and Investment Bank companies (CA CIB) and CA Vita, which it controls, exceeded the 5% limit on capital and voting rights in Vallourec, holding 10,056,323 Vallourec shares, which represented, as at 30 June 2015, 7.52% of Vallourec's capital and 6.94% of its voting rights. The crossing of this threshold resulted from CA CIB trading positions that were recorded as part of the "Value" employee share ownership plans. The 10,056,323 shares declared by Crédit Agricole are distributed as follows: 9,383,808 shares by assimilation of derivatives contracts, representing, as at 30 June 2015, 7.02% of the capital ("Value" plans), 298,235 shares held directly, or approximately 0.22% of the capital, and 374,280 shares held directly by CA Vita (life insurance subsidiary of the Crédit Agricole group), representing 0.28% of the capital.

(d) Bpifrance Participations, jointly with Caisse des Dépôts et Consignations (CDC). By letter received by the French securities regulator (Autorité des Marchés Financiers) on 30 April 2014, CDC and Bpifrance Participations SA clarified that they were each acting alone, and CDC declared that there was no collaboration with Bpifrance Participations SA.

(e) Nippon Steel & Sumitomo Metal Corporation and Vallourec have built up strategic partnerships for a number of years, and have entered into a cross-shareholding agreement, described in Section 2.3.3 of this Registration Document. As at 31 December 2015, NSSMC held 1,973,134 Vallourec shares, or a 1.45% stake in the share capital of Vallourec; likewise, Vallourec held 3,468,759 NSSMC shares (this figure takes into account the 10:1 stock split on the nominal price of the NSSMC shares, which occurred on 1 October 2015 (one share for every 10 held)), or a 0.37% stake in the share capital of NSSMC.

(f) Treasury shares held directly include the shares shown on the balance of the liquidity contract managed by Rothschild & Cie Banque and the shares held by the Company on its own account to cover its plans to allocate performance shares and free shares. As a result, the number of treasury shares is subject to change at any time.

FY 2016 (as at 31 December)

Shareholders	Number of shares	% of share capital	Number of theoretical voting rights	% of theoretical voting rights	% of exercisable voting rights at Shareholders' Meetings
Public [(a) (b) (c)]	291,644,528	64.63%	293,944,782	63.53%	63.92%
Group employees	15,778,550	3.50%	16,516,708	3.57%	3.59%
Bpifrance Participations SA [(d) (g) (l) (o)]	66,695,708	14.78%	73,166,786	15.81%	15.91%
CDC Savings Fund Department [(e) (f) (h) (j)]	7,585,658	1.68%	7,585,658	1.64%	1.65%
GROUP SUBTOTAL, CDC [(n)]	**74,281,366**	**16.46%**	**80,752,444**	**17.45%**	**17.56%**
Nippon Steel & Sumitomo Metal Corporation [(i) (k) (e) (o)]	66,695,715	14.78%	68,668,849	14.84%	14.93%
Treasury shares [(m)]	2,837,846	0.63%	2,837,846	0.61%	0.00%
TOTAL	**451,238,005**	**100.00%**	**462,720,629**	**100.00%**	**100.00%**

(a) *The "Public" part includes the Deutsche Bank AG position. According to a letter received by the AMF on 12 February 2016, Deutsche Bank AG declared that it had exceeded the 5% voting rights threshold on 5 February 2016 after acquiring Vallourec shares on the market, holding 8,760,261 shares representing the same number of voting rights, or 6.46% of the capital and 5.96% of the voting rights. On 8 March 2016, following a transfer of Vallourec shares on the market, Deutsche Bank AG declared that it had fallen below the 5% capital and voting right thresholds, holding 6,333,453 shares representing the same number of voting rights, or 4.67% of the capital and 4.31% of the voting rights.*

(b) *The "Public" part includes the UBS AG position. According to a letter received by the AMF on 23 February 2016, UBS AG declared that it had directly and indirectly exceeded Vallourec's 5% capital threshold on 17 February 2016 after acquiring Vallourec shares off the market, holding 6,984,791 Vallourec shares representing the same number of voting rights, or 5.15% of the capital and 4.75% of the voting rights. On 18 February 2016, UBS AG directly and indirectly dropped below the 5% capital threshold after transferring Vallourec shares off the market, holding 5,798,449 shares representing the same number of voting rights, or 4.27% of the capital and 3.95% of the voting rights. On 31 August 2016, UBS AG directly and indirectly exceeded the 5% capital and voting right thresholds after acquiring Vallourec shares off the market, holding 27,785,481 shares at that date representing the same number of voting rights, or 6.25% of the capital and 6.09% of the voting rights. On 1 September 2016, UBS AG directly and indirectly dropped below the 5% capital and voting right thresholds after transferring Vallourec shares off the market, holding 7,849,806 shares representing the same number of voting rights, or 1.77% of the capital and 1.72% of the voting rights.*

(c) *The "Public" part includes the Crédit Agricole SA position. According to a letter received by the AMF on 15 April 2016, Crédit Agricole SA declared that it had indirectly exceeded Vallourec's 10% capital threshold on 11 April 2016, through Crédit Agricole Corporate and Investment Bank (CACIB), which it controls, holding 14,101,204 Vallourec shares representing the same number of voting rights, or 10.39% of the capital and 9.59% of the voting rights. On 3 May 2016, following a capital increase by Vallourec, Crédit Agricole SA declared that it had indirectly, through Crédit Agricole Corporate and Investment Bank (CACIB), which it controls, dropped below the 10% capital and 5% capital and voting right thresholds, holding 14,814,587 Vallourec shares representing the same number of voting rights, or 3.87% of the capital and 3.76% of the voting rights.*

(d) *In a letter which the AMF received on 29 February 2016, Bpifrance ("EPIC Bpifrance") declared that it had indirectly, on 23 February 2016, following an acquisition by Bpifrance Participations SA of Vallourec shares on the market, exceeded Vallourec's 6% capital and 10% voting right thresholds, indirectly holding 9,112,462 shares representing 15,583,540 voting rights, or 6.72% of the capital and 10.60% of the voting rights.*

(e) *In a letter which the AMF received on 1 March 2016, Caisse des dépôts et consignations (CDC) declared that it had exceeded, on 25 February 2016, directly and indirectly through Bpifrance Participations SA, a company it controls through Bpifrance SA, Vallourec's 10% capital threshold following an acquisition of Vallourec shares on the market, holding 13,682,200 Vallourec shares representing 20,153,278 voting rights, or 10.08% of the capital and 13.71% of the voting rights (with Bpifrance Participations SA holding 10,764,638 Vallourec shares at that date, representing 7.93% of the capital and 11.72% of the voting rights).*

(f) *In a letter which the AMF received on 8 March 2016, Caisse des dépôts et consignations (CDC) declared that it had exceeded, on 3 March 2016, directly and indirectly through Bpifrance Participations SA, Vallourec's 15% voting rights threshold, holding 15,614,207 shares representing 22,085,285 voting rights, or 11.51% of capital and 15.03% of voting rights, following an acquisition of Vallourec shares on the market (Bpifrance Participations SA, holding 12,696,645 Vallourec shares at that date, representing 9.36% of the capital and 13.04% of the voting rights).*

(g) *In a letter which the AMF received on 10 March 2016, Bpifrance ("EPIC Bpifrance") declared that it had indirectly, on 7 March 2016, following an acquisition by Bpifrance Participations of Vallourec shares on the market, exceeded Vallourec's 10% capital threshold, indirectly holding 13,583,965 shares representing 20,055,043 voting rights, or 10.01% of the capital and 13.65% of the voting rights.*

(h) *In a letter which the AMF received on 9 May 2016, Caisse des dépôts et consignations declared that it had directly and indirectly exceeded, on 3 May 2016, through Bpifrance Participations SA, the 15% capital and 20% voting right thresholds following the capital increase of 3 May 2016, holding 74,281,365 Vallourec shares representing 80,752,443 voting rights, or 19.39% of capital and 20.47% of voting rights, noting that Bpifrance ("EPIC Bpifrance") simultaneously declared that it had exceeded, on 3 May 2016, indirectly through Bpifrance Participations SA, the 15% capital and voting right threshold, indirectly holding 66,695,707 shares representing 73,166,785 voting rights, or 17.41% of capital and 18.55% of the voting rights.*

(i) *In a letter received on 21 June 2016, Nippon Steel & Sumitomo Metal Corporation declared that it had exceeded, on 20 June 2016, following a redemption of bonds redeemable in new Vallourec shares, the 5%, 10% and 15% capital and voting right thresholds, holding 66,695,715 shares representing 68,668,849 voting rights, or 15.00% of the capital and 15.06% of the voting rights.*

(j) *In a letter which the AMF received on 24 June 2016, Caisse des dépôts et consignations (CDC) declared that it had dropped below, on 20 June 2016, directly and indirectly through Bpifrance Participations SA, the 20% voting right threshold, holding 74,281,366 Vallourec shares representing 80,752,444 voting rights, or 16.71% of capital and 17.71% of voting rights (Bpifrance Participations SA, holding 66,695,708 Vallourec shares at that date, representing 15.00% of the capital and 16.05% of the voting rights).*

(k) *In a letter which the AMF received on 20 December 2016, Nippon Steel & Sumitomo Metal Corporation declared that it had dropped below Vallourec's 15% capital and voting right thresholds on 14 December 2016, holding 66,695,715 Vallourec shares representing 68,668,849 voting rights, or 14.78% of the capital and 14.84% of the voting rights. These thresholds were crossed following the completion on 14 December 2016 of a capital increase which was reserved for employees of the Vallourec Group (Value 16).*

(l) *In a letter which the AMF received on 20 December 2016, Bpifrance ("EPIC Bpifrance") declared that it had dropped below the 15% capital threshold on 16 December 2016, indirectly through Bpifrance Participations, indirectly holding 66,695,708 Vallourec shares representing 73,166,786 voting rights, or 14.78% of the capital and 15.81% of the voting rights. These thresholds were crossed following the completion on 14 December 2016 of a capital increase which was reserved for employees of the Vallourec Group (Value 16).*

(m) *Treasury shares held directly include the shares shown on the balance of the liquidity contract managed by Rothschild & Cie Banque and the shares held by the Company on its own account to cover its plans to allocate performance shares and free shares. As a result, the number of treasury shares is subject to change at any time.*

(n) *Bpifrance Participations, jointly with Caisse des dépôts et consignations (CDC). By letter received by the French securities regulator (Autorité des Marchés Financiers) on 30 April 2014, CDC and Bpifrance Participations SA clarified that they were each acting alone, and CDC declared that there was no collaboration with Bpifrance Participations SA.*

(o) *As of 1 February 2016, Bpifrance Participations on the one hand and NSSMC on the other must respect a 15% cap on their voting rights for a 15-year period, subject to certain reservations.*

FY 2017 (as at 31 December)

Shareholders	Number of shares	% of share capital	Number of theoretical voting rights	% of theoretical voting rights	% of exercisable voting rights at Shareholders' Meetings
Public	297,640,888	64.99%	299,971,735	63.87%	63.90%
Group employees [(a)]	19,197,184	4.19%	20,044,743	4.27%	4.27%
Bpifrance Participations SA [(b)]	66,695,708	14.56%	73,166,786	15.58%	15.59%
CDC Savings Funds Department	7,585,658	1.66%	7,585,658	1.62%	1.62%
GROUP SUBTOTAL, CDC [(c)]	**74,281,366**	**16.22%**	**80,752,444**	**17.20%**	**17.20%**
Nippon Steel & Sumitomo Metal Corporation [(b)]	66,695,715	14.56%	68,668,849	14.62%	14.63%
Treasury shares [(d)]	172,607	0.04%	172,607	0.04%	0.00%
TOTAL	**457,987,760**	**100.00%**	**469,610,378**	**100.00%**	**100.00%**

(a) *The stake of Group employees as at 31 December 2017 includes all of the shares subscribed via company mutual funds under the international employee share ownership plans that have been implemented by the Group over the last 10 years, which include allocated shares at that date. Recall that under the leveraged formula of these plans, the performance multiple on their Vallourec shares is obtained thanks to a transfer of the discount on dividends and other financial rights related to ownership of the shares to the bank structuring the transaction through a swap contract. As at 31 December 2017, 15,966,628 non-allocated shares appeared in the assets of the company mutual funds, an employee stake of 3.40% in capital and 3.58% in voting rights at that date.*

(b) *As of 1 February 2016, Bpifrance Participations on the one hand and Nippon Steel & Sumitomo Metal Corporation on the other must respect a 15% cap on their voting rights for a 15-year period, subject to certain reservations.*

(c) *Bpifrance Participations, jointly with Caisse des dépôts et consignations (CDC). By letter received by the French securities regulator (Autorité des Marchés Financiers) on 30 April 2014, CDC and Bpifrance Participations SA clarified that they were each acting alone, and CDC declared that there was no collaboration with Bpifrance Participations SA.*

(d) *Treasury shares included the shares appearing in the balance of the liquidity contract handled by Rothschild & Cie Banque. This contract, which had been in effect since 26 June 2012 and concerned 2,481,000 shares, was terminated on 18 December 2017 after the closing of the Euronext Paris market.*

To the best of the Company's knowledge, there are no other shareholders who, directly or indirectly, alone or together, hold more than 5% of the share capital or voting rights.

As at 31 December 2017, Vallourec's free float percentage was 64.99%.

2.3.2 Other persons exercising control over Vallourec

None.

2.3.3 Shareholders' agreements

On 1 February 2016, the Company entered into two shareholders' agreements with Bpifrance and NSSMC, which were intended to regulate the shareholdings of Bpifrance and NSSMC. These shareholders' agreements were entered into for a 15-year term beginning on 1 February 2016 and may be extended for successive five-year periods, with each party having the option of terminating the agreement by giving written notice to the other party no less than six months before the expiration date.

A description of the main provisions of these shareholders' agreements appears in the declarations submitted to the French securities regulator *(Autorité des Marchés Financiers)* regarding the communication of agreements between shareholders, as required by Article L.233-11 of the French Commercial Code *(Code de commerce)*. (These declarations are available on the AMF website: http://www.amf-france.org/.)

The cross-shareholding agreement entered into on 26 February 2009 between Vallourec and Nippon Steel & Sumitomo Metal Corporation (NSSMC) was terminated in light of Vallourec's disposal of its stake in the capital of NSSMC.

2.3.3.1 Shareholders' agreement with Bpifrance

Governance: under the shareholders' agreement, Bpifrance has the right to request the appointment (and, where necessary, the renewal) of a representative to the Company's Supervisory Board, as long as Bpifrance holds more than 5% of the Company's capital and voting rights. Bpifrance has moreover committed to vote, when the Shareholders' Meeting decides on the appointment of an NSSMC representative to the Company's Supervisory Board, in favor of this appointment.

Commitments relating to ordinary shares: the shareholders' agreement prohibits the transfer of shares to a competitor of the Company and sets out orderly disposal clauses for the sale of shares on the market by Bpifrance or a selected investment service provider. These restrictions are not applicable, subject to certain conditions, in the event of a tender offer or a transfer to an affiliate.

Standstill: the shareholders' agreement is accompanied by a commitment from Bpifrance to limit its stake, individually or in concert, to 15% of the Company's voting rights as from 1 February 2016 and until the expiration date of the shareholders' agreement. Notwithstanding this standstill undertaking, under the shareholders' agreement Bpifrance may continue to benefit, for a four-year period starting on 1 February 2016, from the double voting rights attached to the Company's shares owned by Bpifrance, but it shall not use voting rights in excess of the 15% threshold at any Shareholders' Meeting of the Company. This standstill undertaking shall not apply upon the occurrence of a tender offer or if a third party comes to hold, acting alone or in concert, directly or indirectly, more than 15% of the Company's share capital or voting rights.

Right of first offer: if Bpifrance desires to effect a transfer of the Company's shares to a third party, it shall send the Company a pre-notification in writing. The Company will then have the right to purchase (or cause another party to purchase) the shares offered under the same conditions.

2.3.3.2 Shareholders' agreement with NSSMC

Governance: under the shareholders' agreement, NSSMC is entitled to request the appointment of one representative on the Supervisory Board of the Company at the first Shareholders' Meeting following the redemption of the mandatory convertible bonds into ordinary shares, as long as it holds more than 10% of the share capital and voting rights of the Company. The Company has undertaken to present and recommend a resolution at this Shareholders' Meeting to the effect of appointing an NSSMC representative as a member of the Supervisory Board. This member will be subject to information barriers to prevent the exchange of any competitively sensitive information.

Commitments relating to ordinary shares: the shareholders' agreement prohibits the transfer of shares to a competitor of Vallourec and sets out orderly disposal clauses for the sale of shares on the market by NSSMC or a selected investment service provider. These restrictions are not applicable, subject to certain conditions, in the event of a tender offer or a transfer to an affiliate.

Standstill: this shareholders' agreement is accompanied by a commitment from NSSMC to limit its stake, individually or in concert, to 15% of the Company's voting rights as from 1 February 2016 and until the expiration date of the shareholders' agreement. This standstill undertaking shall not apply upon the occurrence of a tender offer or if a third party comes to hold, acting alone or in concert, directly or indirectly, more than 15% of the Company's share capital or voting rights.

Right of first offer: if NSSMC desires to effect a transfer of its shares in the Company to a third party, it shall send the Company a pre-notification in writing. The Company will then have the right to purchase (or cause another party to purchase) the shares offered under the same conditions.

Industrial agreements: in the event of a termination of the Joint Venture Agreement (shareholders' agreement) in Brazil, the R&D Contract or the trademark license agreement (entered into on 1 April 2007) signed between the Company and NSSMC (and/or their respective subsidiaries) (see Section 3.3.1.3 of this Registration Document for a detailed description of these agreements):

- due to the fault of NSSMC, NSSMC shall transfer all the Company's shares it holds within six months of the occurrence of the termination, subject to the contractual transfer restrictions applicable to the transfer of shares. NSSMC shall not exercise any voting rights relating to its shares during any Shareholders' Meeting held after the occurrence of the termination; and
- due to the fault of the Company, NSSMC shall either file a tender offer for the securities of the Company (by exception to the standstill undertaking), or transfer its shares without applying the restrictions applicable to transfers of shares (subject only to the prohibition to sell the shares to a competitor, which will remain applicable).

2.4 Market for Vallourec's shares

2.4.1 Stock market

The Company's shares are listed in subfund A of the Euronext Paris regulated market (ISIN code: FR0000120354-VK). They are eligible for deferred settlement and are a qualifying investment under French laws on equity savings plans *(Plan d'Épargne en Actions – PEA).*

The Vallourec share is one of the shares traded on the following indexes: SBF 120 and Next 150.

The August 2019 Bonds and September 2024 Bonds are admitted to trading on the Euronext Paris stock market under ISIN codes FR0011302793 and FR0012188456 respectively. The October 2022 OCEANEs (Bonds Convertible into New Shares and/or Exchangeable for Existing Shares) are admitted for trading on the Euronext Access market in Paris under ISIN code FR0013285046. The October 2022 Bonds are admitted for trading on the Euro MTF stock market of the Luxembourg Stock Exchange under the code XS1700480160 (see Section 2.2.6, "Non-equity instruments" above).

2.4.2 Other potential markets

In October 2010, Vallourec set up a sponsored Level 1 American Depositary Receipt (ADR) program in the United States. This initiative demonstrates the Group's intention to broaden its investor base by enabling a larger number of US-based investors to participate in its future development.

An ADR is a US-dollar-denominated marketable security representing shares in a non-US company, which allows American investors to hold shares indirectly and to trade them on securities markets in the United States. Vallourec's ADRs may be traded on the US over-the-counter (OTC) market.

JPMorgan is the custodian bank responsible for administering the ADR program. Technical information about the ADR program is available on the Group's website under the ADR heading. For further information, ADR holders may contact JPMorgan services, as follows:

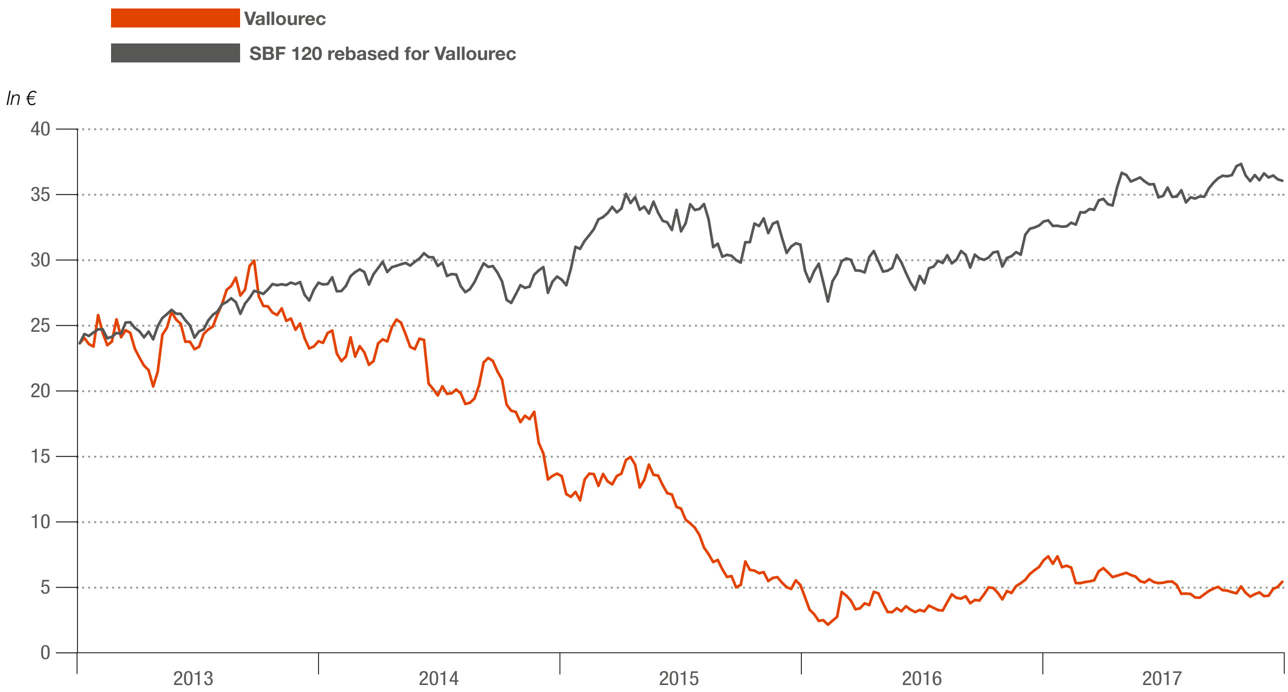
- by phone: (800) 990-1135 (general) or (651) 453-2128 (if calling from outside the USA);
- by e-mail: jpmorgan.adr@wellsfargo.com, or by mail at the following address:

  JPMorgan Service Center
  JPMorgan Chase & Co.

  P.O. Box 64504
  St Paul, MN 55164-0504
  USA

2.4.3 Movements in the share price and market capitalization in the last five years

Vallourec share price performance in the last five years compared to the SBF 120 index



Movements in share price and market capitalization in the last five years

In €	2013	2014	2015	2016	2017
Number of shares outstanding (as at 31 December)	128,159,600	130,597,975	135,688,432	451,238,005	457,987,760
Highest price	51.01	43.26	26.79	6.65	7.47
Lowest price	33.05	21.23	7.63	1.93	4.02
Average (closing) price for the year	41.55	34.80	16.43	3.92	5.40
Year-end price	39.60	22.75	8.60	6.55	5.04
Market capitalization (year-end price)	5,075,120,160	2,971,103,931	1,166,920,515	2,955,608,933	2,305,968,372

Source: Euronext.

2.5 Dividend policy

Vallourec's dividend policy, as approved by the Supervisory Board at its meeting on 17 April 2003, is, over the long term, to distribute on average 33% of its consolidated net income, Group share.

Given the negative result in the 2017 fiscal year, it will be proposed at the Shareholders' Meeting of 25 May 2018 (third resolution) not to pay any dividend for the 2017 fiscal year.

The average payout ratio over the last five years is 16.8%.

Based on the par value of the Vallourec share as at 31 December 2017, the dividends per share paid for the last five years are as follows:

In € per share	Gross earnings	Tax credit	Net dividend	Payout ratio (a)
2013	0.81	None	0.81 (b)	39.6%
2014	0.81	None	0.81 (b)	44.3%
2015	0	None	0	–
2016	0	None	0	–
2017 (c)	0	None	0	–

(a) *The payout ratio is calculated based on the total number of shares outstanding as at 31 December.*

(b) *Note that the Ordinary and Extraordinary Shareholders' Meetings of 30 May 2013, 28 May 2014 and 28 May 2015 gave each of the Company's shareholders the option to receive payment of the dividend in cash or in shares, in accordance with the laws and regulations in force.*

(c) *Submitted for the approval of the Shareholders' Meeting of 25 May 2018.*

2.6 Financial disclosure policy

The Group's priority is to maintain lasting, trustworthy relations with all its shareholders, whether individual or institutional, French or foreign. The role of the Investor Relations team is to facilitate shareholders' access to accurate and precise information that faithfully reflects the Group's activities, results, outlook and strategic developments.

Accordingly, and with ongoing concern for clarity and transparency, numerous dedicated communications media are available, and regular meetings are arranged throughout the year.

2.6.1 Information available to all shareholders

Financial information and communications media are electronically available to all shareholders on the Group's website (www.vallourec.com) under the Investors heading, which is an authoritative Group financial communications database. This media includes:

- the activity report, *Vallourec at a glance* brochure and letters to shareholders;
- all financial and strategic information issued to the financial markets, including quarterly results, press releases, financing, presentations and audio broadcasts of the annual results, and video broadcasts of the Shareholders' Meeting;
- all the regulated information disclosed under the European Transparency Directive of 15 December 2004 as amended, which specifically comprises:
  - the Registration Document, including the annual financial report, the half-year report and the management report of the Management Board, filed with the French securities regulator *(Autorité des Marchés Financiers)*,
  - documents relating to the Shareholders' Meeting (Notice of Meeting, draft resolutions, voting form, meeting brochure);
- all Group press releases, presentations and publications, which are available under the Media heading.

This information may be sent by mail following a request made on the Group website or addressed to the Investor Relations Department by e-mail, telephone or letter.

Annual Shareholders' Meeting

The Annual Shareholders' Meeting, which in 2017 was held at Maison de la Mutualité, is a key opportunity for dialog about the Group's performance over the year between shareholders and the Group's executive management. The Investor Relations team is also available to assist shareholders in their efforts to vote and participate in the Shareholders' Meeting.

Newsfeed

When disseminating its publications, Vallourec provides its shareholders and stakeholders with the possibility of subscribing to a Group newsfeed via the Internet at www.vallourec.com (Investors heading), through a simple online registration process. The newsfeed allows press releases on the Group's financial results and activities to be received electronically, along with notifications of financial publications and letters to shareholders.

2.6.2 Relations with institutional investors and financial analysts

On a regular basis and in accordance with best business practices, the Investor Relations Department organizes, along with various members of the Group's executive management, meetings with institutional investors and financial analysts, including SRI (socially responsible investment) specialists, in France and abroad:

- **each quarter, a conference call is organized** when the financial results are released. Members of the Management Board present the results and answer questions from analysts and investors. The conference call is broadcast live and rebroadcast on the Group's website;
- **each year, a face-to-face meeting is held in Paris,** upon release of the Group's annual results;
- **Vallourec regularly participates in events on socially responsible investment (SRI).** These meetings with investment funds and SRI analysts contribute to the Group's progress in the field of sustainable development;
- **an Investor Day is regularly organized,** where a presentation is made to the financial community on the Group's strategy, products and operations. Accessible to everyone in the form of a video broadcast that is available on the Group's website, the Investor Day allows investors and analysts to have detailed discussions with the Management Board and the operational supervisors on a wide range of topics, outside of the periods for reporting results.

Moreover, **many events are organized throughout the year between the Group's executive management and the financial community**. In 2017, Vallourec's executive management and the Investor Relations team took part in nearly 306 meetings and conference calls, and devoted some 29 days to roadshows and conferences, which were mainly dedicated to the oil and gas sector, at the world's leading financial centers, mainly in Europe and the United States.

2.6.3 Relations with individual shareholders

The Group seeks to promote a sustained dialog with its individual shareholders and strengthen the trusting, close relationships it has built with them. This dialog also helps Vallourec better understand the concerns of its individual shareholders, and to meet their expectations.

To that end, and through various additional media, specific communications methods were developed:

- an Individual Shareholders' section under the Investors heading of the Group's website (www.vallourec.com);
- the posting of financial notices in conformity with the current regulations (release of results, Notice of Shareholders' Meetings);
- specific communications media such as letters to shareholders;
- a dedicated toll-free number for individual shareholders (0800 505 110, free from any landline in mainland France), which allows them to access information such as the financial agenda, as well as to hear a commentary on the most recent publication of the Group's results. The toll-free number also allows shareholders to get in touch with the Investor Relations and Financial Communication team, or BNP Paribas Securities Services, if the shareholder has registered shares or is interested in acquiring such shares;
- a newsfeed which allows press releases, notifications of financial publications as well as letters to shareholders to be received electronically, simply by registering online at www.vallourec.com (Investors heading);
- a presence at the Actionaria Exhibition on 23 and 24 November 2017. The Investor Relations team, along with the business line experts, was thus able to present or reintroduce business lines, know-how and solutions of the Group, and to speak with the individual shareholders;
- a Shareholders' Club allowing members to participate in meetings dedicated to presenting financial results and to having more regular exchanges with Vallourec in order to gain a better knowledge and understanding of its activities. The Shareholders' Club and the conditions for joining and registering are accessible online at www.vallourec.com (Investors/Individual Shareholders heading);
- lastly, an Investor Relations team is always available to answer shareholders' questions.

Directly registered shares

Vallourec offers its shareholders direct registration of their shares, which includes the following benefits:

- **free management:** direct registered shareholders are totally exempt from custody fees as well as other fees associated with the routine management of their shares such as:
  - conversion to bearer shares and share transfers,
  - changes to legal status: transfers, gifts, inheritance, etc.,
  - securities transactions (capital increases, share allocations, etc.),
  - dividend payments;
- **brokerage fees** of 0.25% of the amount of the transaction up to €200,000 and 0.15% above €200,000 (with a minimum of €4.10);

- **a guarantee of receiving personalized information:** the directly registered shareholder will receive personalized information on:
  - invitations to Shareholders' Meetings, with systematic sending of the Notice of Meeting, an individual form for postal voting or voting by proxy, and, upon request, the sending of an admission card and legal documentation,
  - securities management (purchase and sale orders, etc.), securities transactions organized by Vallourec, etc. To this effect, as well as for other information, a team of dedicated operators is continuously available to shareholders from 8:45 a.m. to 6:00 p.m. (Paris time), Monday to Friday, at +33 (0)1 40 14 80 17;
- **easy access to the Shareholders' Meeting:** all registered shareholders are automatically invited to Shareholders' Meetings, and are not required to first request a certificate of shareholding to vote;
- **a dedicated website,** Planetshares, can be accessed at: https://planetshares.bnpparibas.com. This site allows you to:
  - manage your assets,
  - issue orders,
  - participate in the Shareholders' Meeting,
  - directly download all communications relating to assets (portfolio trading, transaction notices, etc.).

Further information about direct registration and registration forms may be obtained from BNP Paribas Securities Services:

- by mail at the following address:

  BNP PARIBAS SECURITIES SERVICES

  Corporate Trust Services
  Relations Actionnaires Vallourec
  9, rue du Débarcadère
  93761 Pantin Cedex – France
- by telephone at: +33 (0)1 40 14 80 17
- by fax at: +33 (0)1 55 77 34 17

2.6.4 Contact for Investor Relations and Financial Communications

Investor Relations Department

- Address: 27, avenue du Général-Leclerc – 92100 Boulogne-Billancourt – France
- Telephone: +33 (0)1 49 09 39 76
- E-mail: investor.relations@vallourec.com or actionnaires@vallourec.com

2.6.5 2018 Financial calendar (dates subject to change)

17 May 2018	Release of results for Q1 2018
25 May 2018	Shareholders' Meeting
25 July 2018	Release of results for Q2 and H1 2018
15 November 2018	Release of results for Q3 and 9M 2018

3

Presentation of Vallourec and its Group

3.1 History and development of Vallourec and its Group

The Vallourec Group is over 100 years old, with some Group companies having been established in the last decade of the nineteenth century. Vallourec originated in two regions of France, both with long manufacturing traditions, where the Group still has a significant presence: the Nord region, around Valenciennes and Maubeuge, and the Burgundy region around Montbard, on the Côte-d'Or. Since the end of the 1990s and the creation of the joint venture between Vallourec and Mannesmann, the Group has also been widely established in the Düsseldorf region in North Rhine-Westphalia (Germany) and in the region of Belo Horizonte in the state of Minas Gerais, Brazil. In the first decade of the new millennium it strongly developed its positioning in North America and established itself in Asia. Also present in Africa and the Middle East, Vallourec is now an international group, operating close to its customers.

1886-1930: INVENTION OF THE SEAMLESS STEEL TUBE ROLLING PROCESS

In 1886, the Mannesmann brothers filed a patent which revolutionized the tube industry: thanks to a rolling mill with an oblique cylinder piercer, they were able to produce seamless steel tubes.

In the late 19th century, in France, tube manufacturers began to adopt the seamless tube manufacturing process that had been perfected by the Mannesmann brothers in Germany. The Société Métallurgique de Montbard was created in 1899 to take over Société Française de Fabrication des Corps Creux, which had operated a plant in Montbard since 1895. Listed on the Paris Stock Exchange since its founding in 1899, in 1907 it was renamed Société Métallurgique de Montbard-Aulnoye, which changed to Louvroil-Montbard-Aulnoye in 1937 after the takeover of Louvroil et Recquignies, itself a company resulting from a merger between Société Française pour la Fabrication des Tubes de Louvroil, founded in 1890, and Société des Forges de Recquignies, established in 1907.

1930: BIRTH OF VALLOUREC

The economic crisis prompted French tube manufacturers to join forces. The name Vallourec appeared for the first time as the name of a management company for tube plants in Valenciennes, Denain, Louvroil and Recquignies.

1957: LISTING OF VALLOUREC ON THE PARIS STOCK EXCHANGE

The Société des Tubes de Valenciennes and Société Louvroil-Montbard-Aulnoye merged. This Group became the second biggest manufacturer of steel tubes in France, and was listed on the Paris Stock Exchange under the name Vallourec.

1965: LAUNCH OF THE VAM® CONNECTION

A major innovation, the VAM® connection (named for Vallourec and Alexandre Madrelle, the engineer who developed the connection) revolutionized the oil industry. Thanks to unique mechanical features, it ensures complete sealing of the strings inside the well.

1976: INDUSTRIAL PARTNERSHIP WITH SUMITOMO

The development of the oil market prompted Vallourec to build industrial partnerships in order to meet its customers' demand worldwide. In 1976, Vallourec signed a licensing agreement with the Japanese group Sumitomo (the third largest producer of steel tubes worldwide) and created a joint venture with it in 1984 to produce and market VAM® connections on the other side of the Atlantic. These agreements were the starting point for an ongoing collaboration.

1997: CREATION OF THE JOINT VENTURE BETWEEN VALLOUREC & MANNESMANN TUBES

Created in 1890, shortly after the Mannesmann brothers' revolutionary discovery of the seamless steel tube rolling process, Mannesmannröhren-Werke AG quickly became a world benchmark. The formation of Vallourec & Mannesmann Tubes, a joint subsidiary of Vallourec (55%) and the German company Mannesmannröhren-Werke (45%), allowed the two companies to offer their customers the widest range of tube sizes in the world.

2000: DEVELOPMENT IN BRAZIL

Vallourec & Mannesmann Tubes acquired the Brazilian subsidiary Mannesmannröhren-Werke, now known as Vallourec Soluções Tubulares do Brasil.

2002: STRENGTHENING OF THE GROUP'S PRESENCE IN THE UNITED STATES

Established since 1984 in the United States, the reference market for tubes for oil and gas well equipment (Oil Country Tubular Goods – OCTG), Vallourec has significantly strengthened its presence in the United States through the acquisition of the seamless steel tube activity of North Star Steel Company (North Star Tubes), which includes an electric steel mill and a tube mill in Youngstown (Ohio), along with a heat treatment and threading unit in Houston (Texas). Now called Vallourec Star, this company is 80.5% controlled by Vallourec Tubes and 19.5% controlled by Sumitomo Corporation.

2005: ACQUISITION BY VALLOUREC OF COMPLETE CONTROL OF VALLOUREC & MANNESMANN TUBES

Vallourec gained full control of Vallourec & Mannesmann Tubes through the acquisition of the 45% stake held by Mannesmannröhren-Werke for €545 million. This major transaction gave Vallourec full control over implementing the strategy of the joint venture.

2005-2006: STRENGTHENING OF THE DRILLING TUBE ACTIVITY

Vallourec acquired the assets of the Omsco Division of ShawCor in the United States (Houston). This acquisition allowed Vallourec to become the second largest drilling tube operator for the Oil & Gas market in the world. This position was strengthened in 2006 with the acquisition of SMFI (Société de Matériel de Forage International) in France. These activities were combined under the name Vallourec Drilling Products.

2006-2011: EXPANSION IN CHINA

In an effort to pursue its growth in the area of tube production for the Power Generation market, in 2006 Vallourec opened a subsidiary, Vallourec Changzhou Co., Ltd, which was established in Changzhou, China, specialized in the cold-finishing of large-diameter seamless alloy steel tubes, produced in Germany for power plants.

In the same year, VAM Changzhou Oil & Gas Premium Equipments was created to operate a mill in Changzhou for threading tubing to equip oil and gas wells. Production began in mid-2007.

In an effort to further strengthen its presence on the Chinese market, in 2011 the Group acquired 19.5% of Tianda Oil Pipe Company Limited (TOP), a Chinese manufacturer of seamless tubes, listed on the Hong Kong Stock Exchange. Under the terms of a cooperation agreement with TOP, VAM Changzhou Oil & Gas Premium Equipments threads premium tubes manufactured locally by TOP for the Chinese premium OCTG market.

2008: ACQUISITIONS IN THE UNITED STATES

To strengthen its positions in products with high added value, Vallourec acquired Atlas Bradford® Premium Threading & Services, TCA® and Tube-Alloy from Grant Prideco. These companies are specialized, respectively, in the production of premium connections, the heat treatment of high-grade alloy steel tubular products, as well as the production and repair of accessories used inside oil and gas wells, and in complex threading operations. In 2009, Atlas Bradford® Premium Threading & Services and TCA® merged with VAM USA LLC and Vallourec Star respectively.

2009-2010: NEW TUBE PRODUCTION CAPACITIES FOR NUCLEAR POWER PLANTS

Valinox Nucléaire, a Vallourec subsidiary specialized in the manufacturing of steam generator tubes, invested in new production capacities in Montbard (Côte-d'Or, France) to meet the growing needs of the nuclear energy market. In order to assist in the strong growth of the Chinese nuclear fleet, Valinox Nucléaire also invested in a new production unit in Guangzhou, in the southeast of China.

2009-2010: DEVELOPMENT IN THE MIDDLE EAST

In 2009, Vallourec acquired DPAL FZCO, a drill pipe supplier established in Dubai. This acquisition allowed Vallourec Drilling Products to increase its presence in the Middle East and to supply local and international customers of the Group. In 2010, the Group acquired the Abu Dhabi-based Protools, the biggest drill pipe accessories producer in the Middle East, thus enabling it to offer comprehensive solutions for the whole drill string.

2010: CONSOLIDATION OF THE PREMIUM SOLUTIONS OFFER

Vallourec acquired Serimax, the world leader in welding solutions for offshore line pipes. This acquisition supplemented Vallourec's activities in the area of offshore line pipes and allowed the Group to offer its customers integrated solutions.

2011: STRENGTHENING OF THE GROUP'S INDUSTRIAL PRESENCE IN BRAZIL AND THE MIDDLE EAST

In 2011, the new integrated joint industrial site for Vallourec & Sumitomo Tubos do Brasil was commissioned at Jeceaba, in the state of Minas Gerais, Brazil. This premium industrial site includes a steel mill, a tube mill, and a group of heat treatment, threading and finishing lines.

In the same year, Vallourec acquired Saudi Seamless Pipes Factory Company Ltd, the leading processing and finishing company for seamless OCTG tubes in Saudi Arabia. Vallourec thus became the leading player in the OCTG market to have local access to integrated heat treatment and threading facilities, to which it added a new threading line of VAM® connections.

2012: PARTICIPATING IN THE DEVELOPMENT OF UNCONVENTIONAL HYDROCARBONS IN THE UNITED STATES

Vallourec began operating a new premium small-diameter tube mill in Youngstown (Ohio), thereby covering a full range of products and services necessary for the production of all hydrocarbons, especially those relating to shale oil and gas.

2013: VALLOUREC, THE SINGLE BRAND FOR ALL COMPANIES OF THE GROUP

Since the formation of the joint venture Vallourec & Mannesmann Tubes, numerous entities of the Group operated under the V & M brand. In 2013, in an effort to contribute to strengthening its world leadership and assisting its growth strategy, Vallourec combined all of its entities under the same name: Vallourec, attesting to the successful consolidation of the numerous companies acquired by the Group worldwide.

2014: VALLOUREC IS BOOSTING ITS SALES IN AFRICA

Having established a presence in Angola via a service center since 2007, Vallourec opened a sales office in Nigeria and a premium tube threading plant in 2009. This presence led to the signing in 2014 of three major contracts in Africa for the supply of subsea line pipes and premium tubular solutions for use in highly complex deepwater offshore projects in Ghana, Nigeria and Angola.

2015: VALLOUREC DEPLOYS VALENS, ITS TWO-YEAR COMPETITIVENESS PLAN

At the beginning of 2015, Vallourec announced that it had launched "Valens", a two-year competitiveness plan aimed at cost reduction and cash flow optimization.

In parallel, Vallourec launched a streamlining process for its European steel tube production units.

2016: VALLOUREC ACCELERATES ITS TRANSFORMATION AND ANNOUNCES MAJOR STRATEGIC INITIATIVES

On 1 February 2016, Vallourec announced major strategic initiatives to transform its operational set-up, improve its competitiveness in the short and longer term, and reinforce its financial structure to secure long-term profitable growth and create value for its shareholders. Vallourec is thus streamlining its industrial footprint in Europe and Brazil, acquiring control of Tianda Oil Pipe in China, and has raised nearly €1 billion through a capital increase. These strategic initiatives are described in Section 3.6 "Transformation Plan" of this Registration Document.

2017: VALLOUREC IS CONTINUING ITS TRANSFORMATION

Throughout the period, Vallourec continued its transformation, notably through the establishment of a new organization structured around four regions and two central departments, and the rollout of new production channels. Vallourec also strengthened its liquidity profile by raising €800 million on the bond and convertible bond markets. The significant events of fiscal year 2017 are described in detail in Section 3.5 "Significant events in 2017" of this Registration Document.

3.2 The Group's activities

The Group is a world leader in premium tubular solutions, primarily for the energy markets and other industrial applications. With 19,500 employees in 2017, integrated production sites, state-of-the-art Research and Development (R&D) and a presence in over 20 countries, the Group offers its customers innovative global solutions tailored to the energy challenges of the twenty-first century.

Originally based in France and Germany, Vallourec now has frontline positions in the United States, Brazil, Europe, the Middle East and Asia. With more than 50 production units and finishing lines around the world, Vallourec has integrated sites combining steel mills and tube mills in the United States and Brazil.

3.2.1 Products and services

3.2.1.1 Overview

The Group is a world leader in premium tubular solutions – high-performance solutions whose manufacture requires significant technological and industrial expertise – in addition to related specialized services that provide customers with a complete range of innovative solutions to meet their strictest requirements. The Group has a large portfolio of tubular products that is diversified, original and has high added value, including:

- a range of seamless tubes that is among the most extensive in the world, up to 1,500 mm in external diameter, with a variety of more than 250 steel grades;
- specialty tubes; and
- connections and accessories.

The Group offers products in many sizes and proportions (i.e., length, diameter, and thickness), as well as varied composition grades (such as high-grade and low-grade carbon steel alloys, stainless steel and nickel alloys, etc.), enabling it to offer its customers a wide range of tubular products and solutions.

The Group offers products and services for the following three markets:

- Oil & Gas;
- Power Generation; and
- Industry (Mechanicals, Automotive and Construction).

Developments in these three markets in 2017, and the outlook for these markets going forward, are presented in Section 3.4 of this Registration Document.

3.2.1.2 Products and services for the Oil & Gas market

PRODUCTS FOR THE OIL & GAS MARKET

Vallourec offers a line of tubular solutions to the oil and gas industry that satisfies the strictest requirements and covers the entire chain of production, from exploration to production and transport of oil and gas.

The Group's premium product lines are adapted to the most challenging extreme and increasingly complex environments, such as:

- deep wells;
- corrosive environments;
- deviated and horizontal wells;
- HP/HT (high pressure/high temperature); and
- offshore drilling[1].

The Group's products and services cover the entire production chain of the Oil & Gas sector: exploration, development and production, transport and processing:

- **OCTG:** Vallourec OCTG (Oil Country Tubular Goods) products are seamless threaded tubes that are found in a large number of oil and gas wells throughout the world (casing and tubing). The tubes are generally connected using premium threaded VAM® connections, which are trademarked by Vallourec;
- **drilling[1]:** Vallourec offers all types of drilling equipment: drill pipe, downhole tools and accessories;
- **transport and processing:** gas and oil are transported from the well to the processing units, whether offshore or onshore, using Vallourec tubes and accessories. Its stainless steel, super duplex welded tubes for umbilical applications connect seabed equipment to the control station at the surface.

Tubes and accessories for the Oil & Gas market

Oil Country Tubular Goods ("OCTG")

For production phases, the Group offers OCTG products, threaded tubes designed for oil and gas well equipment. The OCTG products produced by the Group include casing, which consists of tubes that are assembled using sealed connections to form a column supporting the walls of an oil or gas well. The Group also offers tubing, consisting of steel tubes, smaller in diameter, assembled using leak-tight connections to form a production string used to lift the fluids produced from the bottom of the well towards the surface.

The sealed assembly of OCTG premium tubes relies on VAM® connections offered by the Group (described below in the section on VAM® Connections). These connections have technical characteristics that enable them to withstand the strong forces that the OCTG products are subjected to under extreme conditions.

OCTG activities are being developed in Europe, Africa, the Middle East and Asia, as well as in North America and South America. Each region integrates steel production, tube rolling, and heat treatment and threading facilities.

(1) *In a press release dated 11 December 2017, Vallourec announced that it had received a binding offer for the purchase of its "Drilling Products" business from the American oil services group National Oilwell Varco (NOV). Vallourec's actual sale of this business to NOV should occur in the first half of 2018.*

Drilling[1]

The Group offers a complete range of products and services related to its tubular drilling products to support all types of activities for the Oil & Gas drilling market. This includes an exclusive modular set of drill pipes and API drill pipes (corresponding to the norms of the American Petroleum Institute), heavyweight drill pipes, drill collars, non-magnetic drill collars, and drilling accessories, including safety valves and other drilling accessories. The Group also provides after-sale products and customer services for the maintenance and repair of drilling equipment at certain of its locations worldwide.

VAM connections®

VAM® connections, used for Oil & Gas activities, are premium threaded connections invented and patented by Vallourec. They provide tubes with connections that are resistant to pressure and compression and ensure a perfect seal.

The development of the VAM® connections is a joint activity of Vallourec and Nippon Steel & Sumitomo Metals Corp. (NSSMC). This cooperation has helped make the VAM® brand a global standard on the OCTG market. The launch of the VAM® 21, a premium threaded connection which meets the most stringent industry specifications (ISO CAL IV), and a new Cleanwell Dry® dropfree dry lubrication solution, are a reflection of this dynamic partnership. The cooperation between Vallourec and NSSMC was reinforced as part of the strategic initiatives announced on 1 February 2016 (see Section 3.6 "Transformation Plan" of this Registration Document).

Vallourec filed the first VAM® patent in 1965. Since then, the Group has developed more than thirty VAM® product lines, covering all applications and enabling the Group to adapt to highly diverse environments, including:

- VAM® 21: available in diameters of 5 to 14 inches (approximately 10 to 30 centimeters). This innovative connection, which is as resistant as the tube itself, was the first to offer performance meeting the CAL-IV standard defined in the most recent changes to ISO 13679 and API RP 5C5, two technical specifications required by Oil & Gas customers for their harshest-condition applications. New versions are constantly being added to respond to specific needs, such as versions with high torque capacity or versions dedicated to thick tubes. The connection has been used successfully on the most demanding offshore projects from the Gulf of Mexico to the coast of West Africa, in a large range of sizes (for tubing and casing applications) and grades of steel;
- VAM® HTTC: designed for strongly deviated wells with long horizontal sections, the VAM® HTTC (High Torque Threaded and Coupled) connection for casing and tubing resists extreme torques and compressions when the column is installed and maintains a perfect seal during production phases. Available in various dimensions, the premium VAM® HTTC connection is a high value-added product that makes the most complex horizontal drilling both possible and secure;
- VAM® SG and VAM® EDGE SF: the Group is very involved with non-conventional oil and gas deposits in the United States and has developed connections to address these highly specific needs. VAM® SG is a premium connection for wells with average length horizontal sections (2,000 to 5,000 feet). VAM® EDGE SF, qualified in 2013, is a high-end connection that is suited for longer horizontal sections (up to 10,000 feet). Its technical characteristics are perfectly tailored to this type of drilling, in particular boasting better resistance to tension and to high torque, as well as gas tightness in compliance with the strictest ISO standards;
- VAM® BOLT is a premium integral connection for large-diameter casing. Its mechanical integrity and seal make it especially well-suited to high-pressure, high-temperature deepwater wells, which are common in the Gulf of Mexico, off the Brazilian coast and in the Gulf of Guinea, as well as in North Africa and the Asia Pacific region;
- Vallourec has expanded its high-performance integral connection offerings. With an expanded performance range and validated under the strictest standards, VAM® SLIJ-II, VAM® HTF-NR, can be found in many of the most difficult wells;
- in 2017, the Group pursued an ambitious research program on CLEANWELL®, a dry coating applied to VAM® connections which provides grease-free lubrication and protects the threading from corrosion during transport and storage. The second generation of CLEANWELL® technology, put on the market in 2016, was successfully used in 2017 as part of an offshore project in the North Sea.

To make the VAM® range a leader in premium joints, Vallourec consolidated coordination of the Research and Development Departments involved with this product line under Vallourec Oil & Gas France, and set up a worldwide network of licensees. To accomplish this ambitious program of research on OCTG connections, in 2016 the Group completed a major project to increase testing capacity in France, the United States and Brazil.

The Group also continued to develop its site services network, which provides worldwide coverage from service centers based in Scotland, the United States, Mexico, Singapore, China, Angola, Nigeria and the Middle East. Since 2008, Vallourec has also produced petroleum accessories related to the VAM® joint through its subsidiary Vallourec Tube-Alloy, LLC (USA). This expertise is deployed in Mexico, Brazil, France, Singapore and Indonesia to provide, as a complement to its network of licensed partners, global coverage for accessory requirements to meet customer needs for the VAM® joint.

Development of high-performance steels for OCTGs

To combat corrosion in oil and gas wells, major research programs are underway to create high-tensile carbon steels resistant to H_2S (hydrogen sulfide) corrosion. A program is also underway to develop CRA (Corrosion-Resistant Alloy) and chrome alloys for the most critical corrosive conditions. These developments require significant testing resources, which the Group has doubled over the last three years.

(1) In a press release dated 11 December 2017, Vallourec announced that it had received a binding offer for the purchase of its "Drilling Products" business from the American oil services group National Oilwell Varco (NOV). Vallourec's actual sale of this business to NOV should occur in the first half of 2018.

Tubes and accessories for transportation of oil & gas

The Group's product line for transportation includes the following:

- rigid subsea line pipes (production and injection lines known as flowlines, which are pipes that rest on the seabed for the transport of production or injection fluids, and risers, which bring fluids up from the wellhead to the surface and then connect them to processing units);
- onshore rigid line pipes;
- specialized tubes for umbilicals, through its subsidiary Vallourec Umbilicals – France, which manufactures and sells super duplex welded (stainless steel) tubes for umbilicals, which are structures comprising tubes, cables and/or optical fibers that are used to connect seabed equipment to a control station at the surface for applications in the offshore oil industry; and
- process tubes.

Tubes for the processing of industrial fluids and hydrocarbons

The Group offers a wide range of carbon steel and steel alloy tubes, as well as hollow bars (semi-finished tubes for later processing into a product that meets the needs of a specific market) and connections adapted to the needs of each project.

In particular, for petrochemicals, the Group is a supplier of seamless tubes for refineries, petrochemical facilities, floating liquefied natural gas (LNG) plants, and production, storage and offloading units (FPSO).

SERVICES FOR THE OIL & GAS MARKET

To respond to the needs of its customers (operators, engineering firms, and distributors) in terms of efficiency, cost and integrity, Vallourec services has increased its offerings to include innovative solutions tailored to specific project needs, such as on-site offshore and onshore welding, coating, bending, and complex project management.

As a result, Vallourec offers a series of services to its customers through Vallourec Global Solutions, which assists customers and provides them with the benefit of Vallourec's know-how throughout the lifetime of the facility. These services include:

- the VAM® Field Service offering, which includes more than 160 technicians and engineers in 17 locations throughout the world, available 24 hours per day at the well site to assist customers in lowering tubes, inspecting connections, and supervising assembly. Furthermore, the Group has entered into partnerships with more than 200 licensees to repair Vallourec products and thread tubes with VAM® on all oil accessories;
- inventory management, in which Vallourec's logistics engineers can manage, at the customer's request, their tubular product inventory and coordinate the preparation of tubes to be sent to the platform;
- advisory services in which Vallourec provides guidance including with respect to well design. Vallourec experts recommend the best tailored tubing and casing (in terms of sizing and steel grade) to customers and the connections that best respond to the requirements of the well;
- training sessions in which "Tubular Essentials" are provided by the Group's experts to teach operators best practices for optimal use of tubes and connections, handling, and inventory management.

The Group can also offer a series of tailored services adapted to the customer's needs including tube inspection, maintenance and repair, on-site services, preparation for drilling operations, and well coordination and supply based on the drilling plan. For example, Vallourec has delivered projects in which it managed execution of all of the tube production, coating, welding, and manufacture of the line pipe to be installed in the water.

The Group also offers specific integrated solutions for the subsea line pipe market, including welding, coating, insulation, logistics and service agreements that may be specifically entered into depending on the customer's needs. In partnership with a thermal insulation specialist, Vallourec provides line pipes using pipe-in-pipe technology, in which the line pipe is covered with an insulating, high-performance material and then inserted into another tube. This technology keeps oil and gas at the proper temperature to ensure that it flows properly during transport from the wellhead to the production platform.

In addition, the Group offers tube coating and welding services on site, primarily through the following subsidiaries:

- Serimax – France, a global leader in integrated welding solutions for offshore line pipes, with an international presence consisting of service units close to project sites. Serimax relies on its new welding research centers in order to develop joint research programs with its customers and to respond to projects' increasing technical requirements;
- Serimax Field Joint Coating – UK, which carries out coating activities on the end-to-end welded section of line pipes both onshore and offshore on installation vessels, complementing the welding solutions offered by Serimax.

3.2.1.3 Products and services for other markets

The Group offers complete solutions for the power generation market and for the industrial market (mechanical, automotive and construction).

PRODUCTS AND SERVICES FOR THE POWER GENERATION MARKET

Vallourec's tube portfolio for the Power Generation market is one of the largest in the world. For conventional thermal power plants, new generation "ultra-supercritical" coal plants, or nuclear power plants, Vallourec responds to the different needs of power producers.

The Group offers its customers seamless tubes for boilers and steam generators, in all sizes and all grades, from carbon steel to nickel alloy, through high alloy steel. The tubes cover all the carbon steel grades required in power plants and the entire size range, from small diameters for boiler tubes to very large diameters for steam pipes.

Vallourec's products respond to the challenges of power producers, and the Group's services support their performance, from logistics to risk assessment and customer-specific training.

PRODUCTS AND SERVICES FOR THE INDUSTRIAL MARKET

Products offered to customers in the industrial market are designed for highly varied mechanical, automotive and construction uses. The Group produces tubes, hollow bars (semi-finished tubes for later processing into products meeting the needs of a specific market), and sections (circular, square, rectangular or octagonal sections for a vast array of applications), in all sizes and grades of steel. Its offerings respond to the needs of the most varied and demanding industrial applications with special grades of steel.

Vallourec's premium tubular solutions are found in much infrastructure construction: bridges, stadiums, airports and other ambitious architectural projects. The mechanical industry uses Vallourec's tubes and rings to manufacture cranes and agricultural machinery. Automotive manufacturers equip their heavy-weight and light-weight vehicles with the Group's tubes and axles. The energy sector also relies on the Group to build its offshore jack-up platforms. Lastly, Vallourec also participates in various innovation projects concerning renewable energies, such as, for example, solar or hydrogen energy.

3.2.2 Markets and customers

3.2.2.1 Vallourec's markets

The Group's principal market is the Oil & Gas and Petrochemicals market, representing 68.5% of the Group's revenue in 2017. The table below shows the breakdown of the Group's revenue by market in 2016 and 2017.

In € million	2016	% of revenue	2017	% of revenue
Oil & Gas	1,791	60.4%	2,299	61.3%
Petrochemicals	129	4.4%	268	7.2%
Total Oil & Gas and Petrochemicals	**1,920**	**64.8%**	**2,567**	**68.5%**
Power Generation	**486**	**16.4%**	**408**	**10.9%**
Mechanicals	279	9.4%	368	9.8%
Automotive	101	3.4%	144	3.8%
Construction & other	179	6.0%	263	7.0%
Industry	**559**	**18.8%**	**775**	**20.6%**
TOTAL	**2,965**	**100.0%**	**3,750**	**100.0%**

For an analysis of changes in the market, see Section 3.4 "Market environment" and for an analysis of the variation in the Group's revenue by market, see Section 3.7, "Results of operations" of this Registration Document.

3.2.2.2 Geographic regions

The Group's products are sold to customers throughout the world, principally in Asia and the Middle East (31.3% of the Group's revenue in 2017), and in North America (27.6%). The table below shows the breakdown of the Group's revenue by geographic region in which products were sold in 2017.

In € million	2016	% of revenue	2017	% of revenue
France	91	3.1%	105	2.8%
Germany	280	9.4%	279	7.4%
Other EU countries[(a)]	276	9.3%	210	5.6%
Total Europe	**647**	**21.8%**	**594**	**15.8%**
North America	**559**	**18.9%**	**1,033**	**27.6%**
Brazil	456	15.4%	599	16.0%
Other Central & South America	11	0.3%	13	0.3%
Total South America	**467**	**15.7%**	**612**	**16.3%**
China	257	8.6%	451	12.0%
Other Asia and Middle East	591	20.0%	724	19.3%
Total Asia and Middle East	**848**	**28.6%**	**1,175**	**31.3%**
CIS	27	0.9%	30	0.8%
Rest of the world	417	14.1%	306	8.2%
Total Rest of the world	**444**	**15.0%**	**336**	**9.0%**
TOTAL REVENUE	**2,965**	**100.0%**	**3,750**	**100.0%**

(a) Other European Union countries, excluding Germany and France.

For an analysis of the variation in the Group's revenue by geographic region, see Section 3.7, "Results of operations" of this Registration Document.

3.2.2.3 Principal customers

The Group's most important customers include:

- in the Oil & Gas market, international oil companies (for example Total, Chevron, Exxon and Shell), national companies (such as Aramco, Adnoc, Petrobras or Sonatrach), private independent companies, American distributors (like B&L Pipeco, Premier Pipe, Champions and Pyramid) and engineering and construction companies (for example Petrofac and TechnipFMC);
- in the Power Generation market, European and Asian suppliers of boilers and equipment (for example Dong Fang, Doosan, MHSP and Areva); and
- in the Industry market, European and international distributors (for example ThyssenKrupp, Hoberg & Driesch, Van Leeuwen and Buhlmann).

In certain geographical markets, and in particular in the United States and in Germany, the Group's principal customers are distributors. In the rest of the world, the Group's customers are end-users.

In 2017, the Group's 10 largest customers represented 28% of consolidated revenue, and the five largest customers represented 20% of consolidated revenue.

3.2.3 Information on the competitive position of the Company

The information below is broken down into the various markets in which Vallourec participates. It is based on the Group's internal analyses and constitutes the Group's own estimates.

See Section 5.1.4 "Risks related to competition" of this present Registration Document.

3.2.3.1 Oil & Gas

Valllourec operates in three markets: threaded seamless tubes for the equipment of oil and gas wells used for exploration and production (OCTG), drill pipe, offshore and onshore line pipes for oil and gas transportation:

- in the OCTG market, Vallourec is among the world's leading suppliers of premium products in terms of volumes delivered:
  - in the market for premium connections that satisfy demanding technical performance criteria, the VAM® ranges produced in cooperation with NSSMC, is the world leader,
  - the Group's main competitors in the OCTG market are Tenaris, NSSMC, JFE, US Steel Tubulars, TMK, TPCO and Voest Alpine Tubulars;

- on the drill pipes market Vallourec is, in terms of volume, one of the main producers in the world after NOV Grant Prideco (United States). Most of the other competitors are Chinese and American companies;
- Vallourec is one of the three major players in the offshore line pipe market for seamless tubes, with Tenaris and NSSMC:
  - the Group has a strong position in deep water (over 500 meters) projects, which require high-tech products,
  - Vallourec also has a presence on the onshore line pipe segment,
  - through its subsidiary Serimax, Vallourec has also positioned itself as the world leader in welding solutions for both offshore and onshore line pipes,
  - moreover, Vallourec is offering a premium line of welded super duplex steel tubes that can be fitted into umbilicals at offshore oil and gas fields. The first tubes were successfully assembled in 2016 for a project in the North Sea (Glenlivet project, Scotland). In 2017, tubes were delivered for a large project on the coast of Angola (project Block 15/06 Angola).

3.2.3.2 Petrochemicals

Vallourec is a supplier for several applications: seamless tubes for refineries, petrochemical facilities, floating liquefied natural gas (LNG) plants, and production, storage and offloading units (FPSO): Vallourec is a significant market player, its main competitors being Tenaris, ArcelorMittal, NSSMC and Chinese groups.

3.2.3.3 Power Generation

Vallourec is a global leader in this segment, offering a large range of tubes, product sizes and steel grades (including patented grades). The Group is a supplier for several applications:

- seamless carbon and alloy steel tubes, mainly for thermal power plants: screen panels, header pipes, economizers, evaporators, superheaters, reheaters and piping. Its main competitors are Baosteel, Changbao and Hengyang;
- nickel-alloy seamless tubes for steam generators at nuclear power plants: in these very technically demanding markets, Vallourec's market share significantly outdistances those of its two main competitors, NSSMC and Sandvik.

3.2.3.4 Industry and Other

MECHANICALS

Vallourec is one of the European leaders in seamless tubes for mechanicals applications. This market is characterized by:

- a wide range of applications, including tubes for hydraulic cylinders, construction and civil engineering cranes, industrial building frames, public facilities and oil rigs, etc.; and
- numerous technical alternatives: welded tubes (particularly from Tata Steel), drilled steel bars, cold-drawn tubes, forged and formed tubes, etc.

AUTOMOTIVE

Through its subsidiary Vallourec Bearing Tubes, Vallourec is a leader in the European market for ball-bearing rings manufactured from seamless tubes. The Group supplies products for a range of applications, in particular those in the automotive industry. Its main competitors are Ovako and Maxhütte.

In Brazil, Vallourec Soluções Tubulares do Brasil is the market leader for seamless hot-rolled, cold-formed, forged or drawn tube manufacturing. Vallourec Soluções Tubulares do Brasil products have numerous industrial applications for the various market segments, such as light and heavy vehicles, two-wheel vehicles, construction site and agricultural machinery, primarily for suspension shafts, steering columns, drive shafts and ball bearings.

CONSTRUCTION

On the European market, Vallourec is a leader in construction tubes. It provides solutions for bold architectural projects, infrastructure such as bridges, stadiums, museums, etc.

In Brazil, Vallourec Soluções Tubulares do Brasil also offers standard or formed seamless tubes for the construction of bridges, stadiums, airports, transmission lines and other infrastructures.

3.2.4 The Group's facilities

The teams and production of premium Vallourec solutions are positioned where the customers are. The Group thus has more than 50 production units throughout the world. As at 31 December 2017, its facilities included:

- 5 steel mills, including two in Europe in which the Group holds a minority interest (40% of Ascoval in France and 20% of HKM in Germany), one in the United States and two in Brazil;
- 15 rolling mills in Europe, the United States, Brazil and Asia;
- 6 Research and Development centers, described in Section 3.3 of this Registration Document;
- 34 finishing units;
- numerous sales offices and service centers located near our customers; and
- a group of forest assets and an iron mine in Brazil.

Following the implementation of the Transformation Plan beginning in 2016, the Group benefits from rolled tube production capacities of approximately 3 million metric tons, relatively balanced across its four operating regions:

Rolled tube production capacities by region

Europe	~25%
North America	~25%
Brazil	~30%
China	~20%

3.2.5 Procurement

3.2.5.1 Raw materials and purchasing

The Group's purchases for production activities are broken down as follows:

- raw materials (ferrous alloys, electrodes, refractories, scrap steel, etc.);
- pre material (roundbars, flat products, etc.);
- manufacturing consumables and supplies (mechanical and electrical supplies, cutting tools, lubricants, thread protectors, etc.);
- maintenance (services and spare parts); and
- energy (electricity, natural gas, etc.).

Purchases consumed for the production during 2016 and 2017 included the following:

In € thousand	As at 31/12/2016	As at 31/12/2017
Scrap metal and ferrous alloys	236,568	409,470
Rounds/billets	470,726	605,383
Flat parts	11,817	4,227
Tubes	102,314	91,786
Miscellaneous[(a)]	243,272	501,957
TOTAL[(b)]	**1,064,697**	**1,612,823**

(a) *Including change in inventories.*

(b) *Including €1,369 million (in 2017) and €935 million (in 2016) of raw materials classified under Cost of raw materials consumed. The balance is composed of miscellaneous purchases (consumables, tools, etc.) classified in Other industrial costs.*

The purchase of rounds and billets represented 38% of the Group's consumed purchases in 2017, and the purchase of tubes represented 6%.

Other purchases include the following purchases:

- non-production:
  - external services (engineering, temporary labor, waste treatment, industrial cleaning, etc.),
  - IT (software, hardware, network, professional services, etc.), and
  - logistics (sea, air, road, rail, warehousing, etc.);
- solutions:
  - major equipment infrastructure and investments, and
  - customer-specific solutions.

See Chapter 5, "Risk factors" of this Registration Document for a description of the risks related to changes in the prices of raw materials.

3.2.5.2 Sourcing policy

The Group has implemented a structured, consistent purchasing strategy providing a balance between central management and local guidance:

- use and continued improvement of effective, formalized purchasing processes to optimize the Group's performance in terms of quality, cost, and delivery times;
- together with the Group's internal customers, selection of the best suppliers on the basis of business line needs, purchasing strategies by area, supplier risk analysis and criteria approved before the calls for tender are launched;
- sharing a solid contractual approach with all of the Vallourec entities that takes local characteristics into account to limit risks, ensure compliance with global directives and improve visibility;
- sharing a common and global approach and monitoring suppliers to continuously improve the Group's performance in terms of quality, cost and delivery times, as well as social and environmental responsibility;
- identifying and minimizing the supplier risks borne by the Group under its ongoing responsible purchasing policy;
- the purchasing function is centralized regionally or globally according to purchasing family, whenever pertinent. Supply is primarily managed locally and since 2017 has gradually merged into the regional shared services centers.

3.2.6 Organization of the Group

3.2.6.1 Organizational structure

Vallourec Group organization chart as of 31 December 2017

VALLOUREC

100%

VALLOUREC TUBES

EUROPE/AFRICA (EA)

FRANCE

- 100% Vallourec Bearing Tubes
- 100% Vallourec Fittings
- 100% Vallourec Oil and Gas France
- 100% Vallourec Tubes France
- 100% Vallourec Umbilicals
- 80% Serimax Holdings

REST OF EUROPE

- 100% Vallourec Deutschland GmbH (Germany)
- 100% Vallourec Oil & Gas UK (United Kingdom)
- 100% Vallourec Rus (Russia)
- 20% Hüttenwerke Krupp Mannesmann (Germany)

AFRICA

- 100%[1] VAM Field Service Angola, LDA (Angola)
- 100% Vallourec Nigeria Limited (Nigeria)
- 100% Vallourec Oil and Gas Kenya Limited (Kenya)
- 100%[1] Vallourec O & G Nigeria Limited (Nigeria)
- 100% Vallourec Oil and Gas Uganda (Uganda)

MIDDLE EAST/ASIA (MEA)

MIDDLE EAST

- 75% Vallourec Al Qahtani LLC (Saudi Arabia)
- 100% Vallourec Middle East FZE (United Arab Emirates)
- 80% Vallourec Saudi Arabia LLC (Saudi Arabia)

CHINA

- 99.6% Anhui Tianda Oil Pipe Co., Ltd
- 100% Vallourec (Beijing) Co., Ltd
- 100% Vallourec (China) Co., Ltd[2]
- 100% Vallourec Oil & Gas (China) Co., Ltd
- 100%[1] VAM Changzhou Oil & Gas Premium Equipments Co., Ltd
- 51% VAM Field Service Beijing Co., Ltd

REST OF ASIA

- 81.7%[1] PT Citra Tubindo TBK (Indonesia)
- 100% Vallourec Asia Pacific Corp. Pte Ltd (Singapore)
- 51% VAM Far East (Singapore)

SPECIALTY TUBES

- 100% Valinox Nucléaire (France)[3]
- 100% Valinox Nucleaire Tubes Guangzhou Co., Ltd

NORTH AMERICA (NA)

OCTG

- 100% Vallourec Canada Inc. (Canada)[4]
- 100% Vallourec Oil & Gas Mexico, SA de CV (Mexico)
- 80.5%[1] Vallourec Star, LP (United States)
- 100%[1] Vallourec Tube-Alloy, LLC (United States)
- 51%[1] VAM USA LLC (United States)

MARKETING COMPANIES

- 100% Vallourec Canada Inc. (Canada)[4]
- 100%[1] Vallourec USA Corp. (United States)

SOUTH AMERICA (SA)

BRAZIL

- 84.6%[1] Vallourec Soluções Tubulares do Brasil S.A.
- 100% Vallourec Tubos do Brasil Ltda[5]
  - 100%[1] Tubos Soldados Atlântico Ltda
  - 100% Vallourec Florestal Ltda
  - 100% Vallourec Mineração Ltda
  - 100% Vallourec Transportes e Serviços Ltda

OTHER

- 100% Vallourec Trading South America (Uruguay)

DRILLING PRODUCTS

- 100%[1] Vallourec Drilling Oil Equipments Manufacturing LLC (United Arab Emirates)
- 100% Vallourec Drilling Products France (France)
- 100% Vallourec Drilling Products Middle East FZE (United Arab Emirates)
- 100% Vallourec Oil & Gas Nederland (Netherlands)
- 100%[1] Vallourec Drilling Products USA, Inc. (United States)

(1) Percentage of Group's direct and/or indirect interest.

(2) This company, formerly known as Vallourec (Changzhou) Co., Ltd. changed its business name on 18 August 2017.

(3) Valinox Nucléaire is associated with the Middle East/Asia Region.

(4) Vallourec Canada Inc. performs both OCTG and marketing activities.

(5) This company, formerly a Brazilian corporation, became a limited company on 20 November 2017.

3.2.6.2 Organization of Group activities

In 2017, the Group adapted its organizational structure in order to take full advantage of its Transformation Plan. The goal of this new structure is to strengthen the Group's local presence and proximity to its customers, to optimize overall use of its resources, and stimulate its growth. The operational divisions were eliminated to be replaced by a new structure organized around:

- four Regions: North America, South America, Europe/Africa (EA) and Middle East/Asia (MEA).

  The Regions are responsible for all of the sales and industrial operations located within their geographic scope;
- two Central Departments:
  - the Development & Innovation Department (D&I) is responsible for defining and implementing the development strategy for product lines. It is also responsible for innovation and R&D,
  - the Technology & Industry (T&I) Department is responsible for defining the Group's industrial strategy, with the aim of continuing to improve its cost base. It is in charge of technology and manages the Group's supplies, as well as central planning.

This new structure took effect on 3 April 2017.

On 11 December 2017, Vallourec announced that it had received, following exclusive negotiations with the American oil services group National Oilwell Varco (NOV), a binding offer from that group to purchase Vallourec's Drilling Products business in North America (Vallourec Drilling Products USA, Inc), the Middle East (Vallourec Drilling Products Middle East FZE in Dubai, and Vallourec Drilling Oil Equipments Manufacturing LLC in Abu Dhabi, United Arab Emirates), the Netherlands, and France (Vallourec Drilling Products France, a plant in Aulnoye-Aymeries, Hauts-de-France). The French sites in Cosne-sur-Loire (Bourgogne-Franche-Comté) and Tarbes (Occitanie) will accordingly be sold in a parallel sale. This project further supports the Group's Transformation Plan, aiming at increasing its competitiveness on its strategic markets.

In addition to its operating entities, the Group also includes holding and marketing companies.

3.2.6.2.1 TECHNOLOGY & INDUSTRY

The Technology and Industry Department (T&I) includes the various business lines of the Industrial Division in charge of the Group's strategy and performance with respect to safety, quality, customer service, know-how and performance in key technologies, production cost optimization, procurement and logistics. T&I is in charge of the Group's industrial strategy and with the Regions determines changes in its industrial system. T&I manages the investment portfolio and makes sure investments are properly carried out from a technical standpoint, within the prescribed time limits and economics conditions.

The T&I organization is structured in eight "business" departments which interact with one another and coordinate the activity of the Regions defined in the industrial plan:

- the **Safety/Quality Department** defines the policy, objectives and methodologies of the Group in terms of improving Safety performance (accident frequency rate), the Quality perceived by the customer (number and processing of claims), approval/certifications and regulatory requirements;
- the **Lean Management Department** coordinates the establishment of competitiveness plans for the Regions through the "CAP20" Group initiative, prepares and deploys the Group's Operational Excellence guidelines, relying on lean management methodologies. It is also in charge of the Group's industrial equipment maintenance policy, and the associated improvement processes;
- the **Industrial Layout/Masterplanning Department** conducts strategic studies with the Regions that are associated with the Group's industrial plan, along with the transformation studies of the industrial system;
- the **CAPEX/Projects/Engineering Department** manages the investment portfolio under the strategic plan and the annual budget process, and is in charge of the process of qualifying and authorizing investment projects. It is also in charge of project and engineering management methods for the Group as a whole, as well as for the development of know-how concerning automated technologies. It participates in the operations of major investment or M&A projects;
- the **Sourcing Department** is in charge of all of the Group's purchasing. It defines and coordinates purchase policies, and the operational teams based in the Region that relate to it from a hierarchical standpoint;
- the **Supply Chain Department** is operationally in charge of preparing the medium-term production and of determining allocations of orders and management of production capacities at the Group level (Sales & Operation planning). It defines the policies, objectives and methodologies for improving delivery performance (punctuality, lead times) and logistics (service, costs);
- the **Technology & Performance Upstream Department** is in charge of monitoring and improvement of the technical performance of production tools, and of their technological development (Research and Development process) in the areas of steel manufacturing, rolling, heat treatment and non-destructive testing. It is also in charge of the industrialization methods and plan for tubular products, and for promoting digital industry ("Industry 4.0") among the Regions and their industrial sites;
- the **Technology & Performance Downstream Department** is in charge of monitoring and improvement of the technical performance of production tools, and of their technological development (Research and Development process) in the areas of tube finishing, threading and "Dopefree" (CLEANWELL®) technologies applied to VAM® connections. It is in charge of the industrialization of VAM® products for all of the Group's threading sites.

3.2.6.2.2 DEVELOPMENT AND INNOVATION

The Development and Innovation Department (D&I) comprises the Group's various Product Line departments and the various businesses serving to develop them: marketing, sales, technical promotion and innovation, Research & Development, industrial property.

D&I is in charge of the strategy of developing product lines and defines the Group's objectives with the regions for developing new markets, optimizing the product portfolio, the customer portfolio and in particular major accounts, Research & Development, innovation to expand Vallourec's cornerstones for differentiating itself and creating value in customer solutions (including digital).

D&I manages the product development and services portfolio and makes sure they are put on the market within the time limits and at the performance levels expected to successfully create the expected value.

The D&I organization is structured in eight product lines which interact with the regions and coordinate development activity across the Company. The product line directors are supported by the Innovation and Research and Development Department. The action plan is defined by Product Line and supported by several cross-company roadmaps which cover the various areas of Commercial Excellence and excellence in Innovation.

The Product Line Departments cover all of the Group's markets, i.e.:

- **OCTG** (Oil Country Tubular Goods) which comprises the casing and production tubes used to construct onshore or offshore Oil or Gas production wells. This segment includes the VAM® range of joints, as well as the entire VAM® system, which includes: teams of construction engineers capable of assisting our customers with their rigs 24/7 (VAM® Field Services International); the network of approximately 200 VAM® licensees, audited annually, who provide maintenance and repair services for VAM® joints worldwide as close as possible to the operating areas; the VAM® Global Solutions engineer teams providing assistance in well design, product training, and assistance in supply chain optimization for our customers until the service contracts have been implemented;
- **Accessories** comprise all products, mainly Oil & Gas, that are designed and manufactured by Vallourec, integrated into the production strings and necessary for optimizing production of oil or gas wells;
- the **Line Pipe Project** linked to EPCI (Engineering, Procurement and Construction, and Installation) markets comprises the tubes, expertise and integrated solutions used to connect all of the offshore and onshore facilities of an oil field from the wellhead to the platform or production vessel, as well as the tubes needed to connect these production facilities to the onshore refining and treatment facilities;
- the **Line Pipe Process** comprises the tubular products in which the hydrocarbons are transported or transformed, both in offshore operations (FPSO: Floating Production Storage and Offloading / Floating Liquefied Natural Gas (FLNG)) and onshore (Liquefied Natural Gas (LNG), refining, petrochemical);
- **Industry** comprises a wide variety of industrial applications: agricultural machinery, cylinders, cranes, construction (offshore, bridges, stadiums, etc.), mechanical industries;
- the **Conventional Thermal Power Plant Market** using carbon or gas in a combined cycle comprises all of the tubes provided for the construction of boilers, exchangers and tubes for the circulation of steam up to the turbines;
- the **Thermal Power Plant Market using nuclear energy** concerns tubes of steam generators for the primary circuit, as well as the tubes for supplying steam to the turbines;
- **Renewables** comprises all of the applications for which we market our products (geothermal, biomass, etc.) and/or for which we are seeking development opportunities (in addition to the previous applications, this concerns solar, biofuels and hydrogen).

The functions supporting the Product Line Departments include:

- the **Marketing Strategy Department,** which is in charge of anticipating the development of our markets to help the Group's Product Lines adapt their offers and evaluate opportunities to diversify;
- the **Key Accounts Department,** which is in charge of optimizing the commercial development of the Group's key accounts for all of the regions and all of the product lines;
- the **Research and Development Department,** which includes all of the Group's resources and laboratories in France, Germany, Brazil and the United States. It is in charge of developing the high-performing products and processes needed to develop Vallourec's customer offerings within the prescribed time limits and budgets. It takes steps to capitalize on the Group's know-how in Research and Development of internal skills. It also develops partnerships with companies or universities that are able to provide us additional expertise and participates in numerous Joint Industry Programs (JIPs) to develop adapted solutions with our customers;
- the **Innovation Department,** which is in charge of accelerating the diversification of Vallourec's offer by helping product lines to expand proposed value to services, thanks to the evaluation of new business models, particularly in relation to Digital. It is in charge of identifying the growth catalysts that can be envisaged beyond the heart of the Group's current business;
- the **Industrial Property Department,** which is in charge of technical oversight, the filing of patents, and defending the industrial property of the Group. In 2017, the Group thus filed 28 patents and won all of its oppositions.

3.2.6.2.3 EUROPE/AFRICA REGION

The historical and technological cradle of the Group, the Europe/Africa Region serves all of Vallourec's markets from its production and service units. The industrial activity includes the rolling mills, heat treatment plants, finishing and specialties units.

The objectives of the activity are:

- to ensure premium performance to achieve customer satisfaction;
- to provide its customers and the other Regions with a wide range of products at competitive cost to allow the growth of the Group's global activities in its various markets.

The business notably relies on the complementarity between Vallourec Tubes France – France (100%), which operates heat treatment plants in Déville-lès-Rouen (Seine-Maritime), Saint-Saulve (Nord) and a forge in Aulnoye-Aymeries (Nord), and Vallourec Deutschland GmbH (100%), with four tube mills in Mülheim, Düsseldorf-Rath and Düsseldorf-Reisholz (North Rhine-Westphalia). These tube mills are equipped with continuous-process, plug and pilger rolling mills and Erhardt presses, allowing them to manufacture, with the Aulnoye-Aymeries (Nord) forge and the Montbard (Côte d'Or) rolling mill, products with one of the world's widest range of diameters, thicknesses and grades of steel.

All of the European rolling mills are primarily supplied in raw materials by the steel mill of Saint-Saulve (Nord), for highly allied steel, Huckingen, belonging to Hüttenwerke Krupp Mannesmann (HKM) in which Vallourec Tubes holds a 20% stake, and Bous, belonging to the GMH Group (Georgsmarienhütte).

Launched in 2016, the rationalization of its production capacities to adapt to the structural decline in markets accessible from Western Europe continues: see Section 3.6 "Transformation Plan".

Oil Country Tubular Goods ("OCTG")

The industrial and commercial activities of OCTG Europe/Africa are carried out through the following subsidiaries:

- Vallourec Oil and Gas France (VOGFR) – France (100%) which produces standard joints and the full VAM® range of products. It has a production unit in Aulnoye-Aymeries (France) which includes several oil and gas tube threading lines that allow all of the dimensions and connections of the VAM® product line to be made as well as a line to apply the multifunctional CLEANWELL® coating on certain products, which was especially designed for VAM® connections as a substitute for storage and assembly greases;
- Vallourec Oil & Gas UK Ltd – United Kingdom (100%); this company combines facilities specializing in threading, in Clydesdale Bellshill (Scotland) and service bases in Scotland and Norway to satisfy, in particular, the market needs of the North Sea;
- Vallourec Nigeria Ltd – Nigeria (100%); this company operates a tube threading plant in the Onne free-trade zone at Port Harcourt (Rivers State, Nigeria). In operation since December 2009, it supplies the local market.

Onshore Line Pipe/process

The Onshore Line Pipe Project business is dedicated to the transportation needs of the Oil & Gas market, with a dual strategic position in the exploration and production sectors (upstream oil) and in downstream activities. It groups together all the products and services used by engineering and oil companies, from the wellhead to the petrochemical refineries and gas treatment plants.

The Onshore Line Pipe Project activities are exercised through Vallourec Tubes France and Vallourec Deutschland GmbH through strong synergies with the Group's Services subsidiaries, such as Serimax – France (80%) for welding, and with Serimax Field Joint Coating – United Kingdom (a 60% subsidiary of Serimax) for coating.

Powergen/ST&P

The role of Powergen/ST&P is to market seamless tubes produced in the Europe/Africa Region used in the construction of new power plants and the restoration and maintenance of existing plants, mainly coal and gas, that are provided by Upstream (European plants) and Powergen. It also completes its offer with the appropriate services.

The Powergen/ST&P industrial and commercial activities are exercised through Vallourec Tubes France and Vallourec Deutschland GmbH.

Industry

The Group markets hollow sections, tubes and bars manufactured in its European industrial units for mechanical markets (cranes, hydraulic cylinders, agricultural machines, OCTG mechanical parts…), automotive markets (bearing tubes, bars to be drawn…) and construction (bridges, stadiums, offshore jack-up platforms, airport terminals, exhibition halls…) Vallourec Tubes France, Vallourec Deutschland GmbH and Vallourec Bearing Tubes carry out industrial and sales activity for Industry.

Specialty Activities

Vallourec Bearing Tubes – France (100%), a historic European leader in seamless tubes and rings for the manufacture of bearings. In addition to this bearing tube activity, Vallourec Bearing Tubes produces and supplies made-to-measure tubes for Mechanicals and tubular hollow bars for the Oil & Gas markets. Vallourec Bearing Tubes has two production units: one in Montbard (Côte-d'Or) with a hot rolling mill and thermal treatment, and one in La Charité-sur-Loire (Nièvre) for the cold production of XXL rings.

Vallourec Fittings – France (100%), located in Maubeuge, specializes in "weld fittings", primarily for the Oil & Gas and Process markets.

Vallourec Umbilicals – France (100%), located in Venarey-lès-Laumes (Côte-d'Or, France), manufactures welded stainless steel super duplex tubes for umbilicals for the offshore Oil & Gas market.

3.2.6.2.4 MIDDLE EAST/ASIA REGION

Oil Country Tubular Goods (OCTG)

The activities of OCTG Middle East/Asia are carried out through the following subsidiaries:

- VAM Changzhou Oil & Gas Premium Equipments Co., Ltd – China (100% held directly or indirectly by the Group), was created in September 2006 for the operation of a premium connection threading plant for oil and gas well equipment;
- Vallourec Oil & Gas (China) Co., Ltd – China (100%), was established in April 2010. The company sells Vallourec premium OCTG products on the Chinese domestic market, along with Tianda Oil Pipe Company Limited (TOP) "API" product exports, and provides technical support and quality control services;
- Vallourec Asia Pacific Corp. Pte Ltd – Singapore (100%), operates in the OCTG tubes and accessories market in the Asia-Pacific region;
- PT Citra Tubindo TBK – Indonesia (81.7%, held directly or indirectly by the Group) which has carried out heat treatment on tubes and threading of API, NS® and VAM® joints since 1985;
- Vallourec Saudi Arabia Ltd – Saudi Arabia (80% held directly or indirectly by the Group). In November 2011, the Group acquired Saudi Seamless Pipes Factory Company Limited, the leading processing and finishing company for seamless OCTG tubes in Saudi Arabia (located in Dammam), from the Zamil group. This acquisition brought Vallourec heat treatment and premium threading facilities;
- Tianda Oil Pipe Company Limited (TOP) – China (99.6% held directly and/or indirectly by the Group). This company in particular operates a PQF® continuous rolling mill to produce seamless tubes for the Oil & Gas market. Since 2011, Vallourec has owned 19.5% of Tianda Oil Pipe Company Limited (TOP). At the end of 2016, Vallourec acquired 79.6% of the domestic shares of TOP, then went on to purchase shares from individual shareholders during 2017. This acquisition allows Vallourec to develop an expanded offer of highly competitive solutions which combine the VAM® connections with the Tianda tubes.

Powergen/ST&P

Powergen's activities are notably exercised through Vallourec China, formerly known as Vallourec Changzhou Co., Ltd. (China).

Vallourec (Changzhou) Co., Ltd was created in 2005 in order to increase the Group's machining capacity for large-diameter hot-rolled tubes produced in Europe for the Chinese Power Generation market. The plant at Changzhou, in the province of Jiangsu, began production in July 2006. On 13 September 2012, a new hot-forging and heat treatment unit was inaugurated that enables manufacturing operations for seamless large-diameter pipes to be integrated locally.

Specialty Tubes ("Specialty Products")

The Specialty Products activity brings together companies specialized in the manufacture and processing of seamless tubes in stainless steel and special alloys, primarily for the nuclear energy markets.

The Specialty Products Division principally involves the following companies:

- Valinox Nucléaire – France (100%) specializes in Nuclear Island Tubes. The production unit in Montbard (Côte-d'Or, France) is the original site of Valinox Nucléaire;
- Valinox Nucléaire Tubes Guangzhou Co., Ltd – China (100%), specialized in nuclear island tubes, was formed in November 2010 in Guangdong Province, China, and opened on 6 June 2013.

3.2.6.2.5 NORTH AMERICA REGION

Oil & Gas

The activities in North America are carried out through the following subsidiaries:

- Vallourec Star, LP – United States (80.5% held directly or indirectly by the Group) is an integrated manufacturer of seamless tubes for the oil and gas industry. Its facilities include an electric steel mill, two rolling mills equipped with the latest technology and heat treatment and threading units. It dedicates 80% of its production range to the OCTG market. Sumitomo Corporation is a partner, with a 19.5% stake in Vallourec Star, LP.

  The company's production units are located in Youngstown (Ohio), Houston (Texas) and Muskogee (Oklahoma);
- VAM USA LLC – United States (51% held directly or indirectly by the Group). Partnering with NSSMC with a 34% stake, and with a 15% stake in Sumitomo Corporation, this company works in the threading of premium VAM® joints and the provision of services.

  The VAM® and Atlas Bradford® brands complement Vallourec's product offering, providing significant expertise in the field of flush connections for the industry's most demanding applications;
- Vallourec Oil & Gas Mexico SA de CV – Mexico (100%), which specializes in premium VAM® connections and provides the Mexican Oil & Gas industry with the complete range of VAM® products;
- Vallourec Canada Inc. – Canada (100%) has production units in St. John's (Newfoundland), as well as sales offices in Calgary (Alberta);
- Vallourec Tube-Alloy, LLC – United States (100% directly held by the Group), produces and repairs accessories used inside oil and gas wells. It specializes in complex threading operations and in machining bespoke parts for both oil operators and component manufacturers. Its production units are located in Broussard and Houma, Louisiana, Houston, Texas, and Casper, Wyoming.

3.2.6.2.6 SOUTH AMERICA REGION

Brazil

In 2017, Brazil continued to roll out its industrial transformation program, launched 1 October 2016 with the creation of a new subsidiary following the merger of the assets and activities of Vallourec Sumitomo Tubos do Brasil Ltda. and Vallourec Tubos do Brasil S.A. The newly established company, Vallourec Soluções Tubulares do Brasil S.A., was created to strengthen the industrial base in Brazil and provide synergies to optimize the competitiveness of its production. In parallel with the Brazil and Latin America markets, the activities are increasingly concentrated on exports.

The South American activities are carried out through the following companies:

- Vallourec Soluções Tubulares do Brasil S.A. (VSB, 84.6% shareholding) in partnership with Nippon Steel Sumitomo Metal Corporation (NSSMC, 14%) and Sumitomo Corporation (0.4%) is the result of the above-mentioned merger of assets and activities, which bring together the Jeceaba, Barreiro (Minas Gerais state) and Serro (Espirito Santo state) industrial sites:
  - the Barreiro site has been located in the Belo Horizonte district for more than 60 years and occupies an area of more than 300 hectares. This integrated unit combines all production equipment, from its steel mill (in 2017 the site included a blast furnace) to hot-rolling mills and tube finishing lines. The Barreiro site in particular provides tubular products for very deep water projects, notably the pre-salt fields. Since 2015, the site has housed the Vallourec Research Connections Center Brazil (VRCC Brazil), which tests that all the new exclusive threaded connections comply with industry standards, and guarantees the level of performance needed for difficult pre-salt environments. In March 2016, Barreiro shut down one of its two blast furnaces, with a view to adjusting its production capacity to new market demand,
  - the Jeceaba industrial site is located 120 kilometers south of Belo Horizonte. It consists of a premium tube mill and also includes a pelletization unit whose pellets are intended for use of the Barreiro and Jeceaba blast furnaces and the local Brazilian market, a steel mill (with a blast furnace and electrical furnace), a cutting edge rolling mill and finishing lines. The Jeceaba site performs all types of API and premium threading types, in particular the VAM® product range.

  VSB also participates as an industrial supplier of all Vallourec entities, primarily for the international OCTG markets. Semi-finished products are exported to Vallourec's finishing plants throughout the world.

The seamless tubes of Vallourec Soluções Tubulares do Brasil S.A. are intended for the following applications:

- the Oil & Gas market, delivering seamless steel tubes for oil exploration (casing, tubing, and drill pipes) and for the transport of oil (production lines, tubes for line pipes) using premium VAM® connections. The tubes offer not only resistance to high pressures and high temperatures, but also resistance to corrosion by carbon dioxide and sulfates,
- the Industry market (Petrochemicals, Power Generation, Mechanicals, etc.), a market that is mainly served by distributors working closely with Vallourec Soluções Tubulares do Brasil S.A. to guarantee a certain quality and technical assistance,
- the Automotive industry (light vehicles, trucks and agricultural equipment), with precision parts like tubes for diesel injectors, bearing rings and forged parts such as transmission shafts and axles, and
- the Civil Engineering and construction sector: tubes for infrastructure and industrial foundations, structural tubes for commercial assets, capital goods, ancillary machines and materials.

Vallourec Tubos do Brasil S.A. (100%) became a Brazilian holding company on 1 October 2016 and comprises the following subsidiaries:

- Vallourec Florestal Ltda. – Brazil (100%) plants and operates eucalyptus forests for the production of charcoal from wood. Charcoal is one of the principal necessary components in the production of liquid crude iron by blast furnaces. Vallourec Florestal Ltda. owns 230,000 hectares of agricultural land in the north of the State of Minas Gerais and currently has 113,000 hectares of eucalyptus forest. The production process can be broken down into the following activities: forest planting, forest harvesting, charcoal production, and delivery on a just-in-time basis for the blast furnaces of VSB;
- Vallourec Mineração Ltda – Brazil (100%) has been extracting iron ore at its Pau Branco mine since the early 1980s. The mine is located in the city of Brumadinho in the State of Minas Gerais, 30 kilometers south of Belo Horizonte. Its annual production capacity is 4 million metric tons of iron ore. The mine supplies the blast furnaces and the pellet plant of its affiliated companies. It also sells its production on the market;
- Tubos Soldados Atlântico Ltda. (TSA) – Brazil (100%), which specializes in anti-corrosion coatings (triple-layer polypropylene, or 3LPP) applied to welded and seamless tubes;
- Vallourec Transportes & Serviços Ltda. – Brazil (100%) offers tube inspection and repair services, premium accessories for the Oil & Gas market, as well as a vast array of operational assistance services for the same sector.

Uruguay

- Vallourec Uruguay S.A – Uruguay (100%) was formed on 13 July 2017 to market the tubes produced by the Group for OCTG and Process applications in South America.

3.2.6.2.7 ACTIVITY OF THE HOLDING COMPANIES

Vallourec is a holding company that:

- manages its shareholdings. Its income is mainly financial, including dividends, interest on long-term loans to subsidiaries and investment income from cash and cash equivalents. It also bears the cost of its debt;
- owns its trademark and the Group image, of which it entrusted management to Vallourec Tubes in 2014;
- has no industrial activity.

Vallourec Tubes is a sub-holding company that manages its shareholdings and has no industrial activities. Its income is mainly financial, including dividends, interest on long-term loans to subsidiaries, provisions for subsidiaries and investment income from cash and cash equivalents.

3.2.6.2.8 MARKETING COMPANIES

In the United States, Vallourec USA Corporation – United States (100%) markets all of the tubular goods produced by Vallourec Tubes' various subsidiaries. It also carries a stock of tubes intended for US oil and gas distributors, which usually thread the tubes themselves according to the end-customer's requirements. Its offices are located in Houston, Texas, and Pittsburgh, Pennsylvania.

In addition, sales and marketing companies reporting to Vallourec Tubes are established in:

- Canada;
- the United Kingdom;
- China;
- Russia;
- Dubai;
- Singapore;
- Italy; and
- Sweden.

3.3 Innovation, Research and Development

A key factor for competition and growth, innovation has always been at the heart of Vallourec's strategy, and has largely contributed to its leading position in premium tubular solutions. In a very competitive global environment, the Group intends to continue to detect and foresee the technological challenges faced by its customers. It must respond to the radical and rapid evolution of their needs by offering them tailored solutions which are simultaneously safe, reliable and environmentally friendly, and that create value, in line with its premium position.

3.3.1 Organization of innovation and Research and Development

3.3.1.1 Information and key figures

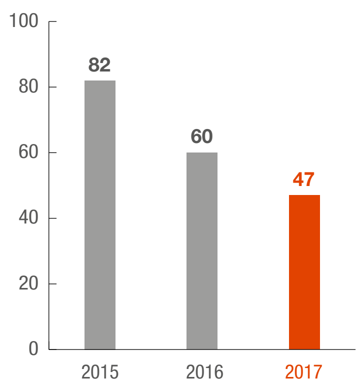
Research and innovation are at the heart of the Group's business focus. Innovation is a key priority for the Group in maintaining its technological leadership and anticipating its customers' needs.

The cornerstones of the Group's research are:

- manufacturing processes;
- new products and improving the performance of existing products; and
- services and solutions.

In 2017, Research and Development expenses totaled €47 million. The following chart represents the Research and Development expenses amount during the last three years. The level of expenses mainly changed in the last two years due to a lower number of qualification tests requested by our Oil & Gas customers. Moreover, the Group maintained a significant effort with respect to the development of new products and new tubular solutions:

In € million



Since April 2017, Vallourec's expertise in Research and Development (R&D) Marketing and Innovation are coordinated within a new department: the Development & Innovation (D&I) Department. This central department also includes the product lines. Thanks to this structure, the R&D and Innovation teams have been established in close proximity to the markets. A total of some 500 researchers and technicians are involved in research and development in the Group in 2017.

The Group's key technological challenges include the following:

- for the Oil & Gas market, the Group has to respond to the increasing complexity of oil and gas reservoirs and transport (onshore and offshore);
- for the power generation market, the Group has to contribute to renewable energy developments and improve the efficiency, flexibility and life of the plants;
- for the Industry market, the Group has to reduce the weight of mechanical engines, by designing lighter structures and increasing the useful load of the existing designs.

3.3.1.2 Research centers and expertise: global presence

Vallourec has six research centers throughout the world specializing in specific products, processes or technologies.

In France, the Aulnoye research complex houses:

- the long-established Vallourec Research Center France which specializes in metallurgy, non-destructive testing, corrosion resistance, surface treatments, product and process numerical simulations, particularly for Oil & Gas applications. It also provides technical assistance to the Group's plants and divisions;
- the Vallourec Research Center Connections develops and validates the VAM® line of threaded connections, then assists with their commercial production throughout the worldwide network of licensees. With a strengthened testing capacity as a result of investments made since 2015, it allows in particular for the full-scale demonstration of tube performance and VAM® connections by subjecting them to all operational stresses (make-and-break operations, combined loads simulation at various temperatures). Whether renewing its product lines, or undertaking specific development for large projects, Vallourec has a history of delivering the strength and reliability expected by oil and gas operators, for more than 50 years.

In Düsseldorf and Riesa, Germany:

- the Vallourec Research Center Germany is dedicated to designing and developing steel tubes for power plants, mechanical infrastructures, and oil and gas pipelines. Its fields of competence are mainly steel design, creep strength and resistance to oxidation or corrosion occurring at high temperature (above 400°C). It also houses a welding lab. In addition, it provides technical assistance to the Group's plants and divisions;
- the Vallourec Research Center Technology is in charge of research on hot forming for seamless steel tube production. This long established center has made innovations in Vallourec's core processes. It operates alongside the "Vallourec Competence Center Riesa", a laboratory containing the most modern equipment, which allows Vallourec to increase the pace of development of innovations in process methodologies and equipment. Its versatile piercing, rolling and forging facilities will push back the current limits of steel and alloy hot-forming within the Group.

In Belo Horizonte and Rio de Janeiro, Brazil:

- the Vallourec Research Center Brazil research units have teams of experts and test laboratories, adapting the Group's solutions to the specific needs of its Brazilian customers, as well as developing new solutions. Vallourec Competence Center Rio is located in the Industrial Park of the University of Rio de Janeiro in close proximity to CENPES, the Petrobras research center and academic laboratories. It takes part in technical partnerships which use the mature technologies of today and tomorrow. Lastly, Vallourec Florestal, Vallourec's subsidiary which operates the Group's eucalyptus forest in Brazil, conducts research work on the forestry, the transformation of wood into charcoal and the preservation of the environment.

In Houston, Texas (USA):

- the Vallourec Competence Center USA is devoted to specific developments of the VAM® connections for the American market. Design and testing capacities have increased continuously in recent years, allowing the introduction of new connections for the shale gas (VAM® SG, VAM® EDGE SF) and for the deep offshore wells (VAM® 21, VAM® HP).

In total, three testing stations worldwide conduct full-scale tests on the behavior of VAM® connections under the most arduous usage conditions.

The Group also performs R&D activities in other regions of the world, notably in Indonesia, through its subsidiary P.T. Citra Tubindo, and in Japan, with its longstanding partner NSSMC.

3.3.1.3 A collaborative approach to innovation with customers and markets

Innovation is at the source of numerous advances which allow Vallourec's customers to push back technological borders, tap into unused resources until then unexplored, and improve the performance of their facilities. As Innovation is a process of ongoing dialog with customers, the Group works in close collaboration with some of these customers to develop solutions which meet their operational needs.

With Petrobras, the Group develops innovative tubular solutions for exploration and production in hard-to-access oil and gas deposits (ultra-deep water, pre-salt fields, corrosive environments with H_2S, CO_2). The Group estimates that approximately 80% of the products developed with Petrobras to operate complex fields did not exist in 2009.

With Total, the Group develops connections delivering unmatched performance in difficult High Pressure/High Temperature (HP/HT) type wells or tubes for umbilicals.

With TechnipFMC, SubSea 7 and Saipem, the Group works on optimization solutions (high grade pipes and welding) allowing the transportation of oil and gas in increasingly deep environments.

With General Electric (GE) Power and Doosan, the Group develops high-performance products and solutions for ultra-supercritical power plants. With European power producers (RWE, UNIPER, EDF) the Group develops solutions to allow it to use different fuels in the existing plants (coal and biomass, waste).

The Group is also developing R&D programs in all countries where it is established, in association with institutions with leading positions in their field. This is the case with NSSMC in particular, with which a collaboration has been in place since 1976 in the area of VAM® connections for the Oil & Gas market. The launch of the VAM® 21, a new premium threaded connection which meets the most stringent industry specifications (ISO CAL IV), and a new dropfree dry lubrication solution, are a reflection of this dynamic partnership. In 2017, VAM® 21 was used for the first time with the new CLEANWELL® coating in the North Sea and along the Egyptian coasts. These tremendously successful projects affirm the value that CLEANWELL® provides to our customers by allowing them to have quicker operations on the oil platforms, without waste and with a product that preserves the environment. The partnership with NSSMC was strengthened in connection with the major strategic initiatives announced on 1 February 2016. NSSMC and Vallourec Mannesmann Oil & Gas France (which has since become Vallourec Oil & Gas France) had entered into a Research and Development agreement on 1 April 2007 (the "R&D Agreement") in connection with their industrial collaboration. Under the R&D Agreement, the parties undertook to inform one another of any new ideas, techniques or products that they wished to put in place with respect to the Research and Development of the VAM® connections, so that a committee could determine what R&D programs to set up. The committee is charged with assigning the parties their respective tasks in connection with these research programs. The parties also undertook to disclose to one another all information that could be useful for the development of these programs, as well as to mutually provide each other with access to the research infrastructure charged with carrying them out. The Group and NSSMC decided to reinforce this arrangement by entering into an addendum to the R&D Agreement dated 1 February 2016, to improve the organizational efficiency and implementation of their joint Research and Development program for the development of the VAM® connections, in particular through a Technical, Industrialization, and Services Committee, and through better organization of the collaboration on each significant Research and Development program.

The Group also participates in the most essential research work with numerous university laboratories in Europe and around the world.

3.3.2 A culture of shared innovation

The Group's innovation strategy is to differentiate ourselves with our premium product range, while developing new solutions linked to the use of our products as well as new markets. In line with this strategy, the Development & Innovation Department (D&I) is strengthening the innovation expertise and capacities of the Group's teams, both by developing deeper knowledge and sharing it on our markets, and by establishing dynamic and efficient innovation methods.

Innovation methods and culture

In order to optimize the generation and selection of ideas that will be the innovations of tomorrow, D&I organizes training sessions to better understand its customers' needs and generate ideas.

These training sessions and workshops enable the Group to deploy and share a common language of innovation, to reinforce and disseminate market knowledge to the teams contributing to innovation, and to successfully use Vallourec-specific creativity tools. All departments that take part in innovation participate in the workshops, R&D and Marketing, as well as Sales and Commercial Production. Some workshops are done in collaboration with customers.

This process, based on collaboration and collective intelligence, the sharing of knowledge and experiences, the generation of ideas in groups, allows effective results to be achieved while strengthening the Group's culture of innovation.

At the same time, with respect to projects already in development, D&I helps the project teams to effectively apply Vallourec's project management methods to ensure that products are brought to market as rapidly as possible.

The product line project portfolio is reviewed regularly to verify its value, identify synergies and define priority projects and next steps.

Furthermore, the initiatives launched in 2016 to strengthen collaboration with start-ups, schools, and industrials (Open Innovation Efforts) to speed up our innovations, continued. These initiatives were even expanded with the open innovation challenge in September 2017 on the topic of "intelligent tubes".

The partnerships launched with the start-ups selected at the time of these initiatives allow Vallourec to integrate the most recent and innovative technologies, accelerate development projects and deepen discussions between teams.

The experts, the process communities, project teams and R&D teams are developing and participating in online collaborative spaces and tools which allow them to share information across the Group.

The Expert Career program

Vallourec established the Expert Career program to enhance the value of technical expertise and individual career paths within the Group's key sectors. This program allows engineers and scientists to be offered new career opportunities in the areas of Technology and R&D. Links between management responsibilities and technical expertise were established under the coordination of the Human Resources Department, guaranteeing the same level of recognition.

Innovation Challenges

Organized by the Innovation Department, the first Vallourec Innovation Challenge allowed all departments and divisions of the Group to contribute to innovation in 2016. The Innovation Challenge was carried out using the Group's front-end innovation methodology, for a period of three months. More than 30 teams took part, coming up with interesting and innovative proposals to reduce our customers' costs. The two winning ideas, selected by employees and the Official Jury, have been developed. All of the ideas proposed were reviewed and expanded upon. Some of them are under development.

The Open Innovation Challenge launched in September 2017 was on "intelligent tubes". More than 40 start-ups and companies from all continents presented their offers. Development is underway with the best companies selected.

3.3.3 High-tech manufacturing processes

Forest and blast furnaces

In Brazil, Vallourec operates eucalyptus forests to produce charcoal to fuel its blast furnaces. The Group is pursuing its efforts to improve performance in this area. The main thrusts of this research include: scientific tree selection, improving forest nutrition programs and industrializing the continuous charcoal-making process.

Steel production

The development and production of steels with a high level of chrome (up to 13%) using continuous-casting processes forms the basis of the Group's range of high-tech solutions, and is the purpose of much of its work. Research on the cleanliness of steel is a cornerstone of research on the manufacture of premium products. Innovations made in continuous casting processes also allow the capacity and quality of the steel to be improved, thereby strengthening the Group's autonomy in terms of premium steel supply.

Hot-process seamless tube production

The hot-process production of seamless steel tubes, invented in 1886 by the Mannesmann brothers, is a fundamental technology for Vallourec, and is constantly being improved thanks to research.

The Group has developed other processes, including the Premium Forged Pipes (PFP®) patented process to produce very wide, thick tubes, in particular for the mechanical and energy sectors. It has been used industrially in Europe since 2008, and in China since 2012.

Developments are underway for the most modern hot-rolling processes (PQF, FQM, etc.).

Non-destructive testing

Non-destructive tests, which enable the assessment of the integrity of structures or materials with no degradation at various stages of life, are being developed to ensure that the Group's products are extremely reliable. Innovations in this sector are major differentiating factors.

Heat treatment

A large share of the Group's premium products is heat-treated to reach exceptional levels of performance. The heat treatment process is continually being improved, in order to meet the needs of the Group's customers, in particular in terms of respect for the environment, deformation resistance or breaking strength, corrosion resistance and tube weldability.

Process communities

Process communities rolled out within the Group allow rapid and ongoing progress to be achieved, through the sharing of best practices and available technologies for the main processes of the Group: production and continuous casting of steel, heating rounds, hot rolling, forging, heat treatment, non-destructive testing, threading and tube finishing (coating, marking, machining, etc.). Benchmarks are regularly reviewed to ensure that Vallourec's practices and technologies remain compliant with best practices and best available techniques. We continually improve our processes through the significant internal efforts in Research and Development.

3.3.4 Standards applicable to the Group's projects

3.3.4.1 Standards applied by the Group

The Group complies with regulations, standards and certifications in the countries in which it markets its products. These standards vary by geographic region, by product and by its use. The Group also carried out a monitoring process to ensure that its products comply with applicable regulations, standards and certifications.

The Group is subject to two types of standards: the mandatory standards set by law, and the non-mandatory standards that the Group voluntarily chose to apply in response to customer demand.

Mandatory standards generally require certification by laboratories and/or independent organizations, and are provided by the government. Their principal purpose is to protect user health and safety by demonstrating that the product complies with regulatory requirement. They relate principally to the properties of fire resistance and slip resistance and to limits on toxic emissions. Non-mandatory standards are required by the Group's customers, who include compliance with these standards in their specifications.

3.3.4.2 Standards organizations and the standards applied in different geographical regions

Standards organizations define the technical characteristics and performance required of a product, as well as the tests to be used. At the international level, the main organization that promulgates standards applicable to the Group is the International Standardization Organization ("ISO"). ISO standards, which are established based on principles of the World Trade Organization, are in theory voluntary, but compliance is often required by the Group's customers.

The Group relies on the Vallourec Management System (the VMS), whose fundamental objective is to improve the Group's performance in the fields of quality, health, safety, the environment and logistics, which are grouped under an ambitious program known as Index and run by one of the Management Board's members. This system ensures that the requirements for managing quality (ISO 9001, ISO/TS 16949, API, ASTM and ASME), health and safety (OHSAS 18001), the environment (ISO 14001) and energy (ISO 50001) are taken into account.

3.3.5 Industrial property

The strengthening of the Group's organization in the area of industrial property continued with the monitoring of major Research and Development projects and the holding of sessions to heighten industrial property awareness among Research and Development teams, in France and abroad, and the development of expertise in the Group's new areas of innovation.

The Group's patent filing activity remained very sustained in 2017. The Group thus filed 28 new basic patents and proceeded with 470 geographical extensions of patents. Individual patent protection has been maintained at a very high and stable level with more than 4,500 patents worldwide and a successful and sustained defense of Group patents under dispute. The budget dedicated by the Group to protecting inventions via patents remained stable in 2017, as compared to 2016.

In 2017, Vallourec also continued its efforts to protect its trademarks, through registrations, renewals, and opposition procedures.

3.4 Market environment

In 2017, the Group's consolidated revenue was €3,750 million, up 26.5% (+25.8% at constant exchange rates) from consolidated revenue of €2,965 million in 2016. In 2017, EBITDA was +€2 million, compared to -€219 million in 2016. Industrial margin as a percentage of revenue increased 4.1 points compared with the previous year. Net result Group share was a loss of €537 million in 2017, compared with a loss of €758 million in 2016.

In 2017, the first tangible signs of a recovery materialized in the US Oil & Gas market. The Group also registered an improvement in Oil & Gas operations in Brazil, while tender activity in other international O&G markets began to resume at a gradual pace. An improved macroeconomic context in Europe and Brazil supported the Group's Industry & Other activities. Power Generation revenue retracted in 2017 as a result of a challenging market environment for both conventional and nuclear applications.

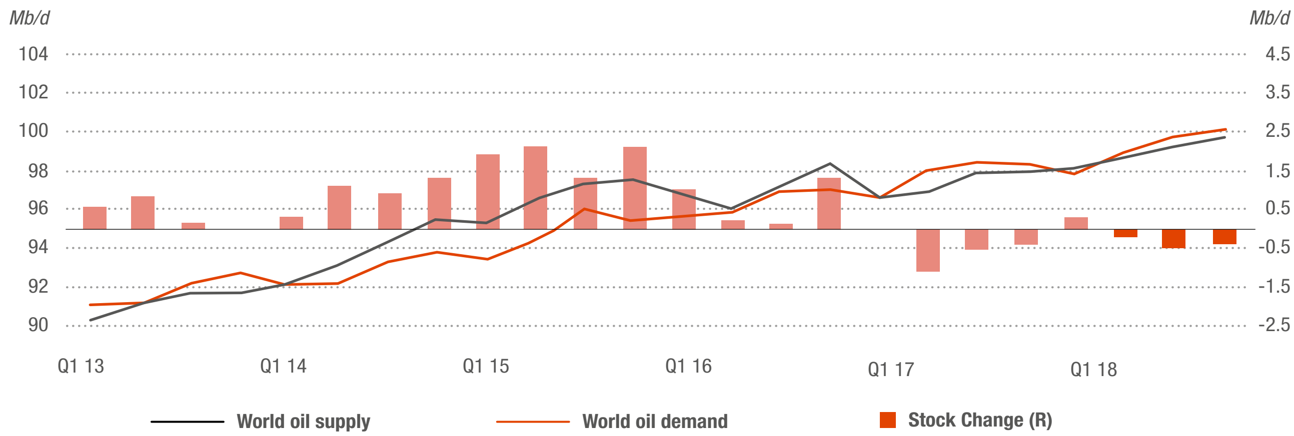
According to IHS and Barclays, Exploration & Production Capex for Oil & Gas projects grew approximately 7% to 8% between 2016 and 2017, essentially supported by investments in the United States. However, the timing and magnitude of a global market rebound is yet to be confirmed.

Since 2016, Vallourec has been implementing a Transformation Plan aimed at transforming its operational set-up and improving its competitiveness in the short and longer term to secure long-term profitable growth and value creation. In 2017, as part of this program, the Group expanded new competitive production routes, developed a new organization closer to its customers, and generated significant cost savings.

3.4.1 Oil & Gas

Demand for seamless tubes depends primarily on the level of capital expenditures on development and production by participants in the oil and gas market, which is driven by the balance of supply and demand for oil and gas and current and expected oil and gas prices.

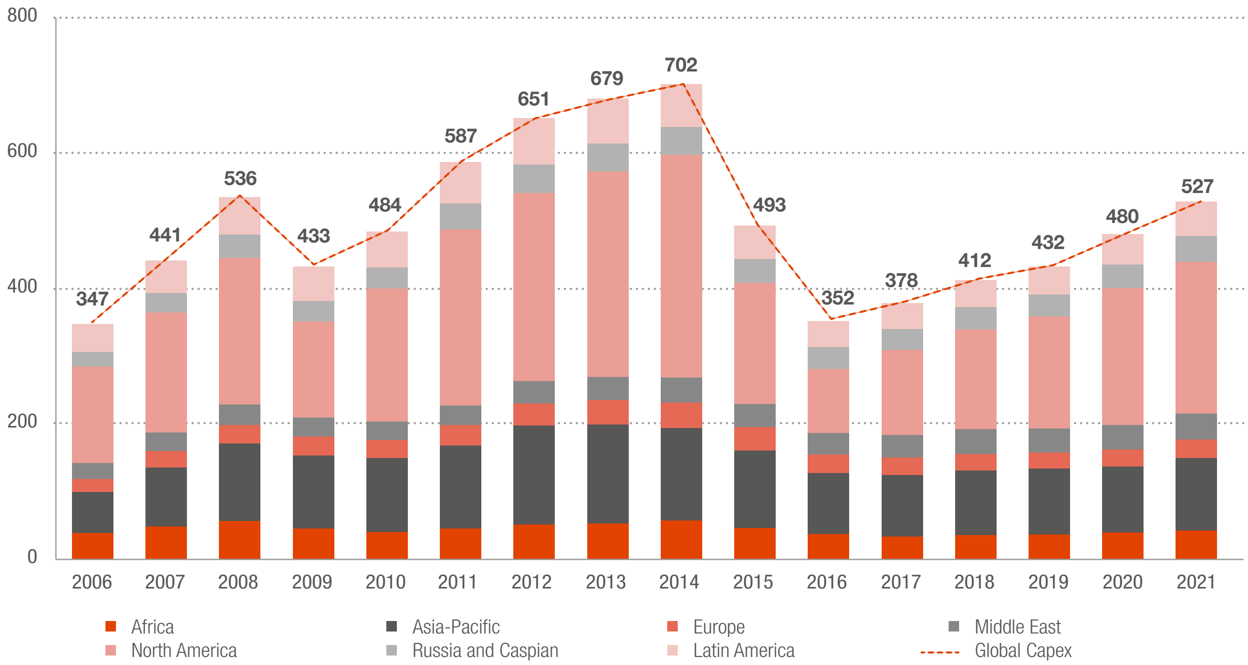
The graphic below shows the IEA's estimates (as at 19 January 2018) for the balance of supply and demand for oil and gas through the end of 2017, expressed in millions of barrels per day (mb/d):



Source: International Energy Agency Oil Market Report — 19 January 2018.

The graphic below shows the anticipated level of capital expenditures on development and production by oil and gas market participants by region, according to IHS estimates as of November 2017:

In USD billion

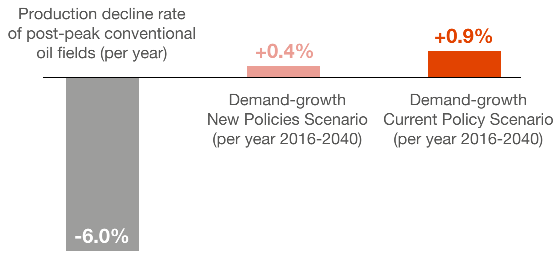


Source: IHS Markit — Global Upstream Spending, 27 November 2017 – Global upstream E&P capex by region.

In addition to supply and demand for oil and gas, field depletion is a key driver of demand for oil and gas products. Over time, oil fields begin to produce less and less oil, until their production rates decline to a point where their oil production is no longer profitable. The Group's customers must accordingly develop new exploration and production projects to replace lost volumes from older oil wells as their production volumes fall, thereby creating demand for the Group's oil and gas products.

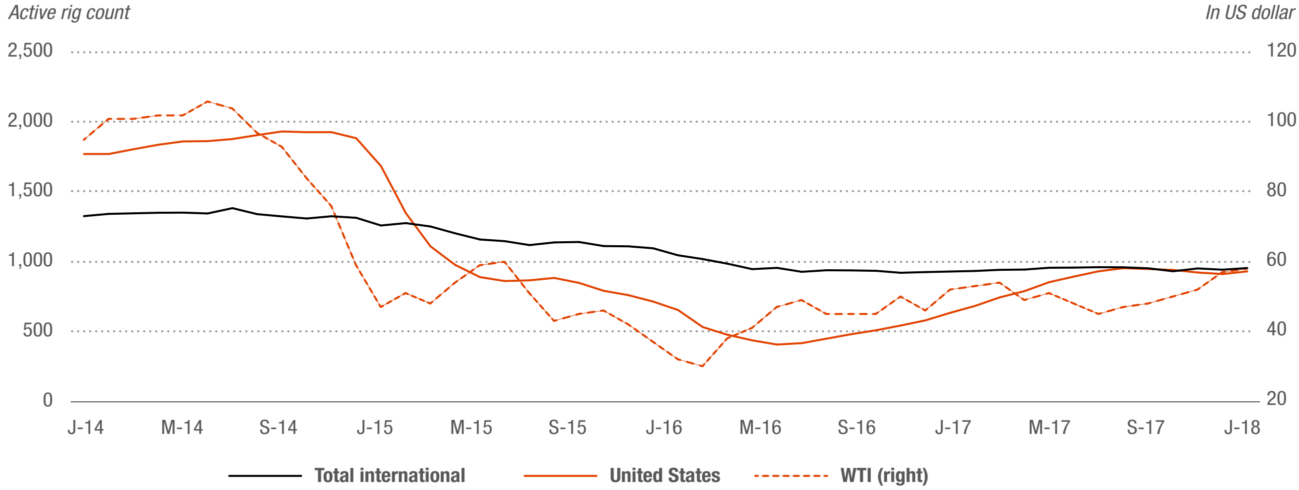
Post-peak decline rates averaging around 6% per year means that the world needs to find an additional estimated 2.5 mb/d of new production each year, just for the conventional output to remain flat. Decline rates for tight oil are even considerably higher.

The graphic below shows projected new conventional production capacity required per year, according to the November 2017 report from the IEA:



Source: International Energy Agency, "World Energy Outlook" — November 2017.

In addition, Vallourec typically considers data relating to drilling rig count (which tends to be correlated to oil prices), as well as drilling productivity of the rigs in operation, as indicative of the state of the market. Rig counts in the United States have increased strongly compared with levels in May 2016. The graphic below shows the evolution of US and international rig counts over the last three years, together with the change over time in WTI prices:



Source: Baker Hughes and Thomson Reuters — February 2018.

In 2017, barrel price remained relatively flat in the range of USD 50/barrel, above 2016 levels.

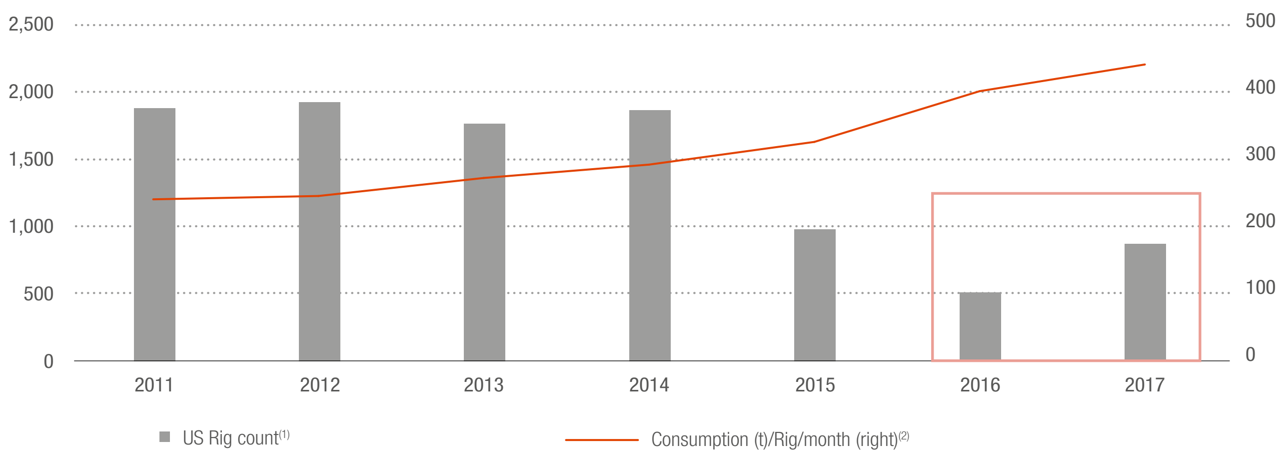
The average Brent and WTI oil prices(1) in 2017 stood at USD 54.2/barrel and USD 50.9/barrel respectively, compared to an average of USD 43.7/barrel and USD 43.9/barrel respectively in 2016.

The price of gas (Henry Hub) was USD 2.9/MBtu(2) at the end of 2017, while average prices in 2017 stood at USD 3.0/MBtu compared to USD 2.6/MBtu in 2016.

OIL & GAS US MARKET

2017 WTI levels led to better rig activity in the United States. The average number of active rigs(3) in 2017 stood at 872 units in 2017 compared to an average of 512 units in 2016, representing a 70% increase year-on-year. In 2017, the rig count increased 41% compared to the end of 2016.

In addition to active rig count, US OCTG consumption is being driven by improved rig efficiencies. The graphic below shows US OCTG consumption trends per rig over the last several years:



Sources: (1) Baker Hughes (January 2018).
(2) Preston US OCTG consumption (January 2018).

(1) *Price of Brent and WTI: Nasdaq – data collected in January 2018.*

(2) *Price of gas (Henry Hub): Nasdaq – data collected in January 2018.*

(3) *Baker Hughes (number of active rigs in the United States) – data collected in January 2018.*

In the Gulf of Mexico, the number of drilling platforms stood at 18 units at the end of 2017[1], a decrease compared to the end of 2016 (22 units).

OIL & GAS REST OF THE WORLD MARKET

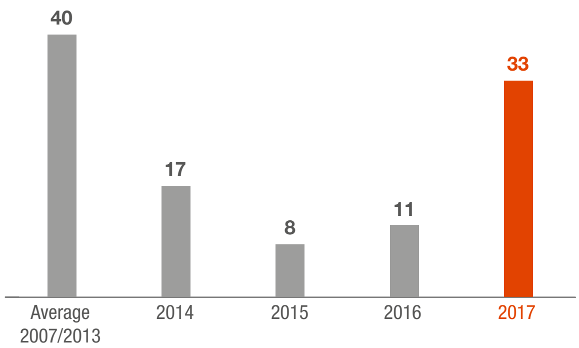
In Brazil, the oil and gas market is heavily dependent on Petrobras' capital expenditure plans, which Petrobras periodically publishes and updates in its Strategic Plan. The 2018-2022 Business and Management Plan, released on 21 December 2017, forecasts investments of USD 74.5 billion and continues to prioritize oil Exploration and Production (E&P) projects with 81% of total Capex being dedicated to these projects. The continuous focus on exploration of pre-salt fields with drilling in very deep waters (over 2,000 meters) far offshore and in a highly corrosive environment requires highly premium tubular products and solutions. For line pipe projects, Vallourec is also working with Libra's team on R&D solutions for rigid risers, as an alternative to flexible risers.

In the EAMEA region, the business environment has started to improve with more projects. In the Middle East, the rig count[2] stood at 378 units at the end of December 2017, broadly stable compared with the end of December 2016 (376 units). Demand from NOCs remains sustained while IOCs' tendering activity has started to resume.

In Africa, tendering activity regained some momentum in the first half of 2017 in a still competitive environment.

Some projects have also been launched in the North Sea.

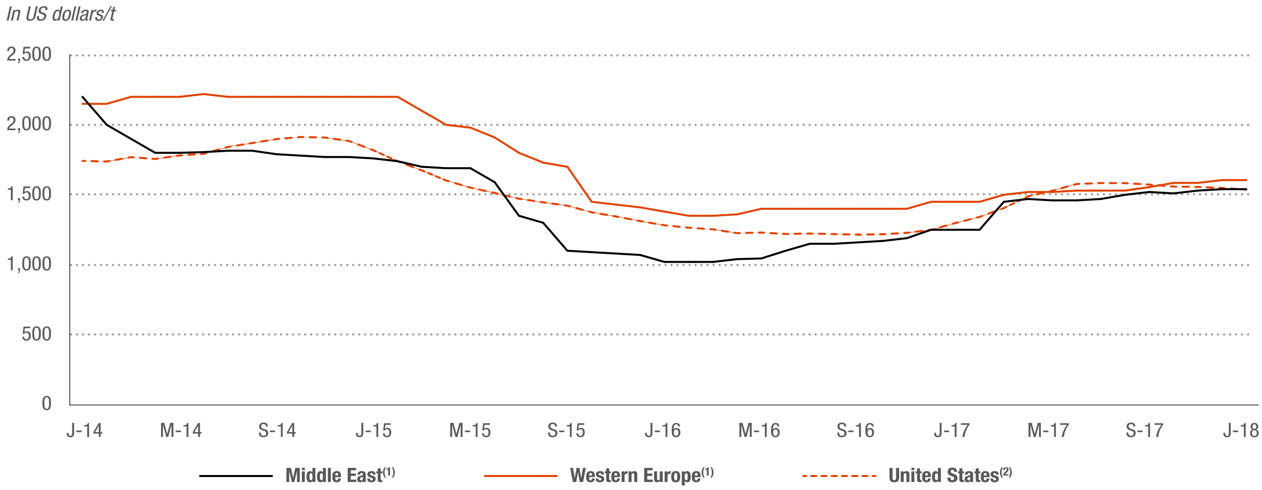
International oil companies (IOCs) have progressively restarted to approve projects in 2017 and their capex have stabilized. In 2017, 33 international oil and gas projects reached final investment decisions ("FID"), three times more than in 2016. The graphic below shows the rebound of international FID projects since 2015 lows:



Source: Wood Mackenzie's Pre-FID Upstream Project Tracker; Vallourec Corporate Strategy & Marketing.

OCTG PRICING EVOLUTION FOR OIL & GAS MARKET

In this context, OCTG prices, while still competitive, have recovered from their lows in mid-2016, rising most sharply in the United States and showing incremental improvement internationally, according to January 2018 data from MBR and January 2018 data from PipeLogix, as shown in the graphic below:



Sources: (1) MBR (OCTG casing L80 premium connection) – January 2018.
(2) PipeLogix (average prices Seamless pipes) – January 2018.

(1) *Baker Hughes (number of active rigs in the United States) – data collected in January 2018.*

(2) *Baker Hughes (international active rig count, excluding North America) – January 2018.*

3.4.2 Power Generation

Demand for seamless tubes in the power generation market depends on the construction or maintenance of power plants and technological advancements in specific types of power generation.

Conventional energy

India and China remain active. Nevertheless, Chinese authorities have decided to reduce the number of projects, with the aim of limiting total coal-fired capacity to below 1,100 GW in 2020.

In South Korea, coal power stations programs are impacted by the decisions taken by the new President and uncertainty remains. In the other regions (Europe, North America) activity remains limited to maintenance works.

These long term trends reflected on demand in 2017 with an improving product mix but at the same time decreasing volumes.

Nuclear energy

The difficulties of funding, the issues related to increasing safety of facilities, as well as the political reluctance of some states are slowing down the development of nuclear power.

China, with targets of 58 GW of nuclear capacity installed in 2020, and 150 GW by 2030 (32 GW in 2017), is the most important market in terms of nuclear new build. In Europe, the United Kingdom has launched a nuclear program of 16 GW new nuclear capacities by 2030, and has signed a cooperation agreement with EDF on the Hinckley Point C project (to be commissioned in 2025 at the earliest).

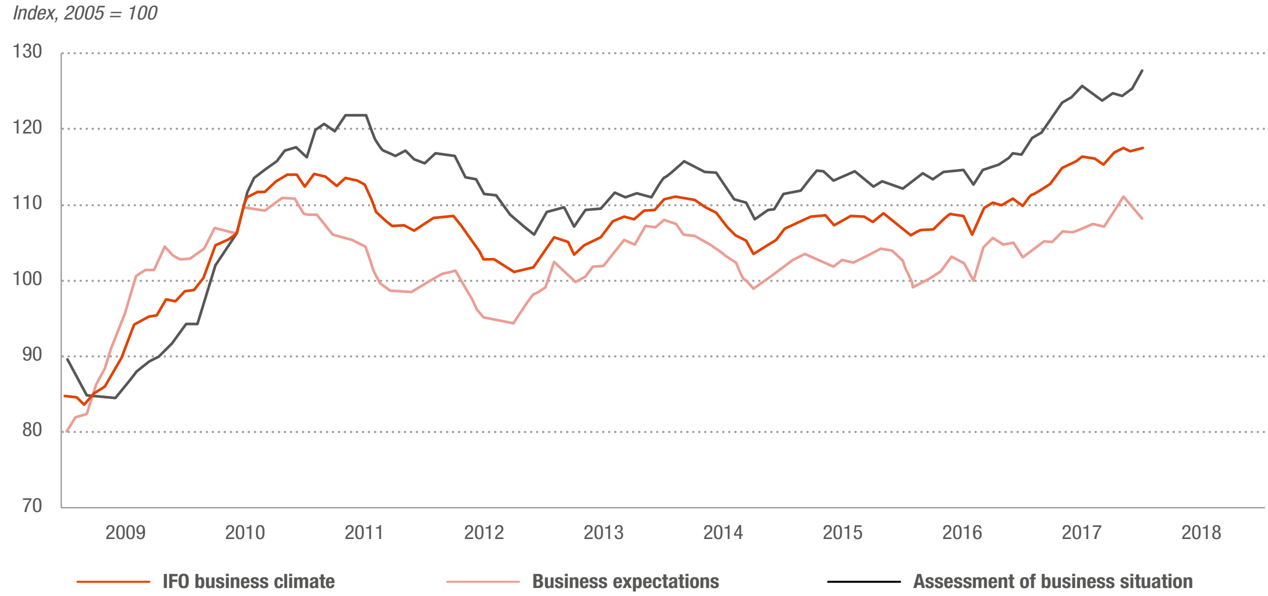
In addition to the new build business, Vallourec is also targeting tubular needs related to the program to extend the life time of existing reactors (France, Canada, South Korea…).

3.4.3 Industry and other markets

Demand for industrial applications is dependent upon the growth or decline of sectors, such as automotive, construction or industrial manufacturing sectors. Such growth is driven by numerous factors, but overall bears a broad correlation to GDP growth.

In Europe, market environment for Industry & other activities improved in 2017, particularly for Mechanical Engineering.

The graphic below illustrates the improvement of the Business Climate Index as per German IFO:



Source: IFO Institute – 25 January 2018.

After two years of a deep recession, the Brazilian economy posted a growth rate of 0.7% in 2017[(1)] with a rebound in Automotive and Mechanical Engineering.

In Brazil, the iron ore mine operated by the Group benefited from higher iron ore prices in 2017.

(1) OECD, February 2018, GDP.

3.4.4 Renewables

Activity is increasing, mostly for geothermal energy, and biomass power plants. Vallourec is also involved in different innovation projects such as in solar or hydrogen energy.

3.4.5 Raw materials

Raw material prices impact the Group as a result of its use of scrap metal and iron ore. The Group's US-based steel plant is equipped with an electric arc furnace fed with scrap metal. The Group's Brazilian steel plants combine both an electric furnace (using scrap metal in Jeceaba) and two blast furnaces (one in Barreiro and one in Jeceaba, both using iron ore).

In 2017, scrap prices increased quite significantly, particularly at the beginning of the year:

- in the United States, average scrap metal prices in 2017[1] stood at USD 302.9/Lt, a 32.4% increase compared to 2016 average prices (USD 228.8/Lt);
- in Brazil, average scrap metal prices in 2017 were USD 240/t, over an average price of USD 198/t during the fourth quarter of 2016;
- in 2017, average iron ore prices on international markets(2) amounted to USD 71.3/t, a 24.8% increase compared to 2016 (USD 57.1/t on average).

3.4.6 Currencies

The Group remains sensitive to volatility in foreign currencies (Brazilian real, US dollar) against the euro.

The translation effect is the impact of the changing value of the financial statements of subsidiaries whose functional currency is not the euro on the Group's consolidated financial statements. When subsidiaries generate profits, the effect is positive when the currency rises against the euro and negative when it falls against the euro.

The transaction effect is the difference in revenue (or costs) expressed in the functional currency of contracts that are invoiced in US dollars or indexed against the US dollar. It is positive when the functional currency declines and negative when it rises, with a delay resulting from hedges in place.

3.5 Significant events in 2017

CONTINUED DEPLOYMENT OF THE TRANSFORMATION PLAN

In 2017, Vallourec continued to roll out its Transformation Plan, which it launched in early 2016:

On 18 January 2017, Vallourec announced it would be adapting its structure, in order to allow it to take full part in its Transformation Plan. This new organization, in effect since 3 April 2017, is structured around four Regions: Europe/Africa, Middle East/Asia, North America and South America, as well as two central Departments (Development & Innovation and Technology & Industry) and allows the Group to strengthen its local presence and proximity to its customers, to optimize global use of its resources and stimulate its development.

On 26 January 2017, Vallourec sold 60% of the Saint-Saulve steel mill to Asco Industries. Vallourec kept the remaining 40% in order to continue to supply itself with special steels.

On 11 December 2017, Vallourec announced its plan to sell its "Drilling Products" activity to the American oil services group National Oilwell Varco (NOV) for a total cash amount of USD 63 million.

GOVERNANCE

At its meeting on 28 March 2017, Vallourec's Supervisory Board decided to propose for a vote by the annual Shareholders' Meeting of 12 May 2017 the appointment of Mr. Yuki Iriyama as member of the Supervisory Board, for a four-year term of office, i.e. until the end of the Ordinary Shareholders' Meeting called to approve the financial statements for the year ending 31 December 2020. The Shareholders' Meeting of 12 May 2017 approved the appointment of Mr. Yuki Iriyama as a member of the Supervisory Board.

Jean-Pierre Michel, Member of the Management Board since 1 April 2006 left the Management Board on 31 March 2017, which has consisted of Philippe Crouzet, Chairman of the Management Board, and Olivier Mallet, Member of the Management Board since that date.

(1) CRU – Shredded Pittsburgh – USD/Lt.

(2) Platts SBB – IODEX Iron ore fines 62% CFR North China USD/t.

COMMERCIAL SUCCESS

On 21 September 2017, Vallourec signed a contract with the oil company Badr El Din Petroleum Company (BAPETCO), a joint venture between Shell and Egyptian General Petroleum Corporation. This agreement concerned the supply of tubular solutions (OCTG) to equip 60 to 70 gas wells of an onshore project in the western desert of Egypt. Vallourec relied on one of the new production channels established under its Transformation Plan, as the majority of the carbon steel seamless tubes are produced by Tianda, the plant the Group acquired in 2016 in Chuzhou, China (North of Shanghai) while the more complex tubes are made in the Group's European plants in France and Germany.

STRENGTHENING OF LIQUIDITY PROFILE

In October 2017, Vallourec strengthened its liquidity profile by raising €800 million on the bond and convertible bond markets:

- on 4 October 2017, Vallourec issued €250 million in OCEANE (Bonds Convertible into New Shares and/or Exchangeable for Existing Shares of the Company) maturing in 2022;
- on 18 October 2017, Vallourec issued €400 million in bonds maturing in 2022;
- on 26 October 2017, Vallourec completed another bond issue in the amount of €150 million.

The net proceeds from these issues have been allocated for repayment of the amounts drawn on the confirmed bank lines and certain short-term debts, noting that the amounts repaid for the confirmed bank lines remain available.

EMPLOYEE SHARE OWNERSHIP

On 14 December 2017, Vallourec announced it had finalized Value 17, a capital increase reserved for its employees worldwide. Close to 10,000 employees in 11 countries, representing 52% of eligible employees, subscribed for this tenth worldwide employee stock plan offered by the Group. As at 31 December 2017, employee shareholders made up 4.19% of Vallourec's shareholding structure.

3.6 Transformation Plan

On 1 February 2016, Vallourec announced major strategic initiatives to transform its operational set-up, improve its competitiveness in the short and longer term and reinforce its financial strength to secure long-term profitable growth and create value for its shareholders. These initiatives are structured around three major goals:

3.6.1 A global industrial reorganization plan

EUROPE

Severely affected by overcapacity and competition from low-cost operators worldwide, Vallourec's European activities have been streamlined by centralizing rolling activities in Germany and specialization of finishing activities in France.

This led to the streamlining of steel production, the closure of a threading line in Mülheim, Germany at the start of 2016, and two rolling mills in France, the Déville-lès-Rouen mill in September 2016 and the Saint-Saulve mill in January 2017, along with the heat treatment line in Bellshill, Scotland in November 2016.

In line with its premium positioning, Vallourec concentrates its European activities on the design and production of high added-value products and solutions, and continues to focus on its Research and Development activities in France and Germany.

BRAZIL

In order to streamline its Brazilian activities, and after obtaining authorizations from the competition authorities, Vallourec Tubos do Brasil (VBR, subsidiary held 100% by Vallourec) transferred almost all of the assets and liabilities from its tubular business to Vallourec & Sumitomo Tubos do Brasil (VSB, Jeceaba site operated by a joint venture held 56% by Vallourec, 40.4% by NSSMC and 3.6% by Sumitomo Corp.) in October 2016. On this occasion, VSB changed its corporate form, adopting the name "Vallourec Soluções Tubulares do Brasil". VSB is now held 84.6% by Vallourec, with NSSMC holding 15% and Sumitomo Corp holding the remaining 0.4%. It enjoys the full benefit of the optimal operational performances of the Jeceaba state-of-the-art PQF®-type rolling mill and premium finishing installations.

The creation of this single production entity will enable Vallourec to generate significant industrial and administrative synergies and to optimize its investments.

In connection with the restructuring of VSB, on 1 February 2016, Vallourec Tubes, NSSMC and VSB entered into a new supply agreement, which superseded the 2011 agreement, whereby VSB has undertaken to supply, and NSSMC has undertaken to purchase, a certain percentage of the Jeceaba facility's annual production capacity of tubes (approximately 300,000 metric tons when the facility is running at full capacity). This contract has been entered into for a term of 30 years.

The streamlining of Brazilian activities led to the closure of a blast furnace at the Belo Horizonte site in 2016. The closure of the second blast furnace and the steel mill at Belo Horizonte will occur during fiscal year 2018. Steel production will be concentrated at the state-of-the-art steel mill in Jeceaba.

CHINA

In early December 2016 Vallourec took control of the capital of Tianda Oil Pipe (TOP) a Chinese seamless tube manufacturer listed on the Hong Kong Stock Exchange. Since 1 April 2011, the Group had been holding 19.5% of TOP's capital.

TOP's industrial assets include a state-of-the-art PQF®-type rolling mill, qualified by leading Oil & Gas customers. This acquisition allows Vallourec to develop an expanded offer of highly competitive solutions which combine the VAM® connections with Tianda's highly competitive tubes to support the market shares of the VAM® connection.

3.6.2 Reinforcement of the partnership between Vallourec and NSSMC

Since 1985, the development of the VAM® connections has been a joint activity of Vallourec and NSSMC. This cooperation has helped make the VAM® brand a global standard on the OCTG market.

This industrial partnership was enhanced, with a plan to capitalize on each group's strengths to ensure the competitiveness of the VAM® connection and support long-term technological leadership. It focuses on three areas:

- improving Research and Development efficiency in order to accelerate the development and marketing of new VAM® connections, thereby reinforcing VAM®'s premium positioning worldwide: on 1 February 2016, NSSMC and Vallourec Oil & Gas France entered into an addendum to the R&D contract of 1 April 2007 in order to improve the efficiency of the organization and implementation of their common R&D program for the development of VAM® connections, in particular through a Technical Committee (Technical, Industrialization, and Services Committee) and better organization of the cooperation for each material Research and Development program;
- the strengthening of the Brazilian organization by merging activities of the two local companies and the creation of Vallourec Soluções Tubulares do Brasil (see details about the merger of the two companies above);
- lastly, NSSMC, acting as a strategic investor, subscribed to Vallourec's funding round in 2016 and as at 31 December 2017, it held 14.56% of Vallourec's share capital.

3.6.3 Reinforcement of Vallourec's balance sheet

In order to bolster its balance sheet and fund its transformation to secure its long-term growth, during the first half of 2016, Vallourec raised €951 million through a combination of a financial instrument (Mandatory Convertible Bonds, "Bonds") reserved to Bpifrance Participations and NSSMC, and a capital increase maintaining shareholders' preferential subscription rights ("Rights Issue").

Under this plan, Bpifrance and NSSMC subscribed to the Rights Issue and the issue of the Mandatory Convertible Bonds up to an amount that will result in each holding a 15% stake in the Company's share capital, on a diluted basis, following the Rights Issue and after conversion of all of the Bonds. NSSMC increased its stake entirely by subscribing to the Rights Issue and bond issue, and Bpifrance could purchase shares on the market before the Rights Issue.

RIGHTS ISSUE

The Chairman of the Management Board, acting by virtue of the delegation of authority and powers entrusted to him by the Ordinary and Extraordinary Shareholders' Meeting of 6 April 2016, under its eighteenth resolution and the subdelegation of the Management Board, decided, on 7 April 2016, to carry out the rights issue for a total nominal amount of €434,202,976 by issuing 217,101,488 new shares with a par value of €2 each, with preferential subscription rights at the rate of eight new shares for five pre-existing shares held, to be subscribed and fully paid-up in cash, for an issue price set at €2.21 per share, comprising €2 of par value and €0.21 of paid-up capital. Pursuant to the eighteenth resolution adopted by the Ordinary and Extraordinary Shareholders' Meeting of 6 April 2016, the issue price was determined on the basis of recommendations of the banking syndicate, pursuant to the usual market practices for this type of transaction, and taking into account current market conditions.

This capital increase was covered by a prospectus filed with the French securities regulator – *Autorité des Marchés Financiers,* AMF – on 7 April 2016, under number 16-126, and took place from 11 to 22 April 2016, inclusive.

Pursuant to their subscription agreements, Bpifrance and NSSMC exercised their preferential subscription rights and subscribed to the Rights Issue on a proportionate basis, for a total amount of around €56 million. In view of the securities custodian certificate prepared by BNP Paribas Securities Services, on 3 May 2016 the Chairman of the Management Board recorded the final completion of the capital increase for a total amount of €479,794,288.48, as reflected in the creation of 217,101,488 new shares.

ISSUE AND REDEMPTION OF MANDATORY CONVERTIBLE BONDS

The mandatory convertible bond issue took place simultaneously with the closing of the Rights Issue, on 3 May 2016. The issuance of the Bonds was composed of two tranches (Tranche A Bonds and Tranche B Bonds), calibrated so that NSSMC and Bpifrance each hold 15% of the Company's share capital following completion of the Rights Issue and full redemption of the Bonds, on a diluted basis. The issue price of the Tranche A Bonds and Tranche B Bonds will equal their par value. The par value of the Tranche A Bonds was €99 and the redemption ratio for the Tranche A Bonds was nine shares per Bond (i.e., a reference price for the underlying shares of €11). The par value of the Tranche B Bonds was the subscription price for each new share in the Rights Issue and the redemption ratio for the Tranche B Bonds was one share per Bond.

No request was made to admit the Bonds to trading on the regulated market of Euronext Paris and they were in registered form only. The Bonds did not bear interest and were not redeemable for cash. The Bonds were to be automatically redeemed into ordinary shares of the Company (i) upon the receipt of regulatory approvals from the Brazilian antitrust authority and (ii) on the earlier of (a) the last day of the 24th month after the date of their issuance and (b) eight business days prior to the date of the Shareholders' Meeting convened to approve the financial statements of the Company for the fiscal year ending 31 December 2017.

The capital increase resulting from redemption of the Tranche A Bonds was covered by a prospectus filed with the French Financial Markets Authority on 16 March 2016 under number 16-079 and the capital increase resulting from redemption of the Tranche B Bonds was covered by a prospectus filed with the French Financial Markets Authority on 7 April 2016 under number 16-126.

Bpifrance subscribed around €128 million of Tranche A Bonds and around €41 million of Tranche B Bonds. NSSMC subscribed around €260 million of Tranche A Bonds and around €84 million of Tranche B bonds.

Bpifrance having obtained the definitive authorization of the Brazilian competition authority, the redemption of Bpifrance Bonds in shares took place on 3 May 2016, creating 30,282,564 new shares (11,647,134 new shares from the redemption of 1,294,126 Tranche A Bonds and 18,635,430 new shares from the redemption of 18,635,430 Tranche B Bonds).

Following NSSMC's obtaining of the definitive authorization of the Brazilian competition authority, the redemption of Bonds subscribed by NSSMC took place on 20 June 2016, creating 61,565,565 new shares (23,679,054 new shares from the redemption of 2,631,006 Tranche A Bonds and 37,886,511 new shares from the redemption of 37,886,511 Tranche B Bonds).

3.7 Results of operations

3.7.1 Consolidated Group results

Income statement

Comparison of FY 2017 with FY 2016

Consolidated data *In € million*	2016	2017	Change 2017/2016
Sales volume *(in thousands of metric tons)*	**1,281**	**2,256**	**+76.1%**
Revenue	**2,965**	**3,750**	**+26.5%**
Cost of sales[(a)]	(2,727)	(3,297)	+20.9%
Industrial margin	**238**	**453**	**+90.3%**
(as a % of revenue)	*8.0%*	*12.1%*	*+4.1 pts*
Sales, general and administrative costs[(a)]	**(448)**	**(440)**	**-1.8%**
(as a % of revenue)	*15.1%*	*11.7%*	*-3.4 pts*
Other	(9)	(11)	N/A
EBITDA	**(219)**	**2**	**+€221 m**
(as a % of revenue)	*-7.4%*	*0.1%*	*+7.5 pts*
Depreciation of industrial assets	(283)	(297)	+4.9%
Amortization, restructuring and other	(176)	(123)	N/A
Impairment of assets	(71)	(65)	N/A
Operating income	**(749)**	**(483)**	**+€266 m**
NET INCOME, GROUP SHARE	**(758)**	**(537)**	**+€221 m**

(a) Before depreciation and amortization.

Production

The diversity of the Group's products and the absence of appropriate units of measurement, other than financial units, prevent the provision of meaningful information on production volumes. However, the following table provides a summary of production output, which corresponds to the volumes produced in Vallourec rolling mills, expressed in metric tons of hot-rolled seamless tubes:

In thousands of metric tons	2016	2017	Change 2017/2016
Q1	251	475	+89.2%
Q2	321	538	+67.6%
Q3	333	588	+76.6%
Q4	376	655	+74.2%
TOTAL	**1,281**	**2,256**	**+76.1%**

The 76.1% increase in 2017 compared to 2016 is primarily explained by the strong recovery of Oil & Gas business in the United States, the sustained deliveries to national oil companies in the EAMEA region, and the effects of a change in scope linked to the integration of Tianda and the 100% consolidation of Vallourec Soluções Tubulares do Brasil.

Revenue

The data presented "at constant exchange rates" is calculated by eliminating the translation effect into euros of the revenues of the Group's subsidiaries whose functional currency is not the euro. The translation effect is eliminated by applying 2016 exchange rates to these subsidiaries' 2017 revenue. However, the transaction effect – resulting from commercial exposure from sales and purchases entered into by certain of the Group's subsidiaries in currencies other than their functional currency – has not been eliminated.

Data presented "at constant scope" is calculated by eliminating the effect of changes in the Group's scope (acquisitions, divestitures, mergers, etc.) by taking into account on 1 January of year N-1 the scope variations occured during the year N-1.

CONSOLIDATED REVENUE

Consolidated revenue amounted to €3,750 million in 2017, up 26.5%. At constant scope and exchange rates, revenue was up 15.2%, mainly driven by a positive volume effect (+35.0%) which was partially offset by a negative price/mix effect of -19.8%. This price/mix effect primarily results from orders recorded in 2016 at low prices in EAMEA[(1)] and delivered in 2017.

REVENUE BY GEOGRAPHICAL MARKET

The following table shows the change in consolidated revenue by geographic region in which products were sold between 2016 and 2017:

In € million	2016	% of revenue	2017	% of revenue	Change 2017/2016 at current exchange rates	Change 2017/2016 at constant exchange rates
France	91	3.1%	105	2.8%	15.3%	15.0%
Germany	280	9.4%	279	7.4%	-0.4%	-0.2%
Other EU countries[(a)]	276	9.3%	210	5.6%	-23.9%	-22.9%
Total Europe	**647**	**21.8%**	**594**	**15.8%**	**-8.2%**	**-7.7%**
North America	**559**	**18.9%**	**1,033**	**27.6%**	**84.8%**	**88.5%**
Brazil	456	15.4%	599	16.0%	31.4%	20.2%
Other Central & South America	11	0.3%	13	0.3%	18.2%	18.3%
Total South America	**467**	**15.7%**	**612**	**16.3%**	**31.0%**	**20.2%**
China	257	8.6%	451	12.0%	75.5%	79.5%
Other Asia and Middle East	591	20.0%	724	19.3%	22.5%	21.1%
Total Asia and Middle East	**848**	**28.6%**	**1,175**	**31.3%**	**38.6%**	**38.8%**
CIS	27	0.9%	30	0.8%	11.1%	10.6%
Rest of the world	417	14.1%	306	8.2%	-26.6%	-25.5%
Total Rest of the world	**444**	**15.0%**	**336**	**9.0%**	**-24.3%**	**-23.3%**
TOTAL REVENUE	**2,965**	**100.0%**	**3,750**	**100.0%**	**26.5%**	**25.8%**

(a) Other European Union countries, excluding Germany and France.

Revenue was strongly up in North America, thanks to the recovery of Oil & Gas business. It was also up in South America and in the Asia and Middle East region, notably thanks to increased volumes. Revenue was nevertheless down in Europe and in the Rest of the world, notably due to deliveries at lower price/mix than those of 2016.

Here after is a breakdown of revenue by activity.

(1) EAMEA: Europe, Africa, Middle East, Asia.

REVENUE BY ACTIVITY

In 2017, the consolidated revenue for Oil & Gas and Industry & Other activities increased, while the revenue for Power Generation activity was down. The following table shows the breakdown of the Group's revenue by activity in 2016 and 2017:

In € million	2016	2017	% change at current exchange rates	% change at constant exchange rates[(a)]
Oil & Gas	1,791	2,299	28.4%	27.9%
Petrochemicals	129	268	107.8%	109.3%
Oil & Gas and Petrochemicals	**1,920**	**2,567**	**33.7%**	**33.3%**
Power Generation	**486**	**408**	**-16.0%**	**-15.2%**
Mechanicals	279	368	31.9%	30.5%
Automotive	101	144	42.6%	35.6%
Construction & other	179	263	46.9%	43.6%
Industry & other[(b)]	**559**	**775**	**38.6%**	**35.6%**
TOTAL	**2,965**	**3,750**	**26.5%**	**25.8%**

(a) The change at constant exchange rates is defined as the change in revenue between two periods obtained by translating the revenues of consolidated subsidiaries whose functional currency is not the euro into euros at the average cumulative rate of the prior period. It does not include foreign currency impacts on sales entered into by certain subsidiaries in currencies other than their functional currency. Rather, that impact is built into price/mix effects.

(b) Including sales of iron ore.

Oil & Gas, Petrochemicals (68.5% of consolidated revenue)

In 2017, Oil & Gas revenue was €2,299 million, up 28.4% year-on-year (up 14.7% at constant scope and exchange rates):

- in the USA, full year 2017 revenue increased significantly. The steep rise in OCTG volumes sold resulted primarily from the sustained increase in drilling activity. This positive trend enabled the Group to pass through price increases with full effect as from July 2017. Q4 2017 revenue was up year-on-year supported by higher volumes and by the full impact of price increases;
- in the EAMEA region, full year 2017 revenue remained relatively flat compared to 2016. Volumes were significantly up, but were recorded at lower price and mix.

  The strong positive volume impact was due to the acquisition of Tianda and the full consolidation of VSB effective end of 2016, and to higher deliveries notably in the Middle East.

  Although price increases have gradually been negotiated with customers with whom price concessions were the most severe during the trough, 2017 deliveries were impacted by the low prices of orders registered in 2016;
- in Brazil, full year 2017 revenue was up year-on-year essentially supported by higher sales to Petrobras in Q1 2017 for the drilling of exploratory wells in the Libra field.

  As forecasted, revenue in Q4 2017 was weaker than in Q3 2017.

In 2017, Petrochemicals revenue was €268 million, up 107.8% year-on-year (up 76.0% at constant scope and exchange rates) resulting from the integration of Tianda, the pick-up of activity in North America along with a low comparison basis in 2016.

Power Generation (10.9% of consolidated revenue)

In 2017, Power Generation revenue amounted to €408 million, down 16.0% year-on-year (down 16.3% at constant scope and exchange rates).

The revenue declined essentially as a result of a challenging market environment for both conventional and nuclear applications.

Industry & Other (20.6% of consolidated revenue)

In 2017, Industry & Other revenue amounted to €775 million, up 38.6% year-on-year (up 30.4% at constant scope and exchange rates):

- in Europe, 2017 revenue was up essentially thanks to higher volumes in Mechanical Engineering;
- in Brazil, 2017 Industry & Other revenue increased mainly due to higher prices and volumes in Automotive and Mechanical Engineering. Revenue generated from the mine was up thanks to the increase in iron ore prices.

REVENUE BY QUARTER

In € million	Q1	Q2	Q3	Q4	Fiscal year
2016	671	763	693	838	2,965
2017	783	933	964	1,070	3,750
% change compared with the previous year	+16.7%	+22.3%	+39.1%	+27.7%	+26.5%
volume effect	*+36.3%*	*+18.3%*	*+38.7%*	*+45.4%*	*+35.0%*
translation effect	*+8.5%*	*+3.1%*	*-4.0%*	*-3.8%*	*+0.7%*
scope effect	*+9.7%*	*+13.5%*	*+13.7%*	*+5.8%*	*+10.4%*
other effects (price, mix, etc.)	*-37.8%*	*-12.6%*	*-9.3%*	*-19.7%*	*-19.8%*

The changes in scope that occurred at the end of 2016 (integration of Tianda and full consolidation of VSB) had a positive impact on revenue in 2017.

The increase in revenue was particularly significant in the second half thanks to strongly increasing volumes and the full effect of the price increases negotiated on the Oil & Gas market in the United States.

EBITDA

EBITDA stood at **+ €2 million in 2017,** compared to a negative EBITDA of €219 million in 2016. This €221 million improvement was primarily a result of an increase in revenue, the improvement in the industrial margin and lower SG&A.

The following table shows the changes in the principal components of EBITDA in 2016 and 2017.

In € million	2016	2017	Change 2017/2016
Revenue	**2,965**	**3,750**	**26.5%**
Cost of sales	(2,727)	(3,297)	20.9%
Industrial margin	**238**	**453**	**90.3%**
% of revenue	*8.0%*	*12.1%*	*+4.1 pts*
Sales, general and administrative costs	(448)	(440)	-1.8%
Other expenses, net	(9)	(11)	N/A
EBITDA	**(219)**	**2**	**+€221 m**
% of revenue	*-7.4%*	*0.1%*	*+7.5 pts*

INDUSTRIAL MARGIN

Industrial margin is defined as the difference between revenue and cost of sales (excluding depreciation).

In 2017, the industrial margin improved by €215 million thanks to (i) the increase in revenue, (ii) the savings generated under the Transformation Plan and the scope effect and (iii) reversals of net provisions in the amount of €81 million in 2017.

The following table shows the breakdown of cost of sales (excluding depreciation) in 2016 and 2017:

In € million	2016	2017	Change 2017/2016
Direct cost of sales	157	223	42.0%
Cost of raw materials consumed	935	1,370	46.5%
Labor costs	747	837	12.0%
Other manufacturing costs[a]	892	908	1.8%
Change in non-raw material inventories	(4)	(41)	N/A
TOTAL	**2,727**	**3,297**	**20.9%**

(a) "Other manufacturing costs" consist mainly of energy and consumable materials costs, subcontracting and maintenance costs, and provisions.

SALES, GENERAL AND ADMINISTRATIVE COSTS

Sales, general and administrative (SG&A) costs were down 1.8% at €440 million in 2017, despite the negative effects linked to changes in scope and inflation.

The following table shows the breakdown of SG&A costs (excluding depreciation) in 2016 and 2017:

In € million	2016	2017	Change 2017/2016
Research and Development costs	60	47	-20.3%
Selling and marketing costs	87	82	-5.7%
General and administrative costs	301	311	+3.3%
TOTAL	**448**	**440**	**-1.8%**

PERSONNEL EXPENSES

Labor costs are divided among cost of sales, SG&A costs, and other operating expenses.

In 2017, total labor costs were €1,068 million compared to €994 million in 2016. This increase is explained by a scope effect (consolidation of VSB and Tianda), an inflation effect and an increase in average staff in the United States, accompanying the recovery of activity, partially offset by the rationalization of industrial production, notably in Europe.

Employee costs are broken down as follows:

In € million	2016	2017	Change 2017/2016
Wages and salaries	763	820	+57
Employee profit-sharing and bonuses	19	22	+3
Expenses relating to share subscription and share purchase options, and performance shares[(a)]	4	10	+6
Social security costs	208	216	+8
TOTAL	**994**	**1,068**	**+74**

(a) Including a €6.6 million expense for all share subscription plans for 2017 (compared to positive €0.8 million for 2016).

Group headcount as at 31 December 2017 was 19,524 people, compared with 19,242 people as at 31 December 2016:

Headcount as of year-end of consolidated companies	2016	2017	Change 2017/2016
Managers	3,299	3,231	-68
Technical and supervisory staff	3,107	3,048	-59
Production staff	12,836	13,245	+409
TOTAL	**19,242**	**19,524**	**+282**

For more detail on the workforce, see Chapter 4 of this Registration Document.

Operating income

Operating result was a loss of €483 million, compared with a loss of €749 million in 2016.

This €266 million improvement is primarily a result of (i) the increase in EBITDA, and (ii) lower asset impairment and restructuring expenses than in 2016.

DEPRECIATION OF INDUSTRIAL ASSETS

Depreciation of industrial assets slightly increased to €297 million in 2017, as compared with €283 million in 2016.

AMORTIZATION, RESTRUCTURING AND OTHER, AND ASSET IMPAIRMENT

Depreciation of non-industrial assets was €44 million, as compared with €49 million in 2016.

Impairments have been booked for a total amount of €65 million in 2017, compared to €71 million in 2016.

In 2017, these non-recurring elements essentially resulted from (i) the insolvency procedure regarding Ascoval, (ii) the disposal of non-strategic assets, notably Vallourec Drilling Products, and (iii) impairments related to the reduction in the number of projects for coal-fired plants in Asia.

Asset impairment can be broken down as follows:

In € million	2016	2017
Losses in value of intangible assets	-	-
Losses in value of property, plant and equipment	58	65
Losses in value of goodwill	-	-
Other impairment of assets	13	-
TOTAL	**71**	**65**

Financial result

The worsening of the financial result, which was -€174 million in 2016 as compared with -€131 million in 2016, is essentially explained by the two following items:

- a €34 million increase in net financial cost, due in particular to the increase in average cost of debt and changes in scope (100% consolidation of VSB) and a reduction in financial income;
- foreign exchange result, mainly impacted by the increase in premium/discount of hedging relating to intragroup loans in foreign currencies.

Financial income/(loss) is broken down as follows:

In € million	2016	2017	Change 2017/2016
Financial income	30	26	-13.3%
Interest expenses	(125)	(155)	+24.0%
Net financial cost	**(95)**	**(129)**	**+35.8%**
Other financial income and expenses	**(26)**	**(32)**	**+23.1%**
Other discounting expenses	**(10)**	**(12)**	**+33.3%**
FINANCIAL INCOME/(LOSS)	**(131)**	**(174)**	**+32.8%**

Income tax

Income tax was a gain of €100 million in 2017 as compared with a gain of €80 million in 2016.

The actual tax rate was 15%, as compared with 9% in 2016, and is primarily due to the following:

- the impact of tax loss carryforwards and timing differences mainly concerns the non-recognition of deferred tax assets (DTAs) for the year in France, Germany and China. Nevertheless, the rate improvement is explained by the recognition of deferred taxes on previous fiscal years for Brazil, Saudi Arabia and Tianda;
- permanent differences consisting mainly of the impact of non-controlling interests, free share allocations and the reintegration of financial expenses;
- differences in taxation mainly reflect the range of tax rates applied in each country (France 34.4%, Germany 31.6%, United States 35%, Brazil 34.0%, China 25.0% and Saudi Arabia 20%). As concerns the United States, the drop in income tax to 21% was considered to calculate deferred taxes.

Net income

The share of non-controlling interests totaled -€23 million in 2017, compared with -€50 million in 2016. This decrease was principally due to the recovery of activities in North America.

Net income, Group share was a loss of -€537 million, compared with a loss of -€758 million in 2016.

The Group's net result, Group share on a per-share basis was a loss of -€1.2, as compared with a loss of -€2.3 per share in 2016.

3.7.2 Liquidity and capital resources

3.7.2.1 Overview

In 2017, free cash flow (as defined in Section 3.7.2.4, "Free cash flow" below) was negative by €423 million, and included (i) a €61 million reduction in working capital requirement, notwithstanding the activity recovery, and (ii) strict discipline with respect to capital expenditures. Net debt increased from €1,287 million at the end of 2016 to €1,542 million as of 31 December 2017.

As at 31 December 2017, gross consolidated financial debt totaled €2,563 million, including €1,817 million in medium and long-term financial debt and €746 million in current financial debt. As of the same date, the Group had €1,021 million in cash and cash equivalents. It also had undrawn credit lines for €2,040 million at the end of 2017.

Group equity decreased in 2017, particularly due to the negative consolidated net income and to the impact of foreign currency translation reserves.

The net debt to equity accounting ratio went from 34.1% as at 31 December 2016 to 53.4% as at 31 December 2017.

3.7.2.2 Cash flow

Simplified statement of cash flows

In € million	2016	2017
Cash flow from operating activities	(399)	(332)
Change in operating working capital requirement (+ decrease/(increase))	+179	+61
Net cash flow from operating activities (1)	**(220)**	**(271)**
Net cash flow from investment activities (2)	**(267)**	**(95)**
Net cash flow from financing activities (3)	**1,095**	**130**
Impact of changes in exchange rates (4)	44	(31)
CHANGE IN CASH (1+2+3+4)	**652**	**(267)**

NET CASH FLOW FROM OPERATING ACTIVITIES

Net cash flow from operating activities was -€271 million in 2017, as compared with -€220 million in 2016.

Cash flow from operating activites amounted to -€332 million in 2017, compared to -€399 million in 2016.

Notwithstanding the activity recovery, working capital requirement was further reduced by €61 million. After an increase in Q1 2017 and a stabilization in Q2 and Q3, it was reduced by €164 million in the fourth quarter. This performance illustrates better efficiencies in operational working capital management along with cash tax synergies in Brazil.

Capital expenditure were €152 million in 2017, as compared with €175 million in 2016.

The change in working capital requirement is broken down as follows:

Gross amounts *(in € thousand)*	31/12/2016	Translation difference	Change	Reclassification and other	31/12/2017
Inventories	1,240,512	(92,756)	81,919	(45,838)	1,183,837
Trade receivables	579,168	(47,526)	85,992	(13,981)	603,653
Trade payables	(530,391)	38,567	(103,566)	13,768	(581,622)
Other receivables and payables	82,678	(3,549)	(148,045)	(1,961)	(70,877)
Gross working capital (1)	**1,371,967**	**(105,264)**	**(83,700)**	**(48,012)**	**1,134,991**
Impact of hedging instruments (2)			**23,145**		
TOTAL (1+2)			**(60,555)**		
Change in working capital requirement from statement of cash flows			**(60,555)**		

NET CASH FLOW FROM INVESTMENT ACTIVITIES

Net cash flow from investment activities was -€95 million in 2017, as compared with -€267 million in 2016. This drop is primarily explained by the fact that in 2016, Tianda was acquired in cash for €158 million. See Section 3.7.2.3, "Industrial Capital expenditure" below for a description of the main investments in 2016 and 2017.

NET CASH FLOW FROM FINANCING ACTIVITIES

Net cash flow from financing activities was +€130 million in 2017, as compared with +€1,095 million in 2016.

Net cash inflow in 2017 consisted primarily of cash inflows relating to €926 million in new loans, partially offset by loan repayments in the amount of €825 million.

In 2016, the Group cashed in €720 million linked to new loans and €980 million linked to capital increases.

3.7.2.3 Industrial capital expenditure

INVESTMENT DECISIONS

Investment decisions are a central pillar of the Group's strategy, addressing the following requirements:

- keeping personnel and facilities safe and complying with legal obligations, such as those relating to safety and the environment;
- developing Vallourec's activities through organic and external growth;
- optimizing production units' economic performance and enhancing the quality of Group products; and
- maintaining and, where necessary, replacing obsolete facilities.

Investment decisions are made through a dedicated process that systematically includes an economic study and risk assessment to ensure that the selected projects will support long-term growth and deliver an acceptable return on investment.

In all its investment projects, Vallourec attaches great importance to ensuring that environmental impact and energy savings receive special focus.

Since 2015, the investment authorization process has been strengthened through implementation of the following actions:

- systematic preparation for each project of more than €1 million through three "Front End Loading" steps;
- qualification of each of the three steps by a Qualification Committee bringing together the Group's experts. During this process, the essential aspects of the projects (market assumptions, technical choices, budget, planning and risks), are systematically examined and fleshed out; and
- an authorization at each of the three steps by a committee including the Director of Management Control and the Director of Investments, Projects and Engineering for projects of over €1 million. The members of the Management Board are part of this committee for projects of over €5 million. At committee meetings, projects compete with each other in terms of alignment with strategy, profitability and risk, while complying with the Group's budget limitations.

MAIN INVESTMENTS DURING THE 2016-2017 PERIOD

In recent years, industrial capital expenditure programs have been directed mainly toward streamlining production facilities, improving quality and process control, adapting product lines to reflect customers' changing requirements, expanding premium product finishing capacity and reducing production costs.

Over the past two fiscal years, investments have been made as follows:

Industrial capital expenditure excluding changes in scope (property, plant and equipment, intangible and biological assets)

In € million	31/12/2016	31/12/2017
Europe	95.6	85.2
North America	18.0	26.2
Central & South America	53.7[(a)]	32.9[(b)]
Asia	9.1	10.5
Other	0.1	0.2
TOTAL INDUSTRIAL CAPITAL EXPENDITURE[(c)]	**176.5[(c)]**	**155.0[(c)]**
Capital expenditure payments during the year	175.4	151.5

(a) Including €6.6 million for biological assets.

(b) Including €6.2 million for biological assets.

(c) The difference between capital expenditure payments and the total of industrial capital expenditure corresponds to the variation of amounts payable on fixed assets.

The most significant investment programs carried out in 2016 and 2017 are outlined below:

In 2016

The investment program was significantly reduced (-35%) due to the continuing decrease in the Group's activity. The programs initiated in previous years still accounted for 65% of expenditure in 2016.

The main new investments in 2016 were as follows:

- planting 52 hectares of eucalyptus, to meet the needs of Vallourec Soluções Tubulares do Brasil, as well as the construction of new combustion ovens for the production of charcoal (Brazil);
- reconfiguring the flows for the Déville and Saint-Saulve tube mills to adhere to the European industrial plan;
- the first industrial line in Europe for the new Cleanwell process for OCTG products;
- numerous projects intended to improve productivity and costs in connection with the Valens Plan and the Group Transformation Plan, as well as the safety and general condition of equipment.

In 2017

After two years of significant drops, capital expenditure decreased again in 2017, but more moderately (-14% compared to 2016) in order to take into account a still volatile and uncertain market environment.

The programs initiated in previous years accounted for 59% of expenditure in 2017.

The main new investments in 2017 were as follows:

- continued implementation of the new Cleanwell process in Europe for OCTG products;
- completion of the new high-performance piercer for the Düsseldorf-Rath tube manufacturing plant;
- improved safety of people and maintenance of facilities.

MAIN INVESTMENTS PLANNED FOR 2018

Investment expenditures in 2018 will be capped at approximately €200 million.

The 2018 program provides for a volume of new investments that is considerably higher than preceding years, in particular:

- the strengthening of the Tianda facilities, and the continued reinforcement of the Vallourec Soluções Tubulares do Brasil facilities, for OCTG and Line Pipe products, aimed at assisting the Group in its Transformation Plan;
- there are several projects to modernize non-destructive testing facilities, which are aimed at improving quality, cost, time frames and capacities;
- numerous maintenance and upgrading projects for facilities;
- the improvement of safety for people and facilities.

3.7.2.4 Free cash flow

In 2017, free cash flow totaled -€423 million, as compared with free cash flow of -€395 million in 2016. Free cash flow is defined as net cash flow from operating activities minus gross capital expenditures. The following table shows the calculation of free cash flow in 2016 and 2017:

In € million	2016	2017
Cash flow from operating activities	(399)	(332)
Change in operating working capital requirement (+ decrease/(increase))	+179	+61
Net cash flow from operating activities	**(220)**	**(271)**
Gross capital expenditures	(175)	(152)
FREE CASH FLOW	**(395)**	**(423)**

3.7.2.5 Liquidity and indebtedness

As at 31 December 2017, gross consolidated financial debt totaled €2,563 million, including €1,817 million in medium and long-term financial debt and €746 million in current financial debt. As of the same date, the Group had €1,021 million in cash and cash equivalents. Net debt thus totaled €1,542 million at the end of 2017, an increase of €255 million as compared with €1,287 million as at 31 December 2016.

As at 31 December 2017, Vallourec had undrawn confirmed credit lines in the amount of €2,040 million. No significant repayment deadline has been planned prior to August 2019, excluding an outstanding €396.8 million in commercial paper and various lines of financing for €68 million within Brazilian, American and Chinese subsidiaries. The amount available under these credit lines will be €2,040 million at the end of 2018, €2,018 million at the end of 2019, and €1,124 million at the end of 2020.

The net debt to equity accounting ratio was 53.4% at the end of 2017, compared to a ratio of 34.1% at the end of 2016.

The Group's financial resources are composed of bank financing and market financing.

Most of the Group's long-term and medium-term bank financing was set up in Europe at the level of Vallourec and its sub-holding company Vallourec Tubes and, to a lesser extent, at the level of its subsidiaries in Brazil and the United States. Market financing is arranged exclusively by Vallourec.

The following table shows the Group's principal financial indebtedness as of 31 December 2017:

In € million	As at 31 December 2017
Private placement – maturing in August 2019	399
Private placement – maturing in August 2027	54
Bond issue – maturing in September 2024	498
Non-convertible bond issue – maturing in October 2022	542
Convertible bond issue – maturing in October 2022	222
VSB BNDES loan	35
Jeceaba Finance Lease – Brazil	72
Commercial paper	397
Bilateral credit lines – US	67
Vallourec Star finance lease	23
ACC ACE	185
Other	69
TOTAL GROSS FINANCIAL INDEBTEDNESS	**2,563**

All of these bank facilities (revolving credit facility of €1.1 billion maturing in February 2019, extended once for €1.078 billion maturing in February 2020, and a second time for €1,034 million maturing in February 2021, a revolving credit line of €400 million maturing in July 2020, a revolving credit line of €450 million maturing in February 2020, a bilateral facility of €90 million maturing in February 2021) provide for Vallourec's compliance with a consolidated net debt-to-equity ratio that is less than or equal to 75%, calculated on 31 December of each year. For 2018, 2019, and 2020, this ratio was taken to 100% for all Vallourec's bank facilities through amendments of 17 March 2017. The Group's consolidated debt to equity ratio was 47% as at 31 December 2017, as calculated under the Group's bank loan covenants. As defined in the financing agreements, the "bank covenant ratio" is the ratio between the Group's net consolidated debt and the Group's equity, restated for gains and losses on derivatives and valuation differences (gains and losses on the consolidated subsidiaries in foreign currencies).

A change in control of Vallourec could trigger repayment of all or part of the debt, as decided by each participating bank. It is also stipulated that the entire debt will be immediately due and payable if the Group defaults on one of its debt obligations (cross default), or in case of a major event with consequences for the Group's business or financial position and its ability to repay its debt.

The following table shows the repayment schedule for the Group's medium-and long-term debt as at 31 December 2017:

In € thousand	> 1 year	> 2 years	> 3 years	> 4 years	5 or more years	Total
As at 31/12/2016	**53,996**	**421,612**	**23,023**	**14,663**	**607,354**	**1,120,648**
Finance lease	9,368	9,211	9,260	9,299	28,735	65,873
Other non-current borrowings	403,675	3,076	4,378	770,705	569,412	1,751,246
AS AT 31/12/2017	**413,043**	**12,287**	**13,638**	**780,004**	**598,147**	**1,817,119**

3.7.2.6 Equity

The Group's equity totaled €2,426 million as at 31 December 2017, as compared with €3,284 million as at 31 December 2016. This drop can be explained by the following main factors:

- the Group's negative net income recorded in 2017, for an amount of -€560 million;
- the remaining drop is primarily explained by translation differences.

3.8 Outlook

3.8.1 2018 outlook

The targets presented below are based on data, assumptions and estimates considered to be reasonable by the Group as of the date of this Registration Document. These data, assumptions and estimates may evolve or be modified due to uncertainties relating, in particular, to economic, financial, competitive, tax or regulatory conditions. The occurrence of one or more of the risks described in Chapter 5, "Risk factors" of this Registration Document could have an impact on the Group's activities, financial condition, results of operations or outlook and thus threaten its ability to achieve its targets. The Group therefore can give no assurances and can provide no guarantee that the targets presented below will be achieved.

Main assumptions

Based on the Group's 2017 results of operations and the principal market trends, the following assumptions have been used for 2018:

a) in Europe, an assumption that moderate inflation, excluding raw materials, will increase compared to 2017. In Brazil, the inflation assumption remains strong, but relatively stable compared to late 2017;

b) an assumption of an average annual increase in the price of raw materials and consumables, which is expected to remain volatile;

c) for the translation of income and expenses and commercial transactions in currencies not yet hedged, exchange rate assumptions for EUR/USD and EUR/BRL are at less favorable levels than 2017;

d) an improving European and Brazilian macroeconomic environment (GDP outlook);

e) an environment that remains very competitive, including for premium products;

f) no significant impact linked to the 2018 application of IFRS 15 "Revenue from contracts with customers" and IFRS 9 replacing IAS 39 on financial instruments;

g) benefits from our cost reductions in accordance with the schedule of strategic initiatives;

h) the following principal changes in scope: divestiture of Vallourec Drilling Products.

2018 outlook

Market trends entering 2018 can be characterized as follows:

In the US, assuming no significant change in WTI price, we anticipate the average rig count to moderately increase in 2018 while OCTG consumption per rig should continue to rise. This would allow us to benefit from these favorable market conditions in addition to the full year impact of volume and price increases achieved in H2 2017.

In Brazil, drilling activity is expected to remain stable, and we target to renew our frame agreement with Petrobras in the course of H1 2018.

In the rest of the world, an increasing tender activity for Oil & Gas projects should result in higher bookings, with positive impacts on deliveries to materialize mostly as from 2019.

Power Generation revenue is expected to be impacted by a diminishing number of conventional power plant projects, particularly in China and Korea.

Improved momentum in the Industry markets in Europe and Brazil should be confirmed, although these markets remain very competitive.

Our business environment is also experiencing an unusually high and unfavorable volatility in some consumable prices (e.g. electrodes) and in currencies, which, if maintained at current levels, would have a negative effect on our results. Meanwhile, we continue to steadily execute our Transformation Plan, which will continue to generate significant savings, and to reinforce Vallourec's competitiveness.

3.8.2 Medium-term outlook

The trends and targets presented below do not constitute forecast data or forecasts or targets for the Group's profits, but rather express the intended effect of its strategic direction. The data and assumptions presented below may evolve or be modified on the basis of changes in economic, financial, competitive, regulatory or tax conditions, or based on other factors of which the Group is not aware as of the date of this Registration Document.

Moreover, the occurrence of one or more of the risks described in Chapter 5, "Risk factors" of this Registration Document could have an impact on the Group's activities, financial position, results of operations or future prospects and thus threaten its ability to achieve the targets presented below.

Therefore, the Group can give no assurances and can provide no guarantee that the targets presented below will be achieved, and does not undertake to publish or disclose any corrections or updates to this information.

The strategic initiatives announced on 1 February 2016 by the Group should enable it to generate approximately €750 million in additional EBITDA contribution between 2016 and 2020. This additional contribution should have three sources:

- the rationalization of the existing industrial footprint and the associated cost reductions following:
  - the closure of production lines in Europe and in Brazil (the latter being facilitated by the merger of VSB and VBR), and
  - productivity initiatives and administrative and sales cost reductions resulting from cost savings plans and from the additional initiatives announced on 1 February 2016;
- the full consolidation of VSB following its merger with VBR and the acquisition of Tianda Oil Pipe;
- the allocation of more volumes to the two most competitive production hubs, VSB and Tianda Oil Pipe.

The essential measures are in place. In 2016 and in 2017, Vallourec:

- optimized its European footprint with the closure of four industrial facilities (a threading line in Mülheim, Germany; the rolling mills in Saint-Saulve and Déville-lès-Rouen in France; and a heat treatment line in Bellshill, Scotland), and the divestiture of Vallourec Heat Exchanger Tubes, along with the rationalization of steel production;
- created two competitive production hubs in Brazil and China with the merger of Vallourec Tubos do Brasil and Vallourec & Sumitomo Tubos do Brasil and the acquisition of Tianda Oil Pipe (TOP);
- generated significant cost savings.

In two years (2016-2017), approximately 50% of the €750 million target has thus been achieved.

In consideration of these results, the Group is confident that the strategic initiatives announced on 1 February 2016 will allow the target of an additional €750 million contribution to EBITDA in 2020 to be achieved, and to place the Group in a position that would allow it to fully benefit from a recovery of the Oil & Gas markets.

Entering 2018, the positive dynamics of the US OCTG market are confirmed. However, international oil companies have not yet launched many new projects, which has resulted in a slow recovery of volumes and prices on the international OCTG market. As stated above, our performance will be dependent on the recovery in worldwide Oil & Gas activities, the timing of which remains uncertain in the current market environment.

3.9 Corporate results for Vallourec (parent company)

Vallourec posted an operating loss of €13.3 million, a slight improvement compared to 2016 which showed a loss of €13.8 million. This loss stems from the costs incurred by the holding company (personnel costs, legal and communications fees, loan issue expenses and changes in provisions).

Financial income/(loss) (the difference between expenses and financial income) shows a profit of €5.9 million compared to a loss of €12.9 million in 2016. This change is analyzed by an improvement in the net financial costs and recoveries in the provisions for impairment of treasury shares and NSSM interests disposed of in 2017.

Corporate income tax showed an expense of €0.3 million compared with a profit of €8.8 million in 2016, which resulted from the tax income generated from the exit from the Group scope of fiscal consolidation of Vallourec Heat Exchanger and the Serimax companies. The net income for the fiscal year was a loss of €39.0 million, compared to a profit of €17.8 million at the end of 2016.

As at 1 January 2017, the start of the 2017 fiscal year, subscribed, fully paid-up share capital amounted to €902,476,010, divided into 451,238,005 shares with a par value of €2.00 each.

At the end of the clearing period for subscriptions to the Value 17 international employee share ownership plan (see Chapter 7 below), at its meeting on 14 December 2017, the Management Board, under the terms of the twenty-second, twenty-third and twenty-fourth resolutions of the Ordinary and Extraordinary Shareholders' Meeting of 12 May 2017, recorded the final completion of three capital increases in the nominal amounts of €6,783,230, €5,517,106 and €1,199,174, or an aggregate nominal amount of €13,499,510, through the respective issue of 3,391,615 and 2,758,553 and 599,587 new shares for an aggregate total of 6,749,755 new shares with a par value of €2.00 each at a price per share of €3.77 for the standard plan and €4 for the leveraged plan. These transactions had the cumulative effect of increasing share capital from €902,476,010 to €915,975,520.

As at 31 December 2017, the subscribed, fully paid-up share capital amounted to €915,975,520, divided into 457,987,760 shares with a par value of €2.00 each.

Equity dropped by €12.4 million and was €4,169.7 million as at 31 December 2017, compared to €4,182.1 million as at 31 December 2016.

This decrease is explained by a loss of €39.0 million in 2017; the allocation of the loss of 2016 to retained losses in the amount of €17.8 million and the €26.6 million capital increase (including issue premium and excluding issue costs) made under the Value 17 international employee share ownership plan.

Financial debt amounted to €2,170.6 million, up €210.2 million compared to 2016. This change is explained by the increase in the commercial paper program set up in October 2011 for a maximum amount of €1 billion. As at 31 December 2017, it had issued, as part of the program rated B by Standard & Poor's, an outstanding amount of €396.8 million with a maturity of one to 12 months compared to an amount of €307.2 million in 2016.

On 27 September 2017, Vallourec issued a €250 million bond, consisting of Bonds Convertible into New Shares and/or Exchangeable for Existing Shares, maturing in October 2022, with a fixed annual coupon of 4.125%, and a unit value of €6.89 strike, and a conversion premium of 37.5%.

On 11 October 2017, Vallourec issued a €400 million bond, which received a matching contribution on 23 October 2017 in the amount of €150 million (i.e. €550 million in total) maturing in October 2022 with a fixed annual coupon of 6.625%. This bond is callable pursuant to the contractual terms as from 15 October 2020. This bond is callable pursuant to the contractual terms as from 15 October 2020.

To the best of the Company's knowledge, the 2017 fiscal year did not generate any of the expenses referred to in Article 39-4 of the French General Tax Code (CGI).

In accordance with Article D.441-4 of the French Commercial Code, the following tables provide a breakdown by due date of trade payables as at the balance sheet date in 2017 and 2016.

Due dates (D=31/12/2017) *In € thousand*	**Amounts due at year-end**	**Due on D+15**	**Due between D+16 and D+30**	**Due between D+31 and D+45**	**Due between D+46 and D+60**	**Due after D+60**	**No due date**	**Total trade payables**
Trade payables	-	-	4,308	-	-	-	-	4,308
Suppliers of fixed assets	-	-	-	-	-	-	-	-
Total payable	**-**	**-**	**4,308**	**-**	**-**	**-**	**-**	**4,308**
Accruals: invoices not received	-	-	928	-	-	-	-	928
Others	-	-	-	-	-	-	-	-
TOTAL	**-**	**-**	**5,236**	**-**	**-**	**-**	**-**	**5,236**

Due dates (D=31/12/2016) *In € thousand*	Amounts due at year-end	Due on D+15	Due between D+16 and D+30	Due between D+31 and D+45	Due between D+46 and D+60	Due after D+60	No due date	Total trade payables
Trade payables	-	-	10,291	165	-	-	-	10,456
Suppliers of fixed assets	-	-	-	-	-	-	-	-
Total payable	**-**	**-**	**10,291**	**165**	**-**	**-**	**-**	**10,456**
Accruals: invoices not received	-	-	305	-	-	-	-	305
Others	-	-	-	-	-	-	-	-
TOTAL	**-**	**-**	**10,596**	**165**	**-**	**-**	**-**	**10,761**

3.10 Location of main facilities

3.10.1 Property, plant and equipment

The Group's registered office is located at 27, avenue du Général-Leclerc – 92100 Boulogne-Billancourt, France. The premises are occupied under the terms of a nine-year lease that came into effect on 1 October 2015. The properties occupied by the Company and its subsidiaries are not owned by any of the Company's corporate officers.

At 31 December 2017, the Group operated some 50 production facilities, most of which were owned on a freehold basis. These plants are located mainly in France, Germany, Brazil, China and the United States, reflecting Vallourec's international character (see Section 3.2.4 "The Group's facilities" of this Registration Document). The Group considers these plants an essential resource for conducting its various activities and a primary concern in its manufacturing resource planning.

The Group's property, plant and equipment (including assets held under finance leases) and biological assets held by consolidated companies had a net carrying amount of €3,048.4 million at the end of 2017 (€3,706.0 million at the end of 2016 and €3,315.8 million at the end of 2015). Property, plant and equipment mainly consists of property assets and industrial equipment:

- the Group's property assets mainly include factory buildings and administrative offices; and
- industrial equipment consists of steel-making and tube-manufacturing facilities.

The following items are described in the Notes to the Consolidated Financial Statements in Chapter 6, Section 6.1 of this Registration Document:

- analysis of property, plant and equipment by type and flow in Note 2.1;
- geographical distribution of industrial property, plant and equipment and intangible assets for the fiscal year (excluding changes in consolidation scope) in Note 2.1; and
- Group commitments under the terms of finance leases (organized by due date) in Note 22.

Details of capital investments made in 2017, which extended the Company's property, plant and equipment base, are provided above (see Section 3.7.2.3 "Industrial capital expenditure" of this Registration Document).

3.10.2 Environmental considerations relating to the Company's property assets

Operational facilities and environmental regulation

The Group's French facilities are subject to environmental protection regulations under a classified facilities system (ICPE), which imposes certain obligations according to the type of activity conducted at the site and the environmental hazards and nuisances concerned. These facilities comply with the following requirements:

- 11 facilities are subject to authorization and are therefore run in accordance with specific operating requirements issued via prefectural order, following the submission of an operating license application, consultations with various organizations and a public inquiry; as at 31 December 2017, all of these facilities held valid prefectural orders;
- 4 facilities are subject to a register regime, i.e. operated in compliance with standard operating obligations.

Vallourec's facilities in other countries are subject to similar local regulation, requiring specific permits in various areas relating to the environment, including water, air, waste and noise. All of the Group's foreign facilities have the prescribed permits, which are regularly renewed pursuant to local regulations.

Environmental situation of former industrial sites

Following its closure, the Anzin plant in northern France was sold to the Valenciennes urban community on 17 November 2004. A file containing soil studies was produced at that time, and decontamination work stipulated by the authorities was carried out; the quality of the groundwater at the site continues to be monitored using piezometric sensors.

All of the other sites sold (VPE, VPS, VCAV, CEREC, Spécitubes, Valti Krefeld plants, VHET Les Laumes), or partially sold (VTFR steel mill of St Saulve) underwent complete environmental investigations. The VDFR Cosne site, whose operations were stopped, is undergoing groundwater monitoring and rehabilitation.

The situation of operational sites with regard to soil pollution is described in Chapter 4 "Corporate social responsibility" of this Registration Document.

The environmental constraints that may impact the Group's utilization of its tangible assets are described in Section 4.4 "Environmental commitment" and Chapter 5.1.12.1 "Industrial and environmental risks" of this Registration Document.

3.10.3 Changes in scope

On 26 January 2017, Vallourec and Asco Industries finalized the latter's acquisition of a majority interest in the Saint-Saulve steel mill, which appeared in the balance sheet as at 31 December 2016 under assets and liabilities held for sale. SAS Ascoval is 60% owned by Asco Industries and 40% by Vallourec Tubes France, and has been consolidated using the equity method as from the date of the transaction.

On 11 December 2017, Vallourec announced that, following exclusive negotiations with the American oil services group NOV, it had received a binding offer for the purchase of the "Drilling Products" business. For the operation, which meets IFRS 5 criteria, associated assets and liabilities were reclassified under assets/liabilities held for sale.

- The main changes in scope of consolidation in fiscal year 2016 were as follows:
  - on 29 April 2016, Vallourec finalized the transfer of the Vallourec Heat Exchanger Tubes subsidiary to American Industrial Acquisition Corporation (AIAC),
  - in August 2016, Vallourec purchased all the shares of VAM Holding Hong Kong Ltd, a company holding, and VAM Changzhou Oil & Gas (a threading business in China). The two companies were consolidated as a joint venture until 30 September 2016, and were then fully consolidated in the Group's financial statements,
  - on 1 October 2016, Vallourec finalized the transfer of the tubular business of Vallourec Tubos do Brasil (VBR), a wholly owned subsidiary, to Vallourec & Sumitomo Tubos do Brasil (VSB), a 56%-owned joint venture. This transaction resulted in Vallourec acquiring control of VSB (renamed Vallourec Soluções Tubulares do Brasil), by increasing its holding from 56% to 84.6%, with the remaining 15.4% non-controlling interests being transferred to the NSSMC and Sumitomo Corp. partners. The new VSB entity has been fully consolidated in Vallourec's financial statements since 1 October 2016, and the stakes of the Japanese partners are recognized as non-controlling interests,
  - on 28 October 2016, Serimax, one of the worldwide leaders in onshore and offshore welding solutions, and Technip, a worldwide leader in project management, engineering and construction in the energy sector, and a longstanding Serimax customer, finalized a strategic partnership in the field of welding subsea line pipes. Under this partnership, Technip purchased a 20% stake in Serimax,
  - on 2 December 2016, Vallourec held 99.03% of the capital of Tianda Oil Pipe after the acquisition of a majority stake of 50.61% in November and the success of the compulsory unconditional public offering. Tianda Oil Pipe was consolidated under the equity method (19.5%) in 2016 and the takeover was recorded in the Group balance sheet on 31 December 2016.
- There was no significant change in scope in fiscal year 2015.

3.11 Agreement with related parties

Agreements with related parties are described in Note 21 to the consolidated financial statements, "Information on related parties" in Chapter 6 of this Registration Document.

4

Corporate social responsibility information

The Vallourec Group has long taken a proactive approach to corporate responsibility issues, in an effort to act responsibly. Over the past decade it has made strong commitments in these areas, in particular with the 2008 signing of its "principles of responsibility" with a global employee representation organization, and by adhering to the United Nations Global Compact in 2010. It has also signed many commitments to promote the climate and the circular economy, under joint initiatives with the AFEP, MEDEF and the *Cercle de l'Industrie,* as well as the Sustainable Development Charter of the International Steel Federation. Lastly, the Group has just adopted a "carbon policy" to mobilize the Company on numerous aspects of these issues.

In this context, the Group intends to formalize its commitments to promote the Sustainable Development objectives the UN defined in 2015. Specifically, four objectives would be of interest to the Group:

- Objective 6, in view of contributing to sustainable water management and taking steps so that our water abstraction continues to diminish and does not induce "hydric stress";
- Objective 7, in view of facilitating access to clean energy, including cleaner fossil energies, and of promoting energy efficiency;
- Objective 8, confirming its commitment to respect the labor rights and offer safe work conditions for all categories of workers; and
- Objective 12, to promote sustainable production methods by significantly limiting the need for natural resources.

Each of these objectives will be associated with an indicator and with a 2030 objective, and the means needed to obtain them will be indicated.

Valllourec's approach to Corporate Social Responsibility is formalized in the Group's Sustainable Development Charter, which is available at www.vallourec.com.

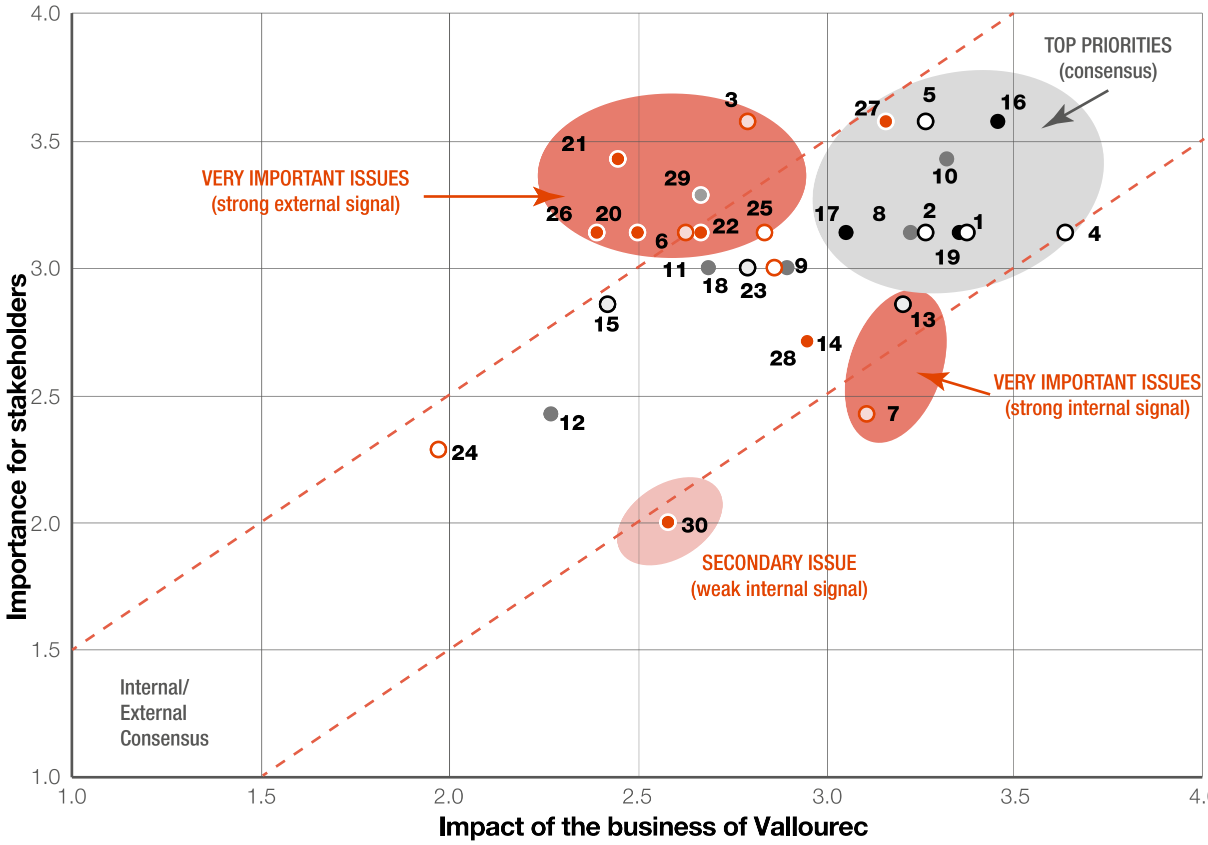
1. Since 2014 the Sustainable Development Department has been implementing a strategic five year plan for Sustainable Development and Corporate Social Responsibility (CSR), which is integrated into the strategic guidelines of the Group, updated annually and monitored by the Supervisory Board. This strategic plan was thus presented to the Supervisory Board in February 2017, and then to the Executive Committee in April 2017. It was determined at the level of the four Regions as specific priorities.

It relies on the following seven cornerstones:

- strengthening governance in Sustainable Development and CSR;
- setting medium-term objectives;
- increasing consideration of Sustainable Development issues in the Group's business model;
- involving more employees in their daily actions to promote CSR;
- developing the Group's social commitments;
- strengthening ongoing actions for progress; and
- obtaining institutional recognition of the efforts made.

In strengthening governance in Sustainable Development matters, the Group thus prepared in 2016, with the aid of a specialized consultant, its "materiality analysis" in an effort to identify the issues it faced, both from the perspective of its management and that of its stakeholders. This analysis, conducted using proven methodology, allowed the Group to get the opinion of our main stakeholders on the 30 issues that had been identified as important and specific to the Company's particularities. This process was based on questionnaires and interviews, with senior executives, employees, investors, customers, suppliers, NGOs and media. In all, 200 questionnaires were sent with a total response rate of nearly 60%. The result of the analysis is presented as follows:

Vallourec's CSR Materiality Matrix: results



Legend

1	Energy transition	11	Stakeholder dialog	21	Non-renewable resources consumption and circular economy
2	Resilience of the business model	12	Transparent and fair tax strategy	22	Air pollution
3	Sustainable product design	13	Quality of social dialog in all economic circumstances	23	Water footprint and water pollution
4	Customer relationship / Satisfaction	14	Fair compensation and benefits	24	Biodiversity
5	Innovation and sustainability strategy	15	Diversity	25	Eco-design of processes and industrial equipment
6	Climate change adaptation	16	Occupational safety	26	Sustainable logistics
7	Trade barriers	17	Occupational health	27	Respect of Human Rights
8	Corporate governance	18	Noise	28	Local socio-economic development & local content
9	Accountability and transparency	19	Employee's skills and development	29	Responsible procurement standards and supplier relations
10	Respect for ethics	20	Energy use & our GHG emissions	30	Corporate citizenship

This analysis allowed Vallourec to validate that the issues identified were pertinent, and that the importance given to them by the Company was in line with the perspective of its stakeholders. It also demonstrates that the strategic plan actions are generally addressing the needs, while highlighting that some matters could be taken into account further, such as health issues, for example. This analysis will be periodically repeated in order to consider the development of the Group and its environment.

2. This Chapter 4 first of all presents the oversight plan of the Vallourec Group, established in application of Law No. 2017-399 dated 27 March 2017, relating to the duty of care of parent companies and companies placing orders, re-anchoring it within the framework of commitments already made by the Group, including those within the field of Corporate Social Responsibility.

3. This chapter then describes the policies implemented by the Group, based on their guiding principles. It sets out the actions taken in terms of safety, health and human resources management, the relationships developed with the local authorities and external stakeholders, as well as the efforts made to preserve the environment in application of Law No. 2010-788 of 12 July 2010, the so-called "Grenelle 2" Law establishing a national environmental commitment, and Law No. 2011-672 of 16 June 2011 relating to immigration, integration and nationality.

The Group is thus committed to providing detailed information on the results of its actions. It therefore reports, with a global scope, on the 43 topics listed in Article R.225-105-1 of the French Commercial Code *(Code de commerce),* as well as on the additional information covered by the 2016 decrees. Unless otherwise specified in the text, all information contained in this chapter refers to Vallourec, all of its subsidiaries as defined by Article L.233-1 of the French Commercial

Code, and the companies Vallourec controls as defined by Article L.233-3 of the French Commercial Code. The individual indicators of the consolidated entities excluded from the consolidated indicators, namely Vallourec Mineração and the pelletization unit established on the Jeceaba site (see below Section 4.5.1.6 "Special situations"), are presented in Appendix 2 to this chapter.

A concordance table showing the information required under the aforementioned article and the information presented in this chapter appear in Appendix 4 hereto.

The other indicators presented were constructed in reference to the Global Reporting Initiative (GRI), which aims to facilitate the measurement of companies' economic, environmental and social reporting indicators on a global basis.

This information factually demonstrates the Group's commitment to Corporate Social Responsibility and highlights the results of its key actions.

The way that this information was gathered and the limitations of this type of data collection are described in the methodological notes found in Appendix 3 to this Chapter. One of the Company's Statutory Auditors conducted audits with a moderate level of assurance as to all of the information presented in this chapter, and issued an opinion with reasonable assurance on selected indicators which resulted in the report which appears in Appendix 1 to this chapter.

The indicators that were verified with a reasonable level of assurance are preceded in the text and in the Appendices by the symbol ☑. Risk factors, risk management and the internal control procedures relating to CSR issues are described in Chapter 5 "Risk Factors" of this Registration Document.

4. It is this information that forms the basis for the periodic evaluations of the main non-financial agencies or specialized SRI funds, such as Vigeo-Eiris, RobecoSam, Oekom, MSCI, Sustainalytics, Guilé, etc. Even though each of these bodies has its own evaluation methods, the overall finding is a rating of B+ on a scale of A to D. This assessment is consistent with the obtention by the Group of the Advanced level of the Global Compact Communication on Progress since two years and with its belonging to the most committed global enterprises in terms of human rights, according to the Vigeo Eiris study published in early 2017. The Group no longer temporarily belongs to the Euronext Vigeo and FTSE4Good indices, not because of an insufficient commitment to CSR, but because its capitalization was considered insufficient at the end of 2017 by these bodies. Conversely, the Group still appears in the Ethibel "PIONEER" and "EXCELLENCE" indices, attesting to Vallourec's quality as a sector leader in CSR. Lastly, it is also appropriate to mention that the Group received a rating of A- in 2016 for the second time by the Carbon Disclosure Project for its actions to promote a low CO_2 economy.

4.1 Oversight plan

In an effort to continue the commitments mentioned above, Vallourec established, both for itself and for all of the subsidiaries it controls, its first oversight plan in application of Law No. 2017-399 of 27 March 2017 relating to the duty of care of the parent companies and companies placing orders, which requires the establishment of a plan containing reasonable oversight measures specific to identifying risks and preventing serious violations of human rights and fundamental freedoms, the health and safety of individuals and the environment, from the activities of the Company and all of the subsidiaries it controls, as well as those of subcontractors or suppliers with which it has maintained an established commercial relationship, when these activities are connected to this relationship.

This process is consistent with the priorities that the Group has set for itself, the pertinence of which has been confirmed by the results of the materiality analysis presented above. In fact, four issues among the ten deemed to have absolute priority, both by our external stakeholders and by corporate management, form an integral part of the points covered by the oversight plan. As concerns environmental issues, the materiality analysis classifies them as being very important. Vallourec's oversight plan thus fits in perfectly with a continuous improvement process, in conformity with Vallourec's proactive approach in areas of corporate social responsibility.

In an effort to establish this oversight plan, a working group comprised of representatives from the Sustainable Development Department, the Legal Department, the Human Resources Department, the Purchasing Department and the Internal Control and Risk Management Department were established.

4.1.1 Identification and evaluation of risks

Generally, the Risk Management Department identifies, with the operational and functional departments, the main risks to which the Group is exposed, analyzes them and establishes a risk map. A map of the risks is in place at the level of each of the major entities, Regions, and for the Group as a whole. Each map incorporates the main risks, along with their impacts, probability of occurrence, and current level of control.

Priorities are determined not only according to probability of occurrence and/or consequences of risks and control level, but also according to the control improvements made, including the benchmark practices in the subject area.

As concerns risks to human rights and fundamental freedoms, the health and safety of individuals as well as the environment, which result from the activities of the Company and from all of the subsidiaries it controls, as well as from the top subcontractors or suppliers with which it maintains an established business relationship, Vallourec has particularly identified the following risks which specifically result from the Group's activities:

1. The Group conducts a significant part of its business in developing countries, in particular because its strategy of being located close to its customers in these countries. The risks of serious violations of human rights and fundamental freedoms, to the health and safety of individuals and the environment, associated with activities carried out in these countries, whether directly or through subcontracted companies, may notably result from political, economic and social instability (nationalization and expropriation of assets, uncertainty as to applicable law and the application of laws, impact of sanctions, accidents, terrorism, etc.).
2. The importance of the industrial labor force to the Group's business makes it essential to manage employees' health and safety. Health and safety management is a priority for the Group and a fundamental value for Vallourec. The Group's health and safety policy was also strengthened in late 2016.
3. The very nature of the Group's industrial activity carries environmental risks. Due to their nature, the Group's activities are the source of noise pollution, require the use of hazardous chemical products and substances, generate waste that is classified as hazardous, may quantitatively or qualitatively impact local water resources, result in soil pollution and give rise to harmful air emissions.

4.1.2 Management of identified risks

Management of identified risks simultaneously includes preventive or mitigating measures and a system for monitoring and evaluating the efficiency of the measures implemented.

Generally, Vallourec relies on a risk management policy deployed by the Risk Management Department, which also ensures it is consistent and all-encompassing. Risk management is controlled by committees which meet once a year, for each concerned entity, comprised of the Risk Management Director or their representative, the Director of the aforementioned entity, their main aides and the functional managers concerned by the specific risks, where applicable. Each Committee meeting handles the following matters:

- validation of diagnosis, allocation and follow-up of action plans for each priority risk;
- validation of the key risk indicators, which ensures the relevance of new controls after closure of the action plan, and the on-going application of said controls.

The Group's Risk Management Director organizes centralized risk management reporting, in cooperation with the Risk Managers from the main entities, to check on the progress of the action plans and ensure they are consistent with the priority guidelines at the Group level. Additional information appears in Section 5.2 "Risk Management and Internal Control System" of this Registration Document.

In order to progress and reduce the risks in question, the Group relies on the Vallourec Management System (VMS), whose fundamental objective is to improve the Group's performance in all of its operating processes, and which thus serves to develop risk prevention, control process variability and improve their efficiency. It uses numerous specific tools such as Lean Management and the "Six Sigma" methodology, and strives to strengthen project management methods. It also ensures that initiatives are consistent with the strategic plan and that they deliver continuous progress. It also ensures that the requirements for managing quality (ISO 9001, ISO/TS 16949, API and ASPE), health and safety (OHSAS 18001), the environment (ISO 14001) and energy (ISO 50001) are taken into account.

The specific risks to human rights and fundamental freedoms, the health and safety of individuals, and the environment, resulting from the Group's activities, as well as from its leading subcontractors or suppliers, with which it maintains an established business relationship, are managed thanks to the structure and measures described below.

RISK MANAGEMENT IN HUMAN RIGHTS AND FUNDAMENTAL FREEDOM ISSUES

Structure

Risk management in human rights and fundamental freedom issues is the joint responsibility of the Human Resources Department, as concerns the Group's employees, and the Purchasing Department, as concerns the subcontractors or suppliers with which it maintains an established business relationship (see the paragraph "Risk Management linked to the Supply Chain" below), in close cooperation with the Ethics and Compliance Officer.

Measures

As an international company, Vallourec has taken on significant corporate social responsibility commitments, in particular with regards respect for human rights and universal fundamental principles that protect the dignity, respect and freedom of employees.

- Therefore, Vallourec strongly condemns: all forms of forced or compulsory labor;
- child labor;
- any difference in treatment between individuals that is based on criteria other than their skills or aptitudes; and
- any act of physical or mental violence, or the threat of such acts.

Conversely, it notably promotes:

- a safe and healthy work environment that ensures physical and mental integrity; and
- the right for employees to join forces and take part in collective negotiations.

In 2008 Vallourec officially committed to conform to the fundamental principles enacted by the international conventions of the International Labor Organization, in the "Agreement on the principles of responsibility applicable in the Vallourec Group," which was approved by the European Committee, forming an integral part of the Code of Ethics. Vallourec has also adhered to the UN Global Compact since 2010.

For example, wherever the Group is established, it has made employer-employee dialog a priority. This is organized in each country, in accordance with local regulations. To date, at least 82% of the workforce are covered by business line or corporate collective agreements. The Group's actions in terms of employer-employee dialog are more extensively described in Section 4.3.3.1 "Organization of Employer-Employee Dialog" in this Registration Document.

Vallourec affirms its commitment to diversity and to combating discrimination in the workplace through the Code of Ethics.

Respect of men and women, their dignity, their diversity and the variety of their cultures is at the heart of the commitment of Vallourec's teams. Under the roll-out of the Code of Ethics, a program to educate all employees on the issue of discrimination was completed using examples from daily life. In terms of gender equality, the Group's policy is defined around strengthening women's presence in operational business lines, in particular those of production, and in increasing women's access to leadership roles. Female employees with high potential might benefit from monitoring from the Group's senior executives. On 8 March 2017, the Group also launched Women@Vallourec, a network of women dedicated to debating and discussing equality and the place of women within the Group, which aims to reveal true proposals for action. Compensation surveys have shown no difference in treatment between men and women. Indicators are in place to ensure follow-up and accountability in the actions led by the Group.

In terms of equal opportunities, the Group strives to promote the continued employment of workers with disabilities. These actions are more extensively described in Section 4.3.6 "Diversity and Equal Opportunities" of this Registration Document.

Vallourec sees that these rights and principles are respected within the Group and at its subcontractors by incorporating it into its regular evaluations. The actions taken towards subcontractors are more extensively described below.

The Group's responsibility does not stop at the doors of its offices and plants, but extends way beyond, through its influence in the community. An engaged partner, concerned for respecting a balanced development model, Vallourec ascribes major importance to the communities that surround it and strives to establish relationships of mutual understanding and trust with them. The Group undertakes actions that support education, healthcare and local development. Very active in Brazil, the Group has multiplied its initiatives there, including transforming the *Cine Theatro* building in Belo Horizonte into a cultural center dedicated to artistic production.

Vallourec also tries hard to prevent specific risks in terms of competition and combating corruption. The Group's actions in ethics and compliance matters are more extensively described in Section 4.2 "Ethics and Compliance" of this Registration Document.

RISK MANAGEMENT LINKED TO THE SUPPLY CHAIN

Structure

The Vallourec Purchasing Department is centrally structured to have a general view of the suppliers and supply chain, by using standardized processes between the Regions and appropriate information systems. A particular process of overseeing supplier risks is deployed at each of the Regions to identify, analyze and rank these risks. These risks are consolidated and mapped at the Group level, with ongoing monitoring of the action plans to mitigate or eliminate these risks. Moreover, Vallourec's policy is to establish sustainable contracts as much as possible with its suppliers, which are not only limited to structuring the commercial transaction but also provide accountability over time for external stakeholders on performance and requirements that are linked to Vallourec's values.

Measures

Within the context of this responsible purchasing policy, Vallourec has established numerous tools and processes aimed at better controlling suppliers and directly considering social and environmental responsibility criteria, and sustainable development, ethics and safety issues. In application of this policy, Vallourec is leading formal and systematic evaluation campaigns of its suppliers on social and environmental responsibility, along with progress action plans. All suppliers with significant activity are subject to a request for formal evaluation on the criteria of social and environmental responsibility, namely the environment, ethics, respect of human rights and labor rights, and control of their own suppliers and subcontractors. The results of these evaluations are systematically taken into account in Vallourec's decisions and guidelines with regard to its suppliers and subcontractors.

In accordance with the new U.S. laws and European directives, Vallourec has also committed to prohibiting its suppliers' use of potential "Conflict Minerals" coming out of certain African countries.

Actions pertaining to relations with subcontractors and suppliers are described in Section 4.4 "Relations with Stakeholders" of this Registration Document.

RISK MANAGEMENT IN HEALTH AND SAFETY ISSUES

Structure

The Health and Safety policy that was updated in 2016 entails a strengthened health section. Entities thus aim to further investigate the health risks specific to the processes, while defining the means designed to eliminate or attenuate them. There are numerous issues, in particular concerning our processes, which cover chemical risk, noise, air quality and ergonomics at workstations.

Measures

Safety is the Group's main priority, and it aims to become a benchmark and a model for success in this area. At the end of 2017, 88% of Vallourec sites were certified OHSAS [1] and represented 87% of production in metric tons. Each year Vallourec renews its "CAPTEN+ Safe" safety improvement program which, since 2014, has particularly focused on the major risks that could lead to a fatal accident and, since 2016, on subcontractors.

In order to prevent the occurrence or limit the impact of risks linked to the Group's activities in emerging countries, the Group implements systematic evaluation procedures for security and health risks, as well as emergency protection procedures, which are systematic for each of the high-risk countries where the Group frequently deploys its personnel. It also implements specific procedures for other countries, with the support of recognized external providers in all cases.

(1) OHSAS 18001: International guidelines relating to occupational health and safety, published in 2001 under the authority of the International Labour Organization.

The Group respects all regulations, standards and certifications in the countries in which it markets its products, which primarily aim to ensure the safety and protect the health of users by demonstrating the product's compliance with the regulatory requirements. They relate principally to the properties of fire resistance and slip resistance and to limits on toxic emissions.

The safe use of chemical products and substances is of critical concern to Vallourec. The database containing their details is regularly updated to ensure rigorous monitoring of developments and reactions and thus prevent harmful effects. All the products or substances entering production sites are monitored and authorized by local HSE managers. Product substitution plans that have been deemed critical were also defined. In late 2017, 84.3% of 453 substances that were identified as CMR [(1)] were replaced [(2)]. 147 products were nevertheless identified as being unable to be substituted due to technical problems or a lack of a substitute on the market. Their uses are thus supervised by the HSE teams.

Hazardous waste is specifically managed: handling and storage are subject to strict safety rules to preserve the environment and health of the staff handling them.

The Group's actions in health and safety matters are more extensively described in Section 4.3.2 "Safety and Health" of this Registration Document.

RISK MANAGEMENT IN ENVIRONMENTAL ISSUES

Structure

In accordance with Group rules and guidelines, the Director of each site is responsible for setting up an effective environmental management system that is tailored to the local context and the site's activity. The Director appoints an Environment Manager who heads up all actions in this area and functionally reports to the HSE Director of each region.

The Environment Department, reporting to the Sustainable Development Department, coordinates all environmental initiatives. It is supported by the Environment Managers of the Regions and production sites, who are responsible for implementing the Group's policies.

The objective of this organization consists of structuring the organizations by Region or country in order to better take into account the specific national regulations. Under the Transformation Plan, the global workforce now totals nearly 50 full-time equivalent people for the Group as a whole.

The Environment Department is also responsible for coordinating and managing these internal benchmarking initiatives, and in particular for consolidating all of the Group's environmental data. Since 2016, the Group has deployed a new IT application to manage safety and environmental data. This application simplifies the collection and verification of data and offers new features to the sites that help them with their own local reporting.

Measures

Vallourec notably aims to minimize the impact of its activities on the environment. This commitment is clearly explained in the Sustainable Development Charter published by the Group in 2011, and in the Group's Environmental Policy, which was signed by the Chairman of the Management Board and published in 2014. In early 2018, the Group also enacted a carbon policy to cover all of the corresponding issues.

Risk assessments have led to the establishment of measures designed to reduce the likelihood of accidents and limit their consequences and environmental impact. These measures relate to the design of the facilities, strengthening of protective measures, organizations to be put in place, and even compensation for any environmental impact if it seems inevitable.

Vallourec seeks to limit the industrial and environmental risk inherent in its activities by setting up efficient organizational structures and quality, safety and environmental management systems, obtaining certification or assessing its management systems, performing stringent inspections and audits, training staff and heightening the awareness of all parties involved, as well as by implementing a policy of environmentally friendly investments that reduce industrial risks. Each investment project, except for those that are of little importance, is assessed according to a precise methodology, formalized through the use of a mandatory standard document explaining the different kinds of impact ("eco-design" sheet). The Capex Committee, which examines the characteristics of the most important projects on a monthly basis, in view of approving them stage by stage, systematically analyzes these kinds of projects and may postpone their approval if they are deficient.

Internal environmental audits are regularly organized in each country to assess compliance with regulations. Specifically, the Performance & Risk audit evaluates performance and risk levels for each environmental concern as well as the environmental management system (EMS) in place. The results are used to identify priorities and corresponding action plans. These audits are part of the process of preparing for certification audits which are now comprehensive, in other words, simultaneously concerning environmental, energy, quality and safety procedures at the regional level. As at 31 December 2017, 85% of all of the Group's sites were certified ISO 14001, which represents more than 86% of production.

The Group endeavors to strictly comply with locally issued operating authorizations and, more generally, with the applicable environmental laws and regulations, according to the principles presented in its Sustainable Development Charter, the Group's Environmental Policy, which the Management Board approved in 2014, and the recent carbon policy. The Group also strives to take all precautions to allow it to prevent environmental incidents. First of all, the Group, which has low greenhouse gas emissions, ascribes specific importance to publishing a complete carbon footprint. In 2018, it published for the first time its medium-term objective, and is studying various ways of further reducing the direct and indirect emissions from its processes.

The Group considers water management to be one of the major challenges of sustainable development, due to its importance to the well-being of populations, the risks of shortage, and because water quantitatively represents the main resource needed for the Group's production processes. Numerous actions to measure and monitor water needs were thus established to reduce specific water consumption (reduction, or even shutdown of pumps during production stoppages).

(1) Chemicals or preparations that may have various adverse effects on human health. These are classified into "CMR" categories. Within the meaning of Article R.231-51 of the French Labor Code, substances or preparations are considered CMR agents when they are carcinogenic (C), mutagenic (M) and/or toxic for reproduction (R).

(2) Some sites reported their inventory. New substances have also been officially classified as CMR.

To preserve the quality of the air surrounding its plants, the Group systematically measures the levels of air emissions produced by the plants, which are vapors and particles, and implements appropriate solutions to limit each type of emission.

Given the age of the sites, particularly in France, Germany and Brazil, soil studies and piezometric groundwater monitoring have been completed. These investigations notably led to the establishment of a program to upgrade former industrial waste storage sites.

In application of the Sustainable Development strategic plan and within the framework of the new Health and Safety policy published in 2016, the Group established an action plan to prevent noise pollution, to protect its workers, and to better respect the environment at its sites.

In terms of biodiversity, Vallourec Florestal in Brazil is an important biodiversity reserve which is consistently monitored in cooperation with local universities. A recent study of the French Aulnoye-Aymeries site provides a key example of the issues. Located in a remarkable natural environment, the study shows that the plants' activity has no significant impact on the surrounding biodiversity. This observation has led to the conclusion that no significant risk to biodiversity is attributable to the Group's activities. An analysis of this issue will be examined further in the future.

The Group's commitments in environmental matters are more extensively described in Section 4.5 "Environmental Commitments" of this Registration Document.

4.1.3 Whistleblowing and reporting systems

The Code of Ethics provides that the Group's employees may indicate behaviors that violate the values and principles of the Code by contacting their line manager, their human resources manager, the Ethics and Compliance Officer, or one of the local ethics contacts. Moreover, a dedicated email address is provided to employees on the Group intranet under the "Ethics and Compliance" heading. This allows behaviors which violate the Code of Ethics or internal procedures to be directly reported to the Ethics Officer.

In North America, a telephone line has long been provided to employees who wish to provide information anonymously on non-compliance with ethics and compliance rules.

Moreover, a professional whistleblowing system is being prepared and should be rolled out within all Group entities in 2018. This system will be accessible to employees and external and occasional associates of the Group, but also to customers, suppliers, service providers and other external stakeholders through a protected website hosted by an independent company. The scope of the whistleblowing system will be broad, including behaviors that violate the Code of Ethics, and in particular allegations of anticompetitive and corrupt practices, but will also include all breaches that could affect Vallourec's activity or reputation that are linked to human rights and fundamental freedoms, the health and safety of people, or the environment.

The Ethics and Compliance Officer will manage this professional whistleblowing system, in conjunction with the local ethics correspondents. The system will guarantee strict confidentiality of the reporting party's identity, of the acts indicated and of the persons concerned by it, including during checks related to such notification.

4.2 Ethics and compliance

The organization of ethics and compliance falls under the Group's Legal Department. The position of Ethics and Compliance Officer is held by the Group's Legal Director, who helps implement the Code of Ethics and determines, with the Ethics Committee, which she leads, the internal compliance policies. The Ethics and Compliance Officer reports to the Chairman of the Management Board.

The Ethics Committee comprises representatives from functional departments (Legal, Purchasing, Human Resources, etc.) and operating divisions. It must hold meetings at least once per quarter in order to determine, at the initiative of the Ethics and Compliance Officer, the ethics and compliance guidelines and ensure they are effectively rolled out.

The Ethics and Compliance Officer relies on a network of 11 local ethics correspondents who are organized by geographic areas, as well as on the legal managers from the operating divisions or Regions. These local ethics correspondents are tasked with disseminating the values and principles of the Group's Code of Ethics in entities worldwide, and making sure that its internal procedures are properly applied. In 2015, management of the network of local ethics correspondents was strengthened: they participated in bi-monthly information meetings which were organized by the Ethics and Compliance Officer, at which internal procedures were presented, along with the current regulatory issues regarding anti-corruption, or with regard to competition rules. In the United States, a telephone line was provided to employees who wished to provide information anonymously on non-compliance with ethics and compliance rules.

An ethics and compliance newsletter is disseminated monthly to the main senior executives of the Group, to Ethics Committee members, to local ethics correspondents and to the legal managers of Regions or divisions.

In 2015, three new policies were adopted and rolled out within the Group: the policy relating to the use of sales representatives, the policy on gifts and invitations, and a policy relating to sponsorship and sponsoring, local partners, lobbying and political involvement. These procedures formalize the principles and guidelines that were already contained in the Global Legal Compliance Program, which has been rolled out globally since 2011.

Non-compliance with anti-corruption laws and regulations, or with competition rules, exposes the Group's employees to disciplinary sanctions and even termination.

The Vallourec Group has taken note of the new Law No. 2016-1691 of 9 December 2016 relating to transparency, the fight against corruption and modernization of economic life, and has launched several actions in view of complying with the requirements of this new law. Vallourec has registered in the new public digital directory of representatives of interest to public bodies of the *Haute Autorité pour la Transparence et la Vie Publique* (High Authority for Transparency and Public Life) (HATVP) and an internal reporting system has been established to formalize an activity report which is to be sent to the HATVP in the first quarter of 2018.

As concerns obligations to prevent and detect corruption, the Vallourec Group already has internal processes to allow it to respond to the requirements of this new law, although some of them must nevertheless be adapted. Therefore, the Group's Code of Ethics will be supplemented in 2018 with an Anti-Corruption Code of Conduct, and a new professional whistleblowing system which can notably be accessed by employees and outside and occasional associates who wish to alert the Group of acts violating its Code of Ethics, which will be available to them on a protected website hosted by an independent company.

Lastly, in an effort to ensure that the Global Compliance Program meets anti-corruption best practices and regulations, the Vallourec Group has launched an anti-corruption certification process with Ethic Intelligence, which will be finished during the first half of 2018. This certification will moreover allow it to promote and strengthen the Group's values in terms of integrity and ethics with outside commercial partners and stakeholders.

4.2.1 Code of Ethics and Anti-Corruption Code of Conduct

The Group's ethical standards are formalized in its Code of Ethics.

The Code of Ethics is a set of core values that includes integrity and transparency, excellence and professionalism, performance and responsiveness, respect for others and mutual commitment.

It provides a framework for conducting the day-to-day activities of each employee through behavioral guidelines based on these values. These guidelines reflect the way that Vallourec seeks to manage its relationships with all of its partners and stakeholders, including its employees, customers, shareholders and suppliers, and constitute the Group's benchmark in implementing its sustainable development and corporate social responsibility plans.

In 2016, an amended version of the Code of Ethics was adopted and rolled out within the Group to reinforce Vallourec's commitments in the fight against corruption and respect for the rules of competition, while maintaining the values and principles of action with regard to its employees, partners, customers, suppliers and stakeholders. The amended version includes the guidelines already contained in the Global Legal Compliance Program and the procedures published in 2015.

Vallourec's Code of Ethics applies to all Group consolidated companies. Each employee is personally responsible for implementing its values and principles and for complying with the rules it sets out.

The Group's various reporting lines ensure that it is communicated to all Group employees. For this purpose, it has been translated into six languages. It has also been published on the Company's intranet and website to affirm the Group's values with regard to third parties.

In order to allow the Group's new employees to review the Code of Ethics during their first few months at the Company, a specific e-learning program aimed at employees that have joined the Group since January 2012 was launched in April 2014. The goal of this program was to allow employees to better adopt the Group's ethical values and principles for issues relating to their daily professional practices.

The Code of Ethics is the founding document with which a certain number of directives and recommendations are associated, which guides Group employees in applying the Code. In an effort to help implement the Code of Ethics with all employees, notably managers, the Ethics and Compliance Officer has the following duties:

- assisting Group companies in communicating the Code of Ethics;
- coordinating actions to educate new employees on the Code of Ethics;
- helping to define the procedures for implementing the Code of Ethics;
- ascertaining any difficulties in interpreting or applying the Code of Ethics that are raised by staff; to that end, the Officer receives any information relating to breaches of the principles of responsibility; and
- preparing an annual report for the Chairman of the Management Board on the Code of Ethics' implementation.

An Anti-Corruption Code of Conduct is being prepared. In addition to the Code of Ethics, it will constitute the Vallourec Group's anti-corruption policy, applicable to all of the Group's subsidiaries. This Anti-Corruption Code of Conduct will contain definitions and practical examples of prohibited conduct which could constitute acts of corruption or influence peddling. It will be integrated into the internal regulations of the Group's French companies. It will moreover be supplemented by an additional statement for employees placed on the Group's website, which summarizes the main anti-corruption legislation applicable to Vallourec's activities.

4.2.2 Compliance program

Consistent with the principles set out in the Code of Ethics and the commitments of the Global Compact of the United Nations which the Group signed on to in 2010, Vallourec seeks to prevent specific risks relating to competition and anti-corruption, within the framework of a Global Compliance program rolled out in all of the Group's companies.

Developed and coordinated by the Group's Legal Department, this program aims to educate the Group's managers, mainly through internal training, on the applicable laws and regulations in these areas. It is designed to respond effectively to the risks managers may face in their activities through detailed, informative and practical recommendations that can be understood by all.

In 2017, training initiatives were continued at a global level, particularly in the Group's subsidiaries located in North America, Africa and China. An e-learning program has also been rolled out since 2014, in an effort to educate all technical and supervisory staff, and managers of the Group, about the laws and regulations on competition, anti-corruption and environmental protection.

The principles enumerated under the Global Compliance Program were formalized in 2015 in the internal procedures relating to recourse to sales agents, gifts and invitations, philanthropy and sponsorship, local partners, lobbying and political life.

In an effort to strengthen the internal communication of the main procedures, in 2017 the Group launched the "Welcome Package". This is a module disseminated via the Learning Management System (LMS) of Vallourec University to all new employees, so that they are aware of the Company's values and workplace rules from the time of their arrival into the Group.

4.3 Social policy

The social indicator scope includes companies within the tax consolidation scope. Staff at sales offices are likewise included in this report.

4.3.1 Group workforce

4.3.1.1 Changes and distribution

BREAKDOWN OF WORKFORCE BY AGE, GENDER AND GEOGRAPHICAL AREA

As at 31 December 2017, ☑ 20,093 employees worked at more than 50 production sites or under service contracts with Vallourec (short-term or permanent contracts), compared to 18,325 employees in 2016. This 1,768 person increase between 2016 and 2017 is in large part explained by the acquisition of Anhui Tianda Oil Pipe Company Limited (TOP), whose staff was not counted in late 2016.

Distribution by geographical area

	Number of employees	
Country	**2016**	**2017**
Brazil	6,546	6,784
France	4,227	3,621
Germany	3,611	3,495
USA	1,732	2,052
China	458	2,105
Indonesia	396	457
United Kingdom	361	387
Mexico	267	322
Saudi Arabia	189	192
United Arab Emirates	169	181
Malaysia	133	241
Other regions	236	256

Workforce as at 31 December (permanent and short-term contracts)	2016	2017	Change 2016/2017	2016 Breakdown	2017 Breakdown
Europe	8,256	7,559	-8%	45%	38%
Brazil	6,546	6,784	4%	36%	34%
NAFTA (United States, Canada, Mexico)	2,036	2,406	18%	11%	12%
Asia	1,070	2,912	172%	6%	14%
Middle East	359	374	4%	2%	2%
Africa	58	58	0%	NS	NS
TOTAL	**18,325**	**20,093**	**10%**	**100%**	**100%**

Breakdown by gender

As at 31 December 2017, the Group had 2,348 women (2,214 of whom had permanent contracts), which represents 12% of the total permanent workforce (equivalent to 2016). Marginally present in the category of production staff, women mainly hold administrative and commercial positions. They represent 29% of the Group's technical and supervisory staff (administrative personnel, technicians or field supervisors), and 22% of its managers. The proportion of women remained consistent for the 2016-2017 period by area, for the Group as a whole.

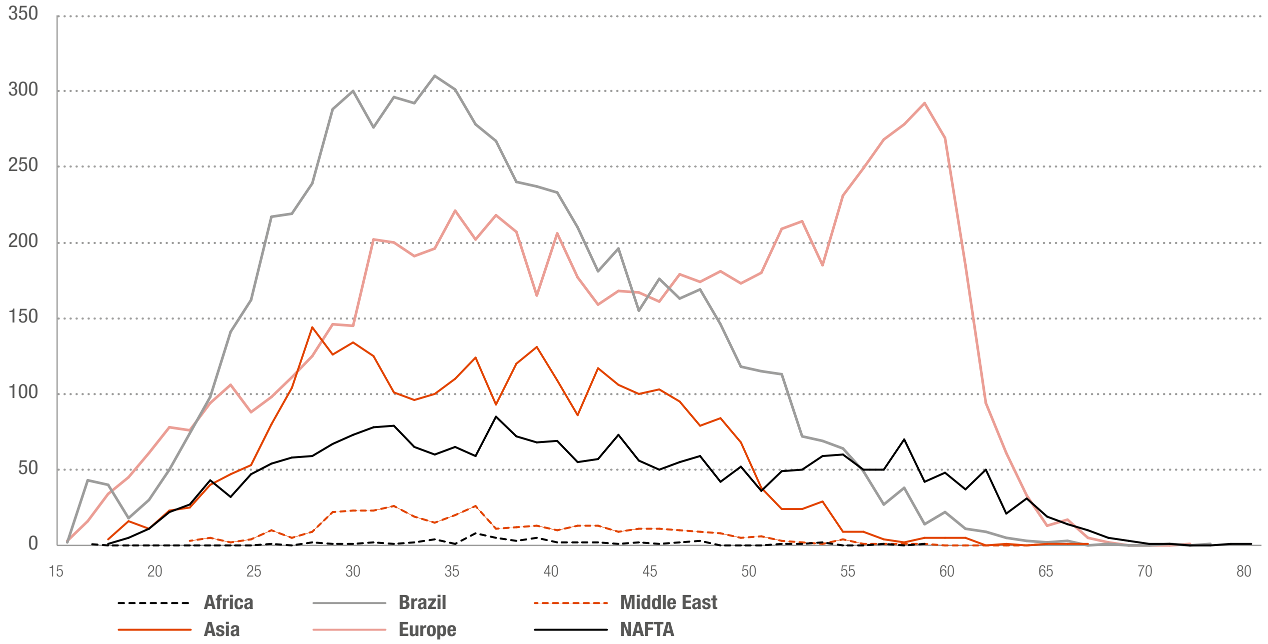
% of women (permanent employees)	Production staff		Technical and supervisory staff		Managers		Total	
	2016	2017	2016	2017	2016	2017	2016	2017
Europe	2%	2%	32%	33%	21%	12%	11%	12%
Brazil	5%	5%	28%	26%	24%	24%	11%	10%
NAFTA (United States, Canada, Mexico)	1%	1%	27%	26%	23%	23%	11%	10%
Asia	11%	13%	31%	28%	19%	17%	19%	16%
Middle East	-	-	14%	15%	11%	11%	5%	6%
Africa	8%	9%	15%	14%			11%	11%
WORLD	**4%**	**5%**	**30%**	**29%**	**22%**	**22%**	**11%**	**12%**

Breakdown by age

The age pyramids show significant disparities in terms of geographical areas.

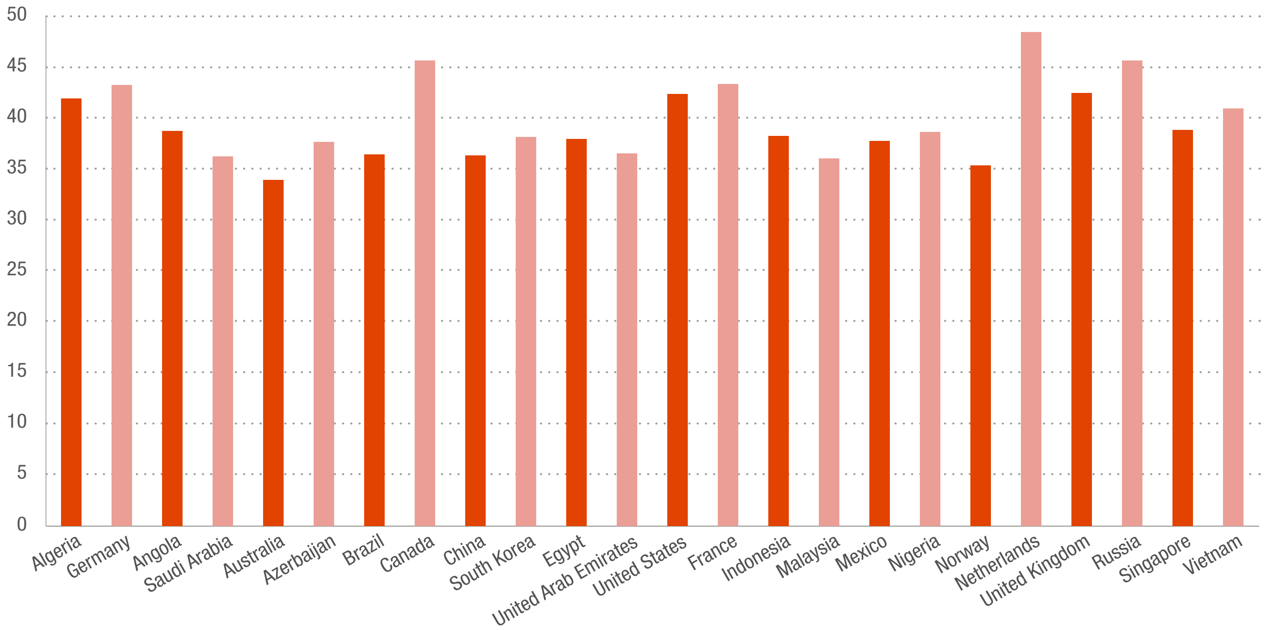
The Brazilian employee population is young, with a strong concentration in the 25 to 40-year-old segment. In the NAFTA region, the distribution of the population among the various age categories is well balanced. Asia has practically no employees older than 55. Conversely, Europe is marked by a strong presence of employees aged between 50 and 58 years. The staff breakdown by age range has not changed in comparison to the previous year.

Breakdown of the workforce by age ☑



These disparities are also reflected in the average age of employees in the main countries where the Group is established.

Average age by area and country



BREAKDOWN OF THE WORKFORCE BY PROFESSIONAL CATEGORY AND TYPE OF CONTRACT

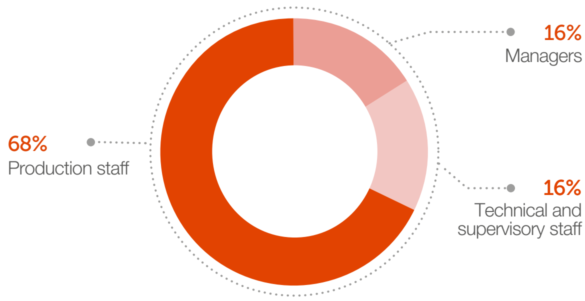
Breakdown by professional category

Production staff represents two thirds of the workforce.

Technical and supervisory staff includes administrative personnel, technicians and field supervisors, who account for 16% of the workforce. Managers likewise represent 16% of the workforce. These proportions are identical to the previous year.

Breakdown of workforce by category in 2017

In 2017, the proportion of managers and technical and supervisory staff dropped very slightly (16% instead of 17% in 2016).



Group's registered workforce by professional category	2016	2017
Managers	3,203	3,210
Technical and supervisory staff	3,169	3,205
Production staff	11,953	13,678
TOTAL	**18,325**	**20,093**

Breakdown of registered workforce	Production staff		Technical and supervisory staff		Managers		Total	
	2016	2017	2016	2017	2016	2017	2016	2017
Europe	28%	23%	9%	8%	8%	7%	45%	38%
Brazil	26%	26%	3%	3%	6%	5%	36%	34%
NAFTA	6%	7%	2%	2%	3%	3%	11%	12%
Asia	3%	11%	2%	2%	1%	1%	6%	14%
Middle East	1%	1%	<1%	<1%	<1%	<1%	2%	<2%
Africa	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%
WORLD	**65%**	**68%**	**17%**	**16%**	**18%**	**16%**	**100%**	**100%**

50% of production staff are located in Europe and Brazil, while 23% of managers and technical and supervisory staff are located in this same area. We also note that in 2017, the production staff in China rose to 11%, compared to 3% in 2016, due to the acquisition of TOP.

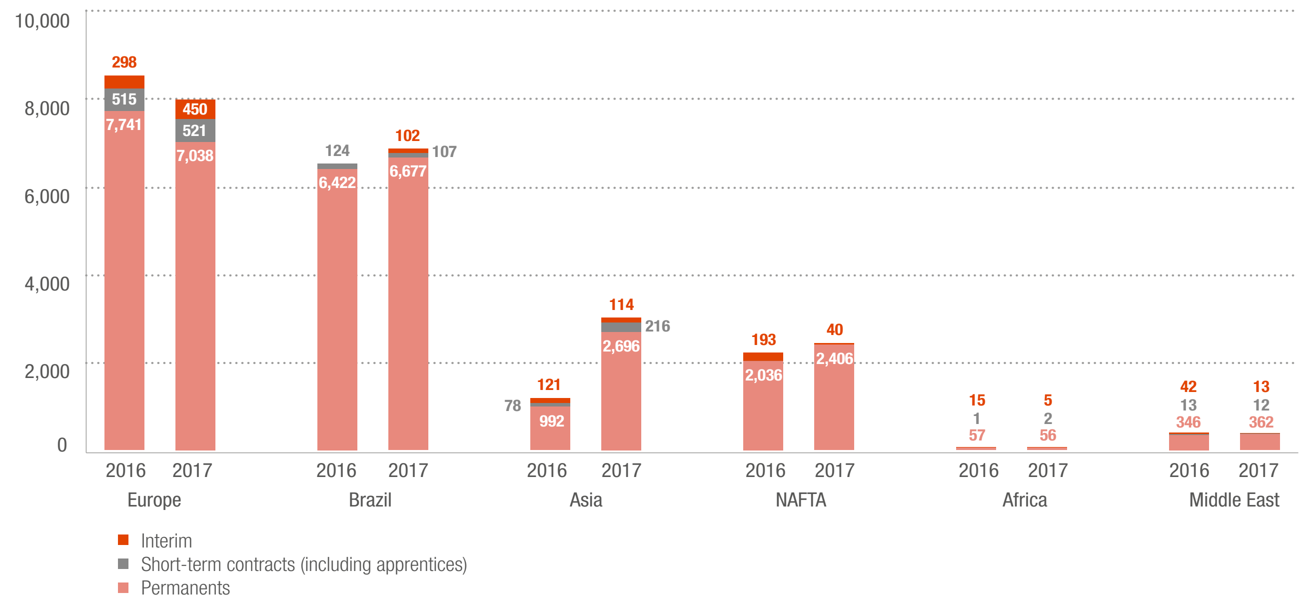
The production staff in 2017 represented approximately 68% of the Group's total workforce, or an increase of slightly more than 14% for this category of worker. The proportions of managers and technical and supervisory staff in turn went from slightly more than 17% to approximately 16%.

Breakdown by type of contracts

Due to the highly cyclical nature of its markets, Vallourec has to be able to adapt rapidly to changes in activity. As a matter of policy, it maintains a permanent workforce (via permanent contracts) which allows it to meet the needs of its ongoing operations, and temporary workers (under short-term and temporary contracts) to cope with surges in activity. For planning purposes, the permanent staff is managed on the basis of a model workforce involved in a standard activity for three to five years. Changes in peak or trough activity are handled via flexible local solutions (e.g., loans between plants, working-time adjustments in Europe, temporary staff and short-term contracts).

At the Group level, temporary staff in 2017 was 7.6% of the total workforce. Temporary staff in Europe was larger in late 2017 and increased by approximately 3% from 2016, while it strongly decreased in the NAFTA area, going from more than 8% to less than 2%, which is primarily explained by a sharp decrease in outside interim workers.

Breakdown between permanent, temporary (fixed-term contracts and apprentices) and interim workforce



In late 2017, there were 19,235 permanent workers at the world level, compared to 17,594 in late 2016. This difference is primarily explained by the integration of TOP workers in China.

4.3.1.2 Entries and departures

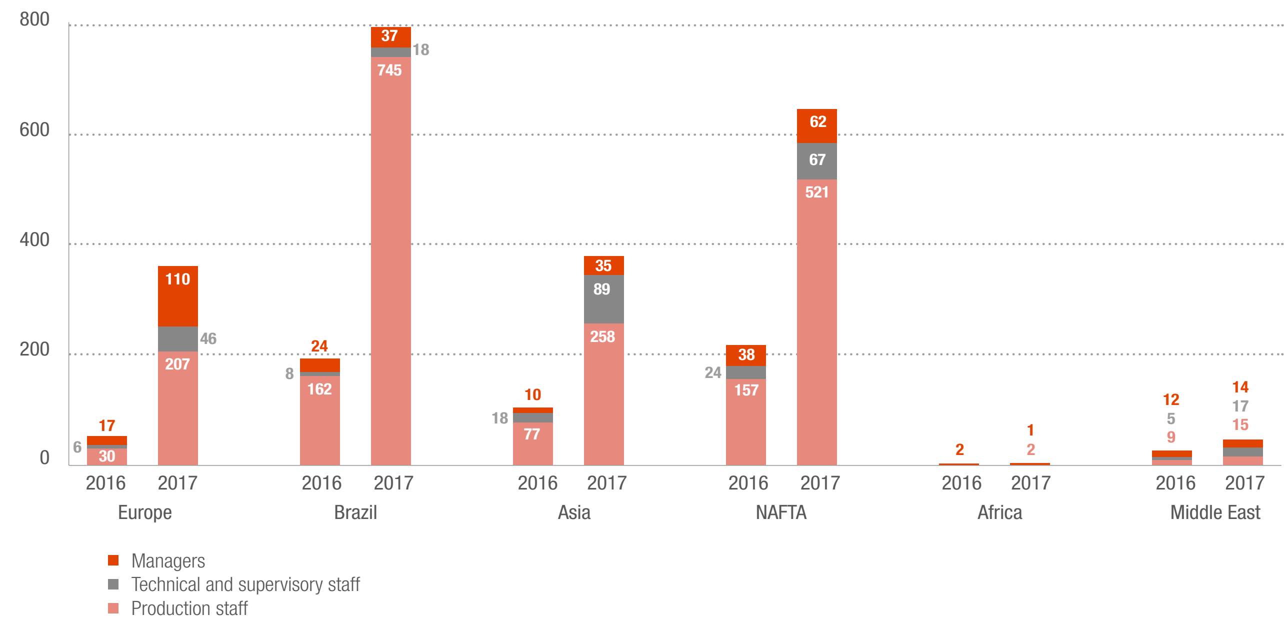
HIRES ☑ AND TRANSFERS

There were a lot more new hires in 2017 than in 2016, in all areas. Nevertheless, these hires must be compared with the departures in each area.

The additional staff generated by the acquisition of TOP in China is not recorded in the hires for the Asia area. The hires indicated in the graph below for the Asia area do not take into account the hires made by this company after it was acquired by Vallourec.

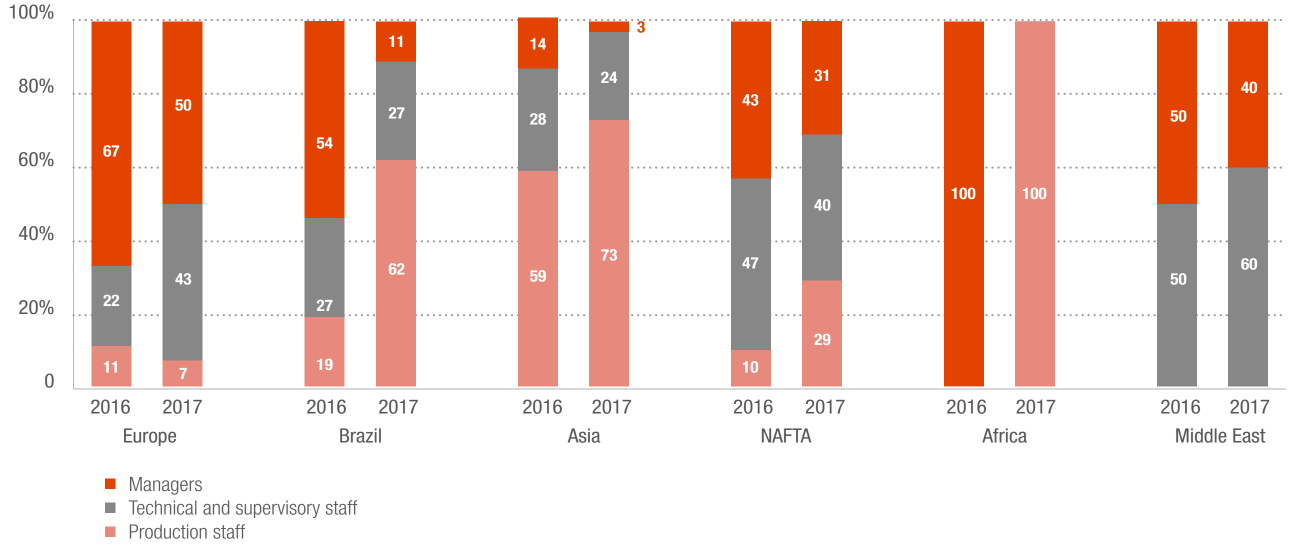
The breakdown of new hires by professional category and geographical area is as follows:

Breakdown of new hires by professional category



In 2017, we simultaneously recorded nearly 279 departures in the NAFTA area, 546 in Brazil, 195 in the Asia area, and 1,135 in the Europe area, notably with the departure of staff from Ascoval in France.

Breakdown of new hires of women by professional category in 2017



Even though new hires of women were primarily in the professional categories of technical and supervisory staff and managers, it is nevertheless noted that in 2017 the percentage of new hires in the production staff category increased considerably for the Asia, NAFTA and Brazil areas in comparison to 2016. While the proportion of women in the Group remained stable, it is important to remember that the Group's policy, as defined by the Management Board in 2016, focuses on two objectives, which are increasing the number of women in operations-related positions, and improving women's access to leadership roles.

DEPARTURES

In 2017, 12% of non-permanent staff were renewed within the Group, leading to a more significant renewal of staff in the majority of areas.

The Group's permanent workforce is up 9%, compared to 17% for its non-permanent workforce.

Turnover rate by area

Turnover rate *(for permanent workforce)*	**2016**	**2017**
Europe	6%	10%
Brazil	9%	10%
NAFTA	15%	23%
Asia	23%	12%
Middle East	9%	12%
Africa	11%	6%

The turnover rate includes departures and arrivals for the year in question and is defined as follows:

(Number of departures + number of arrivals for the year)x2x100/(workforce as of 31/12 of the preceding year)

This takes into account departures, arrivals and transfers within areas.

Reasons for termination of employment contract by area

	Retirement benefits		Resignation		Dismissal		Other reasons	
	2016	2017	2016	2017	2016	2017	2016	2017
Europe	27%	30%	17%	14%	29%	11%	26%	45%
Brazil	1%	1%	2%	4%	95%	93%	2%	2%
NAFTA	12%	12%	17%	41%	47%	43%	24%	4%
Asia	6%	4%	17%	87%	4%	6%	73%	3%

In Brazil, given the employment regulations, dismissal is the method by which contracts are typically broken. In line with the restructuring plan, the use of dismissal continues to be significant in 2017, with a ratio similar to that of 2016.

In the NAFTA area, the number of resignations multiplied by 2.5, while the number of dismissals decreased slightly.

In Europe, 24% of contract terminations for "Other reasons" were linked to staff from Ascoval and 8% to the social redundancy plan in France.

4.3.1.3 Organization of working time

RATE OF WORK

The Group's policy is designed to provide flexibility and responsiveness in order to adapt to customer demand.

Working patterns enable the Group to adjust plant operations to production requirements. Most production sites have adopted a system of continuous shift work (24 hours a day), five or six days per week using three, four or five rotating teams.

In order to minimize the arduous character of working patterns, research is being done in conjunction with occupational physicians and employees into the structuring of working patterns to coincide with physiological rhythms.

Innovative solutions have been implemented, which depend heavily on cultural factors and applicable national laws.

In 2017 as in 2016, in order to meet the need to adapt to economic conditions, whenever possible, hourly cycles were reduced (2×8 from 3×8, or to 3×8 from 5×8, etc.).

WORK TIME

The following table shows the number of hours worked and the average number of overtime hours worked in the last two years. It is based, for each area, on the number of hours worked by the registered workforce.

	Average number of hours worked per employee		Including average number of overtime hours worked per employee during the year	
	2016	2017	2016	2017
Europe	1,434	1,458	44	65
Brazil	1,914	2,003	77	154
NAFTA	2,070	2,345	240	423
Asia	1,965	2,484	129	562
Middle East	2,343	2,390	450	395
Africa	1,922	1,795	142	162

Average number of hours worked per employee	2016	2017
China	1,905	2,604
Saudi Arabia	2,544	2,563
USA	2,063	2,381
Indonesia	2,033	2,243
United Arab Emirates	2,125	2,208
Mexico	2,156	2,170
Singapore	1,952	2,071
Malaysia	2,012	2,022
Brazil	1,914	2,003
South Korea	1,920	1,920
Egypt	1,920	1,920
Azerbaijan	1,892	1,888
Canada	1,806	1,861
Angola	1,920	1,833
United Kingdom	1,774	1,795
Nigeria	1,923	1,786
Australia	2,136	1,724
Netherlands	1,762	1,647
Norway	1,608	1,560
Germany	1,432	1,463
France	1,400	1,419
Russia	1,852	1,316
Kazakhstan	1,920	640

Although overtime hours do not apply to managers, the average number of overtime hours has been calculated for the entire permanent workforce (registered workforce), including managers.

INDIVIDUAL WORKING ARRANGEMENTS AND PART-TIME WORK (FRANCE)

In France, nearly all technical and supervisory staff benefit from individual working arrangements, enabling them to set their arrival and departure times based on personal needs and the requirements of their department.

As an experiment, a homeworking program was established at the headquarters after consulting with staff representatives.

ABSENTEEISM

The rate of absenteeism is calculated by comparing the aggregate of all compensated absences (including for illness, maternity, workplace accidents or commuting accidents) with the total number of hours actually worked. In every country, it is in the low average of the rates of comparable industries.

In 2017, the absenteeism rate at the Group level improved 0.7% compared to 2016.

Rate of absenteeism	2016	2017
Europe	6.5%	6.2%
Brazil	3.6%	3.0%
NAFTA	2.7%	2.7%
Asia	2.1%	2.3%
Middle East	1.1%	0.9%
Africa	1.9%	1.5%
TOTAL	**4.5%**	**3.8%**

4.3.2 Health and safety

4.3.2.1 Safety

Commitment to responsible performance

> Ensure the safety and protect the health of our employees

> Offer each employee good working conditions

INDICATOR

The frequency rate of accidents with or without lost time (Total Lost Time Injury Rate or LTIR, and the Total Recordable Injury Rate or TRIR): number of accidents reported per million hours worked.

2017 OBJECTIVES

To achieve an LTIR of 1.2 and a TRIR of 2.75 (including the performance of subcontractors).

ACHIEVEMENT OF THE 2017 OBJECTIVE

The Group achieved an LTIR of 1.24 and a TRIR of 3.13.

2018 OBJECTIVE

To continue our efforts to achieve an LTIR of 1.2 and a TRIR of 2.8.

Safety is the Group's main priority, and it aims to become a benchmark and a model for success in this area. At the end of 2017, 88% of Vallourec sites were certified OHSAS [1] and represented 87% of production in metric tons.

Vallourec has committed to its "CAPTEN+ Safe" safety improvement plan for several years. This program has been renewed each year with a particular focus (starting in 2014) on the major risks that could lead to a fatal accident and (starting in 2016), a specific focus on subcontractors.

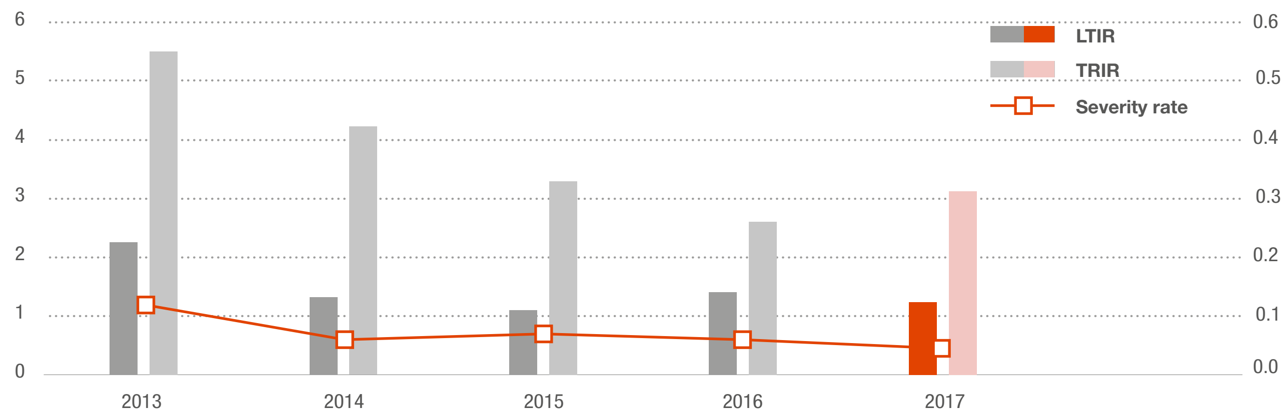
Since 2016, the performance indicators have incorporated subcontractors, Vallourec staff, and temporary workers.

At the end of 2017, the LTIR [2] was 1.24 and the TRIR [2] was 3.13. The Group did not report any fatal accidents in 2015, 2016 or 2017.

Between 2013 and 2017, the LTIR decreased 46% and the TRIR decreased 44%.

In 2017, the Severity Rate (SR) of the Lost Time Injury Rate was 0.045.

Change in safety indicators



(1) *OHSAS 18001: International guidelines relating to occupational health and safety, published in 2001 under the authority of the International Labour Organization.*

(2) *Considering the Group's employees, temporary staff and subcontractors.*

Whenever an accident involving lost time or a potentially serious incident occurs, the Group Executive Committee is informed immediately.

The safety improvement program includes the following measures at all Group sites:

- safety management committees at all levels of the Company;
- safety inspections;
- an ongoing risk assessment for safety concerns and identification and implementation of preventive actions;
- continuous improvement teams (CITs) on safety issues;
- systematic communications at workstations concerning safety issues;
- strong involvement of the entire managerial line to report and address safety issues;
- strong employee involvement to stop and report any situation involving risk;
- eight golden rules (the golden rules are grouped by eight chapters/themes: "my attitude to safety", flow of machines and pedestrians, lifting, manual tools, working at height, confined spaces, energies and lockout-tagout procedures (LOTO), and health protection.

In addition to the safety improvement program, a specific action plan to prevent fatalities was implemented and focuses on maintaining loads, working from heights, confined spaces and lockout-tagout of equipment.

As from 2017, each reported accident is analyzed for actual and potential severity, relying on an internal scale (level 1: minor accident, level 8: fatal or potentially fatal accident). Beyond merely calculating days lost, this approach provides depth to the analysis of causes and allows corrective actions to be taken at the Group level.

In 2017 accidents were primarily to the hands (40%), back (10%) and ankles (8%). The golden rules broken mainly concerned conduct (23%), the use of manual tools (21%) and maintenance operations (20%). Six accidents could have been fatal.

Education and training about safety rules is mandatory for all new employees of the Group and includes frequent follow-up. The programs for temporary staff have now been extended to subcontracting companies, just as for the permanent workforce.

Each year, a day is devoted to safety at all of the Group's sites. This is the time to raise awareness about safety issues in multiple ways among all employees, in particular through specific workshops (risks to hands, load handling, driving forklifts, working from heights, evacuation exercises, etc.) during which production is suspended. A great number of Top managers make special trips to sites for this event. The site recording the best safety performance also receives a specific honor on that day.

The priorities for 2018 are generalizing the elimination of hazardous acts and situations, independent evaluation of risks before any non-standard intervention, and evaluation of the maturity of safety management systems at each of the sites.

In an effort to signal its commitment to safety issues, the Supervisory Board has included safety objectives for several years in the variable portion of the Management Board members' compensation, as well as in that of the main managers in charge of supervising staff at the sites, i.e. nearly 2,000 managers.

4.3.2.2 Health

HEALTH POLICY

In 2017, the Group did not sign any collective agreements regarding occupational health and safety. However, the Health and Safety policy that was updated in 2016 contains a more robust health section. Entities thus aim to further investigate the health risks specific to the processes, while determining the means to eliminate or attenuate them. There are numerous issues, in particular concerning our processes, which cover chemical risk (see below), noise, air quality and ergonomics at workstations. For example, for more than ten years, Brazil has deployed a structured plan to adapt workstations, which is almost complete. The issue also concerns the medical monitoring of employees and the possibility of providing them with adapted health coverage. Lastly, the impact of our products on our customers or our processes is also part of this policy.

PREVENTION OF CHEMICAL RISK

The safe use of chemical products and substances is of critical concern to Vallourec, which has included them in a specific plan since many years. The database listing them is regularly updated to ensure strict monitoring of changes and reactions, and thus to prevent harmful effects. Three points should be emphasized:

a) In 2016, this basis was optimized to better assist the HSE teams in determining the danger of products, and thus establish adequate means of prevention. The application also evolved to take into account the new globally referenced classification system (GHS) as well as all of the new regulations resulting therefrom. The new functionalities were first rolled out at French sites. In 2017, the rollout then continued in Germany, the United States and Brazil.

This tool also evolved to integrate the evaluation of chemical risk at the workstation. The French sites began to deploy the method in late 2017. In 2018, this extended functionality will cover Europe and Brazil.

b) All products or substances entering production sites are monitored and authorized by local HSE managers. Medical services are regularly called in to provide a full risk assessment. Legally required checks on the atmosphere in the work environment are conducted, and this information is included in risk assessments.

c) Lastly, the impact of chemical risk is likewise studied from the initial stage of investment and R&D projects in an effort to take all prevention criteria that should be associated with them into account. Several R&D and investment projects were thus approved from a chemical risk perspective, and the most at-risk areas were monitored and approved at each stage, through to industrialization on-site. This procedure also allows us to strengthen the collaboration with the process communities and purchasing teams. For example, the development of the next generation of grease-free coating for our connections (Cleanwell dry 2) has allowed us to define and establish use of CMR products via closed-cup systems, and thereby guarantee zero contact to ensure maximum staff protection. These highly secure processes were then monitored by local HSE teams.

PRODUCT SUBSTITUTE PLANS

Changes in legislation and improved knowledge about the toxicity of substances increase the number of products that are identified as CMR each year. Plans to substitute critical products have been defined and, in conjunction with R&D and the suppliers, the HSE teams have devised test and qualification programs for substitute products. These programs can sometimes take a long time and, in some cases require the manufacturing processes to be adapted or adjusted. At the end of 2017, 84.3% of the 503 substances identified as CMR [1] were replaced [2] (80% of the 452 products in 2016). This progress is the result of the actions taken, but also of the development of the Group's industrial scope. 147 products were nevertheless identified as being unable to be substituted due to technical problems or a lack of a substitute on the market. Their uses are thus supervised by the HSE teams.

The specific action plans rolled out at the Group level continue to develop, and concern:

a) refractory ceramic fibers: Vallourec has written and circulated a single set of instructions for all countries. The materials containing this type of fiber present in furnaces will be progressively dropped off during maintenance operations when an alternative solution is available. In 2017, furnace maintenance programs did not allow for much progress on RCF substitutions. The substitution percentage in the identified areas therefore remains close to the figure of 63% achieved in 2016;

b) leaded grease: tests and qualifications allowed us to list the substitution greases to use on the threading that is not subjected to high temperature according to the type of connections and environments of use; leaded grease nevertheless remains without a substitute under certain extreme conditions. In 2017, the sites used 107 metric tons of grease, including 21% leaded grease (16% of 110 metric tons in 2016);

c) nickel phosphates: in 2017, the process community rolled out a test program with the three concerned suppliers to validate three Ni-free solutions. Working with the three suppliers has enabled worldwide supply coverage, but has also allowed the process parameters to be optimized to ensure gains on energy consumption, processing time and waste production. The three solutions were approved and presented by the process community at the plants at a specific meeting. The substitutions must now be planned site by site in 2018 with the support of the process community.

Other programs are conducted jointly with R&D, the plants and the suppliers in an effort to reduce CMR use. The use of borax, for example, is a common subject at several sites, which was taken up by one of the process communities.

4.3.3 Social relations

4.3.3.1 Employer-employee dialog

Wherever the Group is established, it has made employer-employee dialog a priority. This is organized in each country, in accordance with local regulations. To date, at least 82% of the workforce are covered by business line or Company collective agreements.

- At the European level, the dialog occurs at several levels:
  - a European committee, comprised of 30 French, German and British representatives, meets at least once a year, alternating between France and Germany. It meets with Management, which provides information about changes in the Group's activities, results and strategy;
  - a European committee office is also in session five times a year, and regularly meets with Management to discuss the Group's future, along with other European issues. In 2017, several special office meetings were held. These meetings allowed the office members to fully grasp the economic and industrial issues impacting the Group's competitiveness, as well as the action plans related to the Group's transformation;
  - additionally, European employee shareholders are represented by a Supervisory Board for employee shareholding funds. They meet with Management twice a year. An employee representative is chosen from among them, who then serves on Vallourec's Supervisory Board.
- In France:

  The Group Committee has 23 representatives chosen by the trade unions from among those serving on the works councils. It meets once a year in the presence of the Management Board and receives general information about the Group (examination of financial statements, activity, investments, etc.) It is assisted by a certified public accountant. It is also involved in managing employee benefits and savings plans. In each company, works councils or central works councils, elected consultative committees or staff delegates, as well as health and safety and working conditions committees are associated with the business or institution's management. The works councils manage social activities (participation in the financing of health contracts, organization of trips, Christmas gifts, sporting activities, etc.). The union organizations that obtained more than 10% of the votes in works council or elected consultative committee elections, are the managerial contacts for negotiations.

  In 2017, the Group Committee proceeded to appoint an employee representative to the Supervisory Board following a call for candidates among employees of the French companies.

  Moreover, a profit-sharing agreement and an agreement concerning the supplementary healthcare expenses system applicable to all of the Group's French companies was entered. Lastly, the employee negotiations that took place at the end of the year resulted in agreements being signed in the majority of companies.

(1) Chemicals or preparations that may have various adverse effects on human health. These are classified into "CMR" categories. Within the meaning of Article R.231-51 of the French Labor Code, substances or preparations are considered CMR agents when they are carcinogenic (C), mutagenic (M) and/or toxic for reproduction (R).

(2) Some sites reported their inventory. New substances have also been officially classified as CMR.

- In Germany:

  In 2017, the main agreements or negotiations concerned fixed cost reduction (negotiation conducted at the business line level), salary increase freeze, headcount reduction WC, reduction of apprentices hired, implementation of the new Vallourec organization and workforce planning in the mills according to standard good load assumptions.

  Negotiations with the union IG Metall concerning collective bargaining, equal pay for agency workers, statutory limitation of the maximum employment of agency workers and measures to reduce fix cost burden also took place.

- In the United Kingdom:

  Employees are represented through two trade unions (Community Union and Unite Union) which represent production, administrative and technical workforce. 2017 negotiations concerned the wage policy and bonus schemes which resulted in an amendment to these schemes and rules surrounding them. Negotiations also related to proposed changes to the Defined Benefit Pension Scheme.

- In North America:

  In Mexico, the union mainly represents production staff and is represented by a collective bargaining agreement. The union, for which dues and membership are mandatory, can propose candidates for promotions among these employees, a list of whom is drawn up in accordance with the agreements. Negotiations concern salaries and benefits in kind. In 2016, Vallourec worked closely with the union on adaptation plans to support the reduced production schedules.

  In the United States, as required by law, employees can choose to be represented by a union and a collective bargaining agreement; so far, employees have consistently voted against union representation. The last formal union election was held in 2014 in Vallourec Star sites, in Youngstown (Ohio, USA).

  In 2017 Vallourec continued to encourage employee engagement through the continued communication plan that was launched in 2016. The plan includes Town Hall style meetings, which are open dialog with the workforce, intended to discuss any item that workers bring up with a short business update. The meetings are opened to all employees, which allows them to gather to know more on the state of business and major projects or change initiatives with a short time allowance for Q&A from the workforce. Round-table discussions with the President and HR Manager and with a small cross-section of the workforce randomly selected to allow a discussion on their likes and dislikes and to try to transform Vallourec into a better place to work.

  In Vallourec Star, Semi-Annual Pulse Survey was expanded to additional departments. The Pulse Survey is a short 21 anonymous questions survey and action program giving the employees another tool to express their voice, not only in identifying opportunities but also finding solutions to improve the working relationship within the teams. The focus of the Pulse is local items not plant or global policy but situations that the employees can be empowered to change to make things better.The final question on the survey asks if they see the Company making efforts to improve the relationship and approximately 85% of the participants say “yes”.

  Vallourec Star operations also kicked off a pilot of Self-Directed work teams in the Finishing and Melt Shop departments, empowering the team to improve the local (single crew) work environment.

- In South America:

  In Brazil, employees are represented by trade unions, which are formed by employees not only from Vallourec, but also from other companies that integrated their territorial base.

  There are legal criteria that establish the obligation of Union representation according to the territorial location of the Company and its preponderant activity. Thus, for each unit in Brazil there is a different union representing the employees.

  These unions are responsible for bargaining salary and benefits increases as well as the work conditions. The negotiations conducted in 2017 for all employees resulted in a salary increase equivalent to the inflation rate of the last 12 months in all plants.

  Moreover, the *Conselho Representativo dos Empregados* (Employee Representative Board – CRE) is a legal obligation for all plants that have 2,000 or more employees since November 2017.

  This Board provides employee representation internally and facilitates joint discussions on specific daily matters such as catering, transportation, restrooms, etc. The CRE can´t become involved in matters that are negotiated by the trade Union. It plays a complementary role.

- In China:

  Employee representatives or works councils exist in some entities, and the employer has regular communications with those representatives. In the entities without employee representatives, employer-employee dialog occurs through direct contact between the production staff and management via internal communication meetings. Should employees request it, the setup of a trade union will have to be planned.

4.3.3.2 Internal survey on employee satisfaction (“Opinion”)

Vallourec conducts a survey at regular intervals with all of its employees worldwide to find out their perception, expectations and concerns. This survey allows the level of satisfaction, motivation and commitment of employees to be measured.

The last survey, conducted in 2017, had a good rate of participation (60% response rate) and yielded a high satisfaction score (81%). The pride of belonging to the Company, the work atmosphere, as well as the strong level of independence given to employees appear to be the main motivating levers.

Following this survey, action plans were begun to respond to employees’ expectations concerning the standards of excellence defined at the Group level.

4.3.3.3 Group internal communications

Internal communications are designed to boost the commitment and motivation of all Group employees worldwide. Vallourec maintains dialog with its employees and provides information through various channels:

- Vallourec Inside is the Group's intranet, which reaches around 8,000 employees in approximately 20 countries. It delivers information on strategy, targets and results, and showcases the achievements of teams worldwide. A bi-monthly e-newsletter presents site news. Vallourec Inside also gives everyone the opportunity to connect through employee networks, which promote working together and increasing responsiveness and performance. Approximately 4,000 individuals have connected via 230 web forums dedicated to specific Group issues (manufacturing processes, business activities, research and innovation);
- specific communication on certain projects seeks to educate employees about key issues in the Group – safety, ethics and values, the environment – or involves them in important matters (the Value employee share ownership plan, Innovation Challenge, major projects impacting Group life, etc.);
- at annual conventions or local meetings, the Group's executive management team visits employees to share information and gather feedback.

The Group's internal communications are also based on local resources in the countries and companies, which relay messages, provide feedback from the field and raise topics of interest within their own channels (magazines, intranets, etc.).

4.3.4 Compensation and benefits

4.3.4.1 Payroll

In 2017, Group payroll, excluding interim, totaled €1,068 million:

- €820 million for salaries;
- €22 million for employee profit sharing;
- €10 million for expenses associated with share subscription or share purchase options and performance shares;
- €216 million in social security costs.

Breakdown of payroll costs by country:

Breakdown of total payroll costs	2016	2017
Germany	23%	22%
Brazil	21%	24%
China	1%	2%
USA	19%	21%
France	27%	24%
Mexico	1%	1%
United Kingdom	3%	2%
Other	5%	4%
TOTAL	**100%**	**100%**

4.3.4.2 Employee profit sharing

Profit sharing plans are designed to associate employees with the Company's performance. In 2017, this amounted to €22 million.

In France, a Company savings plan (PEE) and retirement savings plan (PERCO) allow employees to invest the money they receive from profit-sharing in order to build up savings with a favorable tax status and to benefit from employer contributions.

4.3.4.3 Employee shareholding

In 2017, for the tenth consecutive year, the Group renewed a Value employee shareholding plan, known as Value 17, benefiting employees in 11 countries. More than one out of every two employees, or 52% of eligible employees, chose to subscribe to the Group's proposed share offering. This participation rate demonstrates the loyalty of Vallourec's employees to their Company and their confidence in the Group's strategy and future. Shares held by employees represented 4.19% of Vallourec's share capital as at 31 December 2017, compared to 3.54% as at 31 December 2016.

4.3.4.4 Other benefits

In almost all countries, except in Africa and the Middle East, employees benefit from a healthcare system for themselves and their families. During business travel, a medical service guarantees they will be cared for under the best conditions.

Multiple activities of a social, sporting or cultural nature are organized within the subsidiaries. They take on different forms according to the structures: business orchestras or choirs, organization of tourist trips, sporting competitions or parties and the funding of vacation camps for children. The goal of these activities is to bring people together outside of a strictly professional framework, to support and strengthen connections among employees.

4.3.5 Employee development

4.3.5.1 Talent management process

Vallourec assists its employees throughout their careers, revealing and cultivating their talents thanks to several programs and initiatives that are rolled out within the Group.

TALENT 360

Annual interviews

The talent management information system, known as Talent 360, used throughout the Group, is one of the tools used to evaluate skills, manage objectives and assess the potential of the population of managers. Implementation of this tool, supported by the strong involvement of all managers, enabled performance reviews to be standardized and systematically structured on an annual basis. This tool is also accessible to technicians and field supervisors in certain countries, in particular France.

In countries where this tool is in place, the average rate of completion of annual performance interviews among managers is approximately ☑ 96%.

Professional interviews

In order to comply with the legal obligations to conduct a professional appraisal interview every two years and, in cases where an employee resumes activity after a break due to leave for maternity, parental or long-term illness, etc., measures were implemented within the Talent 360 talent management information system during the last quarter of 2015. These professional appraisal interviews have thus been taking place since 2016.

Job posting

In order to allow managers to seize opportunities for growth within the organization, job openings are widely published in “Talent 360,” with the option to apply online.

EMPLOYEE REVIEW AND SUCCESSION PLANS

The staff review, run by the Human Resources Department in collaboration with the sites and Regions, is an indispensable process for ensuring that the Group has the talent needed to implement its strategy. It also allows employee potential to be identified and developed, helping staff to evolve within the organization over the short, medium and long terms.

This staff review, which is based on criteria of performance and potential, allows true career paths to be constructed by relying on levers such as training, and internal and international mobility.

Vallourec has also generalized succession plans in an effort to ensure that key positions are filled by people with the necessary expertise.

EXPERT PROGRAM

Created in 2010, the goal of the Expert Program is to recognize employees specialized in the processes that are connected to Vallourec’s core business, such as steel production, rolling, heat treatment, threading or even welding.

The Expert Program encourages and values individual career paths in these areas, and allows Vallourec to develop its competitiveness to satisfy increasingly demanding markets. To date, this program has allowed more than 315 experts to be recognized through the Group.

4.3.5.2 Training

In an evolving and competitive market, Vallourec has a growing need for trained and motivated staff who are able to adapt to the changing businesses and markets. The Group strives to reconcile its need for change with the individual aspirations of its employees, allowing them to grow in their careers, while developing their skills.

In addition to training programs which are centrally decided upon by the Group Training Department, each company prepares its training plan each year, in accordance with the Group’s pedagogical guidelines. Specific training programs are thus established to locally address the regulatory or market requirements.

In 2017, more than 282,930 hours were devoted to professional employee training (data collected through the “LMS” unique training management system, including for classroom training sessions that were only given at the Group level, along with those in main location countries: Germany, Brazil, United States, France and the Middle East).

Employees who trained at least three hours in the classroom, or who completed at least one e-learning training session

	Production staff		Technical and supervisory staff		Managers		Total	
	2016	2017	2016	2017	2016	2017	2016	2017
TOTAL, GROUP*	69%	65%	61%	64%	92%	92%	71%	69%

* *% of employees who trained at least three hours in the classroom, or who completed at least one e-learning training session per socio-professional category.*

In 2017, each Group employee completed an average of 14 hours of training, compared to 26 hours in 2016. Shorter-format distance training, which has been developing for several years, allows access to a larger number of employees. Distance training now accounts for 12% of the total training hours.

Type of training provided

	Total number of training hours in 2017	%	Total number of training hours in 2016	%	Change
Leadership	29,567	11%	35,694	7%	-17%
Training by position	22,825	8%	37,309	7%	-38%
Languages	3,545	1%	12,966	3%	-72%
Operational excellence	204,102	72%	382,917	76%	-46%
including HSE	*83,170*	*29%*	*109,351*	*22%*	*-23%*
On-demand training	22,503	8%	37,565	7%	-40%
TOTAL	**282,530**	**100%**	**506,451**	**100%**	**-44%**

We still note a predominance ascribed to operational excellence training, which is at the heart of our industrial strategy. Instructor-led language training is strongly decreasing in favor of online training programs. More generally, instructor-led training is down in favor of e-learning, which is given in much shorter formats.

VALLOUREC UNIVERSITY

Since its creation in 2011, Vallourec University's goal has been to be a center of excellence where employees and customers can meet to create and share in a common culture and build on their knowledge through continuous learning. Its purpose is to strengthen the values that are most important to Vallourec today: focus on the customer, agility, transparency, innovation and respect for people and cultural differences.

Vallourec University offers training programs for Group employees worldwide. These training programs may be given locally through Vallourec University in the main countries, centrally as part of international programs which are most often organized in Europe, or via e-learning through a dedicated training platform, the Learning Management System (LMS).

All of the training programs that are launched and rolled out by Vallourec University must meet the following objectives:

- to ensure a shared understanding of Vallourec's values and corporate culture; and
- to encourage strategic, managerial and technical excellence in order to boost the Group's competitive edge.

To achieve these objectives, Vallourec University has developed four principles: experiment, share, learn and apply, as the basis of all its training. Participants have the opportunity to discuss their experiences and gain new knowledge by alternating theoretical and practical modules and applying and adapting the methods they have learned to their specific needs. Training is systematically related to the strategic objectives of the Group, Regions and its teams.

Vallourec University offers customized training and seeks to develop skills across the Group to fit with the Group's strategy. Its learning center is based on four key pillars:

- leadership, which prepares for the management of specific challenges encountered in management and leadership roles;
- on-demand training, which is focused on topics that are important to Vallourec, such as project management, communications, language skills, digital skills or even finance for non-specialists;
- functional training, aimed at improving practical and technical skills for each business line;
- training for operational excellence, which provides expertise on processes and technologies in the context of the Group's priorities and guidelines, in particular in order to contribute to the Company's performance and to the development of a unified corporate culture.

Vallourec University's activities are structured around two areas: the Learning Center and the External Stakeholders. The Learning Center is the main area and covers all training initiatives. Its modules are implemented at national and international levels, and are aimed at the continuous development and improvement of employee skills to meet the specific requirements of each level of responsibility and in the various geographical areas. They systematically integrate the Group's priorities, such as change management, customer focus and innovation.

Activities geared towards External Stakeholders aim to improve the brand's image among customers and suppliers by offering them "Business Knowledge" and "Tubular Essentials" courses. Such measures also help to attract new talent and enhance Vallourec's employer brand.

Vallourec University adopted a Learning Management System (LMS), a training management tool that offers employees more direct access to training. Intended to improve training management and access, the LMS has been gradually rolled out in the Group since May 2012. The tool offers monitoring of training times and budgets, enables employees to see what training is available in the Group, allows them to enroll in courses directly and review training histories for themselves and the employees reporting to them.

This tool allows Vallourec University to offer customized or standard training, which can be deployed quickly at the Group's various sites for all employees connected to the LMS. These offers are part of a "Blended Learning" strategy in which live training is prepared for or reinforced by e-learning sessions, leading to better understanding of the lessons and reducing time spent in the classroom. Over the next few years, Vallourec University will continue to develop a range of new live and e-learning training courses.

2017 marked a more mature phase in distance learning, in which new learning practices were adopted. An IT safety program was rolled out in e-learning, and numerous modules on operational excellence were given. The number of training hours dispensed remotely has significantly increased. This number was 34,204 hours in 2017 (hours recorded by the Learning Management System), i.e. 12% of the total training hours.

APPRENTICESHIP AND WORK-STUDY VOCATIONAL TRAINING

To ensure the transfer and enhancement of know-how in the context of Europe's demographic imbalance, and to attract more young talent with a training program geared to the needs of its activities, the Group operates a dynamic apprenticeship program:

- in Germany with an average of 216 apprentices in 2017;
- in France where an average of 104 work/study trainees took their training course in 2017;
- in Brazil with an average of 97 apprentices in 2017; and
- in the United Kingdom with an average of 26 apprentices in 2017.

4.3.6 Diversity and equal opportunities

Under the roll-out of the Code of Ethics (see above, Section 4.2 "Ethics and compliance"), a program to educate all employees on the issue of discrimination was completed using examples from daily life.

In France, training for managers includes a specific module on this topic.

4.3.6.1 Diversity

GENDER EQUALITY

Women represent 22% of Group managers and executives overall, with a higher percentage in the lower leadership positions (31%) and a much lower one at the senior executive level (5%).

The Group's policy is defined by the Management Board with two key objectives:

- increasing the number of women in line management positions, especially in production; and
- improving women's access to leadership roles.

Indicators are in place to ensure follow-up and accountability in the actions led by the Group. Monitored by a special committee, which is chaired by a member of the Executive Committee, these concern:

- the percentage of women in line management positions in production, sales, and Research and Development; as at 31 December 2017, 13% of these positions were held by women;
- the number of women who currently hold a senior management position: as at 31 December 2017, 10% of senior management roles were filled by women.

Moreover, an action plan aimed at increasing the number of women in the talent pool was launched a few years ago. It includes:

- a mentoring program covering a dozen female managers with a high potential for advancement; priority hiring when there is equivalent competence (measurements whose scope is low due to the hiring freeze);
- the definition of specific career paths;
- the specific presence of women in succession plans; and
- the creation, starting this year, of a network of women tasked with bolstering women's place in Vallourec by implementing initiatives in communication, conferences, lunches, etc.

2017 was marked by increased activity in promoting women's issues:

- strengthening the network of women following a benchmark of existing networks in other groups: a monthly guidance committee, integration of new members and the launch of initiatives such as a chat with the female Chair of the Supervisory Board, which gathered together 800 participants;
- the launch of a dedicated group on Yammer, Women@Vallourec, which has 234 members after one year;
- numerous regional initiatives aimed mainly at structuring a path for the promotion of women in the region.

CULTURAL DIVERSITY

As an international group, Vallourec enjoys a great cultural diversity. To ensure the conditions for an harmonious and rewarding collaboration, managers who are brought to work with multicultural teams benefit from an adapted training program.

Furthermore, an average of 110 employees of diverse origins have the benefit of working internationally, for a variable duration of one to three years, and in some twenty different countries.

4.3.6.2 Equal opportunities

DISABILITIES

- In Germany and in France, priority is given to keeping employees with disabilities in service by adapting positions or work hours.
- In Brazil, in partnership with the government, Vallourec Tubos do Brasil conducts a rehabilitation program to allow employees with disabilities to continue their professional activities.

4.4 Relations with stakeholders

4.4.1 Relations with employees

➔ Commitment to responsible performance

> Train and motivate our employees through skills development, recognition of expertise, talent promotion and career development

INDICATOR	2017 RESULTS
Result of the Opinion internal survey (employee satisfaction rate). This survey is conducted every six months.	Based on the **81% satisfaction rate** that was expressed during the survey conducted in 2017, action plans were constructed both centrally and locally to meet the stated expectations. They will be implemented in 2018.

The social policy is presented in full in Section 4.3 "Social Policy" of this Registration Document.

4.4.2 Relations with customers

4.4.2.1 Customer profile

The Group has an extensive customer portfolio.

- As concerns the Oil & Gas markets, its customers are:
  - national oil companies such as ADNOC, Aramco, Petrobras, international companies like Exxon and Total; and independents;
  - engineering and construction oil service companies such as TechnipFMC or Subsea7;
  - American distributors such as Pipeco, Premier Pipe, Champions and Pyramid Tubular;
  - national drilling contractors such as NDC, ENAFOR or international drilling contractors like Transocean, Maersk or Seadrill;
  - service companies such as Schlumberger, Halliburton, Weatherford.
- On the Power Generation market:
  - builders of thermal and nuclear power plants such as Areva, Dong Fang, Doosan and Mitsubishi Hitachi Power Services.
- On the Industry market:
  - manufacturers of industrial equipment and distributors such as ThyssenKrupp, Hoberg & Driesch, Salzgitter and Klöckner.

In 2017, the five largest customers accounted for 20% of the Group's consolidated revenue.

It should be noted that a growing number of customers are asking the Group about its level of commitment to CSR in the form of a structured questionnaire.

4.4.2.2 The Commercial Excellence program and customer satisfaction

As part of its "Commercial Excellence" program, the Group tries to continuously strengthen its proximity to its customers.

One of the cornerstones of this program is the management of Vallourec's strategic customers: the Key Accounts. The dedicated Key Account Managers undergo specific training to create a special relationship at all levels of the customer's organization. They detect their needs and contribute to differentiated sales. The community of Key Account Managers meets quarterly to exchange views and share best practices.

Another initiative of the Commercial Excellence program is the preparation of "Value Propositions". For its different offers and on its various markets, Vallourec demonstrates the value created throughout the value chain of its customers' activities through "Value Propositions".

Sales Force Management is also a lever of this program, which allows commercial functions to be professionalized at all managerial levels of the Group, through adapted training programs.

Customer satisfaction is at the heart of Vallourec's concerns. Indeed the Group regularly conducts satisfaction surveys. This process, led by the Products Line or Regions, allows the customer satisfaction rate to be measured and very detailed knowledge of customer experiences to be developed. Satisfaction is measured according to various criteria (response time to a request for quotation, quality of products and services, lead times), and actions are consequently taken to improve satisfaction or, where applicable, remedy dissatisfaction.

This approach is inseparable from the Group's efforts to raise the level of quality of its products as well as that of the associated services. Claims are systematically and fully processed.

4.4.2.3 Measures for consumer health and safety

This topic is not applicable to Vallourec's activities. Indeed, the products manufactured by the Group are designed for other manufacturers who use or transform them. They are sold either directly to the end customer, or to distributors who sell them on for various applications. They are never supplied to individual consumers. Moreover, the products are made of steel, a metal that does not present any danger to health.

4.4.3 Relations with subcontractors and suppliers

Commitment to responsible performance

> Establish a network of reliable and responsible suppliers

INDICATOR	2017 RESULTS
Number of suppliers included in the formal evaluation process conducted by Vallourec of its social and environmental responsibility.	As at 31 December 2017, **a total of nearly 1,000 suppliers** were involved in the process, still particularly focused on emerging countries or regions newer to Vallourec (Asia and the Middle East, and certain categories of suppliers in Brazil). **2018 OBJECTIVE** Involve **75% of the suppliers with which Vallourec has significant revenue** (greater than €1 million) in the Group's formal evaluation process, as well as **all suppliers that are deemed "critical,"** meaning that directly impact the Vallourec product or its production process.

In 2017, the Group's purchases totaled €2,560 million, i.e. a 13% increase from 2016. They break down geographically as follows: 47% in Europe, 26% in North America, 24% in South America and 3% in the rest of the world.

4.4.3.1 Local purchases

Vallourec ascribes specific importance to the regional, economic and social impact of its activities on the neighboring and local populations.

Local purchases, which totaled an estimated amount of nearly €1.15 billion in 2017, represented approximately 45% of purchases (stable share year-on-year) and directly contributed to supporting the local economy. These were mainly for scrap metal, temporary work, certain IT services, subcontracting, maintenance and supply services, and ordinary services to meet production and non-production needs. The distance between suppliers' locations and the plants they serve is not over 80 km, so they can usually respond to requests the same day if needed.

Subcontracting purchases represented an amount in the order of €680 million. These concerned either industrial finishing or control services, or services that were needed for the processes to be properly performed. These subcontracting purchases were for the most part local, given the quality and responsiveness requirements that providers must satisfy. These services corresponded to a significant number of very qualified jobs that helped strengthen the local industrial fabric, although it is not easy to evaluate their number. A significant portion of these local subcontractors were considered in the CSR evaluation of Vallourec's suppliers.

4.4.3.2 Responsible purchasing policy

Vallourec's Purchasing function is organized for optimal supplier management, consistent and centralized governance, and to deploy tools and processes shared by all Group entities. This structure, which supports the line management teams and clarifies processes, is based on an analysis by type of purchase to facilitate the implementation of synergies.

Within this framework, a Supplier Quality and Performance Department established several tools and processes during recent years which aim to best monitor suppliers, their selection and their performance: establishing purchasing strategies by category, a formal contracting process, management of supplier quality, measurement of supplier performance, and supplier risk analysis. All of these new processes directly emphasize criteria such as Corporate Social Responsibility (CSR), sustainable development, ethical conduct, anti-corruption and safety.

In 2017, pursuant to this policy, Vallourec:

- conducted several hundred audits or supplier risk analyses at all of its sites. This consistent effort will continue in 2018 with increased precision, notably with the streamlining of audits. To do so, Vallourec will use improved audit guidelines, still very significantly integrating the criteria on sustainable development, ethics and safety;
- continued the formal and systematic evaluation of suppliers based on CSR criteria, still with the assistance of the same specialized firm. As at 31 December 2017, more than 1,000 suppliers were incorporated in this project, and nearly 400 of them, representing more than 40% of Vallourec's expense, were at the end of the process, with a complete evaluation and progressive action plans. This assessment showed that 51% of the suppliers evaluated already publish a formal report on their energy consumption and greenhouse gas emissions, 65% publish a report on their health, safety and environment (HSE) indicators, and 32% are ISO 14001 certified;
- continued and perfected a specific innovative process to anticipate supplier risks. A score card on the subject matter is continually updated and reviewed monthly by the Group's Purchasing Department Committee, and another more detailed score card has been constructed for each Region to monitor specific regional risks. In 2017, this monitoring allowed the risks identified for 12 of the Group's global suppliers to be treated or eliminated. Furthermore, several e-learning training modules are available to train buyers and their internal customers in all aspects of supplier risk. In 2018, this process for anticipating supplier risks will be strengthened by a more detailed classification of risks and stronger regional management for all Regions;

- used the full power of its new Purchasing information system, which facilitates integrated management of purchases and suppliers, with visibility at all levels, from local to global. This system, which was ramped up in 2017, contains in particular a specific data sheet for each supplier in which sustainable development and safety criteria feature strongly. It will also allow supplier development and improvement action plans to be managed in 2018.

Vallourec's requirements of sustainable development, ethics and safety are always one of the main messages delivered to suppliers during the Top Management Meetings (TMM) that are regularly organized with the Group's largest suppliers.

In accordance with the U.S. laws and European directives, Vallourec has also committed to monitoring potential "Conflict Minerals" coming out of certain African countries which could be used by its suppliers. The Group's policy consists (i) of making sure, in accordance with the Group's Code of Ethics, the Sustainable Development Charter and the Environmental Policy, that none of these minerals are used directly or indirectly and (ii) where certain cases are detected, that solutions are found to replace them. This oversight plan was significantly expanded to cover nearly 4,000 suppliers in 2017. These suppliers were all subject to this survey's analytical matrix. The summary of responses to the questionnaires sent out and analyzed using special software did not show that Group products contained any conflict minerals from the African countries in question. The survey will be further strengthened in 2018, and a specialized company will verify all of the suppliers' responses.

4.4.3.3 Anti-corruption actions

All suppliers are aware of and have access to the Group's Code of Ethics, particularly through Vallourec's website. Vallourec's systematic evaluation of suppliers based on CSR criteria, initiated in 2013 (see above), showed that 43% of Vallourec suppliers already evaluated (compared to 38% in 2016) have also formally established a Code of Ethics or a Business Ethics Charter.

Moreover, as concerns relations with local stakeholders and suppliers, in 2017, there were no comments or complaints related to respect for the values set out in the Group's Code of Ethics.

4.4.4 Support of the local socioeconomic fabric

4.4.4.1 Socioeconomic impact of the Group's activity

In an effort to better determine the global impact of its activity, the Group conducted a study with a specialized provider to assess the Company's socioeconomic footprint, meaning to measure our contributions to the regional economies through the amount of our supplier orders, the expenses of our employees, and the taxes and duties paid. The LOCAL FOOTPRINT® model used, precisely 20%, is based on national accounting methods. The main results concern direct jobs (full-time equivalent) in the Company, the indirect jobs created in its supply chain thanks to the analysis of the purchasing volume, and those ultimately created in the regional economies. The study highlights the total GDP created in the main countries where the Group is present. This study, which was completed in 2017, concerned the 2016 figures. We can thus consider that the Group's impact is normally higher since 2016 was a year of weak business and highly inadequate results.

Data was collected in the main countries where Vallourec is established, namely Germany, France, the United States, Brazil, China, Mexico, the United Kingdom, Indonesia, Saudi Arabia and Mexico. This study thus allows us to consider approximately 90% of the Group's economic scope. For this scope, in 2016, the payroll was €949 million and purchases were €2,207 million. The study examined these purchases according to 13 categories, because the effects obtained differed from one to the next. In short, the 18,000 jobs in the Company will have thus supported more than 160,000 other jobs globally, i.e. a job creation factor of 9, which is in the high range, precisely given the quality of those jobs. The GDP created worldwide will have reached €6 billion for added value of nearly €860 million, i.e. a multiplying factor of nearly 6. For example, it was in Brazil and Germany that the Group made the most purchases, and in these two countries that the Group generated the most jobs, i.e. 63,000 and 21,000 respectively.

Vallourec can thus claim to create significant value benefiting its stakeholders.

4.4.4.2 Local community support policy

Vallourec has initiated numerous relationships with local stakeholders in its activities, such as professional organizations and local authorities, residents' associations and groups with a social or environmental objective related to its sites' activity. Although no overall systematic evaluation of the quality of relations between our sites and the local communities has yet been performed, relationships are considered to be good and no conflicts have arisen. Social actions to benefit local stakeholders are mainly conducted in countries such as Brazil and Indonesia where the expectations of the local residents are strongest and where social systems are less developed than in Western countries. With the exception of these two countries, the Group receives few requests for support.

In accordance with issued recommendations, the local level has the autonomy to determine the actions to be taken, with the approval of management, and focusing on the following guidelines, which are included in simple recommendations:

- consistency of actions undertaken within a single region;
- regular, high quality discussions;
- priority given to actions supported by the Group's employees;
- preference for actions that support education, healthcare and local development.

It should be mentioned that the five-year strategic plan to promote sustainable development provides for establishing a more formal framework for social actions. With the aim of furthering discussion on the subject, an exhaustive list of actions taken at all sites was made in 2015, and updated at the end of 2016. Upon internal consultation and based on the recommendations of a specialized consultant, in 2017 the Group prepared a new action policy to support local communities, in the form of corporate sponsorship or partnerships, by encouraging actions in which employees wish to get involved. The cornerstones established by the Group will concern education and environmental protection. Volunteer employees may take time off to get specifically involved. Each site must construct a medium-term project associated with a budget, to be validated by the managerial chain. Its practices must converge towards the cornerstones set by the Group within a certain number of years. Lastly, governance of these actions will be formalized at the level of each site. At the Group level, a specialized committee will evaluate the actions conducted and to be completed once a year and will disseminate a specific guide on best practices. This new policy will be gradually rolled out in 2018.

4.4.4.3 Actions taken in favor of local communities

In 2017, approximately €2.7 million were allocated to fund partnerships, down from 2016 (€3.3 million). This year-over-year drop is clearly the result of the Company's poor results during the last three years. Note that changes in exchange rates only had a small effect on the amounts used. In volume, efforts thus decreased by approximately 21% compared to 2016.

In this context, the following main actions are noteworthy:

- In Brazil, due to historic, cultural and regulatory reasons, and because the Barreiro site is located in the middle of a very urbanized district in Belo Horizonte, relations with local stakeholders, particularly low-income populations, have for several years followed a structured process in close collaboration with local authorities, backed by tax incentives. The very numerous actions include economic development, cultural and sporting programs.

  We can note:

  - "Education volunteers", who provide educational support directly to nearly 600 young children, in particular for scientific subjects, through 84 employee volunteers from Vallourec Tubos do Brasil (VBR);
  - the voluntary participation of more than 100 employees to assist local communities to the benefit of 900 people;
  - the specific *"Comunidade viva"* school support program. This program, implemented since 2005, has demonstrated its effectiveness, since during the 2011-2015 period, nearly 6,000 young people directly benefited from the programs, and more than 10,000 benefited indirectly, in particular the families of employees. In 2017, more than 1,000 young people directly benefited from the program, and 21,000 benefited indirectly. The very practical results are length of education, which has grown from 5.6 years in 2005 to 8.8 years, with a rate of integration into the workplace that went from 45% to 53%, accompanied by a very considerable increase in family income of more than 70%;
  - the promotion of cultural, sports and social projects with local communities located close to the various sites allowed 1,600 people to directly benefit in 2017;
  - the outstanding effort over the past several years to restore a historic movie theater in the city center has allowed the Belo Horizonte metropolis to become a major cultural center; the *Cine Theatro Brasil Vallourec* has become incredibly successful and has welcomed nearly 235,000 visitors in 2017 for arts activities including exhibitions, and dance, music and theater shows. In 2017, support for the operation of this establishment is the most important action that was carried out in Brazil;
  - school environmental training program.

  Vallourec & Sumitomo Tubos do Brasil (VSB) also established economic and cultural support programs among other local communities under agreements with local authorities that are comparable to those developed in Barreiro, in the form of an economic development project for villages located close to Vallourec Florestal farms. We can note, for example, the support that was given to micro eucalyptus farming or apiculture projects.

  Lastly, there have been numerous discussions with the local residents of the Brumadinho mine (Mineração), which allow any environmental concerns to be clarified and the implications for the local economy to be explained.

- In Indonesia, the subsidiary P.T. Citra Tubindo TBK has for many years been involved in programs that provide educational and medical assistance to the people, in particular very young children, financing for sporting and cultural equipment, as well as environmental protection actions and support to underprivileged populations. It should be noted that the primary action consists of continuing to subsidize the new Nongsa hospital, which is now fully operational.
- In Europe and the United States, given the level of development of social infrastructures, corporate initiatives are for limited amounts and tend, in general, to support university, cultural and sports initiatives, to finance social and charitable causes, restore cultural centers, support the local economic fabric, or even subsidize environmental restoration programs.

In the Valenciennes, Aulnoye-Aymeries and Montbard basins, the Group has participated in the Alizé program for large and medium-sized local businesses, which consists of (i) contributing pro bono expertise to SMEs by providing consulting from managers and (ii) coordinating projects categorized as part of the "Metal Valley Rural Excellence Division".

In the Düsseldorf region of Germany, for example, cultural or sports associations are supported.

4.4.5 Relations with shareholders and investors

The Group's priority is to maintain lasting, trustworthy relations with all its shareholders, whether individual or institutional, French or foreign. It strives to give them access to exact, precise and accurate information, particularly with regard to its activities, results, outlook and strategic developments. Accordingly, and with ongoing concern for clarity and transparency, numerous dedicated communications media are available, and regular meetings are arranged throughout the year. For example, the Group annually presents its actions on a certain number of jointly identified topics to Bpifrance Participations.

In 2017, the Group participated in 306 meetings and telephone conferences with institutional investors and financial analysts. Each year, it also meets with SRI (Socially Responsible Investment) funds and analysts. This approach contributes to the Group's improvement in the area of sustainable development.

The Group maintains an ongoing dialog with its individual shareholders through various communications media and channels. Therefore, Vallourec's Shareholders' Club notably allows them to participate in information meetings to deepen their knowledge and understanding of the Group's activities. Moreover, in 2017, the Group published two editions of its Letter to Shareholders and participated in the Shareholders' Exhibition to meet its individual shareholders.

The entire scheme used by the Group for shareholders and investors is presented in Sections 2.6.2 "Relations with institutional investors and financial analysts" and 2.6.3 "Relations with individual shareholders" of this Registration Document.

4.5 Environmental commitment

The environmental data included in the 2017 environmental reporting scheme concerns all of the subsidiaries controlled by the Group, noting that the data from the Jeceaba plant of Vallourec Soluções Tubulares do Brasil (VSB) in Brazil has now been 100% consolidated and that of Tianda Oil Pipe, which was acquired in late 2016, will be taken into account in 2018. The Jeceaba plant has indeed been subject to numerous progress actions, including in the environmental domain, in an effort to gradually bring it up to Group standards.

The majority of the ratios are established using metric tons "processed," in other words the sum of production from the various units, which are considered independent production workshops. This concept better accounts for the level of activity of the production units than metric tons shipped for two reasons. On the one hand, because it is more representative of the flows and stages of production, and on the other, because it is less affected by changes in inventory.

4.5.1 General environmental policy

Vallourec's manufacturing policy is to minimize the impact of its activities on the environment. This commitment is clearly explained in the Sustainable Development Charter published by the Group in 2011, and in the Group's Environmental Policy, which was signed by the Chairman of the Management Board and published in 2014. Vallourec strengthened its commitment to the climate by cosigning in late 2017, along with 89 other French businesses, a new version of the French Business Climate Pledge, to contribute to a low-carbon economy. It also just published its carbon policy in early 2018 (see below).

In 2013, Vallourec created a five-year environmental roadmap for each of the following three industrial divisions: Upstream, OCTG and Vallourec Tubos do Brasil, which became VSB. These roadmaps constitute a strategic Environmental plan and identify targeted environmental projects (energy, water, waste, chemical hazards and noise) whose purpose is to minimize the Group's environmental footprint. They focus on defining objectives, determining the necessary resources (including capital expenditures to be made), promoting progress and cost savings, and setting priorities. They are monitored regularly and updated each year. Their horizon is extended annually in one-year increments, and currently concerns the 2017-2022 period. Since early 2017, these roadmaps have simultaneously been adopted by the new Europe-Africa, Middle East and Asia, North America and South America regions.

4.5.1.1 Environmental management

In accordance with Group rules and guidelines, the Director of each site is responsible for setting up an effective environmental management system that is tailored to the local context and the site's activity. The Director appoints an Environment Manager who heads up all actions in this area and functionally reports to the HSE Director of each region. The "Corporate" Environment procedures are regularly updated and may be accessed at all plants on a dedicated portal.

The Environment Department, reporting to the Sustainable Development Department, coordinates all environmental initiatives. It is supported by the Environment Managers of the regions and production sites, who are responsible for implementing Vallourec's policies through:

- uniform management of environmental performance, risks, projects, communications and sharing among all Group entities;
- incentives for entities to improve their environmental performance; and
- development of environmental competencies.

These structures exist in all of the countries. The objective of this organization consists of structuring the organizations by region or country in order to better take into account the specific national regulations. Under the Transformation Plan, the global workforce now totals nearly 50 full-time equivalent people for the Group as a whole.

Exchanges among the countries are continuing to develop, fostering significant progress thanks to the benchmarking of performances and solutions, particularly during regional environmental conferences.

The Environmental Department is also responsible for coordinating and managing these internal benchmarking initiatives, as well as for gathering and consolidating all of the Group's environmental data. The results are consolidated monthly and communicated quarterly to the sites, the management line, and to the Executive Committee members, in the form of a report that is specific to each Region and entity. In 2016, the Group rolled out a new IT application to manage safety and environmental data. This application simplifies the collection and verification of data and offers new features to the sites that help them with their own local reporting.

In view of facilitating communications between environmental managers, the Environment Department is rolling out a specific application based on the Yammer social networking service.

4.5.1.2 Audits and certifications

Internal environmental audits are regularly organized in each country to assess compliance with regulations. Specifically, the Performance & Risk audit evaluates performance and risk levels for each environmental concern as well as the environmental management system (EMS) in place. The results are used to identify priorities and the corresponding action plans. These audits are part of the process of preparing for certification audits which are now comprehensive, in other words, simultaneously concerning environmental, energy, quality and safety procedures at the regional level. In this context, support was provided to conform to the new ISO 14001:2015 standards as concerns mapping aspects of the stakeholders and analysis of product life cycle.

As at 31 December 2017, the Group's main sites were certified ISO 14001, which represents more than 86% of production. The certification of the Jeceaba site should occur in 2018, in an effort to achieve a 98% certification rate of Group units.

More generally, the Group's entities are subject to quality, health/safety, energy and environmental certifications.

Each year since 2011, the Group has identified a site deserving of the "environment award". In 2017, this distinction was given to the VSB mine for the construction of a new dry residue treatment system avoiding the raising of a hydropower dam and the corresponding risks, and obtaining significant operational savings.

4.5.1.3 Legal compliance

Regular audits are performed by outside specialists to assess compliance of the production sites' activities with statutory and regulatory requirements.

Through the regular and systematic review of regulatory developments, actions implemented in the context of continuous improvement, new investments or organizational changes can be developed or updated. In France, an environmental regulatory watch has been set up on a dedicated intranet portal, accessible by all production sites. This portal facilitates access to useful information for various sites, and in particular compiles the procedures that are periodically updated.

4.5.1.4 Training and education

Employee training and education on the environment, sustainable development and energy efficiency are carried out in the plants through poster campaigns, periodic publications, briefings and compliance programs, among other measures. The Global Compliance Program, developed and coordinated by the Group's Legal Department, has an educational component on compliance with environmental regulations (see Section 4.2 "Ethics and Compliance" and the Supervisory Board Report on corporate governance appearing in Appendix 1 to Chapter 7 of this Registration Document).

In 2017, the total number of training hours in the field of health, safety and the environment that were counted in the LMS system (including classroom training sessions given at the Group level, along with those in main location countries: Germany, Brazil, United States, France and the Middle East) amounted to 83,170 compared to 109,351 in 2016, or 29% of the total training, which is substantial, although a considerable reduction compared to 2016.

4.5.1.5 Investments

The Group systematically incorporates sustainable development concerns in designing its investment projects. In particular, a health, safety and environment (HSE) analysis is conducted at the beginning of every project to assess the potential impacts and anticipate environmental risks.

A procedure on eco-design rules has been established since 2015 as part of the reworking of major project governance. It is intended to highlight the best practices and techniques available for design that meets HSE challenges in the following main areas:

- optimization of working conditions by evaluating the ergonomics, lighting, heating and ventilation of workstations;
- energy savings by optimizing performance when choosing the type of energy used, recovery of available energy (use of process gases emitted by power generation, recovery of process heat, recovery of energy from engine braking, etc.), better insulation of furnace walls for heat treatment of tubes and installation of sensors to optimize energy use (heating and lighting);
- reasonable use of natural resources and consideration of the consequences of climate change;
- reduction of atmospheric emissions via continuous improvement of capture systems, as well as carbon emissions. To that end, since early 2017 it has been requested for the most important projects to apply a single global price to carbon emissions of €40/metric ton in order to evaluate the sensitivity of these projects' profitability to the existence of carbon pricing systems, which are likely to develop it at the world level within the framework of the latest COP recommendations. Such a process may very clearly help the attractiveness of the project to evolve upward or downward. It allows the final decision to be influenced, above all if the project is structured and falls within the activities development policy;
- water management through recycling and recovery of rainwater using storage basins, and better quality through more efficient wastewater treatment plants, along with a reduction in the volumes of water discharged;
- waste management through improvements in collection, sorting and recycling;
- reduction of noise inside and outside the plants by emphasis on cutting noise emissions at source;
- the impacts for pending administrative authorizations.

In 2017, HSE investments reached €23.8 million, i.e. 15.8% of cash expenses. These investments are relatively more significant than in 2016. HSE investments are considered to be:

- improvement in working conditions (ergonomics, noise reduction, lighting and heating);
- ensuring environmental compliance of work equipment (retention and aspiration, water and gas networks, fire protection systems and product storage);
- reduction in energy consumption: improvement in furnaces for heat treatment, automated lighting and building insulation;
- improved water management;
- management of the forest operated by Vallourec Florestal;

- the replacement of hazardous chemical substances;
- layout and safety of plants in terms of roofing, roads and parking;
- renewal of operating permits; and
- reforestation projects and plans for carbonization furnaces to produce charcoal as a renewable energy source;

Within the scope of these projects, and as concerns actions that have a direct environmental benefit, the following projects are noted:

- completion of the filter press system at the Pau Branco mine in Brazil, allowing sludge to be dried and water to be reused. This system has allowed us to stop sending the sludge into the sedimentation tank and thus to avoid enlarging the dam for the next 20 years;
- completion of a new water filtration system in Aulnoye-Aymeries, drastically reducing the phosphorous content and suspended particulate matter in the wastewater that is released into the Sambre;
- fine-tuning of the functioning rainwater system in Montbard, allowing pumping into the Bourgogne canal to be reduced;
- development of the Cleanwell Dry 2 product line, which avoids the use of grease, and in particular lead-based grease;
- establishment of safety systems to prevent access to machines;
- eucalyptus plantations program;
- modernization of carbonization furnaces;
- modernization of heat treatment furnaces, notably in view of improving energy performance;
- revamping of the Barreiro electric power plant.

Total provisions and guarantees for environmental risks are presented in Note 17 to the consolidated financial statements. This provision covers the cost of treating industrial land and cleaning up the mine once resources have been exhausted. The management of industrial and environmental risks is presented in general terms under Section 5.1.12.1 "Industrial and Environmental Risks".

4.5.1.6 Special situations

1. The mining extraction activities of Vallourec Mineração, which are not the Group's core business (i.e. the manufacture of seamless tubes), on their own generate environmental indicators that are out of proportion to the average environmental performance of the Group's sites. To ensure the consistency of the Group's consolidated information, the results of this company are not included. They are instead reported separately in Appendix 2 to this chapter.
2. The same applies to the pelletization unit established at the Jeceaba site in Brazil. This unit, which manufactures pellets using ore produced by Vallourec Mineração and other mines, and has high water consumption, supplies the blast furnaces of the integrated Barreiro and Jeceaba sites, as well as other local steel metallurgists. Its level of activity is thus independent of Jeceaba's steel and tube mills. Consequently, the environmental information specific to it is presented separately in Appendix 2 to this chapter.
3. The Group's head office in Boulogne is also subject to environmental improvements. In 2016, the "BREEAM In Use" certification was obtained with a level of "very good" for the two fields of "Asset Performance" and "Building Management" and confirmed in 2018. This classification is even more noteworthy since the building was designed in 2002-2003 and delivered in 2005, and does not meet the HQE criteria. It is simultaneously the result of a regular decrease in water consumption (-43% since 2015 and stable in 2017 for internal usage) and energy consumption (-12% since 2015 and -2% in 2017), and the establishment of a collection system which recycles 80% of waste and, since 2015, recovers the biowaste produced by the Company cafeteria. The benchmark for these results shows very good performance except for energy, due to the reason already noted.

4.5.2 Sustainable use of resources

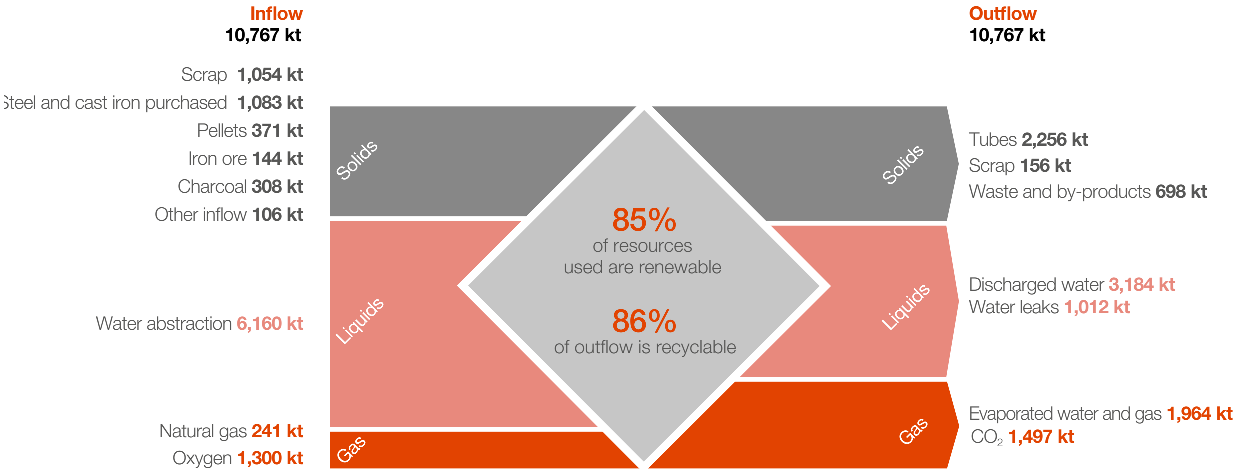
Processed production increased 22% compared to 2016: it went from 3,458.5 kilotons to 4,432.6 kilotons on a like-for-like basis (including 100% recognition of the impacts from the VSB Jeceaba site). Production shipped went from 1,282 to 2,256 kilotons, or a 76% increase between 2016 and 2017.

The environmental figures (expressed in comparison to tons produced) and concerning gas and electricity consumption and water intake clearly improved: they dropped by 2 to 13%. They reflect the optimization work performed by the sites and the lower portion of fixed consumption.

4.5.2.1 Resources implemented

In 2013, the Group conducted an analysis for the first time of all mass flows necessary for tube production at all its industrial sites [1].

Raw materials footprint for 2017



This analysis is updated each year. In 2017, the production of 2,256 million metric tons of tubes required 10.77 million metric tons of different types of inputs, up 19% compared to 2016, while processed production volume increased 24% and shipped production decreased 76%. It should be noted that water intake in 2017 represents 57% of total resources, comparatively lower than in prior years.

It should also be emphasized in this regard that:

- 85% of the resources consumed are renewable (scrap and steel made from scrap, charcoal, water and oxygen), demonstrating the limited nature of the Group's net environmental footprint. This figure has remained nearly stable since 2013. The extraction of non-renewable resources represents no more than 72% of the production shipped;
- more than 99% of production-related outputs can be considered recyclable if we consider that the CO_2 emitted is to be absorbed to reconstitute the biomass, or 86% if this assumption is not adopted.
- in 2017, the ratio of tonnage produced on resources implemented reached 21%, or the best level ever attained, although it is not easy to set an objective or get access to references.

Record of the raw materials footprint

	2014	2015	2016	2017
Input/output *(kt)*	12,937	8,951	8,988	10,786
Production shipped *(kt)*	**2,323**	**1,411**	**1,281**	**2,256**
% renewable resources	84	83	86	85
% ratio of shipments/input	18	15.8	14.2	20.9

The updated analysis demonstrates the need to continue to deal with wastewater treatment and industrial waste disposal, areas in which the Group has taken action for several years. As concerns carbon emissions, the footprint remained quite positive due to consideration of the flows specific to the forest operated by the Group. The cornerstones of progress for the years to come concern pursuing energy savings and decreasing the share of fossil energy sources.

In 2013, the Group also performed a life cycle analysis of two typical products in the Oil & Gas activity (tubing and casing) in cooperation with an important end customer. The ten key impacts evaluated (including carbon, energy, water, resource depletion, toxicity, eutrophication) demonstrated the weak relative impact of the Group's products. The goal is to continue these analyses on other products, in cooperation with other customers. To this end, the Group in 2017, with the aid of an outside consultancy firm, fine-tuned a specific tool designed to perform these

(1) With the exception of Vallourec Mineração Ltda (mining) and Vallourec Florestal Ltda (forestry) which do not manufacture tubes.

types of analyses for products that are already available on the market or which are being created through R&D programs. In 2017, this tool was successfully used by several production sites in France to refine the life cycle analyses of their main production as part of their preparation for the 2015 ISO 14001 certifications. This process will continue in 2018 for Vallourec sites in other regions. It will only be implemented for R&D actions if a rapid qualitative analysis shows a minimum impact level.

4.5.2.2 Consumption of raw materials

The steel Vallourec uses to manufacture tubes is primarily prepared in the Group's steel mills. Two processes are used: the blast furnace process in Barreiro and Jeceaba since mid-2014 (BOF – Basic Oxygen Furnace) and the electric process in Jeceaba in Brazil and in Youngstown in the United States (EAF – Electric Arc Furnace). Thanks to these processes, the Group is on the one hand promoting the use of charcoal produced from its eucalyptus forest and, on the other, recycling scrap.

To increase the efficiency of these processes, the steel mills are trying to precisely document their internal manufacturing rules and their requirements so as to obtain different steel grades while maximizing the furnaces' energy efficiency.

Steel mill production in 2017

	Blast furnaces			Electric furnaces		Steel mills
Plant *(metric tons)*	**Iron ore**	**Pellets**	**Charcoal**	**Scrap iron**	**Of which % of internal recycling**	**Scrap and cast iron used**
VSB – Barreiro – Brazil	143,500	370,876	279,873	54,106	100	312,939
VSB – Jeceaba – Brazil (100% consolidated)	0	0	28,474	306,598	33	421,836
Vallourec Star – Youngstown – USA	0	0	0	692,911	0	717,555
TOTAL	**143,500**	**370,876**	**308,347**	**1,053,615**	**15**	**1,452,330**

One key event in comparison to 2016 was that the steel mill of Saint-Saulve, which became Ascoval, in which Vallourec has a minority interest, was no longer taken into account. The internal scrap recycling rate dropped from 19% in 2016 to 15% in 2017. In 2017, the Jeceaba steel mill, functioning in "electrical" mode, experienced an increase in its production. The Youngstown steel mill production doubled compared to 2016. In terms of footprint, the electrical process increased from 71% in 2016 to 79% in 2017, which contributed to the decreased use of natural raw materials and brought the total percentage of steel used from the electricity process to 61%.

4.5.2.3 Water management

The Group considers water management to be one of the major challenges of sustainable development, due to its importance to the well-being of populations, the risks of shortage, and because water quantitatively represents the main resource needed for the Group's production processes. It is mainly used for:

- cooling hot machinery (steel manufacturing and rolling tubes), representing approximately 50% of requirements;
- cooling tubes after heat treatment, representing approximately 25% of requirements;
- solidifying liquid steel (continuous cast);
- surface treatments, hydraulic operations, non-destructive tube tests and cooling of other tools in the manufacturing process;
- emptying of dissolved or undissolved substances.

In recent years, the quality of plant waste has improved and water intake has decreased, primarily thanks to the establishment of tools that allow the rate of reuse to increase and rainwater to be collected. Intakes went from 11.5 million m^3 in 2002 to 7.83 million m^3 in 2014 (despite the increased load of the new VSB Jeceaba sites and the second tube mill in Youngstown) and from 5.67 million m^3 in 2016 to just 6.18 in 2017, despite the clear recovery of activity.

The relative intake thus steadily improved over the 2002-2014 period during which the production level was high, totaling 1.4 m^3/metric ton processed at year-end 2014. In 2015, it reached 1.99 m^3/metric ton processed, dropping to 1.85 in 2016 and to 1.37 in 2017, the historic low.

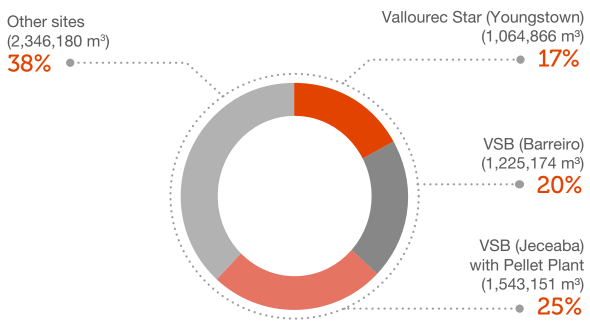
Nevertheless, even if production stops, the thermal processes (scrap melting, liquid steel bags, reheating furnaces) require that certain tools with energy consumption and a need for cooling be continually monitored. The fixed portion of water needs is thus important, which explains the shift in ratio in 2015. The subject constitutes a cornerstone of progress and the majority of the plants using hot processes have started to improve this ratio in 2016. The strong performance of 2017 specifically documents the efforts accomplished to achieve water savings during periods of low production.

Rainwater collection and its use have already been extensively developed at certain major industrial sites. This was also true of several Vallourec sites in France, Germany and Brazil. The recovery and reuse of rainwater allow them to reduce their surface water and groundwater intake. In 2017, Vallourec improved the recognition of these volumes of recovered water: 606,910 m^3 were able to be saved.

The three integrated sites (steel mill and tube mill) of VSB Barreiro, VSB Jeceaba and Youngstown show an internal water reuse rate of an average of 98.1%: this attests to very low water intake and to the very good performance of flow management systems.

Water intake – 2002-2017

Year	Total water intake *(m³)*	Water intake per metric ton processed *(m³/metric ton)*
2002	11,526,990	2.71
2007	9,554,272	1.78
2012	7,868,009	1.60
2013	8,857,826	1.60
2014	7,831,288	1.40
2015	5,630,516	1.99
2016	5,672,035	1.85
2017	6,179,371	1.36 (1.23 without rainwater recovery)



Process water can be discharged into municipal networks (most sites) or into the natural environment after being treated at internal purification plants. The Group aims to reduce the quantity of discharged wastewater by increasing internal reuse. To ensure wastewater quality and comply with local regulations, the sites monitor the following factors, which will be stated in metric tons discharged into the natural environment, as from 2017:

- SPM (suspended particulate matter): 38.3 metric tons;
- COD (chemical oxygen demand): 684 metric tons;
- BOD (biochemical oxygen demand): 213 metric tons;
- TH (total hydrocarbons): 37.2 metric tons;
- Heavy metals: 1.3 metric tons.

The total heavy metal ratio per volume of water discharged (mg/liter) by the plants concerned was 0.60 mg/l in 2017 compared to 0.94 mg/liter in 2016 within the Group's consolidation scope. This clear improvement was mainly due to the deconsolidation of the Saint-Saulve steelworks.

ACTIONS TAKEN

Numerous actions to measure and monitor water needs were established to reduce specific water consumption (reduction, or even shutdown of pumps during production stoppages, recovery of rainwater, recycling and reuse of wastewater).

In order to monitor the proper adaptation of water used in the production of steel or tubes, so-called "comet" curves were traced to show the connection between abstraction and production. These curves confirm that abstractions are not proportionate enough to production, but also that the plants adapted to reduce their abstraction during periods of low production and to decrease their fixed portions of consumption.

At the end of 2014, VSB Barreiro launched a plan to reduce the risk of water rationing. This was despite an already very satisfactory industrial water reuse rate of 98%. VSB Barreiro is the largest consumer of water in Belo Horizonte, and is extremely dependent on COPASA, the public entity in charge of water distribution.

Due to a chronic drought, the regional government requested that water consumption be reduced 30% compared to the 2014 benchmark, while envisaging an increase in the price of water. Consequently, VSB Barreiro implemented an action plan in 2015 to reduce industrial and domestic water loss, increase internal water recirculation, drill wells and develop internal campaigns to change behavior in order to encourage the saving of water resources, and in particular lower the fixed consumption level, with an objective of reducing water consumption from the public network by 32% in comparison to 2014. In 2016, these actions continued to concern improving the flow measurement system and the completion of well drilling, which allowed intakes to be reduced 26% compared to 2015. In 2017, the ratio was 2.16 m³/metric ton, compared to 3.02 m³/metric ton in 2016, i.e. a new drop of 28%, which was helped by the strong recovery in production.

At the VSB Jeceaba plant, progress was also made, for example with the collection of rainwater to supply the pellet manufacturing plant.

In 2014, the Group established the full cost of water management for the three integrated steel mill/tube mill sites of VSB Jeceaba, VSB Barreiro and Youngstown. These costs, which combine the costs of intake, rehabilitation in the natural environment or networks, staff, maintenance, energy, consumables, and amortization and depreciation were higher than original estimates.

This methodology was also applied in 2016 to Rath and Mülheim, two important tube mills. The resulting specific action plans will be adapted to the Group's new industrial configuration, with the knowledge that a shared cornerstone for improvement consists, as was done for Brazil, in establishing "smart" meters at strategic consumption points. This would enable real-time measurements to be taken, and actions to be rapidly implemented, in the event a discrepancy was noted.

Unit costs are variable from one plant to another, notably because certain sites must use the municipal networks, and the energy and maintenance costs are significant. This detailed knowledge of costs allowed the total water cost at the Barreiro plant to be reduced 25% compared to the 2014 reference.

The Aulnoye-Aymeries site put a dephosphoration system into service which allowed the quality of wastewater released into the Sambre to be considerably improved, with quantities of phosphorous and suspended matter that were much lower than regulations (5 mg/l). This site, which includes three plants and one Research Center, almost entirely uses rainwater (85%) for industrial uses thanks to a very large storage basin and a filtration, purification and pumping unit for cooling waters and rain from the plants.

At the Montbard site, the Vallourec Bearing Tubes plant uses 82% of rainwater stored in two basins, one for cooling machines and products, the other in case of fire. The Valinox Nucléaire plant fine-tuned a new rainwater treatment and recovery system to produce very high quality industrial water for 25% of its needs.

Furthermore, the large Rath site (Germany) operates with 33% rainwater.

Lastly, the Pau Branco mine received the "2017 Environment" award for having established a sludge filter press system, which allows dry sterile materials to be placed in piles rather than sending them to the sedimentation dam, which was full. The resulting water (380 m^3/h) is now reused by the mine.

THE WATER IMPACT INDEX

Water management is not limited to measuring intake in natural environments or municipal networks, or to monitoring the quantity and quality of waste. The materiality analysis mentioned above showed that the stakeholders devoted increased attention to water management. That is why the Group is tracking and analyzing its "water footprint" thanks to an indicator known as the "Water Impact Index". This indicator takes into account the volumes abstracted and discharged, the quality of the abstracted and discharged water, and stress factors (water scarcity and the hydrological context). The method for measuring the water stress factor was affirmed in 2014 after comparing existing methodologies. Expressed in equivalent m^3 as related to the site's production, it synthetically measures the impact of each site with regard to the available water resources in the basin to which it belongs. A better understanding of the overall impact of water use indeed allows actions to be better prioritized and investments to be made, such as improving measurement, reducing abstractions, improving quality, increasing the reuse rate, as well as reducing the total water management cost.

An initial study was conducted in 2012 based on 2011 data, with the participation of a specialized provider, at seven of the Group's sites located in Brazil, the United States, France and Germany. In 2015, the study was repeated with respect to water at the Group's ten most important sites, based on 2014 data. Since this data only changes slowly, we intend to repeat it in 2018 based on the new industrial footprint, including the Tianda site.

The following sites were analyzed: PTCT in Batam, Indonesia, Vallourec Star in Houston, Vallourec Star in Youngstown (steel and tube mill), VSB Barreiro in Belo Horizonte (steel and tube mill), VSB Jeceaba (steel and tube mill), Vallourec Deutschland in Rath and Mülheim, Vallourec Tubes France in Saint-Saulve (steel and tube mill) and Vallourec Drilling Products in Tarbes. The sites analyzed represent nearly two-thirds of abstraction. It appears that only two of these sites belong to hydrological basins that are subject to water stress.

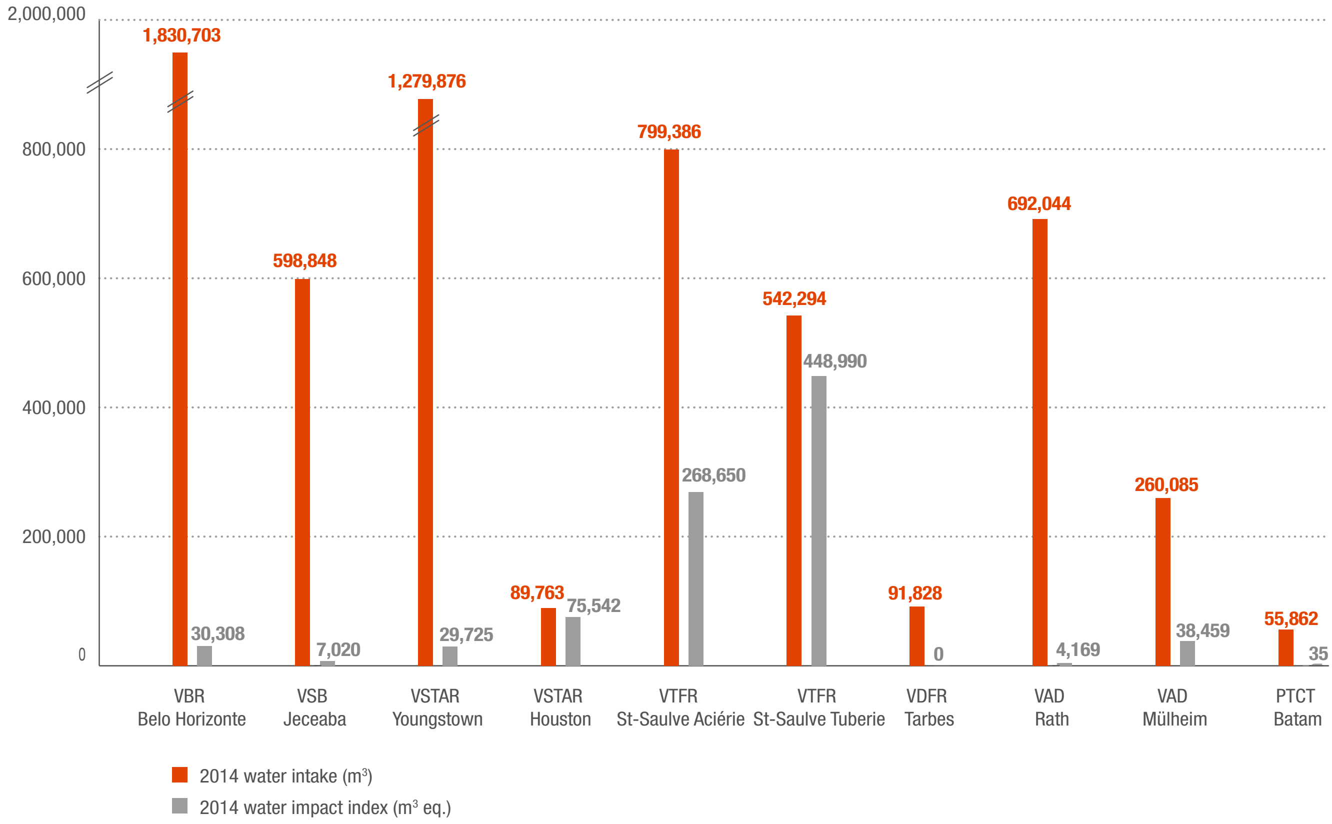
The application of the "Water Impact Index" demonstrated that the most critical sites were not only those where water intake was highest, as the chart below shows.

This chart likewise shows that the equivalent volumes calculated are very low, except for the two sites of Saint-Saulve and Houston, which attests to the Group's responsible water resource management.

The sale in January 2017 of the Saint-Saulve steel mill and the simultaneous closure of the rolling mill at the same site contributed to very considerably reducing the water consumption of this site, and thus its Water Impact (the tube mill consumed 16% less water in 2017 compared to 2016).

Lastly, since the intake and waste levels were lower in 2017 than in previous years, the overall impact is still less than shown in the graph below. Since the Group's scope is now stable and activity has recovered, it will be useful to recalculate this index in 2018.

Water intake and Water Impact Index in 2014



4.5.2.4 Energy policy

ENERGY CONSUMPTION

➔ Commitment to responsible performance

> Improve the energy efficiency of our equipment and reduce carbon emissions from our manufacturing processes

INDICATOR	2018 OBJECTIVE
Energy consumption in kWh/metric ton processed. In 2017, energy consumption was ☑ 2,939 GWh (2,531 in 2016) for natural gas, or 649 kWh per metric ton produced and ☑ 1,590 GWh (1,376 in 2016) for electricity, i.e. 351 kWh per metric ton produced. Overall, total energy consumption increased 16% compared to 2016 while specific consumption dropped 11%. Given the combined increase of 24% in production in 2017 compared to 2016 (on a like-for-like basis) this strong performance reflects the energy savings actions and proper adaptation of mills further to activity variations in order to reduce the fixed share of energy consumption.	Set at the beginning of the year, it will incorporate the data from the Tianda site based on the values obtained and analyzed throughout 2017.

In 2017, energy consumption (gas and electricity) reached €201 million (excluding the new Tianda site) or 5.4% of 2017 revenue, a reasonable increase compared to 2016 (€175 million). This was due to multiple reasons such as the level of production, the geographic mix of production, consumption conditions and currency effects.

The Group also uses biomass as a source of energy for its blast furnaces in Brazil. It owns 237,000 hectares of eucalyptus plantations and forests, for the production of charcoal, which is used to process the iron ore into pig iron in the Blast furnace.

The table below shows the energy sources used by the Group:

Energy source	Unit	Renewable Energy	Non-renewable Energy	Total
Electricity purchased	GWh	805	870	1,674
Electricity produced		0	0	0
Natural gas		–	3,109	3,109
Fuel		–	195	195 (a)
Charcoal		2,245	–	2,245
TOTAL	**GWH**	**3,049**	**4,173**	**7,223**
Energy consumed	%	42%	58%	100%

(a) Including since 2015, the fuel needed to produce electricity at certain sites, such as PTCT.

In 2017, renewables accounted for nearly 42% of the energy consumed on a Group scale. This figure was 37% in 2016. This remarkable progress is primarily a result of the energy contained in the charcoal produced by Vallourec Florestal, but also from the 100% hydraulic power provided to Vallourec in Brazil, along with power purchased on other markets from a renewable source, notably in Germany.

Compared to the outcomes of previous years, the Group also based itself on information from its electricity providers, "market-based" data, and on "location-based" national energy mix data. This allowed the Group to better measure the impact of its choice of energy supply sources and to better manage them to reduce the Vallourec Group's carbon footprint.

THE GREENHOUSE PROJECT

In an effort to significantly reduce all energy consumption, as of 2009, the Group established the GreenHouse project, which aims to reduce total gas and power consumption by 20% by 2020, for an equivalent scope, product mix and level of activity, using 2008 as the reference year. With this project, Vallourec is also acting to promote a "low-carbon" economy, contributing to reducing greenhouse gas emissions. This commitment was strengthened in January 2018 by the publication of the Group's Carbon Policy, which was signed by the Chairman of the Management Board.

The GreenHouse project is rigorous in its approach and is supported by Vallourec Management System tools and methodologies (see above). It is one of the levers of the Group's Energy and Carbon Policy and centers around the following main elements:

- sharing of best practices, led by Practice Communities which include energy and industrial process experts in all energy-related areas (thermal, electrical, compressed air and steam production processes) and the organization of numerous Continuing Improvement Groups acting exclusively in the energy sector to improve the Group's performance. Seven objectives on the different aspects of energy efficiency have been drafted and issued as a working document for the continuous improvement groups;
- numerous quick wins as a specific result of the actions in question;
- the introduction of thermal balances and energy audits:
  - thermal balances to date, covering over 80% of the Group's furnaces. The furnace performance analysis helps to identify areas for improvement and to propose investments to increase energy efficiency, such as the installation of regenerative burners, steam heat recovery systems and better insulation,
  - energy audits at the Group's major sites identify the equipment or workshops that use the most energy, and prioritize future actions;
- a self-assessment system for sites controlled by the project leaders.

The change in production in 2017 compared to 2016 (+76% of metric tons shipped and +47% of metric tons processed) led to a limited increase of 16% of energy consumed in the form of gas and electricity. Specific consumption conversely decreased 11% (see above).

Energy consumption per metric ton processed was thus established to be 649 kWh/metric ton for gas and 351 kWh/metric ton for electricity, excluding mine, pelletization units and Tianda plants (China), but including the full scope of VSB Jeceaba.

The energy performance for each year was calculated until 2014 using a straight-line model of consumption, taking into account the production volume and mix effect represented by the percentage of heat treatment compared to the 2008 reference year. Production levels and the organization of production (periods of stoppage and work at a given post) for 2015 and 2016 do not allow such a model to be used. It was thus not possible to determine the Group's intrinsic energy performance in 2017 in comparison to previous years, even though the actions at the site level continued to produce effects.

We note, for example, a certain number of actions at the most important sites:

- in Youngstown: reduction of the cost of electrical power during certain scheduled days by the energy distributor, as a result of the system for managing energy consumption in real time that was recently installed, as well as the ongoing reduction in consumption of the main processes due to the real-time analysis of the composition of gas emitted by the electrical furnace which allows production inputs to be used to make the process more energy efficient and increases the safety level of the operations;
- at VSB: carbon particle supply for pellet plant burners, oxygen enrichment of the billet furnace supply in Jeceaba, installation of regenerative burners on the same furnace, roll-out of a new temperature control system in all furnaces, actions on air compressors, variability of the operation of electrical motors. Also note the continued operational use of a real-time energy measurement system (AMM).

Consequently, and given that the Group's industrial footprint was considerably modified in 2017, it is no longer possible to refer to the 2008 consumption conditions. A new 2020 objective is being established based on new assumptions integrating the recent acquisition of Tianda, whose results will be published next year.

THE VALLOUREC ENERGY MANAGEMENT SYSTEM

To take this to the next level and incorporate sustainable energy management into industrial processes, the Group developed the Vallourec Energy Management System based on the methodology of the GreenHouse project and international energy efficiency standard ISO 50001.

As mentioned in its Energy policy, Vallourec promises to certify its primary production facilities under ISO 50001. This is true for the sites of VSB Barreiro, Vallourec Oil & Gas UK, Vallourec Tubes France Saint-Saulve and Aulnoye, Vallourec Deutschland, Valinox Nucléaire France and Vallourec China (previously Vallourec Changzhou); they represent 29% of production. Other sites are committed to the same process. Therefore, the VSB Jeceaba site plans to become certified during the first half of 2018.

The success of the processes and the sustainability of their results in particular, depend on:

- energy efficiency training: several hundreds of operators were trained in dedicated energy efficiency sessions in France, Brazil and Scotland, with experts from each site and the assistance of specialized organizations. The training is given in various technical disciplines, such as compressed air, thermal combustion, industrial cooling, lighting, mechanization and renewable energy;
- real-time metering systems, known as "Advanced Metering Management," at the largest sites in Brazil, France, Germany, Scotland and the United States.

EXPANSION OF ENERGY PERFORMANCE RESEARCH

Vallourec Florestal, which manages the Brazilian forest, also follows an energy efficiency research plan. Its teams developed a more efficient carbonization process which led to an improvement in the mass transformation rate of wood into charcoal from 29% to 35%, a procedure which was applied to investments in new furnaces. This led to (i) a decreased need for wood and cultivated areas for production of cast iron, (ii) a very considerable reduction in methane emissions as compared with m^3 of charcoal, as well as (iii) a reduction in the heat dispersed into the atmosphere.

4.5.3 Impact and emissions

4.5.3.1 Air quality

To preserve the quality of the air surrounding its plants, the Group systematically measures the levels of atmospheric emissions and implements appropriate solutions to limit each type of emission. The emissions produced by plants are vapors and particles.

VAPORS

- Nitrogen oxide (NOx) and sulfur dioxide (SO_2) emissions come from furnaces for steel billets and from the heat treatment of tubes. To limit these emissions, all furnaces are fed by natural gas, which is low in emissions, and every year some of the older burners are replaced by more efficient or "low-NOx" burners that meet the highest technical specifications for this type of emission. In 2017, 633 metric tons of NOx were emitted (as compared to 492 metric tons in 2016), an increase connected to the recovery of activity. Ninety-four metric tons of SO_2 were emitted, an amount which was recently published.
- Emissions of volatile organic compounds (VOCs) come from our facilities for tube lubrication, lacquering and painting, and for degreasing and cleaning tubes and machinery parts. They also come from oily vapors from rolling or cold-forming facilities and machine tools. In 2017, the nominal amounts of VOCs that were emitted, meaning before trapping and filtration, were estimated at 268 metric tons, clearly down (339 metric tons in 2016) due to the lower usage of paint and the start of a shift towards water-based paint to diminish VOC emissions at the source, in particular on the "casing" line of Vallourec Oil & Gas's site. Atmospheric emissions were thus quite considerably lower. Actions are put in place every year to reduce VOC emissions at the source, by coordinating with product suppliers and, if this is impossible, channeling and treating emissions. As concerns vapors from surface treatments, facilities are equipped with a treatment and retention system in compliance with applicable regulations.

After the progress of these last few years, the main source of the Group's VOC emissions is linked to the temporary protection of OCTG tubes. Efforts to limit VOC emissions in future years will concern the corresponding facilities.

	2012	2013	2014	2015	2016	2017
VOC emissions *(kg/metric ton processed)*	0.10	0.09	0.11	0.17	0.11	0.06
NOx emissions *(kg/metric ton processed)*	0.13	0.13	0.13	0.17	0.16	0.14

The total quantity of VOC per metric ton processed is therefore much lower than the 2016 amount.

PARTICLES

- The main potential sources of particle emissions are steel mill furnaces and hot-rolling. Every year, retention systems are improved to continuously reduce the corresponding emissions.
- The conditions for replacing refractories in electric arc furnaces and laddle furnaces were also modified with a view to avoiding the generation of dust. In Youngstown, since the installation of the dust extractors, the working environment has considerably improved. Particle retention is very efficient and abstractions show that the heavy metal content released (chrome, lead, nickel, etc.) is well below the authorized limits.
- Tube mills and finishing plants also produce dust from facilities for hot rolling, grinding and polishing tubes. Processes for sealing, aspiration and filtering are incorporated into the machinery to collect dust at source. Where necessary, these systems can be supplemented by aspiration devices and filters on the roof to capture diffused emissions.
- Trucks, cars and other handling equipment circulating outside the buildings are also a source of dust emissions. To ensure that personnel and neighbors are not inconvenienced by dust clouds, the road surfaces are coated with concrete or polymers. They may also be watered during a dry period to limit re-entrainment.

4.5.3.2 Soil

FRENCH FACILITIES

Because of sites being old, all soil studies have been completed at the Group's initiative without being required by the authorities. The results of these investigations prompted some facilities to introduce piezometric sensor-based monitoring of underground water, after obtaining permission from the relevant authorities. The list of monitored sites is included in an official database known as BASOL.

The Vallourec Drilling Products site in Cosne-sur-Loire, which stopped its activities in 2017, continued its treatment of soil and groundwater pollution, which increased after the transfer of the machinery to the Villechaud site. In 2017, 13 piezometric pipes for monitoring groundwater were in service, compared to the seven in operation previously. The site was fully cleaned and is awaiting completion of the cessation of activity by the regional environment, planning and housing authority (DREAL). It will be subject to a prefectural monitoring order.

As part of its restructuring, the Saint-Saulve site (steel mill and tube mill) had its soil studies updated in 2016 and 2017, and the monitoring of its groundwater was increased with the installation of six new piezometers, which were added to the ten already in place.

In Aulnoye-Aymeries, underground investigations were conducted on an old disposal site for miscellaneous materials. By 2020, it will be confined and placed under monitoring following a new prefectural order.

FOREIGN ENTITIES

After analyses, and with permission from the local authorities, groundwater monitoring systems were set up at two facilities in Germany. As far as the Group is aware, there is no contamination at the other sites.

In Brazil, the only potential risks relate to the Barreiro plant in areas of the site previously used to store waste. A depot formerly used to store slag (a by-product of the steelmaking process) and a former sludge depot were made compliant with legislation and a piezometric sensor-based groundwater monitoring system was introduced. A program to make compliant with legislation a former solid industrial waste storage site (wood, plastic, scrap, etc.) was launched in 2004. Its progress is in line with the commitment made to the authorities. Nearly €10 million will have been spent (€8.5 million at the end of 2015 and €1.5 million in 2016) to remove contaminated soil and incinerate it. A second section of work began in 2017, to redo the earthwork and drainage of roads.

In the United States, analyses were performed at the vast majority of production facilities. As far as the Group is aware, none of the analyzed sites are subject to significant contamination risk.

4.5.3.3 Waste and by-product management

➔ Commitment to responsible performance

> Respect our environment and protect biodiversity by preventing pollution of all kinds, reducing water consumption, recovering waste and reducing disturbances

INDICATOR	ACHIEVEMENT OF THE 2017 OBJECTIVE
Percentage of waste recovered.	The rate of recycled waste reached ☑ **94%,** identical to 2016's results with the homogeneous perimeter. **2018 OBJECTIVE** Given the Group's new industrial footprint, the 2018 objective will be set to 94.5%.

Like all industrial activities, the Group generates significant quantities of various types of waste. In 2017, the Group produced 698,887 metric tons of waste (458,650 metric tons in 2016, excluding mine and pellets), 3.5% of which was hazardous (6% in 2016).

The key indicators for their management are as follows:

	2011	2012	2013	2014	2015	2016	2017
Waste *(in thousands of metric tons)*	666	655	626	669	467	459	698 (566) [(a)]
Waste/production processed *(%)*	13	13	11	12	17	15	15
% hazardous waste	7.4	7.7	8.6	6.1	6.1	6.0	3.5 (4.3) [(a)]
% recovery	89	91	92.7	93.5	94.8	94.4	☑ 94.0

(a) The data in parentheses corresponds to the waste balance, excluding mine and pellet plant.

The recovery of activity in Brazil and the United States, along with Vallourec's new consolidation scope, strongly impacted the Group's recovery rate. In fact, the 100% inclusion of the Jeceaba site, as well as the mine and pellet plant, resulted in a strong increase in waste production compared to 2016.

However, the actions that have been taken since 2014 continue to bear their fruits, even though certain sites still favor dumping over incineration for cost reduction reasons. Furthermore, the closure of certain production lines, and even of complete sites, along with restructurings generated non-recoverable waste which contributed to lowering the ratio. Best practices nevertheless allowed a 94% recycling rate to be maintained, but above all enabled the portion of hazardous waste in comparison to non-hazardous waste to be reduced. A breakdown of the waste produced appears below.

To mark its commitment to the environmental issues represented by waste management, starting in 2013, the Supervisory Board, at the recommendation of the Appointments, Compensation and Governance Committee, introduced a waste recovery target into the variable portion of Management Board members' compensation. In this same spirit, the Group joined the AFEP initiative to promote the circular economy, which became public in February 2017.

The "By-products" project

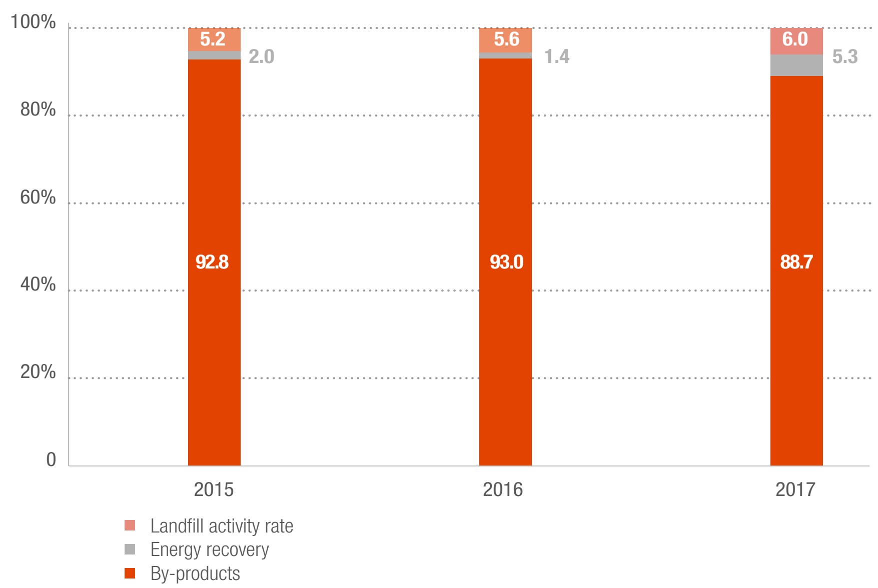
Waste management is a major economic and environmental concern for the Group, which considers that most of such waste should now be treated as value-added by-products and generate operating revenue. This is the objective of the "By-products" project.

Waste is now considered a resource to be exploited rather than an unavoidable consequence of production. Depending on its origin and type, it is managed and treated differently in accordance with local regulations, with maximum emphasis on recycling of materials or energy recovery.

As the costs of eliminating waste are relatively high, it is satisfying to note that in 2017, the income resulting from the transfer/recovery of waste was significantly above the amount of treatment or disposal costs. Therefore, within the integrated sites in Brazil (Barreiro and Jeceaba) and the United States (Youngstown) there is a positive balance, with a gain close to €5 million, thanks to the numerous initiatives presented below.

In a spirit of continuous improvement, all waste categories are monitored monthly by each site with the aim of reducing volumes. The percentage of recycled waste in the form of material (by-products) was 88.7%, that of waste incinerated to produce energy 5.3%, and that of landfill waste 6%. The energy recovery rate increased, to the detriment of recovery of materials, essentially due to economic reasons. Some waste, such as sludge from the steel mill in Brazil, was ultimately unable to be recovered and thus had to be landfilled.

Waste by end-use



The main levers of progress under the "By-products" project are as follows: "Reduce, reuse, recycle":

- reduction of waste volumes;
- identification, consolidation and optimization of output for process sludge (from rolling and surface treatment), metallic residues, scale and dust;

- identification of the best channels for recycling blast furnace slag sold to the cement industry, and the sale of metallic waste under multi-year contracts;
- increase in the recovery rate by favoring a recovery of materials rather than energy; The integrated Brazilian sites of VSB Barreiro and VSB Jeceaba, after tests in 2013, have been using blast furnace sludge as a source of enrichment for the soil in eucalyptus forests, and as raw material for the ceramic industry. The steel mill sludge from the VSB Barreiro plant is now 100% recycled using iron ore particles to manufacture sinter feed.

As an example, in 2017 the local teams opened new waste management channels and generated additional revenue by implementing the following initiatives:

- in Youngstown, "bad" scale which was sent to the landfill can now be mixed with "good" scale. The result is sold to companies in the cement sector. This new business opportunity has allowed the amount landfilled to be reduced, and has decreased treatment costs. Vallourec Star Youngstown also changed its sludge dehydration practices. The addition of sawdust allowed it to reduce the amounts of sludge that are sent for treatment;
- in Brazil, numerous trial programs were launched in 2017 to reuse certain waste internally through the steel mill, mine or pellet plant (sludge, dust). The restructuring of the sites in Brazil also allowed waste storage methods and areas to be reorganized, which led to a reduction in material and transportation costs. Nevertheless, this restructuring also generated construction waste;
- the renegotiation of some contracts also allowed some revenue to be generated;
- the sites of the Montbard basin in France chose to incinerate their waste instead of landfilling it, despite a slight increase in cost applied by the supplier.

TREATMENT OF HAZARDOUS WASTE

Posing a risk to health and the environment, hazardous waste (classified as such due to the hazardous substances it contains) is subject to special treatment. The percentage relating to all waste, i.e. 3.5% in 2017, dropped significantly in comparison to 2016 (6%).

The Group has identified two important hazardous waste categories on which it is working:

- organic waste (sludge, oils); and
- solid mineral waste (dust).

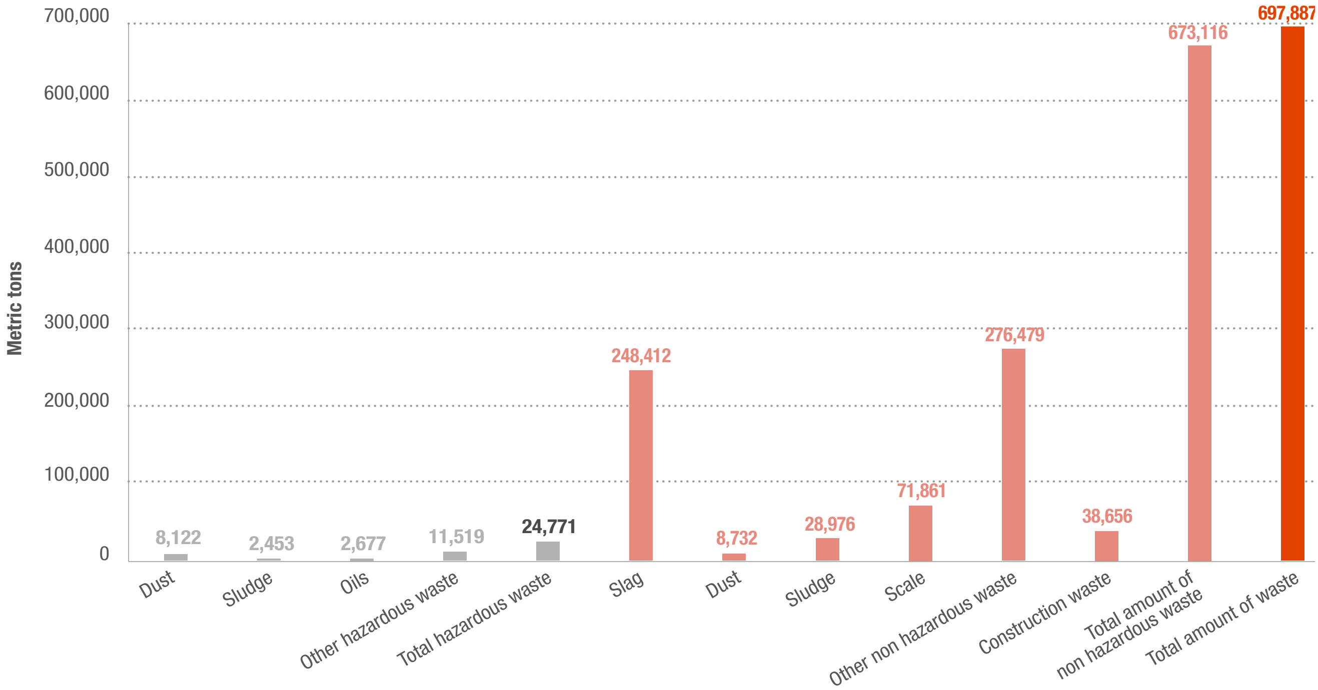
Hazardous waste requires specific management: handling and storage are subject to strict safety rules to preserve the environment and health of the staff handling them. Furthermore, this waste is generally not very recoverable as is, and processing costs are significant.

There are thus two possibilities that have been explored by the By-products project: either reducing the portion of hazardous substances at the source, or separating that portion from the rest of the waste concerned through pre-treatment. For example, the water treatment station at the Youngstown site was able to improve the separation of mill scale particles and oil, which is responsible for its hazardous classification. Non-oily mill scale, which is not classified as hazardous, may thus be recovered for its material. The establishment of small waste oil treatment units allowed for a corresponding decrease in the generation of this waste, which is reused internally after treatment.

In Youngstown, a change in operation for neutralizing the used phosphate and stripping baths allowed these baths to be sent to the evapo-concentrator and thus to reduce the amount of hazardous waste sent for treatment, thereby reducing costs.

AMOUNT OF WASTE

The waste generated in 2017 is broken down as follows:



FOOD WASTE

In compliance with the decree of 19 August 2016, the Group presents its approach to food waste even though Vallourec's activity has no connection to agribusiness. This approach will thus be limited to reporting the practices of the Company restaurants at sites where one exists.

- France: Boulogne Site, Group headquarters

  The restaurant, which welcomes nearly 200 people a day, is managed by a specialized provider Elior, which has established a policy to combat food waste, considering that this action is an integral part of its business and of its CSR strategy.

  We can note, for example, the establishment of guest educational workshops, the training of catering teams, the establishment of a partnership with certain suppliers and the upcoming experimentation on the automatic connected weight of biowaste.

- Brazil: Barreiro, Jeceaba and Mineraçao sites

  These sites welcomed nearly 6,000 people on a daily basis in 2017; the Company restaurants are managed by the foundation of the Brazilian subsidiary Sidertube.

  Numerous actions have been taken for several years to reduce food waste, and have had remarkable results: between 2010 and 2017, the weight of individual food waste was reduced 45%.

  This is the result of numerous initiatives, such as the preparation of meals according to the number of people, the strict management of stock and numerous awareness campaigns along with food donations.

- China: Changzhou and Nansha sites

  Food services are subcontracted to a provider, which is responsible for waste management, under a contract which provides for combating food waste.

- Germany: Rath and Mülheim site

  Catering is subcontracted to specialized partners. Practices in this area also consist of thoroughly analyzing needs and reusing surplus in accordance with hygiene rules, with the aim of reducing waste.

4.5.3.4 Noise

Among actions to continue preventing noise pollution, in January 2012 the Sustainable Development Committee defined a noise action plan. This approach is part of the discussion conducted by the Group in accordance with the Sustainable Development strategic five-year plan to increase attention paid to employee health. The new Health and Safety policy published in 2016 clearly mentions this.

The Group's activities inevitably involve noise. The noise arises from various sources: steel mill furnaces, the cutting and storage of steel bars, the impact between bars and tubes, and the steel-rolling process. Several types of action are in place to limit noise, reduce it as far as possible or eliminate it entirely.

Vallourec's intent is thus to protect its employees and also to better respect the environment of the sites.

To determine noise levels, the sources of noise are measured and analyzed. Depending on local constraints, these measurements are taken internally, at the edge of the site, or at neighboring properties, if the plant is situated close to a residential area. At certain sites, very elaborate systems have been installed. They allow noise to be measured at very precise locations and to determine its source. Simulation software is often used to assess the reduction of noise levels that various insulating systems might provide.

The most effective actions are those that allow noise to be reduced at its source. For example, some plants replace pneumatic movement commands by hydraulic movement commands or incorporate rubber between tubes to avoid a much noisier direct impact. Similarly, the tubes are cleaned with Venturi-type nozzles instead of standard nozzles.

If source noise reduction is too much of a constraint or impossible, other actions can be undertaken, such as setting up barriers, containing the machinery or building soundproof walls. To limit the impact of noise on employee health, the Group's plants provide staff with earplugs and make their use a strict requirement in certain work areas. For greater comfort, the earplugs are custom-fitted. They filter certain frequencies to allow people to communicate while substantially reducing the noise from machinery. Employees at risk undergo regular medical checks for very early detection of any hearing loss.

Among actions to continue preventing noise pollution, in January 2012 the Sustainable Development Committee defined a noise action plan including the following measures:

- establishing noise maps on the most critical and representative sites of sound levels in different workshops and staff exposure based on their number and the length of time spent working in the areas concerned;
- analyzing and improving behaviors in the workshops;
- referring to best practices for new investments and refittings;
- improving employees' and providers' work conditions;
- reducing disturbance caused to local residents;
- favoring group protection over individual protection measures.

In 2017, around 80% of sites had noise mapping for workshops, and for the outside when local residents live nearby. 50% of them completed dosimetric measurements. The frequency with which interior or exterior measurements are repeated is, however, still insufficient.

The monthly Capex Committee meeting is also the time to check that noise issues have been properly considered, before authorizing any investment.

4.5.4 Climate change

4.5.4.1 Greenhouse gas emissions (see detailed table in Appendix 5)

As mentioned above, the Group published its Carbon policy in January 2018. Its goal is to continue to better understand all of our emissions, reduce our direct and indirect emissions, position them in the dynamic of commitments of the Paris climate agreement, integrate a €40 carbon price into our decision-making processes, pursue the development of products that respect the environment, and make sure that our industrial assets will resist the future impacts of climate change.

Further to the commitments made in 2015 as part of the preparation for COP 21 and to the adhesion to the "business proposals in view of a 2015 international climate change agreement at COP 21 in Paris" initiative launched by 80 international companies, in late 2017 Vallourec, with 90 other French companies, signed a new version of the French Business Climate Pledge in order to contribute to a new low-carbon economy thanks to a significant effort to finance R&D projects and *ad hoc* investments.

It is also worth mentionning that, since 2013, Vallourec improves to its public report under the Carbon Disclosure Project each year. Its evaluation in terms of transparency and performance has improved, since its ratings between 2012 and 2015 respectively went up from 63 to 98, and from D to C. The results of the abovementioned study and the precision of the information provided helped to further raise the rating of our commitment to a low carbon economy, earning a rating of A- in 2016, which was confirmed in 2017. Accordingly, Vallourec decided to examine, with the assistance of specialists, whether its emissions trajectory could fit within the "Science based targets" approach, which aims to assess the compatibility of companies' efforts with the provisions of the 2015 Paris agreement.

ANALYSIS OF EMISSIONS

Reducing greenhouse gases and, first and foremost, being aware of its emission level, is a goal for Vallourec.

1. It should be noted that in 2015 a detailed analysis of the carbon cycle for the forest operated in Brazil was completed with the aid of university and institutional experts.

   The aims of this study, which has been underway for several years, was to provide evidence that the Company had managed this forest responsibly from a carbon emissions standpoint, that it had a sound methodological basis that would allow it to estimate the emissions with sufficient precision, and, correspondingly, to set a medium-term objective, which has not yet been done.

   The 237,000 hectare forest area operated by Vallourec Soluções Tubulares do Brasil (VSB) within its Florestal subsidiary consists of a so-called native forest, which represents approximately one third of the surface area. It is kept as is, while the other portion is cultivated. Every year, about one seventh of the cultivated forest is cut down for the production of charcoal, and that area is then immediately replanted. As they grow, trees absorb CO_2. The trunks of harvested trees are transformed into charcoal, with a high carbon content, in furnaces designed for that purpose. The charcoal then enters the cast iron manufacturing process needed to manufacture steel in addition to iron ore. This process, which leads to the combustion of charcoal, results in CO_2 emissions. Until now, the generally accepted assumption of the profession in Brazil was that this CO_2 was gradually reabsorbed by the forest during its growth through photosynthesis.

   The aim of the study in question was to specify, over a long period, the quantity of carbon put into play from the two-fold perspective of measuring stock and measuring the flows of carbon and greenhouse gas, taking into account initial deforestation operations. It was conducted by the Sustainable Development Department of VSB, with the assistance of the University of Lavras, Professor Caetano of the University of Viçoza, and with the participation of Professor Sampaio as an expert consultant from the SR office of the GeoConsult consultancy firm, all under the methodological control of the National Forests Office, in France.

   The study considered the scientific research and data that have been available for the past 30 years, and in particular used the public aerial surveys, which allowed the scope and nature of the native or exploited forest to be reconstituted over this period.

   Particular care was taken, firstly in calculating the emissions at each stage in the processes of exploiting the forest and carbonization, using the scientifically recognized methods, and secondly, with regard to analyzing the phenomena of carbon sequestration in the atmospheric and underground biomass. The study lastly concerned the role of soil from the viewpoint of carbon retention, thanks in particular to on-site measurement initiatives on various kinds of soil, and around stumps and roots of trees at various stages of growth. This study will be made public once it is finalized.

   In essence it shows that, for the 1983-2013 period, the forest sequestered 29.6 million metric tons of CO_2 equivalent, after taking into account the particular power of methane as a greenhouse gas emitted during carbonization. It also shows that, after considering the CO_2 emissions during the cast iron manufacturing process in the blast furnaces, the net sequestration over this period is 7.4 million metric tons per year, or on average 250 thousand metric tons per year; even though, until now, due to the conservative assumptions adopted, the estimated annual analysis was an emissions level of approximately 300 thousand metric tons.

   Based on this information, it was thus possible to redefine a method for calculating the carbon analysis of the forest/blast furnace system that was used to establish the Group's annual carbon analysis since 2015 on more precise bases.

   The calculation used for the 2017 analysis again shows a very significant level of sequestration, which is the result of the forest management process by our subsidiary Florestal, whose activity is consolidated. This is why Vallourec considered that the sequestered carbon should be included in the calculation of "scope 1" biogenic emissions as a "negative" emission.

2. Emissions were calculated using the GHG protocol methodology, which distinguishes between direct, fossil and biogenic emissions (scope 1), indirect emissions from electricity consumption (scope 2), and indirect emissions from other sources of emissions based on the Group's full scope (scope 3). In short, the full simplified carbon analysis, detailed and commented on in the notes, is as follows:

Simplified carbon footprint (CO_2 equivalent and CH_4 equivalent)

Type of emissions	2011	2012	2013	2014	2015	2016	2017
Non-biogenic direct emissions (scope 1) *(CO_2 equivalent in thousands of metric tons)*	1,051	1,008	1,126	1,273	580.3	550.9	652.3
Biogenic direct emissions (scope 1) *(CO_2b and CH_4b in thousands of metric tons)*					2,321.9	2,121.4	2,348.5
Total biogenic sequestration (scope 1) *(CO_2b in thousands of metric tons)*					(3,275.7)	(3,141.2)	(3,078.6)
TOTAL DIRECT EMISSIONS (SCOPE 1) *(CO_2eq in thousands of metric tons)*	**1,051**	**1,008**	**1,126**	**1,273**	**(373.5)**	**(468.8)** ☑	**(81.7)** ☑
Indirect emissions (scope 2) *(in thousands of metric tons)*	463	508	580	696.2	422.8	518.3 ☑	410.6 ☑
Indirect emissions (scope 3) *(in thousands of metric tons)*	3,034	2,963	3,195	2,889.9	1,782.9	1,811.3	2,424.8 ☑
TOTAL EMISSIONS *(in thousands of metric tons)*	**4,548**	**4,479**	**4,901**	**4,859**	**1,832.2**	**1,860.8**	**2,753.8**
Specific emissions *(in kg per metric ton processed)*	879	903	899	882	648	606	609

As concerns scope 1, the first observation is that (non-biogenic) direct ordinary emissions increased, primarily due to the rise in production in 2017 compared to 2016.

We must also keep in mind that:

- two of the Group's three steel mills (Youngstown in the United States and Jeceaba in Brazil) use the "scrap" method to manufacture their steel. The process, which consists of melting scrap and recycled steel in an electric arc furnace (EAF) emits low levels of CO_2. This industrial feature, which limits the use of fossil carbon in comparison to the cast iron process and its blast furnaces, is one of the reasons why Vallourec's direct emissions have remained moderate;
- in Brazil, the blast furnaces in Barreiro and Jeceaba use charcoal as a primary source of carbon. But as explained above, the calculation of the sequestration of the eucalyptus forest has resulted in the Vallourec Group's biogenic and non-biogenic direct emissions being negative.

As concerns scope 2, indirect emissions from electrical energy consumed dropped 24% in comparison to 2016. This results from the fact that, for the 2017 assessment, for the first time Vallourec used or calculated emissions factors (kgCO_2e/kWh consumed) of its local electricity suppliers whenever information was available from them, in particular in France, Germany, Brazil and in the state of Ohio where the Youngstown site is located.

Scope 3 emissions increased by nearly one third. Given the importance of this item, the Group's intention is to review the methodology for calculating scope 3 emissions in 2018, by applying new regulatory directives, in particular on the subject of upstream and downstream emissions of its supply chain.

3. With a direct CO_2 emissions ratio that is still negative per metric ton processed (and a carbon intensity of 0,09 kilogram of CO_2 per euro of revenue) thanks in particular to the sequestration of its Brazilian forest, Vallourec has demonstrated exemplary conduct in comparison to industrial groups of comparable size.

2020 EMISSIONS OBJECTIVES

The Group's Transformation Plan has been in effect since 2017. Under these conditions, the 2020 activity forecast allows us to evaluate what our emissions will be for this time horizon. To that end, we have noted that the operation of a single blast furnace in Brazil renders our forest area over-capacity, such that the sale of a large portion of our forest area has proved necessary. The sales process was launched and may lead to the sale of just the surplus, or even of the entire forest area, according to the wishes of potential buyers. In this case, on one hand the carbon sink effect from which we have benefited for numerous years would stop and on the other hand we would then have to purchase charcoal to supply the individual blast furnace in Jeceaba.

This is the conservative assumption that we adopted to calculate the 2020 emissions objective, which would be 1.6 million metric tons for scope 1 and 460,000 metric tons for scope 2, or a total of 2.07 million metric tons and a carbon intensity of approximately 0.42 kilograms of CO_2 per euro of revenue. Even though this intensity level remains moderate, it would thus be appropriate to consider accompanying measures to further reduce our emissions, such as using low-carbon electricity, establishing measures to offset our emissions and, in the long term, using systems for trapping our emissions, or even using biogas.

In the event that just a portion of the forest is transferred, the target could be set at a lower level.

EMISSIONS REGULATION SYSTEMS

Since 2013, both French and German tube mills and the Vallourec Drilling Products site in Aulnoye-Aymeries have fallen within the scope of Directive No. 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing the European Community Emissions Trading Scheme for the third period. It is appropriate to note that the considerable reduction of Vallourec's industrial footprint in France and Germany had the result of reducing the amount of free allocations over the 2013-2020 period which the Group could benefit from to date. Therefore, the quotas allotted to the Saint-Saulve steel mill, on the order of 40,000 metric tons per year, have no longer been taken into account since 2017, due to the disposal of majority interests in the company. In 2017, the quotas allotted to these 10 sites (five in Germany and five in France) were 172,275 metric tons for Germany (down 1.9% compared to 2016) and to 95,294 metric tons for France (down 10% compared to 2016, which is primarily explained by a reduction in activity at the Vallourec Bearing Tubes site in Montbard). The result of this was that in 2017 we still benefited from surplus direct allocations in the order of 60,000 metric tons of CO_2.

The impact of the mechanism on the Group's activity is not limited to consideration of its own emissions. European electricity suppliers are obligated to fully cover their CO_2 emissions with emission rights, although it is not easy to measure the corresponding impact on the price of electricity supplied. Furthermore, steel suppliers and, in particular HKM, which uses the cast iron coke-ore process, are also obligated to purchase emission quotas. Therefore, given the current low price of these emission quotas, the full impact of the ETS system provisions on the Group's operating costs remained very limited in 2017.

Lastly, we should note that in late 2017, the European authorities agreed to new provisions, applicable starting in 2020, for the greenhouse gas emissions trading scheme. The impact on the Group still needs to be calculated, notably considering the impact on steel suppliers, but there is a strong reason to suspect that it will be higher than it will have been in the 2013-2020 period.

4.5.4.2 Adaptation to the impact of climate change

In 2014, the Group conducted a study of the risks related to the consequences of climate change, distinguishing among eight regions with distinct climate characteristics, namely Nord-Pas-de-Calais (now Hauts-de-France), Burgundy, Rhine-Westphalia (Germany), Minas Gerais, Ohio, Texas, Batam Island in Indonesia, and the Shanghai region.

Upon an in-depth examination of the public documents and national adaptation plans, the main phenomena identified were the risks of flooding, heat waves and prolonged drought, periods of frost, disturbance of water resources and the evolution of marine or lacustrine life. Some exceptional events could become more frequent (storms and hurricanes) and damage the Group's facilities. The conditions under which the sites are operated could also worsen (availability of water needed for the tube manufacturing process, working conditions at the plants, operation of equipment during heat waves). In addition, the unique ecosystem of Group-operated forests could change or weaken over the long term. For each of these risks, a probability of occurrence was estimated, and the extent of the consequences also evaluated. Lastly, the upstream and downstream supply chains are also likely to be seriously impacted.

	Nord-Pas-de-Calais France		Burgundy France		Rhine-Westphalia Germany		Minas Gerais Brazil		Ohio/Cleveland United States		Texas/Houston United States		Batam Indonesia		Shanghai China	
	Probability	Impact	Probability	Impact	Probability	Impact	Probability	Impact	Probability	Impact	Probability	Impact	Probability	Impact	Probability	Impact
Increase of average temperature	3	1	3	1	3	1	3	2			3	1	3	1	1	5
Heat waves	3	2	3	2	3	2			3	3	3	4	2	3	2	3
Drought	3	2	3	2	2	1	1	decrease	2	decrease	3	4	1	3		
Depletion of water resources	2	2	2	3	1	1	2	4			3	4	1	3	2	4
Snowfall/frost	3	decrease	2	decrease	3	decrease			3	decrease						
Strong rains, flooding and mudslides	3	3	2	2	3	4	3	5	3	5	2	3	1	5	1	5
Storms, tornadoes, hurricanes, etc.					2	1	2	3			2	5	1	5	1	5
Rising sea level	N/A	N/A	N/A	N/A	N/A	N/A	2	3	N/A	N/A	3	5	3	3	2	5
Drop in levels of rivers, lakes and waterways									3	3						

1	2	3		decrease	1	2	3	4	5
uncertain	*probable*	*very probable*	*data unavailable*	*reduced frequency/intensity*	*weak impact*				*very strong/ costly impact*

A growing number of international industrial groups are beginning to adopt protective measures. Each industrial site is thus in charge of further examining, at a local level, the risks that have thus been identified, and of constructing an adjusted adaptation plan. This process starts with a general approach, focusing on the situations that would be deemed most critical, and is being recorded in the map of major risks which the Company currently maintains.

The raising of the Santa Barbara dam can be cited as an example. It serves to retain sediment from the operation of our Pau Branco mine in Brazil. The environmental authorities in the state of Minas Gerais recently decided that this type of dam should now be sized to absorb potential rainwater for 10,000 years instead of 100 years. Indeed one of the consequences of climate change is the increased probability that a phenomenon of a certain intensity will occur.

Another recent example is that of the Jeceaba site (Brazil) in 2017: the aggravation of drought phenomena had the effect of dropping the level of the river from which the site abstracts its industrial and drinking water: the site had to lower the level of its pumping point to maintain its activities.

The 2014 study will be updated in 2018, considering the Group's new industrial footprint, the evolution of risks and recent events like Hurricane Harvey in Texas, which only had a limited impact on our industrial facilities.

4.5.5 Biodiversity

Summary surveys have been conducted during the past few years at the main Vallourec sites, to evaluate the impact of their activities on biodiversity. No major risk has been identified.

Some of the Group's specific activities nevertheless have a direct link to biodiversity and so very specific measures aimed at protecting it have been established for several years already, or are established for a specific project.

4.5.5.1 Actions conducted in Brazil

- The Brazilian subsidiary Vallourec Tubos do Brasil runs the environmental education center in Barreiro, on the outskirts of Belo Horizonte. This 20-hectare center includes three ecosystems: the *cerrado* (savanna), the transitional vegetation, and the *mata atlantica* (Atlantic forest).
- The specialist Brazilian subsidiary Vallourec Florestal carries out forestry activities for the production of charcoal, which is used as a source of energy in Brazilian steel mills. It conducts plant and wildlife monitoring programs in cooperation with the universities of Minas Gerais and Lavras, the aim of which is to measure the impact of activities on the natural environment and to establish appropriate management measures with a view to preserving and balancing biodiversity. The maintenance of "ecological corridors" guarantees the free circulation of animals. The Company thus plays a fundamental role in nature conservation, protecting the region's natural ecosystems. With the help of cameras, a monitoring program has identified hundreds of bird species and dozens of mammal species, some of which are endangered.
- During construction of the Jeceaba site, subsidiary VSB created a reference center on the "Atlantic" forest over a surface area of 660 hectares, with the goal of replanting this area with approximately 400 native species of the region. This space includes the legal reserve as well as the green belt and forest belt. A camera system for monitoring wildlife was established. Numerous specimens have been able to be detected, including protected species, which is an indicator of biodiversity and helps protect regional ecosystems.
- Vallourec Mineração performs mining activities in the city of Brumadinho, around 50 kilometers from the Barreiro industrial complex. In order to better control its activities' impact on the natural environment, Vallourec Mineração regularly monitors the biodiversity of its site as well as neighboring areas. A 200-hectare reserve has also been established in the Atlantic forest to serve as a conservation area for numerous animal species (for example, 148 different bird species have been counted there). The Company also pays special attention to the environmental rehabilitation of mining areas. In 2008, 167,000 m^2 of land used for mining were rehabilitated by planting species native to the region. These areas are now covered with a wide variety of species of trees, grasses and legumes.

4.5.5.2 Case of the Aulnoye-Aymeries site

In France, environmental studies conducted as part of the project to extend the Aulnoye-Aymeries test station resulted in a decision to move and transplant a protected plant species from several stations, according to an action plan approved by the authorities. Protection of the existing ecosystem was also expanded, notably with the establishment of semi-watertight barriers which insulate operating activities from the fallow ground used by the protected species of amphibians and reptiles. The oversight plan established in 2014 confirms the effectiveness of the measures taken.

To improve knowledge of biodiversity on the site, an impact study of the Aulnoye-Aymeries area was launched in 2017, with a specialized provider in and around this site which has several plants and is located close to classified natural spaces, a space belonging to the Natura 2000 network, and listed natural heritage areas. The study concerned Vallourec's land holdings, the immediate periphery of Vallourec's industrial site and a study area that was expanded to a radius of ten kilometers. It also addresses unusual and invasive species.

This study, which will be finalized in 2018, has already shown that the same plants and wildlife exist within the site, in the fallow ground, outside, in the immediate proximity, and in the various ecosystems which comprise the Sambre basin, the marshland and flood zones bordering it, as well as in the surrounding fields and pastures. This observation is thus encouraging in terms of the minor influence of the Group's activity on biodiversity. The final results will be announced in 2018.

4.5.5.3 Actions taken in Indonesia

For several years, PT Citra Tubindo has been planting trees, specifically fruit trees, and has maintained a mangrove close to the facilities. These actions slow coastal erosion, halt the penetration of saltwater towards the interior, and protect the shores from storms, as well as enabling carbon to be retained, and the toxic products contained in the water to be absorbed. These actions are supported by the local populations, academic institutions and students.

Appendices

Appendix 1 – Report by one of the Statutory Auditors, appointed as independent third party, on the consolidated human resources, environmental and social information included in the management report

To the Shareholders,

In our capacity as Statutory Auditor of Vallourec S.A., (the "Company"), appointed as independent third party and certified by COFRAC under number 3-1049[(1)], we hereby report to you on the consolidated human resources, environmental and social information for the year ended 31 December 2017, included in the management report (hereinafter named "CSR Information"), pursuant to Article L.225-102-1 of the French Commercial Code..

COMPANY'S RESPONSIBILITY

The Management Board is responsible for preparing a Company's management report including the CSR Information required by Article R.225-105-1 of the French Commercial Code in accordance with the procedures used by the Company (hereinafter the "Guidelines"), summarized in the management report and available on request from the Company's head office.

INDEPENDENCE AND QUALITY CONTROL

Our independence is defined by regulatory texts, the French Code of ethics (Code de déontologie) of our profession and the requirements of Article L.822-11-3 of the French Commercial Code. In addition, we have implemented a system of quality control including documented policies and procedures regarding compliance with the ethical requirements and applicable legal and regulatory requirements.

STATUTORY AUDITOR'S RESPONSIBILITY

On the basis of our work, our responsibility is to:

- attest that the required CSR Information is included in the management report or, in the event of non-disclosure of a part or all of the CSR Information, that an explanation is provided in accordance with the third paragraph of Article R.225-105 of the French Commercial Code (Attestation regarding the completeness of CSR Information);
- express a limited assurance conclusion that the CSR Information taken as a whole is, in all material respects, fairly presented in accordance with the Guidelines (Conclusion on the fairness of CSR Information);
- at the request of the company and outside the scope of accreditation, express reasonable assurance, that information selected[(2)] by the Group and identified by the symbol ☑ in Chapter 4 of the management report is presented fairly, in all material respects, in accordance with the Guidelines (Reasonable assurance on a selection of CSR information).

However, it falls to us to decide on the compliance with other applicable statutory provisions where necessary, in particular those provided for by Article L.225-102-4 of the French Commercial Code (oversight plan) and by the Sapin II law no. 2016-1691 dated 9 December 2016 (anti-corruption).

Our work involved six persons and was conducted between October 2017 and March 2018 during an eleven week period. We were assisted in our work by our CSR experts.

We performed our work in accordance with the order dated 13 May 2013 defining the conditions under which the independent third party performs its engagement and with the professional guidance issued by the French Institute of statutory auditors *(Compagnie nationale des Commissaires aux comptes)* relating to this engagement and with ISAE 3000[(3)] concerning our conclusion on the fairness of CSR Information.

(1) Whose scope is available at www.cofrac.fr.

(2) See table of indicators below.

(3) ISAE 3000 – Assurance engagements other than audits or reviews of historical financial information.

1. Attestation regarding the completeness of CSR Information

Nature and scope of the work

On the basis of interviews with the individuals in charge of the relevant departments, we obtained an understanding of the Company's sustainability strategy regarding human resources and environmental impacts of its activities and its social commitments and, where applicable, any actions or programs arising from them.

We compared the CSR Information presented in the management report with the list provided in Article R.225-105-1 of the French Commercial Code.

For any consolidated information that is not disclosed, we verified that explanations were provided in accordance with Article R.225-105, paragraph 3 of the French Commercial Code.

We verified that the CSR Information covers the scope of consolidation, i.e., the Company, its subsidiaries as defined by Article L.233-1 and the controlled entities as defined by Article L.233-3 of the French Commercial Code within the limitations set out in the methodological note, presented in Appendix 3 of Chapter 4 "Corporate social responsibility information" of the management report.

Conclusion

Based on the work performed and given the limitations mentioned above, we attest that the required CSR Information has been disclosed in the management report.

2. Conclusion on the fairness of CSR Information

Nature and scope of the work

We conducted around twenty interviews with the persons responsible for preparing the CSR Information in the departments in charge of collecting the information and, where appropriate, responsible for internal control and risk management procedures, in order to:

- assess the suitability of the Guidelines in terms of their relevance, completeness, reliability, neutrality and understandability, and taking into account industry best practices where appropriate;
- verify the implementation of data-collection, compilation, processing and control process to reach completeness and consistency of the CSR Information and obtain an understanding of the internal control and risk management procedures used to prepare the CSR Information.

We determined the nature and scope of our tests and procedures based on the nature and importance of the CSR Information with respect to the characteristics of the Company, the human resources and environmental challenges of its activities, its sustainability strategy and industry best practices.

Regarding the CSR Information that we considered to be the most important, listed in the following table:

- at parent entity level, we referred to documentary sources and conducted interviews to corroborate the qualitative information (organization, policies, actions), performed analytical procedures on the quantitative information and verified, using sampling techniques, the calculations and the consolidation of the data. We also verified that the information was consistent and in agreement with the other information in the management report;
- at the level of a representative sample of entities selected by us[1] on the basis of their activity, their contribution to the consolidated indicators, their location and a risk analysis, we conducted interviews to verify that procedures are properly applied and to identify potential undisclosed data, and we performed tests of details, using sampling techniques, in order to verify the calculations and reconcile the data with the supporting documents. The selected sample represents 45% of headcount considered as material data of social issues and between 44% and 86% of environmental data considered as material data of environmental issues (environmental data listed in the following environmental indicators table)..

(1) Human resources and safety information: Palier (France), VSB Barreiro & Jeceaba (Brazil).
Environmental information: VSB Barreiro & Jeceaba (Brazil), VAD Rath (Germany), VAD Mülheim (Germany), VAD Reisholz (Germany), VTFR Aulnoye (France).

Social indicators	Level of assurance
Headcount at 31/12	Reasonable
Breakdown of the workforce by age, gender and geographical area	
Hires	
Departures	
Lost Time Injury Rate	
Total Recordable Injury Rate	
Rate of completion of annual performance interviews among managers	
Rate of absenteeism	
Severity rate	Limited
Number of employees having participated in a training session	
Number of training hours	

Environmental indicators	Level of assurance
Energy consumptions	Reasonable
CO_2 emissions (scope 1, scope 2) [(a)]	
CO_2 emissions (scope 3, linked to losses during extraction, storage and transport of energies)	
Water intakes (per source)	
Volume of hazardous and non-hazardous waste Percentage of waste recovered (including recycled)	
Water discharged	Limited
Quality of water discharged	
Volume of raw materials used/recovered	

(a) Scope 1: stationary combustion, process of steel mills, methane emissions, internal transport, and Scope 2: electricity.

Qualitative information	
Human resources topics	■ Organization of social dialog including information procedures, consultation and negotiation with the employees
Environmental topics	■ The organization of the company to integrate environmental issues and, if appropriate, the assessments and certification process regarding environmental issues ■ Significant items for greenhouse gas emissions generated from the company's activity, particularly through use of goods and services that it produces
Social topics	■ Territorial, economic and social impact of the company activity on employment and regional development ■ Integration of social and environmental issues into the company procurement policy

For the remaining consolidated CSR Information, we assessed its consistency based on our understanding of the company.

We also assessed the relevance of explanations provided for any information that was not disclosed, either in whole or in part.

We believe that the sampling methods and sample sizes we have used, based on our professional judgment, are sufficient to provide a basis for our limited assurance conclusion; a higher level of assurance would have required us to carry out more extensive procedures. Due to the use of sampling techniques and other limitations inherent to information and internal control systems, the risk of not detecting a material misstatement in the CSR information cannot be totally eliminated.

Conclusion

Based on the work performed, no material misstatement has come to our attention that causes us to believe that the CSR Information, taken as a whole, is not presented fairly in accordance with the Guidelines.

3. Reasonable assurance on a selection of CSR Information

Nature and scope of the work

For the information selected by the Group and identified by the symbol ☑, presented in the management report, our audit consisted of work of the same nature as described in paragraph 2 above for CSR information considered the most important, but in more depth, particularly regarding the number of tests.

The selected sample represents 45% of headcount, and between 58% and 67% of quantitative environmental data identified by the symbol ☑.

We consider that this work enables us to express a conclusion of reasonable assurance for the information selected by the Group and identified by the symbol ☑.

Conclusion

In our opinion, the information selected by the Group and identified by the symbol ☑ is presented fairly, in all material respects, in accordance with the Guidelines.

Paris – La Défense, 16 March 2018

KPMG S.A.

Philippe Arnaud	Catherine Porta
Partner	*Partner*
Sustainability Services	

Appendix 2 – Individual environmental indicators of companies excluded from the consolidated environmental indicators

Environmental results of Vallourec Mineração and of the VSB pelletization unit

		Unit	Vallourec Mineração	VSB Jeceaba pelletization unit
Production		Metric tons	4,394,245	1,135,326
Natural gas		kWh	-	170,433,869
		kWh/t	-	150.1
Electricity		kWh	33,153,455	63,463,317
		kWh/t	7.54	55.9
Water intake	Water tables	m^3	2,824,370	-
	Surface	m^3	143,345	263,396
		m^3	2,967,715	263,396
	Total	**M^3/METRIC TON**	**0.68**	**0.23**
Discharged water		m^3	-	-
		m^3/metric ton	-	-
Waste generated	Non-hazardous	Metric tons	579.8	131,667
	Hazardous	Metric tons	114.4	161
		Metric tons	694.2	131,828
	Total	**KG/T**	**0.16**	**115.7**
Recycled waste	Non-recycled waste	Metric tons	160.0	783.7
	Recovery rate	%	77.0	99.4
CO_2 emissions	Scope 1	Metric tons of CO_2 equivalent	-	174,190
	Scope 2	Metric tons of CO_2 equivalent	-	388
	Scope 3 [(a)]	Metric tons of CO_2 equivalent	-	4,124
		Metric tons of CO_2 equivalent	18,919.69	178,702
	TOTAL	**KG CO_2 EQUIVALENT/ METRIC TON**	**0.05**	**157.4**

(a) Scope 3: indirect emissions linked to losses at the time of extraction, storage and transport of energies (electricity, natural gas, gasoline, gas oil, propane).

Vallourec Mineração Ltda operates the Pau Branco mine, located in the towns of Nova Lima and Brumadinho in the state of Minas Gerais. The Pau Branco mine has a total area of 1,373 hectares, of which 32% is industrial area, 20% is an environmental protection region, and 48% is unused space.

Vallourec Soluções Tubulares do Brasil (VSB) operates a pelletization unit (processing of iron ore to improve the performance of the blast furnaces) in Jeceaba. This unit, which functions at nominal capacity, supplies the blast furnaces of VSB Jeceaba and VSB Barreiro as well as other Brazilian steel steelworkers.

Appendix 3 – Methodological note

Designed to inform shareholders and the greater public about the actions taken by Vallourec to promote sustainable development, Chapter 4 of the Registration Document complies with the Grenelle 2 Law of 12 July 2010, and in particular Articles L.225-102-1, R.225-104 and R.225-105 of the French Commercial Code. The information contained herein is derived from database systems deployed worldwide, at each site concerned.

All of the CSR information published in Chapter 4 of the Registration Document was verified by an Independent Third Party Body, whose report appears on page 120 of this document.

These assertions clearly explain the Group's CSR strategy, as well as its actions in these areas.

GUIDELINE INDICATORS

Vallourec defined its guidelines by reproducing the list of CSR information that appears in Article R.225-101-1 of the French Commercial Code *(Code de commerce)*. See concordance table below. Other indicators were constructed based on those published by the Global Reporting Initiative (GRI), which proposes CSR reporting indicators for global companies.

Environmental and safety indicators have been drawn from the CR 360 reporting system since late 2016, which has allowed for monthly monitoring and consolidation. They are included in a project definition worksheet provided by the Sustainable Development Department to its network of local contacts in the Group's four working languages (French, English, German and Portuguese).

Social indicators are also the subject of a precise and standardized Group-wide definition, and covered by a detailed procedure.

- Indicators related to workforce and hours

  The data is automatically collected by the GatheringTools system, and then sent to several SIRH tools, including Qbik (consolidating and management of social data). The Human Resources Department collects this data, which goes through an on-site correspondent..

- Training-related indicators

  The data is collected in the LMS (Learning Management System). Calculation and consolidation are completed by the Group Training Department: the Valllourec University Department.

REPORTING SCOPE

The environmental reporting scope is determined according to rules established by Vallourec's Sustainable Development Department. The environmental reporting scope includes:

1. industrial sites. The following are thus excluded from environmental reporting: the IT Europe data center in Saint-Saulve, the administrative offices and headquarters, and all sales offices. Research centers are also excluded, with the exception of Vallourec Research Center France, whose activity is more varied. As for the consolidation of safety indicators, all sites are included, with the exception of small sales offices;
2. sites belonging to Vallourec for more than six months. This rule is to be considered when a disposal or acquisition occurs. Tianda, which was acquired in late 2016, has not been taken into account, due to the still partial and incomplete environmental data, which needs to be verified and undergo additional adjustments (an on-site audit was scheduled for Q4 2017).

   Therefore, the two Tianda sites have been incorporated into the human resources and training data but are excluded from environmental and safety reporting. For these issues, the percent coverage is 80% of the workforce and 89% of the processed production.
3. sites with active industrial operations during the year. This excludes construction sites that have not been in operation for more than six months;
4. sites for which Vallourec owns more than 50% of the voting rights. Conversely, the sites for which Vallourec is a minority shareholder are not integrated within the scope (for example, this is the case for the HKM steel mill in Germany, and the Saint-Saulve steel mill which became ASCOVAL);
5. Vallourec & Sumitomo Tubos do Brasil has been fully consolidated since 1 October 2016 and connected to the new company Vallourec Soluções tubulares do Brasil (VSB).

The social reporting scope includes companies belonging to the accounting consolidation scope, including the Tianda company acquired at the end of 2016..

CONSOLIDATION PRINCIPLES

1. The companies and sites included in the reporting scope in accordance with the rules described above are not accounted for using the equity method, but are treated equally in the reporting consolidation – that is, as 100% owned by the Group.
2. Precautionary principle: consolidation is established on the basis of prudent assessments to avoid transfer risk and reputational risk.
3. Accruals principle: all fiscal years are independent from one another.

Consolidation and auditing

Environmental indicators are consolidated and audited monthly by the Sustainable Development Department (timeliness, fairness, completeness). In case of doubt or inconsistency, the Regions and sites involved are questioned and must provide sufficient explanation to clarify the given indicators, as well as the achievement or shortfall of the targets set for the year. This step is essential to ensure the quality of the reports and the integrity of the indicator monitoring system within a continuous improvement process. In addition, to verify and compare the data, the Sustainable Development Department issues a quarterly summary to Management and to all sites.

Safety indicators are issued monthly, after verification, to General Management, the Regions and divisions, and all sites.

PRODUCTION CALCULATIONS

By "metric ton processed", Vallourec means the metric ton produced in each plant (number of units of work produced in the plant), whether of steel, hot-rolled tubes or cold-finished tubes. The production of each plant is added together to calculate the total production in metric tons processed or work units.

For consolidated sites, such as Vallourec Star in Youngstown (United States), and Vallourec Soluções Tubulares do Brasil (VSB) in Barreiro and Jeceaba, the total production is the sum of the steel and tubes produced.

Production of iron ore by Vallourec Mineração, the manufacture of pellets as well as the production of charcoal by Vallourec Florestal are, however, not included in the Group's total production.

By "metric ton shipped", Vallourec means the metric tons shipped to customers during the year. This production indicator is published in the Group's results.

Environmental data are routinely expressed in absolute and relative terms, in both graphs and tables of quantified results.

Relative values are divided either by production, expressed as metric tons of tubes processed (which allows different sites to be compared) or metric tons of tubes shipped, expressed as metric tons of tubes (which helps in estimating the environmental footprint of tubes shipped to customers).

VERIFICATION OF CSR INFORMATION

All of the CSR information published in Chapter 4 of the Registration Document was verified by an Independent Third Party Body. A selection of indicators identified by the symbo ☑ for more in-depth verifications, with a check at the reasonable assurance level. For each piece of information presented, Vallourec has prepared a file to demonstrate a complete and rigorous implementation of its policy..

METHODOLOGICAL LIMITATIONS AND SPECIAL CASES

The following table lists some exceptions or special rules.

Issue	Plants concerned	Description
Determining the reporting scope (Rule No. 1)	Vallourec Mineração and the pelletization unit of Vallourec Soluções tubulares do Brasil (VSB) Jeceaba	Vallourec Mineração in Brazil has a very different activity from the other Vallourec sites (production of iron ore to supply part of the consolidated Brazilian site VSB). The same goes for the VSB pelletization unit, which supplies the Group's blast furnaces as well as outside customers. Their environmental indicators are monitored as in any Vallourec plant, but are not consolidated at Group level, except for waste. They are reflected on an individual basis in Appendix 2. Conversely, the safety and social indicators of Vallourec Mineração and the pelletization unit, along with the carbon emissions, are consolidated with all of the Group's other results.
Wastewater quality	Vallourec Tubes France (Saint-Saulve, Déville and Aulnoye tube mills), Vallourec Drilling Tarbes, Vallourec Tubes Deutschland Rath, Vallourec Star Houston, PT Citra Tubindo	Indicators for monitoring wastewater quality (SPM, COD, TH and metals) are consolidated for sites that discharge wastewater directly into the environment after internal processing at their effluent treatment plants. These indicators are calculated based on the weighted average concentration per flows of discharged wastewater. Samples are taken quarterly in Germany and the United States, and at least weekly in France. This data is based on a list of metals established by the Group, with the knowledge that the data reported by the sites only concerns the analyses imposed by the local regulations.
Waste	All plants	"Historical" waste (hazardous/non-hazardous) produced prior to the reporting period and stored on site is not counted in the total tonnage of consolidated waste.
Sludge from blast furnaces and steel mills	VSB	In Brazil, sludge generated by blast furnaces is classified as non-hazardous waste, and is a totally different type of waste from tube mill sludge.
Dust from blast furnaces and steel mills	VSB	In Brazil, dust generated by blast furnaces is classified as non-hazardous waste, and is a totally different type of waste from that produced by American and French steel mills.
Methane	Vallourec Florestal	When estimating methane emissions, the calculations are based on the statistical study in Appendices 5 and 6 of the "Project Design Document Form (CDM PDD) – Version 03" registered as a CDM 8606 project at UNFCCC: "Carbonization Project – Mitigation of Methane Emissions in the Charcoal Production of V & M Florestal, Minas Gerais, Brazil", which is available at: https://cdm.unfccc.int/Projects/DB/BVQI1354824411.24/view According to this study, process methane emissions depend on the gravimetric yield of wood carbonization in furnaces (Appendix 5), or the ratio between the final mass of dry charcoal (after combustion) and the initial mass of wood (Appendix 6).
Sequestration of Florestal	Vallourec Florestal	The method for calculating amounts of CO_2 sequestered by the forest during the reference year is as follows. It derives from information drawn from the study conducted in cooperation with numerous scientific authorities (See 4.5.4.1). Annual sequestration is estimated when the tree is cut to be transformed into charcoal. The reference value is thus the annual charcoal production. The reference study allowed a 30-year observation period to be identified, considering the amount of charcoal produced, the amount of carbon absorbed by the tree trunk and the amount absorbed by the roots and stumps in the soil. It was thus possible to calculate the ratios of carbon sequestered by the roots in relation to the tonnage of charcoal produced and ultimately consumed in the blast furnaces, and the ratio of carbon absorbed by the tree trunk, also in relation to the charcoal produced. These ratios are then used to calculate the amounts of carbon sequestered annually. The amounts of carbon emitted during carbonization of the trunks and the amounts of methane emitted during the carbonization process in the ad hoc furnaces are also in proportion to the charcoal produced.
Water consumption	Vallourec Mineração	On-site water consumption corresponds to process water only
Raw materials	All plants	Indicators of raw materials (iron ore, iron ore pellets, charcoal, charcoal dust, scrap, cast iron) correspond to the amounts loaded into the furnaces. Scrap is considered by Vallourec as a by-product and is not included in either the waste or the recovery rate indicator.
Compensation	All	The "Compensation" indicator is calculated as the sum of staff compensation, social security charges and pension expenses.
Turnover	All	The turnover rate includes departures and arrivals for the year in question and is defined as follows: (number of departures + number of arrivals for the year) x 2 x 100 / (workforce at 31.12 of the previous year). It includes departures, arrivals, and transfers of the workforce within the zones. The reasons for departure included are: retirement, resignation, dismissal, and other (death, change of category, contract termination, termination after trial period).
Method of accounting for lost days following a workplace accident in the United States	All	In the United States, lost days for workplace accidents are not counted beyond the 180th day in accordance with OSHA regulations. This accounting method is specific to the United States and differs from the rule recommended by the Group for accounting for lost days.
Number of training hours	All	The data relating to the number of training hours published covers classroom-based learning that exceeds three hours and e-learning. Classroom-based learning of less than three hours is excluded from this data.

Appendix 4 – Concordance table between the information required under Article R. 225-105-1 of the French Commercial Code and the information in this chapter

1.	**HUMAN RESOURCES INFORMATION**	
a)	**Employment**	
1.	Total number and breakdown of employees by gender, age and geographical segment	4.3.1.1 (p. 82-84)
2.	New hires and dismissals	4.3.1.2 (p. 86-88)
3.	Compensation and changes thereto	4.3.4 (p. 94)
b)	**Organization of work**	
4.	Organization of working time	4.3.1.3 (p. 88-89)
5.	Absenteeism	4.3.1.3 (p. 89)
c)	**Employee relations**	
6.	Dialog between employers and employees, including procedures for informing, consulting and negotiating with staff	4.3.3.1 (p. 92-93)
7.	Review of collective bargaining agreements	4.3.3.1 (p. 92-93)
d)	**Health and safety**	
8.	Health and safety conditions at work	4.3.2 (p. 90-92)
9.	Review of agreements with trade unions or employee representatives on health and safety in the workplace	4.3.2 (p. 91)
10.	Workplace accidents, including their frequency and severity, and occupational illnesses	4.3.2 (p. 90-92)
e)	**Training**	
11.	Training policies implemented	4.3.5.2 (p. 95-97)
12.	Total number of training hours	4.3.5.2 (p. 95)
f)	**Equal opportunity**	
13.	Measures taken to promote gender equality	4.3.6.1 (p. 97)
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17.	Elimination of discrimination in respect of employment and occupation	4.1.2 (p. 77)
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22.	Resources devoted to the prevention of environmental risks and pollution	4.5.1 and 5.1.12.1 (p. 99-103/135-136)
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Appendix 5 – Summary of workforce-related and environmental indicators

Environmental indicators

Indicators	Units	2011	2012	2013	2014	2015	2016	2017
Production	Metric tons processed	5,175,558	4,959,229	5,456,271	5,508,079	2,826,499	3,068,607	4,524,518
	Metric tons shipped	2,251,000	2,092,000	2,159,000	2,322,800	1,410,865	1,281,500	2,256,100
Water intake	m^3/year	8,628,862	8,360,710	8,786,030	7,831,288	5,630,516	5,672,035	☑ 6,179,371
	m^3/metric ton processed	1.67	1.69	1.61	1.42	1.99	1.85	1.37
	m^3/metric ton processed	3.83	3.99	4.07	3.37	3.99	4.43	2.74
Water discharged	m^3/year	5,257,296	5,596,360	5,494,232	4,087,062	3,616,090	3,179,631	3,203,321
	m^3/metric ton processed	1.02	1.13	1.01	0.74	1.28	1.04	0.71
	m^3/metric ton processed	2.34	2.68	2.54	1.76	2.56	2.48	1.42
	Total metals released g/m^3 [(a)]	1.11	1.09	0.81	1.29	1.23	0.94	0.60 (1,261 kg)
Waste								
Non-hazardous waste	Metric tons/year	616,828	604,425	572,669	628,005	438,266	430,980	☑ 673,111
Hazardous waste	Metric tons/year	48,985	50,544	53,737	40,909	28,549	27,670	24,763
% recovered waste	%	89	91	93	93	94.8	94.38	☑ 94.0
Total waste [(a)]	Metric tons/year	665,813	654,969	626,406	668,914	466,815	458,650	697,874
	kg/metric ton processed	129	132	115	121	165	149	154
	kg/metric ton shipped	296	313	290	288	331	358	309
Energy								
Natural gas	GWh/year	3,496	3,257	3,708	3,751	2,498	2,531	☑ 2,939
	kWh/metric ton processed	675	657	680	681	884	825	649
	kWh/metric ton shipped	1,553	1,557	1,717	1,615	1,771	1,975	1,302
Electricity	GWh/year	1,598	1,603	1,812	1,873	1,205	1,376	☑ 1,590
	kWh/metric ton processed	309	323	332	340	426	448	351
	kWh/metric ton shipped	710	766	839	806	854	1,074	705
CO_2 [(b)]								
Total direct emissions (scope 1) [(b)]	Metric tons/year	1,050,778	1,007,967	1,127,592	1,273,427	(373,538)	(468,853)	☑ (77,744)
	kg CO_2 equivalent/metric ton processed	203	203	207	231	(132)	(153)	(17)
	kg CO_2 equivalent/metric ton shipped	467	482	522	548	(265)	(366)	(35)

(a) As, Cd, Cr, Cu, Hg, Mn, Mo, Ni, Pb, Zn.

(b) Biogenic and non-biogenic, including since 2015 the carbon sequestration by the Florestal forest.

Analysis of GHG emissions 2017

		Summary of emissions in metric tons of CO_2 equivalent				
Scope	Type of emissions	Emissions excluding biomass	Emissions related to biomass	Biogenic methane emissions	Metric tons CO_2	kg CO_2/ metric ton
Scope 1 Direct emissions	Natural gas combustion	542,712	-	-	542,712	120
	Carbonization process (biogenic)	-	1,052,650	360,816	1,413,466	312
	Atmospheric and underground sequestration (biogenic)	-	(3,078,572)	-	(3,078,572)	(680)
	Production of iron and steel	79,519	935,011	-	1,014,530	224
	Internal transportation	30,121	-	-	30,121	7
	TOTAL – SCOPE 1	**652,352**	**(1,090,912)**	**360,816**	**(77,744)**	**(17)**
Scope 2 Indirect emissions	Electricity purchased	410,654	-	-	410,654	91
	TOTAL – SCOPE 2	**410,654**	**-**	**-**	**410,654**	**91**
Scope 3 Other emissions, indirect (a)	Upstream and downstream external transport ordered by the Company	404,802	-	-	404,802	89
	Waste treatment	144,732	-	-	144,732	32
	Employee transportation	58,261	-	-	58,261	13
	Purchases of materials, goods and services	1,512,587	-	-	1,512,587	334
	Emissions related to the carbon content of industrial equipment proportionate to amortization and depreciation	173,318	-	-	173,318	38
	Emissions linked to losses during extraction, storage and transportation of energies (b)	122,454	-	-	122,454 ☑	27
	TOTAL – SCOPE 3	**2,416,154**	**-**	**-**	**2,416,154**	**534**
TOTAL ACROSS ALL COMPONENTS		**3,479,160**	**(1,090,912)**	**360,816**	**2,749,064**	**608**

(a) *The items appearing under this entry are those for which the Company has an action or direct influence, and for which data is available. To date, emissions pertaining to client processes are neither known nor taken into account. In an effort to improve knowledge of scope 3 in light of its importance, the Group will again examine the content of these items in 2018, with the assistance of a specialized consultant, and will likewise evaluate, if possible, upstream and downstream emissions connected to its customers and suppliers' activity.*

(b) *Energies = electricity, natural gas, gasoline, gas oil, propane.*

Social indicators

	2012	2013	2014	2015	2016	2017
Workforce	23,177	24,053	23,709	20,964	18,325	☑ 20,093
Turnover *(%)*	10	9	12	17	9	13

	2012	2013	2014	2015	2016	2017
Safety						
LTIR [(a)]	2.6	2.26	1.32	1.24	1.41	1.24 ☑
TRIR [(b)]	97.1	5.51	4.23	3.25	2.61	3.13 ☑
Severity rate	0.11	0.12	0.06	0.07	0.06	0.045
Training						
Number of employees having participated in a training session	15,942	14,912	14,537	145,779	13,779	13,615
Number of training hours	597,379	582,000	513,597	473,009	506,459	282,542

(a) LTIR (Lost Time Injury Rate): number of accidents with lost time per million hours worked.

(b) TRIR (Total Recordable Injury Rate): number of accidents declared per million hours worked.

% of women (permanent employees)

	Production staff		Technical and supervisory staff		Managers		Total	
	2016	2017	2016	2017	2016	2017	2016	2017
Europe	2%	2%	32%	33%	21%	23%	11%	12%
Brazil	5%	5%	28%	26%	24%	24%	11%	10%
NAFTA	1%	1%	27%	26%	23%	23%	11%	10%
Asia	11%	13%	31%	28%	19%	17%	19%	16%
Middle East	-	-	14%	15%	11%	11%	5%	6%
Africa	18%	9%	15%	14%	-	-	11%	11%
WORLD	**4%**	**5%**	**30%**	**29%**	**22%**	**22%**	**11%**	**12%**

Breakdown between permanent and temporary staff

	Permanent		Temporary (including apprentices)		Interim	
	2016	2017	2016	2017	2016	2017
Europe	7,711	7,038	515	521	298	450
Brazil	6,422	6,677	124	107	0	102
Asia	992	2,696	78	216	121	114
NAFTA	2,036	2,406	0	0	193	40
Middle East	346	362	13	12	42	13
Africa	57	56	1	2	15	5

5

Risk factors

Investors are invited to consider all information featured in this Registration Document, including the risk factors described in this Section, before deciding whether to make an investment. As at the date of this Registration Document, these are the risks, the occurrence of which the Company believes could have a material adverse effect on the Group, its business, financial position, earnings, growth or outlook. The attention of investors is drawn to the fact that other risks may exist that have not been identified or which are not considered, as at the date of this Registration Document, likely to have a material adverse impact on the Group, its business, financial position, results, growth, outlook on the price of Company shares, or on the image of the Group or the Company.

5.1 Risk factors

The Group operates in a rapidly changing environment that generates numerous risks, some of which are outside its control.

The Group has assessed the risks that could have a material adverse impact on its business or results (or on its ability to achieve its targets) and considers there are no material risks other than those presented below. Nevertheless, other risks, of which it is not currently aware or which it does not currently regard as significant, could also have an adverse effect.

5.1.1 Risks linked to the Group's dependence on customers in the oil sector

The Group's activity is dependent on the level of expenses incurred by Oil & Gas companies for exploration, production and development of oil and natural gas reserves. In 2017, approximately 61% of the Group's consolidated revenue was earned in the Oil & Gas sector, excluding Petrochemichals.

Since 2015, spending by Oil & Gas companies has been significantly impacted by the sharp drop in world oil prices, which began in late 2014 due to the overproduction of oil in relation to demand. This considerable drop in world oil prices led Oil & Gas companies to intensify control of their costs, significantly reducing their expenses and optimizing their inventory levels, which had a significant impact on the demand for tubes and put pressure on tube prices. In 2017, thanks in particular to successive OPEC agreements that were entered into in late November 2016, in late May 2017 and in late November 2017 to limit their oil production, world oil prices stabilized and considerably increased at the end of the fiscal year.

The spot price per barrel of Brent dropped from an average price of USD 99 for fiscal year 2014, with a peak price of USD 115 in June 2014, to an average price of USD 52 for fiscal year 2015, USD 44 in 2016 and USD 54 in 2017. As at 31 December 2017, the price per barrel of Brent was USD 66.7, compared to USD 54.9 on 31 December 2016. The rise in oil prices had a relatively limited impact in 2017 on the average international rig count (excluding North America), with an average of 955 units in 2017, compared to an average of 948 units in 2016, and particularly in regions where national companies that are less sensitive to the price per barrel operate (such as the Middle East, for example). Tube prices were under significant pressure throughout the fiscal year.

In the United States, conversely, the correlation between price per barrel and number of rigs is much higher. West Texas Intermediate (WTI) went from an average price of USD 44 in fiscal year 2016 to USD 51 in 2017. This rebound in the price of oil, combined with the drop in the break-even point of American operators led to a 70% increase in the average number of rigs between 2016 and 2017 (an average of 512 units in 2016, compared with an average of 872 units in 2017). This recovery, which was stronger than initially anticipated, allowed Vallourec to significantly increase its sales in the United States and announce price increases, which took full effect as from July 2017.

According to the Group's internal estimates, the share of tube consumption in a complex and integrated offshore project is less than 2% of the total project cost, although this proportion varies according to the complexities and types of drilling. This share may reach up to 9% of the total cost of the project for unconventional onshore drilling in the United States. The level of Exploration and Production investments thus had a direct impact on the consumption of tubes and on the Group's results.

The rebound in oil prices, as well as the rebalancing of oil supply and demand in 2017, led to a slight increase in oil company expenses compared to 2016. According to estimates from IHS[1] and Barclays[2], investment expenses in Exploration and Production for Oil & Gas projects grew by approximately 7% to 8% between 2016 and 2017, primarily driven by investment expenses in North America. This market trend had a positive impact on Group volumes, revenue and the operating income. For 2017, the Group recorded a 76% increase in volumes (35% excluding effects of scope) EBITDA of +€2 million and a net loss of -€537 million. The share of its net financial debt-to-equity-ratio totaled 53% of equity at the end of 2017. Since 1 February 2016, the Group has used a Transformation Plan to improve its short and long-term competitiveness (see Section 3.4.3 of this Registration Document). This Plan, which includes plans to reduce investments, operating costs and capacity, has in particular allowed the Group to transform its operational structure and balance its expertise in production around four regions. The Group nevertheless cannot be certain that these measures will be sufficient to limit the impact of the still difficult market environment on its operating income or financial position (see Section 5.1.9 of this Registration Document). Moreover, if oil prices were to start falling again, this could have a significant adverse effect on the Group's activity, operating income, financial position and outlook.

Likewise, the investments of Oil & Gas companies could be subject to other negative factors such as changes in applicable laws and regulations, changes in the political situation or weather conditions. These factors could consequently have a negative impact on the Group's activity, results and outlook.

(1) IHS Markit – Global Upstream Spending, 27 November 2017.

(2) Global 2018 E&P Spending Outlook, 14 December 2017.

5.1.2 Risks linked to the cyclical nature of the tube market

The tube market is traditionally subject to cyclical trends which result both from economic changes as described above in the Oil & Gas sector, and from macroeconomic conditions which have an impact on the other business sectors of the Group, including mechanicals, automotive, construction and power generation which, together, accounted for 31.6% of consolidated revenue in 2017. These sectors have important business cycles which follow the trends in the economic climate and which are likewise influenced by other factors, such as the growth outlook.

Deterioration in the global economic climate and the financial markets could have a significant adverse effect on the Group's sales, revenue, cash flow and outlook.

In order to prevent such risks from occurring, or to limit their impact, the Group implements the following measures:

- diversity of applications for its products in the energy (hydrocarbon, nuclear and wind), petrochemical, mechanicals, automotive, and construction sectors;
- geographical diversity of its markets worldwide;
- promotion of long-term partnerships with major customers; and
- flexibility, i.e.:
  - the production substitution capability developed among some of the Group's 50 production sites in more than 20 countries,
  - seeking to reduce fixed costs at each of its sites, and
  - the capacity to broadly adjust variable costs as activity evolves.

5.1.3 Risks related to dependence on particular customers

In 2017, the Group generated 20% of its consolidated revenue from its five largest customers and 28% of its consolidated revenue from its ten largest customers (see above Section 3.2.2.3 "Principal customers" of this Registration Document). No customer accounted for more than 10% of the Group's consolidated revenue in 2017. Historically, customer loyalty has been strong (no sudden switches to another supplier) thanks to good relations with the Group and the quality of its products.

Nevertheless, most customers are not generally required to purchase a fixed amount of products or services over a given period and could decide to terminate their contracts, not renew them, or renew them on terms, particularly with respect to pricing, that are less favorable for the Group. This could have a significant adverse effect on the Group's business, financial position and results.

Generally, the Group has only very rarely been exposed to a significant risk on outstanding receivables of its main customers. Nevertheless, in a deteriorating world economic environment, the risk that a worsening of its customers' financial position will expose the Group to the risk of payment default cannot be ruled out.

5.1.4 Risks related to competition

The Group operates in a highly competitive international environment. To respond sufficiently to this competitive pressure, Vallourec's strategy is to stand out from its competitors by specializing in premium solutions for the energy markets. Meeting the complex needs of demanding customers in sophisticated markets requires a level of local know-how, innovation, quality, and related services that few manufacturers are in a position to provide.

The Group nonetheless faces competition with varying degrees of intensity in the Group's different sectors:

- in the Oil & Gas sector, the Group's main differentiating element is premium connections, for OCTG tubes in particular. These patented connections ensure perfect sealing for tube columns, thereby meeting customers' safety, environmental and performance requirements. However, strong competition in the OCTG commodity tubes market brings downward pressure to bear on prices throughout the market, including the prices of premium connections and tubes and in particular those that are the least differentiated. Oil companies, particularly International Oil Companies (IOCs), are seeking to develop a strategy of qualifying low-cost suppliers, particularly Chinese suppliers, for increasingly high-end products, as low-cost players have progressed technically and developed premium connections for the least differentiated categories. This has also had the effect of increasing pressure on the prices of established operators, who have significantly reduced their prices in an effort to be able to win tenders. This new competition has particularly impacted the Europe/Africa (EA) and Middle East/Asia (MEA) Regions. The intensification of the competitive landscape in an increasingly globalized seamless tube market could cause losses in market share, and impact the Group's volumes, revenue and profitability;
- in the Group's other sectors of activity:
  - in the power generation sector, premium solutions contain high-alloy steel capable of withstanding extreme temperatures and pressure, requiring top-level metallurgical skills and state-of-the-art technology. The Group has noted increased competition since 2009, in particular in the Chinese market, due to the decision of some customers to give preference to local manufacturers who have entered the market for higher grade products, potentially at the expense of the stringency of the customers' technical requirements, and

- in the petrochemical, mechanicals, automotive and construction sectors, the Group faces stronger competition as customer requirements are less sophisticated. The Group nevertheless has strong positions in Europe and Brazil, thanks to local operations that enable it to offer short lead times and related services. It works to innovate so as to create new, differentiated product ranges, such as fine-grain steel for industrial cranes and PREON®solutions for the construction of industrial buildings.

In order to prevent such risks from occurring, or to limit their impact, the Group implements the following measures:

- a premium-positioning strategy, underpinned by growth, innovation, close relations with customers and competitiveness;
- a major focus on innovation and the development of tubular solutions generating long-term partnerships with highly demanding customers;
- defense of the Group's industrial expertise through patents and protection of trade secrets; and
- a reduction in its cost base to protect its margin in a competitive environment leading to pressure on prices.

5.1.5 Risks related to the Group's activities in emerging countries

The Group conducts a significant part of its business in emerging countries, in particular because its strategy of being located close to its customers in these countries enables it to improve its responsiveness and to develop appropriate products and services in these countries. The risks associated with doing business in emerging countries may include political, economic and social instability (which can result in nationalization and expropriation of assets, uncertainty as to applicable law and inconsistent application of laws, and the impact of international sanctions, etc.), as well as financial instability and an increased exchange rate risk. There are also risks for personnel deployed on assignment or permanently (with a heightened risk of events such as industrial accidents or terrorism). The Group may not be in a position to take out insurance or hedge against all of these risks, and may also encounter problems in performing its activities in such countries, which could have an impact on its employees and/or results, growth or outlook.

In order to prevent such risks from occurring, or to limit their impact, the Group implements the following measures:

- for personnel deployed on temporary or permanent assignments: systematic health and safety risk assessment procedures, as well as systematic emergency and protection procedures for each of the high-risk countries where the Group frequently deploys personnel, and specific procedures for the other countries, with the support of recognized outside providers in all cases; and
- for its business operations exposed to political, economic, social or financial instability and foreign exchange risks: alternative means of production situated in other countries and the development of business continuity plans designed to increase, as far as possible, the resilience of the business at local level.

5.1.6 Risks related to maintaining advanced technology on key products

The tubes market is subject to technological change. It is not possible at this point in time to foresee how such change could affect the Group's activities in the future.

Third party technological innovations could affect the competitiveness of the Group's existing products and services and have a negative impact on the value of existing patents and the revenue generated by the Group's licenses. The Group's financial results and outlook could be affected, and the Group might find itself at a competitive disadvantage if it were unable to develop or access (either alone or through partnerships) new technology, products or services ahead of its competitors, or if its new technology, products or services were not to have the success counted on in the market.

Furthermore, the risk that competitors may access some of the Group's manufacturing secrets, or certain innovations that are not yet patented or that are not eligible to be patented, cannot be entirely ruled out. The procedures established by the Group's Security Department and IT Department, as well as the signing of confidentiality agreements, can limit this risk, although it cannot be completely eliminated. The Group's results and outlook could therefore be affected.

In order to prevent such risks from occurring, or to limit their impact, the Group in particular implements the following measures:

- a major program of investment in new production tools and in innovation, leading to the opening since 2011 of new production centers, R&D units and test stations close to the Group's markets, especially in the United States and Brazil;
- the proliferation of front end innovation type multi-business procedures, often directly involving the Group's clients. These aim to identify client needs as accurately as possible and to generate new concepts for solutions that create a difference in value, adapted for customers;
- a strengthened digital strategy, designed to further enrich the Group's offer, its processes and methods of cooperation;
- the launch of partnerships and the management of initiatives such as the Open Innovation Challenge, aiming at fostering collaborations between key players in digital, including "nimble" SMEs, and allowing the Group to increase competence in areas as varied as Data Science, predictive models, artificial intelligence, augmented reality or even additive manufacturing;
- monitoring technological developments in the market to systematically gain access to the most recent techniques and their commercialization;
- protecting inventions through patents in key countries as well as maintaining and defending these patents; and
- protecting expertise, including trade secrets, through systematic confidentiality agreements and dedicated procedures.

5.1.7 Risks related to intellectual property

Risks related to intellectual property primarily stem from:

- disputes brought by third parties against the Group;
- the appropriation of its technologies by competitors; and
- fraudulent use by third parties of its trademarks.

To limit the impact of these risks, the Group has an Intellectual Property Department and a Legal Department comprised of qualified and experienced personnel who are responsible for (i) taking the necessary measures to protect and ensure its intellectual property rights are respected, while ensuring the rights of third parties are respected, and (ii) educating Group employees on the importance of better protecting and defending its intangible assets.

Preserving the Group's intellectual property also entails protecting its investments in Research and Development, and its technological edge.

To that end, the Group pursues its efforts at both national and international levels to:

- protect its innovations through patents and secrecy (e.g. confidentiality agreements, specific procedures to maintain trade secrets);
- protect its distinctive marks, such as trade names, domain names and trademarks; and
- preserve the value of its intellectual property through its global network of licensees.

However, the laws and regulations, as well as the legal system in some countries in which the Group operates do not necessarily provide such extensive and effective protection for intellectual property rights, and/ or the means to combat counterfeiting at this time as in countries such as France, Germany or the United States.

That is why the Group, in addition to the legal actions it is taking, is also simultaneously developing technical trademarking and authentication techniques for there to be greater product traceability, including by intermediate distributors and customers themselves. In particular, in 2017 Vallourec industrialized and qualified its Valguard solution, which permits the safeguarding of both the certificates relating to Vallourec tubes, notably through a QR code, and the products themselves, thanks to a point marker using a "Vallourec DNA" tracer.

These actions and technical solutions are key elements in the counterfeiting prevention policy used by the Group.

Like other tubular products and accessories manufacturers, the Group has indeed been faced with the existence of counterfeit products for sale on the market, which use the trademarks of Vallourec and its subsidiaries, and are sometimes even accompanied by false certificates. Counterfeiting activities aim to confuse customers in terms of the source of products, thereby allowing the counterfeiters to unfairly derive a profit from the Group's investments and reputation. There are thus multiple risks involved: in addition to the risk of losing customers drawn to cheaper products, there is a material risk of accidents if the counterfeit products have problems with quality and do not comply with the applicable standards. These risks could have an impact on the Group's image, and, indirectly on its financial results.

In order to more effectively combat counterfeiting, the Group has not only created, in 2015, a Counterfeit Committee, but has moreover been one of the founding members of the Steel Alliance Against Counterfeiting (SAAC), which combines the most well-known manufacturers of tubular products in the world market to combat counterfeiting. The Group has also doubled its campaigns to raise awareness among the public authorities and market players concerned. To that end, 2017 was particularly rich in both targeted and comprehensive initiatives to raise awareness, in particular through the public interventions during the Abu Dhabi International Petroleum Exhibition & Conference (ADIPEC) and in international conferences, alongside major players like Interpol, the World Customs Organization and the Emirates Intellectual Property Association.

If, despite all of the measures taken, the Group was unable to successfully protect, maintain and defend its intellectual property, it would risk losing a portion of its technological edge, customers and income sources; this could have a significant adverse effect on its activities, results and image.

5.1.8 Risks related to the Group's external and internal growth strategy

In pursuing its development strategies, the Group has engaged, and could in the future engage in external growth operations (through the acquisition of businesses and companies) and internal growth operations (through the construction of new production units), as well as the development of partnerships. Although the Group examines and defines the details of all investment projects according to a very strict procedure, the underlying assumptions for the profitability of investment projects may be invalidated or the Group may not manage to successfully consolidate the acquired or merged companies. Consequently, the expected benefits of future or already completed external or internal growth operations may not be realized within the expected time frame or to the expected extent, and this could affect the Group's financial position. These operations include risks that are linked to difficulties in the integration of personnel, activities, technologies and customers.

Although the Group takes great care when drafting and negotiating acquisition, sale and partnership development contracts, and uses guarantees and other methods to hedge against certain risks, it cannot rule out the possibility that a liability, impairment of assets or claim may arise as a result of one of these contracts.

5.1.9 Risks related to the industrial restructuring plan

Since 1 February 2016, the Group has used a Transformation Plan (see Section 3.6 "Transformation Plan" of this Registration Document), in particular through an industrial restructuring plan which aimed to:

- streamline industrial production, in particular by reducing European capacities by 50% and focusing activities on value-added solutions and products;
- optimize its industrial footprint by developing new, more competitive production centers, in particular in Brazil and China; and
- significantly reduce costs in the context of the industrial plan.

Although the Group is rolling out the strategic initiatives linked to the industrial restructuring plan in accordance with the schedule, and is making every effort to attain the objectives announced within this plan, the Group could encounter many difficulties, as follows:

- the Group's customers could turn to other suppliers if they think that the Group's products and services, or the time frame for delivering the Group's products, do not meet their expectations following the transfer of production to Brazil or China;
- the Group cannot guarantee that implementing the industrial restructuring will be sufficient, given the particularly poor economic climate, nor that it will achieve the results it anticipates within the expected time frames. If the Group was unable to effectively implement the industrial reorganization or if it did not produce the expected results, this could have a significant adverse effect on its results, financial position and outlook.

5.1.10 Risks related to the Company's objectives

For the purposes of its operational organization and in order to allocate its resources, Vallourec has set a number of targets for 2018 and in the medium-term regarding indicators such as free cash flow, EBITDA and net debt (see Section 3.6 "Transformation Plan" of this Registration Document).

These medium-term targets, which are based on data, assumptions and estimates which Vallourec considered to be reasonable when it announced its Transformation Plan on 1 February 2016 (see Section 3.8.2 "Medium-term outlook"), notably depend on the date of recovery in the global Oil & Gas activity. These targets are also dependent on the implementation of the industrial restructuring plan, for which the risks involved are described in Section 5.1.9 above.

At the start of 2018, the recovery in the Oil & Gas markets was confirmed in the United States. However, international oil companies have not yet launched new projects resulting in a delay in the recovery of volumes and prices on the international OCTG market. As mentioned above, the medium-term outlook is dependent on the date of recovery of the global Oil & Gas activity, particularly offshore. Taking into account the current market environment, this date remains uncertain.

However, the Group is confident in its ability to deliver contributions to EBITDA resulting from the strategic initiatives that are not linked to a recovery of volumes.

In addition to the realization of the strategic initiatives, these data, assumptions and estimates are likely to evolve or be modified, due to uncertainties that are linked to the economic environment and, above all, to the level of spending by companies in the Oil & Gas sector, from which the Group draws the bulk of its revenue. This sector has been suffering from a downturn since mid-2014 and there is significant uncertainty regarding when it will recover. Given the changes in the sectors in which the Group is active, it is also difficult to reliably assess its outlook and forecast its needs, particularly in terms of capacity and operating resources, technology requirements and product volumes.

Any change in the assumptions presented in Chapter 3 of this Registration Document and any unforeseen events impacting the Group's assumptions might impact the Group's ability to achieve its objectives and could consequently have an adverse effect on the Company's share price on the Euronext Paris market.

5.1.11 Risks related to impairments of goodwill and fixed assets

The Group faced a worsened economic climate which led it to record an impairment on 31 December 2014 of property, plant and equipment and intangible assets of the Vallourec Europe CGUs and of assets from the Jeceaba (Brazil) plant held in the Vallourec Soluções Tubulares do Brasil (VSB) joint venture. In 2016, the acquisition of VSB had the result of solidifying the impairment recorded in 2014.

As at 31 December 2017, goodwill was €348.2 million, (see Chapter 6.1 C Note 1 to the consolidated financial statements).

Impairment tests performed in 2017 do not lead to impairments being recorded for loss in value beyond the isolated asset impairments (see Chapter 6.1 C, Note 2.3 to the consolidated financial statements).

The Group cannot rule out the possibility that the occurrence of future events could result in an additional impairment of certain fixed assets and/or goodwill. Potential significant impairments could have an adverse effect on the financial position and results of the Group for the fiscal year for which such charges could be recorded, and on its liquidity (with regard to the ratio contained in the banking agreements described below in Section 5.1.14.2).

5.1.12 Operating risks

5.1.12.1 Industrial and environmental risks

DESCRIPTION OF THE INDUSTRIAL AND ENVIRONMENTAL RISKS

In the various countries in which the Group operates, particularly in Europe, the United States, Brazil and China, its production activities are subject to numerous environmental regulations that are extensive and constantly changing. These regulations concern, in particular, management of major accidents, the use of chemicals (REACH regulations in Europe and their equivalent outside of Europe), disposal of wastewater, disposal of special industrial waste, air and water pollution, CO_2 emissions, noise pollution and site protection. The Group's activities could, in the future, be subject to even more stringent regulations requiring it to incur expenditure in order to comply with regulations or pay new taxes.

All French plants require authorization to operate in accordance with the provisions of Law No. 76-663 dated 19 July 1976 (as amended), relating to facilities classified for environmental protection and with Decree No. 77-1133 dated 21 September 1977 codified in Article R.512-1 of the French Environmental Code. Any major changes at these sites (investments, extensions, reorganization, etc.) require the updating of said authorizations in collaboration with the local Regional Departments for the Environment, Land-use Planning and Housing (*Directions régionales de l'environnement, de l'aménagement et du logement* – DREAL). Vallourec's facilities in other countries are subject to similar local regulation, requiring specific permits in various areas relating to the environment, including water, air, waste and noise. All of the Group's foreign facilities have the prescribed permits, which are regularly renewed pursuant to of local regulations.

The Group endeavors to strictly comply with these authorizations and, more generally, with the laws and regulations applicable in France and abroad on environmental matters, according to the principles presented in its Sustainable Development Charter and in the Group's Environmental Policy, which the Management Board approved in 2014. The Group is also striving to take all precautions that would allow it to prevent environmental incidents; it should be noted that almost all of the sites are ISO 14001 certified, with production of certified sites corresponding to 86% of the total production. This rate does not yet take into account the recent acquisition (in late 2016) of Tianda sites in China, for which an environmental improvement plan was launched. This is also explained by the fact that the Brazilian site in Jeceaba (which grew in importance in production terms for the Group in 2017) has not yet been certified, which will done in the second quarter of 2018.

It is clear that the very nature of the Group's industrial activity carries environmental risks. The Group could consequently be faced with an environmental accident that could have a material impact on the continuing operation of the sites concerned, and on its financial position.

In addition, the regulatory authorities and courts may require the Group to carry out investigations and clean-up operations, or even restrict its activities or close its facilities temporarily or permanently, and/or require it to pay fines. Given the long industrial history of several of the Group's sites (whether currently in use or obsolete), the soil or ground water may have been polluted and pollution may be discovered or occur in the future. Vallourec could be required to decontaminate the sites concerned. As regards its former activities, the Group could be held responsible in the event of damage to persons or property, which could adversely affect Vallourec's results. To that end, and applying the regulations, the estimated cost for clean-up of the French sites concerned in the event of cessation of their activities totals almost €3 million. The Group's commitment with the Regional Departments for the Environment, Land-use Planning and Housing to provide any necessary amounts is covered by a bank guarantee.

The accounting data relating to environmental matters is recorded in the Group's consolidated balance sheet under "Provisions" (see Chapter 6.1 C Note 17 to the consolidated financial statements). Future expenses for rehabilitation of sites are recognized by the Group using the accounting principles described in Section 6.1.7, paragraph 2.12 of the notes to the consolidated financial statements.

EVALUATION OF INDUSTRIAL AND ENVIRONMENTAL RISKS

Operating entities assess the industrial and environmental risks of their activities before developing them, and then regularly during operations. They comply with the regulatory requirements of the countries in which the activities are carried out and have developed specific risk measurement procedures. The new environmental organization, based on a regional approach, simplifies the risk assessment in question.

At sites with significant technological risks, risk analyses are performed when new activities are developed and updated, and when significant changes are made to existing installations. They are then periodically updated using a methodology adapted to local regulatory obligations. Each site prepares its own emergency or internal prevention measures depending on the risk analysis relating to the establishment. In France, the level of risk is reduced since only the Valinox establishment in Montbard is covered by "Seveso 3" with a "lower tier" classification.

Similar measures are taken at the Group's other industrial sites.

In addition, environmental impact studies are carried out before any industrial development including, in particular, an analysis of the initial state of the site, taking account of its vulnerabilities and the choice of measures to reduce or prevent incidents. These studies also take into account the impact of the site's activities on the health of neighboring populations. They are performed using common methodologies. In countries that implement authorization procedures and monitor project progress, no project is launched until the appropriate authorities approve it based on the studies submitted to them.

All Vallourec entities monitor regulatory changes in order to ensure that they comply at all times with local and international regulations and standards relating to measurement and management of industrial and environmental risk.

Lastly, in 2014 the Group completed, with the assistance of a specialized firm, an analysis of the risks inherent to climate change (droughts, floods, heat waves or cold snaps, submergence of land, high winds, etc.). This study relied on available scientific information and existing national adaptation plans. For each of the Group's major industrial basins, it identified risks and estimated their probability of occurrence and severity. It is now the responsibility of each site to establish the measures to be taken with regards to personnel and equipment, in order to reasonably prepare for the identified risks. These measures should be added to the sites' environmental roadmaps. These risks have appeared in certain risk maps at the regional level (North America) or for each entity (Valinox) and are consequently evaluated site by site under the loss prevention policy carried out with our insurer's experts.

The Group's recently published carbon policy also stresses the importance of ensuring the resiliency of industrial plants to various climate risks. For example, upon more extensive consideration of climate change-related risks, the Brazilian authorities determined that the risk of exceptional rain in a 100-year period should be substantially increased in relation to the dam flood barrier intended to collect certain sediments resulting from the operation of our mine. Consequently, the dams in question were raised.

The supply chain is also subject to climate risks. It is thus the responsibility of the Purchasing Department, in conjunction with the most affected suppliers, to examine the measures to be adopted under the supplier risk assessment plan.

The above-mentioned study shall be conducted in 2018 due to progress that has been made on the subject and based on the Group's new industrial footprint.

MANAGEMENT AND TRACKING OF INDUSTRIAL AND ENVIRONMENTAL RISKS

Risk assessment results in the establishment of risk management measures designed to reduce the likelihood of accidents and limit their consequences and environmental impact. These measures relate to the design of the facilities, strengthening of protective measures, organizations to be put in place, and even compensation for any environmental impact if it seems inevitable. These studies may be accompanied, on a case-by-case basis, by an assessment of the cost of the measures to control risk and reduce impact.

Vallourec seeks to limit the industrial and environmental risk inherent in its activities by setting up efficient organizational structures and quality, safety and environmental management systems, obtaining certification or assessing its management systems, performing stringent inspections and audits, training staff and heightening the awareness of all parties involved, as well as by implementing a policy of environmentally friendly investments that reduce industrial risks. Each significant investment project is assessed according to a precise methodology. This process is formalized with the use of a mandatory model document which explains the various kinds of impact ("eco-design" sheet), in accordance with the risks listed above. The Capex Committee, which examines the characteristics of the most important projects on a monthly basis, in view of approving them stage by stage, systematically analyzes these kinds of projects and may postpone their approval if deficiencies are detected.

5.1.12.2 Other operational risks

RISKS RELATED TO OCCUPATIONAL SAFETY AND HEALTH

The importance of the industrial labor force to the Group's business makes the management of employees' health and safety particularly vital. Health and safety management is a priority and a fundamental value for Vallourec. Despite the efforts used by the Group, Vallourec cannot rule out the fact that occupational accidents and illnesses may arise that could render it liable in the event of serious illnesses or accidents.

Determined to act on all safety levers, in 2017 Vallourec continued its CAPTEN+ Safe safety improvement program. At the end of 2017, the Lost Time Injury Rate (LTIR) was 1.24, an improvement compared to 2016 (1.41), while the reported accident rate reached 3.13, having worsened since 2016 (2.61). Vallourec did not have any fatal accidents in 2017.

The safety improvement program includes the following measures at all Group sites:

- establishing safety management committees at all levels of the Company;
- safety visits conducted by supervisory staff at all organizational levels;
- employee involvement in reporting all incidents, hazardous conditions or actions, even the most minor;
- ongoing risk assessment for safety concerns and preventive actions;
- establishing continuous improvement teams (CITs) on safety issues; and
- the roll out of a specific action plan to prevent fatal accidents.

As regards health, the Group pursued its action program with a view to reducing physical hardship at work and preventing psychosocial and chemical risks (see Chapter 4 "Corporate Social Responsibility Information" of this Registration Document).

In France, some of the Group's subsidiaries are involved in civil proceedings relating to the use of asbestos. These proceedings were initiated by certain employees or former employees who believed they had contracted an occupational illness linked to asbestos, with the aim of obtaining a judgment that would give them supplementary social security benefits. Although the outcome of all the current asbestos-related cases cannot be predicted with reasonable certainty, the Group does not expect them to have a material adverse effect on its financial position and the image of the Company and the Group. However, the Group cannot be sure that the number of existing cases linked to asbestos or new cases will not have material adverse effects on its financial position. Despite all the attention that the Group pays to the health and safety of its employees, the occurrence of accidents or an increase in occupational illnesses remains a risk.

RISKS RELATED TO AN INDUSTRY THAT CONSUMES RAW MATERIALS AND ENERGY

Tube production consumes raw materials such as iron ore, coal, coke and scrap. The Group has some in-house sources of supply and diversifies its external sources of supply whenever possible.

More generally, raw materials and energy represent a significant expense for the Group.

An increase in the price of raw materials and energy leads to a corresponding increase in the production cost of the Group's finished products. Uncertainty surrounding economic trends along with a highly competitive environment in the international market for tubes means that the Group's ability to effect any increases in raw materials and energy prices in its orders is uncertain. This could reduce Group margins and have a negative impact on earnings.

These risks carry a probability and impact that Vallourec aims to reduce through the following measures:

- owning some of its own sources of supply (iron ore mine, eucalyptus plantation in Brazil) and maintaining a variety of external sources of supply wherever possible;
- continuously reducing consumption, particularly by computer-modeling of furnaces and making processes more reliable; and
- effecting any changes in supply prices on the Group's revenue through the adjustment of its selling prices.

RISKS RELATED TO DEFECTIVE OR FAULTY PRODUCTION

The Group's positioning in the market for premium tubular solutions requires the implementation of a demanding quality control program for its products and services. However, the Group cannot totally eliminate the risk that some of its products or services may have production or manufacturing defects, or faults which could potentially cause damage to property, personnel or installations attached to the tubes, lead to an interruption of business for customers or third parties, or cause environmental damage. Although the Group follows quality control procedures for its products and services that meet the most rigorous benchmark requirements in order to provide products and services without production defects or faults, defects or faults could occur in Group products or services. This could potentially require damages to be paid by the Group, cause a fall in demand for these products and services, or damage their reputation for safety and quality, resulting in a significant impact on the financial position, earnings and image of the Company's and the Group's businesses.

These risks carry a probability and impact that Vallourec aims to reduce through the following measures:

- implementing a product quality control process that takes into account the requirements of the strictest standards such as ISO 9001, ISO/TS, API, EN 10210 and ABNT in Brazil;
- obtaining qualification from the most demanding customers, especially on nuclear and oil markets;
- a continuous improvement approach, managed by Vallourec Management System (VMS), and based on three pillars: Total Quality Management (TQM) plans, steering committees and continuous improvement teams (CITs). The VMS program in particular aims to bolster the capability of all industrial processes;
- a focus on the major quality risks that could unfavorably impact customers;
- additionally, since 2015, strengthened management of customer claims so as to reduce the risks that defects would reappear as much as possible. To do so, a specific methodology known as "8 D" was put in place; and
- contractually limiting its liability, to the extent possible.

RISKS RELATED TO GROUP EQUIPMENT FAILURES

The Group's success in meeting orders depends on a high level of asset reliability. The Group could nevertheless suffer breakdowns of equipment or unavailability for other reasons such as damage, fire, explosion or a computer virus. Such failures could cause delays in the delivery of orders in progress or subsequent orders for which these assets were to be used. Although the Group follows a regular maintenance program in order to keep all of its assets in good working order, it cannot exclude the possibility that breakdowns could occur. Equipment failures may lead to dissatisfaction on the part of the Group's customers, have an impact on the cost of orders and, therefore, significantly affect the financial position, results and image of the Company or the Group.

These risks carry a probability and impact that Vallourec aims to reduce through the following measures:

- a regular maintenance program to maintain all assets in good working order;
- the roll-out of regular external audits to prevent damage, including from equipment breakdowns, fires, explosions and natural disasters; and
- a business continuity plan (BCP) at the Group's main sites to reduce the impact of equipment failure on customers and costs, by preparing rapid solutions to restore operations and/or alternative production processes.

RISKS RELATED TO WEAKNESSES IN INTERNAL CONTROL AND/OR RISK OF FRAUD

The Group's international profile involves complex processes at entities with different levels of sophistication in terms of internal control, evolving in a variety of legal environments, and running different information systems. In this context, Vallourec runs a risk of completing inaccurate and/or inappropriate or fraudulent transactions or operations. Some of the Group's activities are performed in countries which have a risk of corruption, which exposes it to civil and/or criminal sanctions which could have a negative impact on the Group's financial position or image.

To limit these risk factors, Vallourec began in 2013 a plan to strengthen its internal control mechanism, which is designed to better structure and coordinate the actions taken. This process particularly relies on a body of rules and procedures that is disseminated to all subsidiaries. These rules and procedures are regularly updated to ensure they are in line with changes in Vallourec's processes and risks.

The essential values of Vallourec also incorporate an ethical component. The Group's requirements have been formally established in the Code of Ethics, which has been extensively disseminated among all personnel.

In 2016, an amended version of the Code of Ethics was adopted and rolled out within the Group's entities in order to strengthen Vallourec's commitments to combat corruption and abide by competition rules, all while maintaining the values and principles of action for employees, associates, customers, suppliers and stakeholders.

In order to ensure that the principles and controls required by all of the procedures are respected, regular audits are conducted by the Internal Audit Department, according to the multi-year audit plan.

RISKS RELATED TO INFORMATION SYSTEMS

The Group uses complex information systems (in particular to manage its sales, logistics, accounting and reporting), which are essential for conducting its commercial and industrial activity. Despite a policy to strengthen the emergency programs of its information systems, of its infrastructure (including providing access to service providers and partners), as well as its clients, a failure of one of them could have a material adverse impact on the activity, financial position, results or outlook of the Group.

The launch of a certain number of projects concerning the digitization of its production tools and customer assistance services could increase the risk of theft or loss of information, including personal information.

Despite a certain number of proactive measures that have already been deployed, and others that will be in 2018, the Group could fall victim to complex and targeted attacks of its IT networks. A growing number of companies have indeed recently been the victims of intrusions or attempted intrusions in their information systems. The techniques implemented to hack, disrupt, degrade the quality of or sabotage information systems are constantly evolving; they are sometimes not listed and it is often impossible to identify them before an attack is launched. Despite all of the precautions taken and its multiple means of defence, the Group might not be able to protect itself against such hacking techniques, or to rapidly establish an appropriate and effective response system. Any breakdown or interruption in the Group's IT systems that is linked to such intrusions or to other factors, could have a material adverse effect on the activity, financial position, results or outlook of the Group.

The Group cannot guarantee that it will not suffer an uninsured loss.

As concerns Vallourec's information system, the multi-year audit plan for the information system security of the Group was renewed for the 2014-2018 period, and its scope was expanded to new regions, such as the Middle East, United States and Asia Pacific.

Since 2014, the Information Systems Department has undertaken and developed a program aiming at strengthening its capacity to detect intrusion attempts by establishing network monitoring mechanisms for the majority of the sites in its Regions.

In 2016, this system was strengthened in an effort to adapt to new threats and was geographically extended in Europe and the Middle East, in order to better cover the new production units. A plan concerning the improvement of security for industrial equipment, primarily that of the lower IT levels of the plants, which are close to production workshops, progressed in Europe and the Middle East.

The deployment of the disk encryption solution for computers, considerably improving data protection in case of loss or theft of laptops and cell phones has been continued.

A strengthened analysis system for messaging was established in addition to the classic measures, in an effort to combat the increase of attempts to steal the identity of our users, suppliers and partners.

The commissioning of the SAP application at Vallourec Star LP and its roll-out at Vallourec Oil and Gas France was successfully completed.

A plan to harmonize financial reporting and the adoption of a standard accounting plan for all of the Group's units was executed, and a software program to track and manage suppliers for the Purchasing Department was set up and centralized.

Actions to educate employees on protecting information and support for major projects related to risk management and internal control include:

- performance and follow-up of the action plan for an internal control campaign for all Regions of the Group;
- development and application of a Group IT Charter with the aim of strengthening users' best practices and hygiene measures;
- the launch of a program scheduled for 25 May 2018, on compliance with the new European General Data Protection Regulation (GDPR), subject to the protection of the Legal Department;
- a mandatory training program for all employees in information protection;
- updating of the guidelines for IT security rules and procedures, which are published under the Group guidelines available on the intranet; and
- adoption of standards and best practices in cybersecurity thanks to the identification of a security partner ecosystem.

RISKS RELATED TO HUMAN RESOURCES

Vallourec's success depends on retaining key personnel within the Group and recruiting qualified staff. It also depends to a large extent on the strong and continuing contribution made by its key executives. If the Group were to lose an important member of its management team, whether to a competitor or for any other reason, this could reduce its capacity to implement its industrial or business strategy successfully.

The Group has put in place a number of Human Resources management programs designed to limit the possible impact of these risks, which have increased in the current economic climate, such as performance appraisals, succession planning for key employees in each Region and/or Central Department, and programs to develop different categories of personnel, including future leaders. These different programs are monitored regularly by the Executive Committee.

The Group's performance also depends on the talents and efforts of highly qualified staff. Its products, services and technology are complex and its future growth and success depend largely on the skills of its engineers and other key personnel. Ongoing training of already skilled staff is also necessary to maintain a high level of innovation and adapt to technological change. The ability to recruit, retain and develop top-quality teams is a critical factor for the Group's success, and particular attention is currently being devoted to it, as a failure to do so could have a negative impact on its operating performance or development. In order to limit the risks related to the economic climate and to the launch of the Transformation Plan, Human Resources management programs are being monitored, and those programs which impact employee retention have been particularly strengthened.

5.1.13 Legal risks

5.1.13.1 Call options stipulated in certain industrial cooperative agreements linking Vallourec to Nippon Steel & Sumitomo Metal Corporation (NSSMC (1)) and Sumitomo Corporation

Certain industrial cooperative agreements linking the Group to Nippon Steel & Sumitomo Metal Corporation (NSSMC) and Sumitomo Corporation contain reciprocal change of control clauses under the terms of which each party has, in certain circumstances, a call option over the other party's interest or a termination right depending on the circumstances, in the event of a change of control of the other party (or of the entity that controls it).

NSSMC and/or Sumitomo Corporation therefore have, in the event of a change of control of Vallourec Tubes or of Vallourec, the right to acquire the shares held by the Group in the capital of VAM USA LLC.

The agreements entered into on 1 February 2016 (see Section 3.4.3 "Transformation Plan" of this Registration Document), which came into effect on 1 October 2016, amended the reciprocal change of control clauses relating to Vallourec Soluções Tubulares do Brasil (VSB, formerly known as Vallourec & Sumitomo Tubos Do Brasil), in order to take into account of Vallourec Tubos do Brasil's contribution of almost all of its assets to VSB, and thus the expansion of VSB's business scope. In the event of a change in control of Vallourec Tubes, Vallourec Tubos do Brasil or Vallourec, NSSMC benefits from the right to acquire the Jeceaba plant which was the scope of VSB's business before the 1 February 2016 agreement came into effect.

In return, the Group has the right, under certain circumstances, to acquire the shares held by the NSSMC group and Sumitomo Corporation in VSB in the event of a change in control of NSSMC or Nippon Steel and Sumikin Tubos do Brasil (or the entities controlling them).

Moreover, in the event of a change of control of Vallourec Oil & Gas France (VOGFR), Vallourec Tubes, or Vallourec, NSSMC has the right to cancel the Research and Development contract entered into by VOGFR and NSSMC on 1 April 2007, while retaining the right to use the research and development results jointly obtained and to enable any licensees to benefit from such results, as VOGFR benefits from the same rights in the event of a change in control of NSSMC. If NSSMC exercises its right of cancellation, it will also be entitled to continue to use the VAM® trademarks for three years from the date of such cancellation.

5.1.13.2 Tax risks

As an international group that carries out its activities in numerous countries, the Group has structured its sales, industrial and financial activities in conformity with the various regulatory requirements to which it is subject, and according to its sales, industrial and financial objectives. To the extent that the laws and regulations of the various countries in which the Group's entities are located or operate do not establish clear or definitive guidelines, the tax regime that is applied to its activities, transactions or intragroup restructurings (whether past or future), is or may sometimes be based on interpretations of French or foreign tax regulations and laws. The Group cannot guarantee that these interpretations will not be challenged by the competent tax administrations in the jurisdictions concerned. More generally, any breach of the current tax laws and regulations in the countries in which the Group or Group's entities are located or operate could result in reassessments of taxes owed, or the payment of late interest, fines and penalties. Furthermore, the tax laws and regulations could change or be modified through their interpretation and application by the jurisdictions or tax administrations concerned, in particular in the context of joint initiatives occurring on an international or community scale (OECD, G20, European Union).

Each of the preceding factors could result in an increase in the Group's tax burden, and have a material adverse impact on its financial position and results.

The Group has been and may in the future be subject to recovery proceedings and tax disputes in some countries in which the Group entities are located or operate. When the Group considers that a loss relating to the tax disputes is probable, a provision is made according to the best estimate of foreseeable expenses. The outcome of the ongoing tax proceedings might, however, differ from the Group's forecasts and positions, or from the amount that may be provisioned in the consolidated financial statements. The Group cannot provide assurance that these provisions will be sufficient to cover the amounts to be actually disbursed at the end of these proceedings.

The Group's future results, the French and foreign tax rules, and tax controls or disputes could limit the Group's capacity to use its tax deficits, and thus impact its financial position.

The Group has significant tax losses (for which the accounting impacts are described in Note 5 to the Group's consolidated financial statements for the fiscal year ended 31 December 2017 which appears in Section 6.1 C "Consolidated financial statements" of this Registration Document).

The Group's ability to effectively use these losses will depend on a number of factors, including (i) the ability to achieve tax benefits and the extent to which such benefits cover losses, (ii) the limits applicable to any tax losses imposed by the French and foreign laws and regulations, (iii) the consequences of current or future tax audits or disputes, and (iv) any changes in the applicable laws and regulations.

The impact of these factors could increase the tax pressure to which the Group is subject, and thus have an adverse effect on its effective tax rate, financial position and results.

5.1.13.3 Risks related to disputes

In the normal course of its business, the Group is involved in lawsuits and may be subject to inspections or inquiries by tax or customs authorities, and other national and supranational authorities. The Group recognizes a provision whenever a tangible risk is identified and a reliable estimate of the cost arising from said risk can be made.

To the Group's knowledge, at this time, with the exception of disclosures in Note 17 to the consolidated financial statements, there are no governmental, judicial or arbitration proceedings, including any proceeding of which the Company is aware that is pending or has been threatened, which could have or has had material effects on the financial position or profitability of the Company and/or Group over the last 12 months.

(1) On 1 October 2012, Sumitomo Metal Industries merged with Nippon Steel. The newly-merged organization was named Nippon Steel & Sumitomo Metal Corporation (NSSMC).

5.1.14 Market risks (interest rate, foreign exchange, credit and equity risks) and liquidity risk

Given its financial structure, the Group is exposed to (i) market risks, including interest rate, foreign exchange, credit and equity risks, and (ii) liquidity risk.

A description of market and liquidity risks is provided in Notes 8 and 16 to the consolidated financial statements in Chapter 6, Section 6.1 of this Registration Document.

5.1.14.1 Market risks

INTEREST RATE RISKS

The Group is exposed to interest rate risk on its variable-rate debt.

In December 2009, Vallourec & Sumitomo Tubos do Brasil, now known as Vallourec Soluções Tubulares do Brasil (VSB), took out a loan from *Banco Nacional de Desenvolvimento Econômico e Social* (BNDES). As at 31 December 2017, BRL 4.4 million of this loan, at a fixed rate of 4.5%, had been drawn. VSB also concluded a fixed-rate finance lease in 2010.

Vallourec issued:

- in August 2012, two long-term private placement bonds totaling €455 million. The respective amounts and terms of these two private placement bonds are €400 million for seven years with an annual coupon of 3.25% for one, and €55 million for 15 years with an annual coupon of 4.125% for the other;
- in September 2014, a €500 million bond issue, maturing in September 2024, with a fixed annual coupon of 2.25%;
- in September 2017, a €250 million bond issue, consisting of bonds convertible into new shares and/or exchangeable for existing shares, maturing in October 2022, with a fixed annual coupon of 4.125%, a 37.5% conversion premium and a unit par value of €6.89;
- in October 2017, a €400 million bond issue, with a matching contribution of €150 million (i.e. €550 million in total) maturing in October 2022 with a fixed annual coupon of 6.625%.

As at 31 December 2017, financial debt exposed to changes in variable interest rates was €182.3 million (about 7% of total gross debt). No other material fixed-rate credit facility will reach contractual maturity in the 12 months following the 31 December 2017 reporting date, apart from the outstanding amount, as at 31 December 2017, of €396.8 million in commercial paper with a maximum 12-month maturity, and various credit facilities (€68 million as at 31 December 2017) of Brazilian, American and Chinese subsidiaries.

Given the Group's interest rate risk hedging policy, the impact of a 1% rise in interest rates applied to short-term rates in the euro zone, Brazilian and Chinese rates, and British and American money market rates, would result in a €1.8 million increase in the Group's annual financial expenses, based on an assumption of complete stability of the financial debt and constant exchange rates, and after taking into account the effects of any hedging instruments. This impact does not take into account the interest rate risk on commercial paper with a maximum maturity of 12 months and on cash in short-term investments (with a maximum maturity of three months).

The tables below summarize the Group's position with regard to interest rate risk in 2017 and 2016:

Total debt as at 31/12/2017

In € thousands	Other borrowings	Cash
Fixed rate on date granted	2,381,008	–
Variable rate on date granted swapped to fixed rate	-	–
Fixed rate	**2,381,008**	**–**
Variable rate	182,331	1,021,035
TOTAL	**2,563,339**	**1,021,035**

Total debt as at 31/12/2016

In € thousand	Other borrowings	Cash
Fixed rate on date granted	2,325,628	–
Variable rate on date granted swapped to fixed rate	-	–
Fixed rate	**2,325,628**	**–**
Variable rate	247,460	1,286,722
TOTAL	**2,573,088**	**1,286,722**

FOREIGN EXCHANGE RISK

Foreign currency translation risk

The assets, liabilities, revenues and expenses of the Group's subsidiaries are expressed in various currencies. The Group financial statements are presented in euros. The assets, liabilities, revenues and expenses denominated in currencies other than the euro are translated into euros at the applicable rate so that they can be included within the financial statements.

If the euro rises (or falls) against another currency, the value in euros of the various assets, liabilities, revenues and expenses initially recognized in that other currency will fall (or rise). Therefore, changes in the value of the euro may have an impact on the value in euros of the assets, liabilities, revenues and costs not denominated in euros, even if the value of these items in their original currency has not changed.

In 2017, net income, Group share, was generated to a significant extent by subsidiaries that prepare their financial statements in currencies other than the euro (mainly in US dollars and the Brazilian real). A 10% change in exchange rates would have had an upward or downward impact on net income, Group share, of around €2.1 million. In addition, the Group's sensitivity to long-term foreign exchange rate risk is reflected in the changes that have occurred in recent years in the foreign currency translation reserves booked to equity (-€564.5 million as at 31 December 2017) which, in recent years, have been linked mainly to movements in the US dollar and Brazilian real.

Foreign currency translation reserve – Group share

In € thousand	31/12/2016	31/12/2017
USD	343,878	193,059
GBP	(11,583)	(12,107)
Brazilian real (BRL)	(529,697)	(738,432)
Chinese yuan (CNY)	34,276	19,532
Others	(13,448)	(26,513)
TOTAL	**(176,574)**	**(564,461)**

As far as the Group is aware, translation risk is unlikely to threaten its financial equilibrium.

Transaction risk

The Group is subject to exchange rate risks due to its business exposure linked to sales and purchase transactions entered into by some of its subsidiaries in currencies other than their functional currency.

The main foreign currency involved is the US dollar (USD): a significant portion of the Group's transactions (approximately 38 % of Group revenue in 2017) are invoiced in US dollars by companies whose functional currency is not the US dollar. Exchange rate fluctuations between the euro, the Brazilian real and the US dollar may therefore affect the Group's operating margin. Their impact is, however, very difficult to quantify for two reasons:

- there is an adjustment phenomenon on selling prices denominated in US dollars related to market conditions in the various sectors of activity in which Vallourec operates;
- certain sales and purchases, even though they are denominated in euros, are influenced by the level of the US dollar. They are therefore indirectly and at some time in the future affected by movements in the US currency.

The Group actively manages its exposure to foreign exchange risk to reduce the sensitivity of its net profits to currency fluctuations by setting up hedges once the order is placed and sometimes once a quotation is given.

Orders, receivables, payables and operating cash flows, are thus hedged with financial instruments, mainly forward purchases and sales.

Order cancellations could therefore result in the cancellation of hedges implemented, leading to the recognition in the consolidated income statement of gains and losses with regard to these canceled hedges.

To be eligible for hedge accounting as defined under IAS 39, the Vallourec Group has developed its cash management and invoicing systems to facilitate the traceability of hedged transactions throughout the duration of the hedging instruments.

As at 31 December of the last two years, forward foreign exchange contracts to hedge foreign currency-denominated purchases and sales amounted to the following:

Hedging contracts with regard to commercial transactions – Exchange rate risk

In € thousand	31/12/2016	31/12/2017
Forward exchange contract: forward sales	1,074,559	805,754
Forward exchange contract: forward purchases	45,218	64,563
Currency options: sales	–	–
Currency options: purchases	–	–
Raw materials and energy: call options	–	–
TOTAL	**1,119,777**	**870,317**

Contract maturities at 31/12/2017

Contracts on commercial transactions *In € thousands*	Total	1 year	1 to 5 years	> 5 years
Exchange contracts: forward sales	805,754	805,754	–	–
Exchange contracts: forward purchases	64,563	64,563	–	–
Currency options: sales	–	–	–	–
Currency options: purchases	–	–	–	–
Raw materials and energy: call options	–	–	–	–
TOTAL	**870,317**	**870,317**	**–**	**–**

Forward sales (€806 million of the €870 million total) correspond mainly to sales of US dollars. These contracts were transacted at an average forward EUR/USD rate of 1.18 and an average forward USD/BRL rate of 3.29. In 2017, as in 2016, the hedges entered into generally covered an average period of about 10 months and mainly hedged highly probable future transactions and foreign currency receivables.

In addition to hedges on commercial transactions, Vallourec has, since 2011, implemented forward sales for USD 200.8 million (€168.8 million).

These instruments are intended to hedge the foreign currency loans and checking accounts established by the financial holding company Vallourec Tubes in the currency of the subsidiaries receiving them. The forward purchases and sales mature at various times in 2018, as and when the hedged loans and borrowings mature.

CREDIT RISKS

Vallourec is subject to credit risk on financial assets for which no impairment provision has been made and whose non-recovery could affect the Company's results and financial position.

The Group has identified three main types of receivables that have these characteristics:

- security deposits paid in connection with tax disputes and the tax receivables due to the Group in Brazil;
- trade and other receivables;
- derivatives that have a positive fair value:
  - security deposits and tax receivables due to the Group in Brazil: there is no specific risk in respect of these receivables, even if the outcome of the disputes is unfavorable, since the risk has already been assessed and a provision recognized in respect of these receivables, and the funds have already been paid in full or in part,
  - the Group's policy on the impairment of trade and other receivables is to recognize a provision when indications of impairment are identified. The impairment is equal to the difference between the carrying amount of the asset and the present value of expected future cash flows, taking into account the position of the counterparty.

The Group considers that as at 31 December 2017 there is no reason to assume that there is any risk in respect of receivables for which no provision has been made and which are less than 90 days overdue. Trade receivables more than 90 days past due and not impaired amounted to €38.4 million as at 31 December 2017, or 7% of the Group's total net trade receivables.

However, Vallourec believes that its credit risk is limited given its existing customer risk management procedures, which include:

- the use of credit insurance and documentary credits;
- the long-standing nature of the commercial relationship with the Group's major customers; and
- the commercial collection policy.

In addition, as at 31 December 2017, trade receivables not yet due amounted to €435.6 million, or 80% of total net trade receivables. The following table provides an analysis by maturity of these trade receivables:

As at 31 December 2017	0 to 30 days	30 to 60 days	60 to 90 days	90 to 180 days	over 180 days	Total
Not due *(in € millions)*	276.5	97.8	16.7	41.0	3.6	435.6

Equity risk

Treasury shares held by Vallourec as at 31 December 2017 are allocated to allocation plans for certain employees or executive corporate officers of the Group.

In this context, Vallourec holds:

- 165 treasury shares acquired in 2011 under the share buyback plan of 7 June 2011, after definitive allocation of 27,534 shares in 2012, 86,377 shares in 2013, 91,929 shares in 2014, 108,600 shares in 2015, 30,524 shares in 2016 and 54,871 shares in 2017 under the various performance share plans;
- 1,131 treasury shares acquired in 2012 under the share buyback plan of 31 May 2012, upon the definitive allocation of 94,600 shares in 2014 and 225,684 shares in 2016, and 78,585 shares in 2017 under the various performance share plans;
- 171,311 treasury shares acquired in 2014 after the definitive allocation of 128,689 shares in 2017 for the various performance share plans;

On 18 December 2017, Vallourec decided to terminate the liquidity contract entered into on 26 June 2012 with Rothschild & Cie Banque.

To the best of its knowledge, the Group had no other exposure to equity risk as at 31 December 2017.

5.1.14.2 Liquidity risk

As at 31 December 2017, the maturities of current bank loans and other borrowings totaled €746,220 thousand; the maturities of non-current bank loans and other borrowings totaling €1,817,119 thousand are shown in the table below:

Breakdown by maturity of non-current loans and other borrowings (> 1 year)

In € thousand	> 1 year	> 2 years	> 3 years	> 4 years	5 years or more	Total
As at 31/12/2016	**53,996**	**421,612**	**23,023**	**14,663**	**607,354**	**1,120,648**
■ Finance lease	9,368	9,211	9,260	9,299	28,735	65,873
■ Other non-current borrowings	403,675	3,076	4,378	770,705	569,412	1,751,246
AS AT 31/12/2017	**413,043**	**12,287**	**13,638**	**780,004**	**598,147**	**1,817,119**

The Group's financial resources are composed of bank financing and market financing.

The majority of long-term and medium-term bank financing has been put in place in Europe through Vallourec and, to a lesser extent, the subsidiaries in Brazil (see below).

Market financing is arranged exclusively by Vallourec.

Within the context of deteriorating market conditions and results of the Group, Vallourec's rating was downgraded to B, with a negative outlook.

IN EUROPE

In February 2014, Vallourec took out a revolving credit facility for the amount of €1.1 billion, maturing in February 2019, plus two one-year extension options. In addition to the first one-year extension obtained for €1.078 billion, the second extension was granted in July 2016 for the sum of €989 million, which was then raised to €1,034 million in July 2017. The new maturity date is in 2021. This credit line is available for the Group's general funding purposes. As at 31 December 2017 this line had not been drawn.

In June 2015, Vallourec agreed to a confirmed bilateral line of €90 million until February 2019 with two one-year extension options, which were granted in July 2016. As at 31 December 2017 this line had not been drawn.

In September 2015, Vallourec took out a revolving credit facility for an amount of €400 million, maturing in July 2019, with a one-year extension option which was granted in July 2016 for the total amount. The new maturity date is in 2020. This replaced four medium-term bilateral lines of €100 million each, which were originally granted to Vallourec Tubes, maturing in July 2017. As at 31 December 2017 this line had not been drawn.

In May 2016, Vallourec took out a revolving credit line for €450 million maturing in February 2020. As at 31 December 2017 this line had not been drawn.

Each of these bank facilities requires Vallourec to maintain its consolidated net debt-to-equity ratio at no more than 75%, calculated as at 31 December each year. For 2018, 2019, and 2020, this ratio was taken to 100% for all Vallourec's bank facilities through amendments of 17 March 2017. In the event of non-compliance with this ratio requirement, lenders would be entitled to demand early repayment of the outstanding drawn amounts. Vallourec was in compliance with this ratio requirement as at 31 December 2017. As defined in the financing agreements, the "bank covenant ratio" is the ratio between the Group's net consolidated debt and the Group's equity, restated for gains and losses on derivatives and valuation differences (gains and losses on the consolidated subsidiaries in foreign currencies).

A change in control of Vallourec could require the repayment of some or all of the loans, to be decided by the participating banks. The financing agreements also provide that the entire debt will be immediately due and payable if the Group defaults on one of its debt obligations (cross default) or, in the case of specified major events, with consequences for the Group's business or financial position and its ability to repay its debt.

In addition to this bank financing, the Group aims to diversify its sources of financing on the markets. For example, Vallourec launched a commercial paper program on 12 October 2011 to meet its short-term needs. The program has a €1 billion ceiling. As at 31 December 2017, Vallourec had outstanding €396.8 million for maturities ranging from 1 to 12 months. This commercial paper program is rated B by Standard & Poor's.

In August 2012, Vallourec also issued two long-term private bonds totaling €455 million. The amounts and terms of these two private placements are €400 million for seven years with an annual coupon of 3.25% for one, and €55 million for 15 years with an annual coupon of 4.125% for the other.

On 30 September 2014, Vallourec issued a €500 million bond, maturing in September 2024, with a fixed annual coupon of 2.25%.

On 27 September 2017, Vallourec issued a €250 million bond, consisting of Bonds Convertible into New Shares and/or Exchangeable for Existing Shares, maturing in October 2022, with a fixed annual coupon of 4.125%, a 37.5% conversion premium and a unit par value of €6.89.

On 11 October 2017, Vallourec issued a €400 million bond, which received a matching contribution on 23 October 2017 in the amount of €150 million (i.e. €550 million in total) maturing in October 2022 with a fixed annual coupon of 6.625%. This bond is callable pursuant to the contractual terms as from 15 October 2020.

As at 31 December 2017, the market value of these fixed-rate bonds was €410.4 million, €61.5 million, €521.7 million, and €549.0 million, respectively.

These bond issues were intended to diversify and increase the amount and extend the maturity of the financial resources available to the Group.

They specifically include a change of control clause that would trigger the mandatory early redemption of the bonds at the request of each bondholder in the event of a change of control of Vallourec (in favor of a person or a group of people acting jointly), entailing a reduction in the Company's financial rating.

The bonds may also be redeemed early at the request of the bondholder or Vallourec, depending on the case, in the event of certain standard cases of default for this type of bond issuance or a change in Vallourec's position or in the tax regulations.

BRAZIL

In December 2009, Vallourec & Sumitomo Tubos do Brasil, now known as Vallourec Soluções Tubulares do Brasil (VSB), took out a loan of BRL 448.8 million from *Banco Nacional de Desenvolvimento Econômico e Social* (BNDES). This fixed-rate loan at 4.5% is denominated in Brazilian reals and has a term of eight years. It is amortizable from 15 February 2012. As at 31 December 2017, the residual amount outstanding on this loan was BRL 4.4 million.

In 2010, the same company entered into a finance lease with a nominal value of BRL 570 million relating to equipment needed to operate the plant at Jeceaba. As at 31 December 2017, the residual amount outstanding on this finance lease was BRL 287 million.

UNITED STATES

Vallourec Star LP benefits from a bilateral bank line of credit established in 2016 for a total amount of USD 80 million. The amount used as at 31 December 2017 totaled USD 80 million. This line contains clauses relating to the indebtedness of Vallourec Star LP and a change of control clause.

In 2013, Vallourec Star LP set up a finance lease with a nominal value of USD 64.3 million and a final maturity of five years. As at 31 December 2017, the residual amount of this contract was USD 27.9 million.

As at 31 December 2017, the Group complied with its covenants and the terms and conditions for obtaining and maintaining all of the above facilities.

All the facilities described above adequately covered the Group's liquidity requirements as at 31 December 2017.

5.2 Risk management procedures and internal control

Risk management and internal control are rolled out in all companies in which Vallourec directly or indirectly holds the majority of share capital. Companies whose shares are listed or under joint control have an appropriate system and internal control structure, consistent with current local legislation.

Internal control and internal audit rely on the results of the risk analysis, in order to improve the Group's internal control mechanisms and define its internal audit plan, respectively.

5.2.1 Risk management

5.2.1.1 Objectives and general principles of risk management

Risk management provides management leverage for the Group, and primarily contributes to:

- securing the Group's decision-making processes and other procedures in order to promote the achievement of its objectives;
- creating and preserving the Group's value, assets and reputation.

Furthermore, risk management aims to:

- promote consistency between the Group's actions and values; and
- mobilize the Group's employees around a common vision in terms of primary risks and raise their awareness of the risks inherent to their business.

Vallourec adopts a detailed cross-company approach in its "Group Risk Management Policy". The Risk Management Department provides methodological support for promoting and implementing this policy. This favors the development of internal control by anticipating risks and reviewing the "best practices" for controls.

Risks are managed by the industrial and sales units and by the functional departments.

The Risk Committees set up within each major entity and Region, and the Management Board evaluate the risks and determine the controls and action plans aimed at limiting the impact and/or the probabilities of these risks occurring.

5.2.1.2 Risk management measures

Identifying risks consists of determining the main risks the Group faces with its operational and functional departments. In collaboration with the entity in question, the Risk Management Department analyzes these risks and maps them, an exercise which in particular aims to agree on a list of risks and to determine how to reduce, transfer, eliminate or accept them. Priorities are determined not only according to probability of occurrence and/or consequences of risks, and control level, but also of the progress of control improvements through benchmark practices in the subject area.

Risk maps are in place for each of the major entities, Regions, and for the Management Board. Each map incorporates main risks, along with their likely scenarios, internal and external experiences with such risks, controls in place and "best practices".

Risk management is provided by the Regions and Management Board during the periodic committee meetings in which the head of risk management participates, in order to provide ideas and guarantee that actions are consistent at Group level. Each Committee meeting is attended by the relevant entity manager and their main assistants. Functional managers affected by specific risks may also be invited, in particular managers from the Departments of Technology, Research and Development and Innovation, and Information Systems. Each Committee meeting handles the following matters:

- validation of diagnosis, allocation and follow-up of action plans for each priority risk;

- validation of the key risk indicators, which ensures the relevance of new controls after closure of the action plan, and the on-going application of said controls.

The Group works collaboratively with its insurers to supplement this work of identifying industrial risks and to roll out continuity plans.

5.2.2 Internal control

5.2.2.1 General internal control principles and objectives

The Group's internal control system was developed and implemented with significant involvement from the Group's staff. It aims to provide reasonable assurance that the following four objectives can be achieved:

- compliance with laws and regulations in force;
- proper application of the instructions issued and compliance with the policies laid down by the Management Board;
- proper operation of internal processes (in particular those relating to achieving objectives and safeguarding assets); and
- accuracy of accounting and financial information.

The internal control process is constantly evolving in order to adapt to changes in the economic and regulatory environment and the Group's structure and strategy. Independently of these developments, the key control activities for internal control processes and risk management are regularly reviewed.

In order to ensure the consistency of daily actions led worldwide on behalf of the Group, Vallourec has put in place a set of key internal control procedures. These constitute the basis for the internal rules which apply to all its employees and to its units.

At the heart of Vallourec's internal control system, these procedures provide a framework for the actions of each employee. They relate, in particular, to ethics, compliance with laws and regulations, the delegation of authority, the confidentiality of information, the prevention of insider trading, the procedure for relations with the media and financial communication.

ETHICS AND COMPLIANCE WITH LAWS AND REGULATIONS

The Group's structure and actions in terms of ethics and compliance with the laws and regulations are more extensively described in Section 4.2 "Ethics and Compliance" of this Registration Document.

DELEGATION OF AUTHORITY

The level of authority given to each manager within the Group must remain compatible with the maintenance of an overall level of control, with the Group's strategy, and with the application of rules common to all Group entities.

To meet these requirements, the aim of the delegated authority procedure at Group level is to clearly define the prerequisite approval levels for the main commitments entered into by any Group entity. Delegations of authority may not contravene applicable statutory and regulatory provisions.

Led by the Internal Control Department, this procedure is adapted as often as needed. It is implemented in each Region in the areas for which the subdelegations have been authorized by the Group.

CONFIDENTIALITY OF INFORMATION

Against a backdrop of intense competition, the Group needed to make all employees aware of their obligations as regards confidentiality. Vallourec therefore drew up a Confidentiality Charter with the aim of enabling it to carry out its business under the best possible conditions in the face of competition and of protecting people working for Vallourec by informing them of the confidentiality obligations with which they must comply.

PREVENTION OF INSIDER TRADING

Vallourec has a Code of Good Conduct on the prevention of insider trading that may occur in connection with transactions in its shares.

This Code concerns not only Vallourec's corporate officers, but all of the Group's employees and partners.

Its objective is to ensure compliance with precautions in order to (i) protect staff at all levels by making them aware of stock exchange regulations and applicable penalties, so as to enable them to avoid being the subject of legal proceedings, (ii) protect Vallourec and the Group, in particular from the risks of damage to its image and reputation and a decline in the value of its shares, and (iii) retain the confidence of investors and maintain equality of treatment between shareholders.

The Group's Legal Director performs an ethics function, and is mainly in charge of overseeing compliance with the provisions of the Code of Good Conduct, although each employee involved is ultimately responsible for compliance with the applicable regulations. In particular, the Legal Director updates the insider lists required by current regulations and keeps them available for the French securities regulator (*Autorité des Marchés Financiers* – AMF).

PROCEDURES FOR RELATIONS WITH THE MEDIA

Vallourec defined procedures for relations with the media, as well as a set of best practices to be followed on social networking sites, which aim to safeguard the development of the Group's image and the promotion of its activities, while ensuring its messages are consistent and its reputation is protected.

All information for the media, whether provided or requested, and when it concerns in particular a press release, conference, interview or telephone call, is subject to an internal validation process.

Likewise, all activity on social networking sites must be conducted in accordance with the best practices that have been formally adopted by the Communications Department and posted on Vallourec's Intranet.

FINANCIAL COMMUNICATIONS

Vallourec has drawn up a financial communications procedure, which aims to ensure that the Group's system of providing financial information to the public complies with applicable statutory and regulatory provisions.

Annual and interim financial reports and quarterly financial information are the subject of an internal approval process prior to their release and filing with the AMF.

5.2.2.2 Internal control mechanism

The Management Board sets the internal control policy and ensures it is implemented by the executive management of each Group entity.

To ensure the consistency of the Group's procedures worldwide, the Management Board relies on the functional departments to draw up procedures, give instructions and ensure compliance with them.

In 2013, the Group launched a plan to strengthen its internal control mechanism over three years, in an effort to better structure and coordinate existing procedures.

In 2014, the Group focused specifically on preparing, disseminating and monitoring a self-assessment mechanism on internal control. This tool relies on a new set of internal control guidelines, which were developed by Vallourec using objectives which go beyond the reliability of financial information. These are based on an analysis of the risks inherent in key processes and on identifying their key control points. In preparing them, Vallourec relied on the recommendations of the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in its 2013 edition, and on the provisions of the Reference Framework of the French securities regulator in its 2010 edition. Specific controls were included to prevent fraud.

In 2016, the Group provided all of its managers with training on internal control. The objective was to strengthen the culture of each of the managers in this area. This enables them to closely adapt the internal control mechanism of their entity based on the guidelines and priorities given by the corporate Internal Control Department.

In 2017, a new self-assessment session based on the improved questionnaire was conducted and allowed points for improvement and joint action plans to be identified, which will be completed in 2018.

Moreover, the Internal Audit Department always participates in these processes with the objective of evaluating the quality of the self-assessment at the internal control level approved by each company manager, through the evaluation of a predefined number of "key" checkpoints.

The existing internal control mechanisms are described in relation to the relevant key functions of the Vallourec Group below.

5.2.2.2.1 INTERNAL CONTROL MECHANISM PROCESSING FINANCIAL AND ACCOUNTING INFORMATION

Financial and accounting reporting

Preparation of financial and accounting information is centralized based on the subsidiaries' financial statements, adjusted to comply with Group standards. The information is collected via reporting and consolidation software at all the consolidated subsidiaries.

The subsidiaries report monthly in the following month. Accounting consolidation is comprehensive and completed quarterly, within the same period of one month. The reporting of off-balance sheet contingent liabilities and commitments is an integral part of the quarterly consolidation process.

External financial information

Vallourec publishes quarterly information as at 31 March and 30 September each year, including, in particular, the consolidated statement of financial position and income statement. The preparation of the quarterly, interim and annual consolidations is the responsibility of the Management Board. The Statutory Auditors conduct an audit of the annual financial statements and a limited review of the interim financial statements. They generally do not audit the quarterly financial information.

Cash management and financing

The Cash Management and Financing Department is in charge of the Group's financing strategy and manages banking liquidity and access to market financing.

The Cash Management and Financing Department ensures that cash flow is optimized and controlled through:

- forecasts prepared by companies in the Group;
- centralizing euro, British pound, Chinese yuan and US dollar cash flow at the main European companies;
- centralized cash management in Chinese yuan for the main Chinese companies at Vallourec Beijing Co. Ltd;
- centralized cash management in US dollars for some US companies at Vallourec Holding, Inc. and Vallourec Tubes; and
- monthly cash management reports in Brazilian real at the Brazilian companies.

Long-term (more than one year) financing and investment are managed by the Cash Management and Financing Department. Financing and investments of less than one year are delegated to subsidiaries according to a specific Group procedure: quality of the banks involved, risk-free investment, and monitoring of the financial guarantees given.

The Cash Management and Financing Department is also responsible for foreign exchange and interest rate risk management strategy.

To this end, currency hedging operations for sales in US dollars, British pounds, Chinese yuan, Norwegian krone and Canadian dollars are centralized for the Group's main companies.

Currency and currency hedging operations are governed by rules established by the Group's Cash Management and Financing Department and, more generally, all the cash management operations specific to each company are conducted within the framework of a general cash and risk management policy.

The Cash Management and Financing Department ensures debts, investments and foreign exchange transactions of subsidiaries are tracked. As part of this tracking, it prepares a monthly report which is sent to the Management Board.

Procedures and instructions for financial and accounting reporting

With the objective of producing high-quality financial and accounting information, Vallourec has established procedures and instructions tailored to its French and foreign subsidiaries. These procedures are classified by topic and deal mainly with accounting, cash and cash equivalents, and reporting issues, and with the IFRS framework.

Details of the procedures are available on an intranet site that can be consulted by all of the Group's finance staff.

To ensure consistency between financial and accounting data on the one hand, and management tools and rules on the other, the Group has drawn up a set of procedures in a Management Manual, summarizing the definitions, principles and rules for management control and for the production of financial information. This document is disseminated among employees who are in charge of preparing and controlling management and financial information. Its purpose is to contribute to the quality and consistency of this information.

5.2.2.2.2 OTHER KEY INTERNAL CONTROL MECHANISMS

Gross capital expenditure

The Management Board reviews the Group's capital expenditure position presented by the Capital Expenditure, Projects and Engineering Department several times per year. It examines budgets, capital expenditure authorizations, and actual and forecast expenses.

According to the procedure, "Management of CAPEX projects", projects with an expected cost of over €1 million follow a specific qualification and authorization process through three stages of Front End Loading.

The Qualification Committee includes the Group's experts, examines the fundamental aspects of the projects at each of the three stages (market assumptions, technical choices, budget, planning and risks) and meets once a month under the aegis of the Capital Expenditure, Projects and Engineering Department. The Authorization Committee brings together either the Director of Capital Expenditure, Projects and Engineering, and the Director of Management Control for projects over €1 million, or the members of the Management Board for projects of more than €5 million. During these committee meetings, the projects are compared in terms of alignment with strategy, profitability and risks, all within the framework of the Group's budget.

The Capital Expenditure, Projects and Engineering Department participates as a member of the steering committees for major industrial projects in progress, in order to implement "best practices" of governance and management. The goal is to reliably complete these projects in line with expected costs, quality and time frames. It also audits certain projects underway, in order to ensure that best project management practices are effectively implemented.

The Capital Expenditure, Projects and Engineering Department carries out a monthly check on compliance with annual objectives and, in conjunction with the Regions concerned, ensures that corrective measures are taken if any discrepancy is noted.

A posteriori controls are carried out on expenses, expected objectives and the profitability of capital expenditure projects at the initiative of the Capital Expenditure, Projects and Engineering Department, and with the support of the Management Control Department. Such controls are performed on projects authorized in earlier years that are in production.

Management system

Vallourec has management systems (Vallourec Management Systems – VMS), which are implemented at all Group companies. VMS has been structured around seven main components:

- the Human Resources management system, including, in particular, the Talent 360 system, on which the management of performance, annual interviews and professional interviews depend;
- the CAPTEN+ Safe program, which coordinates all actions to continuously improve work safety;
- programs related to sustainable development, following the commitments of the Group's Sustainable Development Charter;
- management systems contributing to industrial excellence, which specifically comprise the quality management and lean management systems. Lean management aims to improve performance in terms of productivity, level of stock and time to complete orders;
- systems that include activities related to excellence in sales, including marketing, key account management, and the implementation of valued offers;
- Research and Development management systems, through the innovative project management system; and
- the major projects management system described in the Group's Qualification and Authorization Management Handbook, which coordinates the activities and deliverables required for managing industrial investments.

In addition to the control of processes and continuous improvement, VMS is responsible for ensuring that initiatives are consistent with the aims of the Group's strategic plan.

The functional departments assist the Group's entities in rolling out VMS, sharing and capitalizing on "best practices", and developing managers' expertise.

Quality – safety

The Quality Department and the Group Safety Department are in charge of proposing the guidelines and objectives of the Group to General Management, in terms of quality and safety, and of defining applicable standards on the subject for the Group as a whole.

Under VMS, these standards define the suitable systems, methods and specific tools to be implemented to consistently improve product quality and control of manufacturing processes, on the one hand, and the safety of people and equipment, on the other. They are defined in conformity with the quality management standards (ISO 9001 or ISO/TS 16949, API, ASME, etc.) and safety standards (OHSAS 18001).

The Quality Department and the Safety Department handle promotion of these standards, assist with their implementation, set up the necessary training programs and oversee the sharing of best practices. Through the visits they make to all Group sites, in addition to the audits carried out by external certification bodies, they ensure these practices are well understood and properly applied to all processes which contribute to customer satisfaction.

The Vallourec Quality approach takes into account the requirements of the most stringent standards, in particular those relating to standardization, problem resolution, the control of variations in quality and risk prevention.

The safety improvement program, known as CAPTEN+ Safe, falls within the framework of VMS, and is consistent with the following three basic principles: the commitment of management as a whole, the involvement of all employees and the establishment of appropriate follow-up indicators.

Sharing the Management Board's concern regarding safety, the Supervisory Board starts each of its meetings with a progress review of safety performance.

Sustainable development

Sustainable development is managed within Vallourec by the Sustainable Development Department, which reports to the Group's Legal Director, General Secretary and a member of the Executive Committee.

In 2014, the Sustainable Development Department presented the Executive Committee with a five-year strategic plan. Its main provisions, approved by the Supervisory Board during its meeting of 30 July 2014, were incorporated into the Company's strategic guidelines. This plan was again presented to the Executive Committee on 4 July 2016 to report on its progress and propose new actions. The conditions for implementation of the Health and Environmental policies were communicated to the Supervisory Board in May 2016.

The Sustainable Development Department's main role is to mobilize the Regions and functions to make progress in sustainable development and social responsibility.

Whenever necessary the Sustainable Development Department submits the decisions to be implemented by the Divisions and functional departments to the Executive Committee.

The Sustainable Development Department is in charge of communicating the information required pursuant to the Law of 12 July 2010, the “Grenelle 2” Law and its implementing regulations, the purpose of which is to emphasize the Company’s commitment to corporate social, environmental, societal and ethical issues, as well as the progress achieved. This information has been included in Chapter 4 of this Registration Document.

The Sustainable Development Department is directly responsible for environmental actions. It coordinates and leads the initiatives of those responsible for HSE in the Regions and business units. They are tasked with the particular duty of ensuring compliance with applicable laws and regulations on operations, and with improving environmental performance pursuant to Vallourec’s Sustainable Development Charter and the Group’s Environmental Policy, which in particular concerns water, waste, hazardous products, emissions and noise. Annual or bi-annual audits, depending on the importance of the sites, are conducted locally. An environmental performance report is published every quarter for the managers concerned. In 2016 the Group installed new a software application specifically for the management of environmental data and safety. This application now simplifies the collection and verification of data and offers new features to the sites that help them with their own local reporting.

The goal of ISO 14001 certification for all production sites is close to being achieved and the Jeceaba site in Brazil is expected to be certified in 2017. An environmental compliance plan will also be developed for the newly-acquired Tianda.

The Sustainable Development Department is also leading the energy performance improvement program, which has an objective of reducing specific consumption by 20% by 2020, based on 2008 production guidelines. This objective is maintained in the context of the Group’s new industrial footprint. To this end, it adjusts practices and ensures that the operational entities invest in new energy-efficient equipment. These actions were also aimed at reducing greenhouse gas emissions.

Since 2013, numerous sites, including Barreiro, Saint-Saulve, Vallourec Deutschland, Vallourec Oil & Gas UK Ltd and Vallourec (Changzhou) Co., Ltd [(1)] in China have obtained ISO 50001 certification for energy management. The Youngstown and Jeceaba sites should also be certified in the short term.

Research and Development

The Development and Innovation Department (D&I), which comprises product lines, the R&D centers, the Key Account Managers and the Innovation teams, established procedures at Group level concerning the management of new products, industrial processes and services, the project portfolio management of product lines, and the Group’s idea generation process (Front End Innovation). The defined processes are consistently applied by the entities concerned. These procedures also incorporate aspects of intellectual property.

The selected projects benefit from specific training and assistance actions that are conducted by experienced professionals, to speed up.

The product line projects portfolios are monitored according to various criteria, in particular and their risks.

Purchases

In 2017, the Purchasing Department pursued and consolidated its internal control continuous improvement process. This process occurs at the stage of the initial purchase (product specification, selection of suppliers and contracts) through processing (receipt of the necessary quantities at the price agreed to and under the determined delivery and payment conditions).

At the start of the process, the Purchasing Department centralizes the analysis of all purchases in order to have good visibility on the most strategic goods and services among the Group’s purchases. It has set up a specific information system to ensure that visibility. On this basis, purchase strategies are determined in cooperation with internal customers and validated by management. Taking commercial practices into account, it focuses on precisely formalizing the contracts and orders to avoid later disputes.

In an effort to make competitive, high quality, and responsible purchases, suppliers are selected based on analytical matrices. These simultaneously consider the financial health of the suppliers, their level of social and environmental responsibility and, of course, the criteria of quality, lead times and overall cost.

At the end of the purchase process, and in addition to the control of supplier invoices, a quality control process is likewise conducted for the products or services that require it. Purchase orders, receiving controls and supplier payments are rigorously carried out by different entities.

A process is in place to systematically assess supplier risk. Monthly reviews are carried out to ensure that all actions are being taken to minimize and then eliminate these risks.

In order to prevent any conflicts of interest and any unethical relations between the Purchasing Department and suppliers, every major purchase has to be approved by the internal client and the Purchasing Department, which issues a decision based on a comparative analysis of offers and suppliers.

The emphasis on formalizing procedures and educating buyers, mainly through e-learning, has also allowed the entire Purchasing Department to gain further knowledge on risk management and internal control.

Information systems

The multi-year audit plan for the information system security of the Group was renewed for the 2014-2018 period, and its scope was expanded to new regions, such as the Middle East.

In 2014, the Information Systems Department strengthened its capacity to detect attempts at intrusion by putting in place network observation and analysis mechanisms for all the Regions. In 2015, the mechanisms were extended in France to improve coverage of all sites.

A plan concerning industrial safety, primarily that of the lower IT levels of the plants, which are close to production workshops, progressed in France.

The roll-out of a hard drive encryption solution for laptops continued.

A strengthened analysis system for messaging was established in addition to the classic measures.

(1) Became Vallourec (China) Co., Ltd on 18 August 2017.

The commissioning of the SAP application at Vallourec Star, LP and its roll-out at Vallourec Oil and Gas France was successfully completed.

A plan to harmonize financial reporting, and the adoption of a standard accounting plan for all of the Group's units, was executed and a software program to track and manage suppliers for Purchases was set up and centralized.

Actions to educate employees on protecting information and support for major projects related to risk management and internal control included:

- performance and follow-up of the action plan for an internal control campaign for all the Group's Regions;
- development of a Group IT Charter with the aim of strengthening users' best practices;
- pooling of CNIL (French data privacy agency) practices with the Legal Department;
- a training program on protecting information; and
- updating of the guidelines for IT security rules and procedures, which are published under the Group guidelines available on the intranet.

Human Resources

The Human Resources Department relies on an internal control process for all of its functioning: the performance of its duties, training and skills management, the working environment, compliance with the Vallourec Group's internal regulations and the prevailing statutory and regulatory provisions, compensation management and the protection of privacy and information regarding the Company and its employees.

Within the context of talent management, the Human Resources Department identifies key positions in the Group, analyzes the risks of misconduct, and then consequently prepares development and succession plans. Furthermore, Human Resources (HR) management ensures that there is an available group of people who have the necessary expertise and abilities to perform the duties with which they have been entrusted.

Various control activities relating to the Human Resources process are monitored in cooperation with the Group HR Director.

HR managers participated in training and workshops provided in 2017 in their reporting entity and within their function, taking responsibility, whenever necessary, for the improvement action plans that resulted from these sessions.

Commercial relations

With the aim of specifying and formalizing certain practices regarding contractual relations with its customers, Vallourec has developed a procedure for managing customer risk (limits regarding credit and delegation of authority, and credit insurance) and drawn up general sales terms to be applied by all Group entities, in order to make practices consistent throughout the Group and reduce risk exposure.

The procedures for reviewing contracts and candidates for invitations to tender were reviewed in 2012, in order to roll out a new tool to evaluate and summarize the legal risk associated with sales. The rolling out of this new tool improves the effective analysis of the legal conditions that apply to sales contracts signed by the Group's subsidiaries with their customers, and allows discrepancies in relation to the Group's standards to be precisely managed and related statistics to be recovered. The general conditions and standard documents are regularly updated in order to monitor changes in the market and regulations.

Furthermore, the Legal Department and the Risk Management Department are working together closely. They are providing monitoring in order to identify "best practices" for managing the contractual legal risk, with a view towards ongoing improvement.

Insurance

The main industrial risks are covered by two types of Group insurance:

- a general insurance policy (direct material damage to Group property, not subject to specific exclusions, as well as any resulting costs and consequential losses); and
- a third-party liability insurance policy (liability arising as a result of injury or loss caused to third parties during operations or after delivery or service).

5.2.3 Entities and persons involved in risk management and internal control

5.2.3.1 The Management Board

The Management Board, acting directly or by delegation, is responsible for the quality of the internal control systems and risk management. It designs and implements the internal control and risk management systems which have been tailored to the Group, its activity and organization, and in particular defines relevant roles and responsibilities within the Group.

It conducts on-going oversight of internal control and risk management systems with the dual objective of preserving their integrity and improving them – in particular by adapting them to structural changes and the business environment. It initiates any corrective action necessary to correct issues that are identified and stays within the scope of the accepted risks. It ensures that these actions are properly conducted.

The Management Board makes sure that the appropriate information is communicated within the desired period of time to the Supervisory Board and Audit Committee.

5.2.3.2 The Supervisory Board

The Supervisory Board is informed of the basic characteristics of the internal control and risk management mechanisms retained and implemented by the Management Board to manage risks: the organization, roles and duties of the main players, the process, risk reporting structure and operational follow-up of the control mechanism. It acquires an overall understanding of the procedures relating to the preparation and processing of the accounting and financial information.

The Supervisory Board sees to it that the major risks identified, which have been incurred by the Group, are addressed by its strategies and objectives, and that these major risks are taken into account in the Group's management.

In particular, the Supervisory Board verifies with the Management Board that the mechanism for managing the internal control and risk management systems is sufficient to ensure the reliability of the Group's financial information and provides a true and fair view of its results and financial position.

5.2.3.3 The Finance and Audit Committee

In conformity with Article L. 823-19 of the French Commercial Code (*Code de commerce*), the Finance and Audit Committee is responsible for the following:

- monitoring the process of preparation of financial information;
- monitoring the effectiveness of the internal control and risk management systems as well as the internal audit system, regarding the procedures for the preparation and processing of accounting and financial information, without prejudice to its independence;
- issuing a recommendation to the Supervisory Board on the Statutory Auditors proposed for appointment by the Shareholders' Meeting;
- monitoring the Statutory Auditors in the completion of their assignment, particularly the statutory audit of the parent company and consolidated financial statements;
- ensuring compliance with the requirements for the independence of Statutory Auditors and taking the necessary steps to comply with the rules on capping audit fees for services other than certification of the financial statements; and
- approving the provision by the Statutory Auditors of services other than certifying the financial statements, where such services are not prohibited.

The Finance and Audit Committee ensures that the internal control and risk management systems are effectively monitored, based on the information that is communicated to it by the Management Board, or which it requests. It ensures there are internal control and risk management systems, and that they are used, and makes sure that the weaknesses identified are addressed by corrective actions. Conversely, it does not take part in implementing said systems.

In order to carry out its role of monitoring the effectiveness of the internal control and risk management systems, as well as the internal audit system, regarding the procedures for preparation and processing of accounting and financial information, the Finance and Audit Committee takes formal note of the results of the internal audit and external audit work conducted on these subjects, in order to ensure that if any problems are detected, appropriate action plans are put in place and thoroughly implemented.

5.2.3.4 Head of risk management and internal control

The head of risk management and internal control ensures that the overall risk management process, as defined by the Management Board, is rolled out and implemented. To that end, it puts in place a structured, permanent and adaptable mechanism which aims to identify, analyze and address the main risks. It carries out the risk management system and provides methodological support to the Company's operational and functional departments. In 2014, Vallourec adopted a new "Internal Control" function which is shared with the Risk Management function. This allowed it to go from development to a sustainable structure in 2015, with the aim of strengthening the internal control culture within the Group. In 2016, training provided to all Group executives strengthened the internal control culture at Vallourec.

5.2.3.5 Internal Audit Department

The Group's Internal Audit Department is an independent and objective entity, which reports to a member of the Management Board. Its purpose is to handle all topics, without restriction.

The Internal Audit Department, whose duties, powers and responsibilities are formally specified in an Internal Audit Charter, helps the Group achieve its objectives by evaluating the proper implementation of internal control and risk management mechanisms, using a systematic and methodical approach. It identifies the weaknesses of these mechanisms, issues proposals for corrective actions, and makes sure, until they are resolved, that the audit points noted are addressed with proper follow-up.

The Internal Audit Department may also participate in specific engagements, such as operations relating to business acquisitions or disposals, project assistance, or investigation.

In order to draft its annual audit plan, the Internal Audit Department takes into particular consideration the Group's risk mapping, as well as the requests of the Management Board and the heads of Regions and functional departments. The purpose of the annual audit plan that is prepared using these methods is to audit all of the Group's entities in which it directly or indirectly holds a majority interest, over a three or four-year period.

At the end of each audit, the Internal Audit Department issues a report which leads to recommendations, which are systematically followed up on. It simultaneously reports on its work and findings, as well as on the degree of progress of action plans, by presenting summaries to the Finance and Audit Committee on a semiannual basis.

The Internal Audit Department implements an on-going improvement procedure with the aim of improving the internal audit process.

5.2.3.6 Employees

Each employee concerned, and in particular the heads of offices, Regions and functional departments, has the necessary information to operate and oversee internal control and risk management systems, with regard to the responsibilities and objectives he/she has been assigned.

Vallourec's core values also include an ethical component in terms of conduct, the requirements of which are relayed by the Group's Code of Ethics, which applies to all levels of the Company.

5.2.4 Role of the Statutory Auditors

The Statutory Auditors formally examine the internal control and risk management mechanisms, relying on internal audit work to obtain a greater understanding and to formulate, completely independently, an opinion as to their effectiveness.

They certify the financial statements and, within this context, can identify during the fiscal year significant risks and major weaknesses in internal control which could have a significant impact on accounting and financial information.

They present their observations on the internal control procedures which relate to the preparation and treatment of the financial and accounting information, and attest to the preparation of other information required by law.

5.2.5 Limits on risk management and internal control

In contributing to the effectiveness of its operations, the efficient use of its resources and the control of risk, the Group's internal control and risk management system plays a key role in the management and supervision of the Group's various activities. However, like any system of control, it cannot guarantee that the Group's objectives will be achieved or that all risks, in particular, of error or fraud, will be totally eliminated or contained.

The Group's international profile requires complex processes at entities with different levels of maturity in terms of internal control, evolving in a variety of legal environments, and running different information systems. In this context, Vallourec faces risks related to internal control, which could lead to inaccurate and/or inappropriate transactions or operations being carried out. Vallourec could also be the victim of fraud (theft, embezzlement, etc.). However, Vallourec has developed a structured and formalized process to review its internal control on an on-going basis, as the developments of this report attest. This approach is based on a set of rules and procedures circulated to all subsidiaries. Reviews and regular audits are conducted to make sure they adhere to them. These rules and procedures are regularly updated to ensure they are in line with changes in Vallourec's processes. Vallourec's fundamental values also incorporate an ethical behavior component, the requirements of which are set out in the Group's Code of Ethics, effective since 2009 and widely circulated to all staff. It applies to all Company levels.

5.3 Insurance policy

The Group's policy regarding protection against risks of accident is based on taking out insurance policies, supplemented with an operational program of developing, rolling out and managing preventative measures. This policy is coordinated by the Human Resources Department for the life sector (life insurance, mutuals), the Risk Management Department for the safety of individuals, and by the Insurance Department for all other aspects.

Industrial risks insured within the Vallourec Group are covered by two main types of insurance taken out with first-rate insurers:

- property insurance; and
- civil liability insurance.

The Group's policy with regard to establishing insurance coverage for industrial risks is designed to achieve the following objectives:

- to take out shared insurance policies to ensure, firstly, the consistency of transferred risks and insurance coverage purchased and, secondly, to leverage economies of scale, while taking into account the specific characteristics of the Group's different businesses and contractual or legal constraints;
- to optimize thresholds and means of action in the insurance or reinsurance markets by appropriate deductibles.

The Group's insurance policy consists of defining the overall insurance coverage policy for the Group's activities, using the analysis of the requirements of the subsidiaries to select adequate insurance solutions, with the help of an internal provider (the broker Assurval, a wholly-owned subsidiary of Vallourec) and external providers (brokers, consultants, insurers), and to decide whether to maintain the financial consequences of such events within the Group or transfer them to the insurance market.

Implementation of the insurance risk coverage policy takes into particular account the insurability of the risks linked to the Group's activities, the available capacities in the insurance and reinsurance markets, the premiums proposed in light of the coverage offered, and exclusions, limits, and sublimits and deductibles.

The basic principles of Vallourec's insurance policy consist of:

- pursuing an active policy of prevention and protection for industrial sites, aimed at reducing the frequency and scale of accidental risks of fire or explosion, as well as detecting other exposures to natural or environmental disasters. To date, more than 90% of the insured values were included in at least one multirisk audit by the insurers' loss prevention engineers, under the framework of a plan to conduct annual visits to the Group's major industrial sites;
- organizing a mechanism for distributing casualty premiums according to the subsidiary scoring criteria established by the insurer with a bonus/malus depending on the score, in an effort to encourage subsidiaries to fine-tune their objectives for preventing damage from fire/equipment breakdowns; and
- communicating detailed information on the Company to the insurance and reinsurance markets.

The Group takes out global insurance coverage for all its subsidiaries for third party liability and physical loss. The primary insurance contracts that cover all Regions and/or central Departments are detailed below.

5.3.1 Insurance for property damage and business interruption

This insurance covers all direct physical loss to the Group's insured property, not subject to exclusions, as well as any costs and consequential losses.

Deductibles applied to physical loss range from €100,000 to €1,000,000 per claim, according to the severity of the risk concerned.

Insurance for operating losses and supplementary operating expenses is taken out on a case-by-case basis according to each risk analysis, taking into account the existing emergency plans (PCAs).

5.3.2 Civil liability insurance

5.3.2.1 General civil liability insurance

This insurance covers the Group for any liability arising as a result of damage caused to third parties, either resulting from the Group's operations or after delivery of goods or services, as well as for professional civil liability.

The indemnity also includes a limit on liability.

In respect of both property and civil liability insurance, contracts are split between a main Group contract and local contracts integrated into the main contract. The Group contract prevails where terms or limits differ from those of local contracts issued by the partners of the lead insurer.

An active policy for the prevention of contractual risks was established, in particular through the nearly systematic use of the CLEAR formula, which primarily aims to control contractual liability clauses that could have a potential financial impact on the Group's results.

The insured cap for third-party civil liability and products was raised in 2011, 2012 and 2014, to take account of the increased size of the Group and the prevailing levels of compensation on the market in this area.

5.3.2.2 Assistance-repatriation insurance

An assistance-repatriation insurance policy for employees seconded abroad (travelers, personnel under a site contract (rotators) and expatriates) covers all Vallourec Group subsidiaries.

5.3.2.3 Civil liability of corporate officers

The Group has taken out liability insurance covering corporate officers against the risk of claims made against them that could result in them being held personally, jointly and severally liable for loss suffered by third parties and which could be attributed to a real or alleged professional error committed by them during performance of their duties.

5.3.3 Insurance policy

The insurance policy described above gives a picture of the Group's situation for prior periods at a given moment in time and cannot be considered representative of a permanent situation. The Group's policy with regard to insurance may change at any time according to market conditions, opportunities and the Management Board's assessment of the risks incurred and the adequacy of insurance coverage. The Group cannot guarantee that it will not suffer an uninsured loss.

6

Assets, financial position and results

6.1 Consolidated financial statements

6.1.1 Vallourec Group's statement of financial position

In € thousand	Notes	31/12/2016	31/12/2017
NON-CURRENT ASSETS			
Net intangible assets	1	124,982	88,695
Goodwill	1	382,684	348,200
Gross property, plant and equipment	2.1	6,351,197	5,734,621
Less: accumulated amortization, depreciation and provisions	2.1	(2,733,583)	(2,757,732)
Net property, plant and equipment	2.1	3,617,614	2,976,889
Biological assets	2.2	88,411	71,494
Associates	3	124,800	101,529
Other non-current assets	4	348,571	137,163
Deferred taxes – assets	5	190,269	242,440
TOTAL		**4,877,331**	**3,966,410**
CURRENT ASSETS			
Inventories and work in progress	6	1,034,749	1,003,833
Trade and other receivables	7	546,218	567,923
Derivatives – assets	8	57,985	32,451
Other current assets	9	283,019	230,612
Cash and cash equivalents	10	1,286,722	1,021,035
TOTAL		**3,208,693**	**2,855,854**
Assets held for sale and discontinued operations	11	46,327	64,119
TOTAL ASSETS		**8,132,351**	**6,886,383**

In € thousand	Notes	31/12/2016	31/12/2017
EQUITY	13		
Capital		902,476	915,976
Additional paid-in capital		1,404,786	1,417,897
Consolidated reserves		1,993,343	1,190,448
Reserves, financial instruments		(33,482)	6,694
Foreign currency translation reserve		(176,574)	(564,461)
Net income for the period		(758,016)	(536,691)
Treasury shares		(49,003)	(3,833)
Equity – Group share		**3,283,530**	**2,426,030**
Non-controlling interests	15	**494,432**	**458,545**
TOTAL EQUITY		**3,777,962**	**2,884,575**
Shareholder loan	34	83,172	71,702
NON-CURRENT LIABILITIES			
Bank loans and other borrowings	16	1,120,648	1,817,119
Employee benefit commitments	19	226,763	208,565
Provisions	17	95,688	50,552
Deferred taxes – liabilities	5	80,494	18,284
Other long-term liabilities	18	25,712	10,571
TOTAL		**1,549,305**	**2,105,091**
CURRENT LIABILITIES			
Provisions	17	280,296	148,799
Overdrafts and other short-term borrowings	16	1,453,096	746,220
Trade payables		530,391	581,622
Derivatives – liabilities	8	105,293	12,894
Tax liabilities		10,163	16,945
Other current liabilities	20	299,462	305,881
TOTAL		**2,678,701**	**1,812,361**
Liabilities held for sale and discontinued operations	11	43,211	12,654
TOTAL EQUITIES AND LIABILITIES		**8,132,351**	**6,886,383**

6.1.2 Consolidated income statement

In € thousand	Notes	2016	2017
Revenue	23	2,965,061	3,749,641
Cost of sales [(a)]	24	(2,726,709)	(3,297,148)
Administrative, sales and research costs [(a)]	25	(447,602)	(439,587)
Others	26	(9,466)	(10,676)
EBITDA		**(218,716)**	**2,230**
Depreciation of industrial assets	28	(283,274)	(297,020)
Other depreciation and amortization	28	(48,522)	(44,457)
Impairment of assets and goodwill	29	(71,391)	(65,105)
Asset disposals, restructuring costs and non-recurring items	29	(127,471)	(79,236)
OPERATING INCOME/(LOSS)		**(749,374)**	**(483,588)**
Financial income		29,764	26,007
Interest expenses		(124,922)	(155,129)
Net interest expenses		(95,158)	(129,122)
Other financial income and expenses		(26,313)	(32,010)
Other discounting expenses		(8,864)	(12,451)
FINANCIAL INCOME/(LOSS)	**30**	**(130,335)**	**(173,583)**
PRE-TAX INCOME/(LOSS)		**(879,709)**	**(657,171)**
Income tax	31	80,166	100,615
Share in net income/(loss) of associates	33	(8,003)	(3,173)
NET INCOME/(LOSS) FROM CONTINUING OPERATIONS		**(807,546)**	**(559,729)**
CONSOLIDATED NET INCOME/(LOSS)		**(807,546)**	**(559,729)**
Attributable to non-controlling interests		(49,530)	(23,038)
Group share		**(758,016)**	**(536,691)**
Group share:			
Net earnings per share	14	(2.3)	(1.2)
Net diluted earnings per share	14	(2.3)	(1.2)

(a) Before depreciation and amortization.

6.1.3 Statement of comprehensive income

In € thousand	2016	2017
CONSOLIDATED NET INCOME/(LOSS)	**(807,546)**	**(559,729)**
Other comprehensive income:		
Actuarial gains and losses on post-employment benefits	(9,015)	12,738
Tax attributable to actuarial gains and losses on post-employment benefits	(1,070)	(2,443)
Items that will not be reclassified to profit or loss	**(10,085)**	**10,295**
Exchange differences on translating net assets of foreign entities	340,411	(452,178)
Change in fair value of hedging financial instruments	13,791	29,716
Change in fair value of available-for-sale securities	9,343	8,665
Tax attributable to the change in fair value of hedging financial instruments	(3,827)	1,836
Tax attributable to the change in fair value of available-for-sale securities	-	-
Items that may be reclassified subsequently to profit or loss	**359,718**	**(411,961)**
OTHER COMPREHENSIVE INCOME/(LOSS) (NET OF TAX)	**349,633**	**(401,666)**
TOTAL COMPREHENSIVE INCOME/(LOSS)	**(457,913)**	**(961,395)**
Attributable to non-controlling interests	(31,954)	(88,539)
Group share	**(425,959)**	**(872,856)**

6.1.4 Statement of changes in equity, Group share

In € thousand	Capital	Additional paid-in capital	Consolidated reserves	Foreign currency translation reserve	Reserves – changes in fair value of financial instruments – net of tax	Treasury shares	Net income or loss for the period	Total equity, Group share	Total non-controlling interests	Total equity
POSITION AS AT 31 DECEMBER 2015	**271,377**	**1,058,872**	**2,794,668**	**(500,575)**	**(54,279)**	**(59,642)**	**(864,753)**	**2,645,668**	**391,941**	**3,037,609**
Change in foreign currency translation reserve	-	-	-	322,704	-	-	-	322,704	17,707	340,411
Financial instruments	-	-	-	-	10,393	-	-	10,393	(429)	9,964
Actuarial gains and losses on retirement commitments	-	-	(10,383)		-	-	-	(10,383)	298	(10,085)
Available-for-sale financial assets	-	-	-	-	9,343	-	-	9,343	-	9,343
Other comprehensive income (loss)	-	-	*(10,383)*	*322,704*	*19,736*	-	-	*332,057*	*17,576*	*349,633*
2016 NET INCOME/ (LOSS)	**-**	**-**	**-**	**-**	**-**	**-**	**(758,016)**	**(758,016)**	**(49,530)**	**(807,546)**
Comprehensive Income	-	-	*(10,383)*	*322,704*	*19,736*	-	*(758,016)*	*(425,959)*	*(31,954)*	*(457,913)*
Appropriation of 2015 net income/(loss)	-	-	(864,753)	-	-	-	864,753	-	-	-
Change in share capital and additional paid-in capital	631,099	345,914		-	-	-	-	977,013	-	977,013
Change in treasury shares	-	-	(10,403)	-	-	10,639	-	236	-	236
Dividends paid			(207)	-	-	-	-	(207)	(2,162)	(2,369)
Share-based payments	-	-	4,164	-	-	-	-	4,164	-	4,164
Changes in consolidation scope and other (see Note 34)	-	-	80,257	1,297	1,061	-	-	82,615	136,607	219,222
POSITION AS AT 31 DECEMBER 2016	**902,476**	**1,404,786**	**1,993,343**	**(176,574)**	**(33,482)**	**(49,003)**	**(758,016)**	**3,283,530**	**494,432**	**3,777,962**
Change in foreign currency translation reserve	-	-	-	(387,388)	-	-	-	(387,388)	(64,790)	(452,178)
Financial instruments	-	-	-	-	31,947	-	-	31,947	(395)	31,552
Actuarial gains and losses on retirement commitments	-	-	10,611		-	-	-	10,611	(316)	10,295
Available-for-sale financial assets	-	-	-	-	8,665	-	-	8,665	-	8,665
Other comprehensive income (loss)	-	-	*10,611*	*(387,388)*	*40,612*	-	-	*(336,165)*	*(65,501)*	*(401,666)*
2017 NET INCOME/ (LOSS)							**(536,691)**	**(536,691)**	**(23,038)**	**(559,729)**
Comprehensive Income	-	-	*10,611*	*(387,388)*	*40,612*	-	*(536,691)*	*(872,856)*	*(88,539)*	*(961,395)*
Appropriation of 2016 net income/(loss)	-	-	(758,016)	-	-	-	758,016	-	-	-
Change in share capital and additional paid-in capital	13,500	13,111	-	-	-	-	-	26,611	-	26,611
Change in treasury shares	-	-	(34,222)	-	-	45,170	-	10,948	-	10,948
Dividends paid			-	-	-	-	-	-	(262)	(262)
Share-based payments	-	-	10,571	-	-	-	-	10,571	-	10,571
Changes in consolidation scope and other (see Note 16)	-	-	(31,839)	(499)	(436)	-	-	(32,774)	52,914	20,140
POSITION AS AT 31 DECEMBER 2017	**915,976**	**1,417,897**	**1,190,448**	**(564,461)**	**6,694**	**(3,833)**	**(536,691)**	**2,426,030**	**458,545**	**2,884,575**

6.1.5 Statement of changes in non-controlling interests

In € thousand	Consolidated reserves	Foreign currency translation reserve	Reserves – changes in fair value of financial instruments – net of tax	Net income or loss for the period	Non-controlling interests
POSITION AS AT 31 DECEMBER 2015	**349,565**	**74,749**	**828**	**(33,201)**	**391,941**
Change in foreign currency translation reserve	-	17,707	-	-	17,707
Financial instruments	-	-	(429)	-	(429)
Actuarial gains and losses on retirement commitments	298	-	-	-	298
Available-for-sale financial assets	-	-	-	-	-
Other comprehensive income (loss)	*298*	*17,707*	*(429)*	-	*17,576*
2016 NET INCOME/(LOSS)	**-**	-	**-**	**(49,530)**	**(49,530)**
Comprehensive Income	*298*	*17,707*	*(429)*	*(49,530)*	*(31,954)*
Appropriation of 2015 net income/(loss)	(33,201)	-	-	33,201	-
Dividends paid	(2,162)	-	-	-	(2,162)
Changes in scope and other	135,422	614	571	-	136,607
POSITION AS AT 31 DECEMBER 2016	**449,922**	**93,070**	**970**	**(49,530)**	**494,432**
Change in foreign currency translation reserve	-	(64,790)	-	-	(64,790)
Financial instruments	-	-	(395)	-	(395)
Actuarial gains and losses on retirement commitments	(316)	-	-	-	(316)
Available-for-sale financial assets	-	-	-	-	-
Other comprehensive income (loss)	*(316)*	*(64,790)*	*(395)*	-	*(65,501)*
2017 NET INCOME/(LOSS)	**-**	**-**	**-**	**(23,038)**	**(23,038)**
Comprehensive Income	*(316)*	*(64,790)*	*(395)*	*(23,038)*	*(88,539)*
Appropriation of 2016 net income/(loss)	(49,530)	-	-	49,530	-
Dividends paid	(262)	-	-	-	(262)
Changes in scope and other	53,888	(997)	23	-	52,914
POSITION AS AT 31 DECEMBER 2017	**453,702**	**27,283**	**598**	**(23,038)**	**458,545**

6.1.6 Statement of cash flows

In € thousand	Notes	2016	2017
Consolidated net income (including non-controlling interests)		**(807,546)**	**(559,729)**
Net amortization, depreciation and provisions		448,807	319,814
Unrealized gains and losses linked to changes in fair value		5,902	18,509
Income and expenses linked to share options and equivalent		4,164	10,571
Capital gains and losses on disposals		43,281	17,668
Share of net income in associates	3	8,003	3,173
Dividends reclassified as other flows linked to investing activities		(1,050)	(1,726)
Cash flow from operating activities after net financial cost and taxes		**(298,439)**	**(191,720)**
Net financial cost	30	95,158	129,122
Tax expense (including deferred taxes)	31	(80,166)	(100,615)
Cash flow from operating activities before net financial cost and taxes		**(283,447)**	**(163,213)**
Interest paid		(124,922)	(155,129)
Tax paid		(20,481)	(40,063)
Interest received		29,762	25,995
Cash flow from operating activities		**(399,088)**	**(332,410)**
Change in operating working capital requirements	12	179,631	60,555
NET CASH FLOW FROM OPERATING ACTIVITIES (1)		**(219,457)**	**(271,855)**
Cash outflows for acquisitions of property, plant and equipment and intangible assets	2.1	(168,802)	(145,343)
Cash outflows for acquisitions of biological assets	2.1	(6,584)	(6,184)
Cash inflows from disposals of property, plant and equipment and intangible assets		2,857	1,404
Impact of acquisitions (changes in consolidation scope)	34	(162,341)	(1,253)
Cash of subsidiaries acquired (changes in consolidation scope)		30,510	-
Impact of disposals (changes in consolidation scope)		29,139	(17,914)
Cash of subsidiaries sold (changes in consolidation scope)		1,018	(1,193)
Other cash flows from investing activities		11,349	75,384
Impact of reclassification to assets held for sale and discontinued operations		(4,646)	-
NET CASH FLOW FROM (USED IN) INVESTING ACTIVITIES (2)		**(267,500)**	**(95,099)**
Increase or decrease in equity		979,647	26,611
Dividends paid during the year			
■ Dividends paid in cash to shareholders in the parent company			
■ Dividends paid to non-controlling interests		(2,427)	(262)
Movements in treasury shares		236	10,948
Proceeds drawn from new borrowings	12	719,823	926,758
Repayments of borrowings	12	(585,601)	(825,043)
Change in percentage interest in controlled companies		-	-
Other cash flows from financing activities		(16,269)	(8,730)
CASH FLOW FROM FINANCING ACTIVITIES (3)		**1,095,409**	**130,282**
IMPACT OF CHANGES IN EXCHANGE RATES (4)		**44,103**	**(30,119)**
CHANGE IN CASH (1 + 2 + 3 + 4)		**652,555**	**(266,791)**
Opening net cash		**624,559**	**1,277,114**
Closing net cash		**1,277,114**	**1,010,323**
Change		652,555	(266,791)

Net cash represents cash and cash equivalents less bank overdrafts with an initial maturity of less than three months.

Statement of changes in net debt in 2017

In € thousand		31/12/2016	Change	31/12/2017
Gross cash (1)	10	1,286,722	(265,687)	1,021,035
Bank current accounts in debit and overdrafts (2)	16	9,608	1,104	10,712
CASH (3) = (1) - (2)		**1,277,114**	**(266,791)**	**1,010,323**
Gross financial debt (4)	16	2,564,136	(11,509)	2,552,627
NET FINANCIAL DEBT = (4) - (3)		**1,287,022**	**255,282**	**1,542,304**

Statement of changes in net debt in 2016

In € thousand		31/12/2015	Change	31/12/2016
Gross cash (1)	10	630,540	656,182	1,286,722
Bank current accounts in debit and overdrafts (2)	16	5,981	3,627	9,608
CASH (3) = (1) - (2)		**624,559**	**652,555**	**1,277,114**
Gross financial debt (4)	16	2,143,816	420,320	2,564,136
NET FINANCIAL DEBT = (4) - (3)		**1,519,257**	**(232,235)**	**1,287,022**

6.1.7 Notes to the consolidated financial statements for the year ended 31 December 2017

In € thousand (€k) unless stated otherwise.

A – Consolidation principles

1. Basis of preparation and presentation of the financial statements

The consolidated financial statements for the year ended 31 December 2017, including the related notes to the consolidated financial statements, were approved by Vallourec's Management Board on 20 February 2018 and will be submitted for approval at the Shareholders' Meeting.

Pursuant to EC Regulation No.1606/2002 adopted on 19 July 2002 for all listed companies in the European Union, Vallourec has prepared its consolidated financial statements in accordance with International Financial Reporting Standards (IFRS) as adopted by the European Union, using the standards and interpretations applicable as at 31 December 2017. These financial statements are available on the Company's website: www.vallourec.fr.

The IFRS framework covers the standards issued by the International Accounting Standards Board (IASB), as well as the International Accounting Standards (IAS) and their interpretations as issued by the Standing Interpretations Committee (SIC) and the International Financial Reporting Interpretations Committee (IFRIC).

The accounting principles and measurement methods have been applied consistently to the periods presented, with the exception of:

New mandatory standards

The texts adopted by the European Union, which must be applied as from 1 January 2017, concern:

- the amendments to IAS 12 relating to the recognition of deferred tax assets under unrealized losses. The application of these texts has had no impact for the Group;
- the amendments to IAS 7 relating to information on the cash flow statements. The application of these texts led the Group to provide in the notes to the consolidated statements a reconciliation between the financing flows and the changes in the balance sheet items in an effort to distinguish between the variations that had an impact on cash flow.

New standards not applied early

The IASB issued IFRS 15 – Revenue from Contracts with Customers, which introduced a new model of accounting for these revenues for contracts with customers and will replace IAS 11, IAS 18 and the IFRIC and SIC interpretations related to revenue recognition.

The Group will apply this standard as from 1 January 2018, according to the retrospective method. An analysis of the contract underway on the date of first application was conducted with regard to the provisions of the new standard. The Group does not anticipate there being an impact on equity at the date of application or on the recognition of revenue.

The IASB completed its project to replace IAS 39 – Financial Instruments: Recognition and Measurement by publishing the final version of IFRS 9 – Financial Instruments. IFRS 9 specifically introduces changes to the classification and evaluation of financial assets, the impairment model, and hedge accounting. The Group will apply this standard as from 1 January 2018, and is not anticipating any significant impact.

The IASB issued IFRS 16 – Leases, which introduces a new accounting model for lease agreements and which will be mandatory as of 1 January 2019. The Group is currently finalizing (i) the review and analysis of its leases, in particular considering items recorded as off-balance sheet commitments, (ii) as well as an estimate of the discount rates to be used.

In this context, the Group is continuing to assess any effects prompted by the first application of this text, and is not planning to apply it early.

The Group has not opted for early application of any other standards or interpretations that will be mandatory for fiscal years beginning on or after 1 January 2018.

2. Accounting principles and methods

2.1 General measurement principles

The consolidated financial statements are prepared using the historical cost convention, except for biological assets, derivative financial instruments that are measured at fair value, as well as financial assets measured at fair value through profit and loss or equity (see paragraph 2.16).

2.2 Use of estimates and judgment

The preparation of the financial statements under IFRS leads Vallourec's management to use estimates and formulate assumptions that affect the carrying amount of certain assets and liabilities, income and expenses, and some of the information in the notes to the financial statements.

Such assumptions are inherently uncertain, and actual results could differ from these estimates. The Group regularly reviews its estimates and assumptions in order to take into account past experience and any factors deemed relevant in prevailing economic conditions. In the current economic climate (uncertainty about business trends, a highly competitive international environment and volatility in costs of raw materials and energy), the uncertain nature of some estimates may be more pronounced.

Accounts and information subject to significant estimates include the measurement of the following items:

- property, plant and equipment, intangible assets and goodwill (see paragraphs 2.5, 2.7 and 2.8);
- financial assets (see paragraph 2.16.1);
- derivative financial instruments (see paragraph 2.16.4);
- inventories and work in progress (see paragraph 2.10);
- provisions (see paragraph 2.12);
- biological assets (see paragraph 2.5.6);
- assets held for sale and discontinued operations (see paragraph 2.11); and
- deferred taxes (see paragraph 2.17).

The Group must use assumptions and judgments to evaluate the level of control in certain associates, notably to define relevant activities and identify substantive rights, as well as the type of joint arrangement in question for a jointly controlled business. These judgments are revised if facts and circumstances change.

2.3 Consolidation of subsidiaries

The consolidated financial statements include the financial statements of Vallourec and its subsidiaries for the period from 1 January to 31 December 2017.

2.3.1 CONTROLLED ENTITIES

Subsidiaries are fully consolidated from the date of acquisition. They cease to be consolidated when control is transferred outside the Group.

Definition

There is control when the Group (i) holds power over an entity, (ii) is exposed to or is entitled to variable returns due to its connections with the entity and (iii) has the capacity to exercise its power over the entity so as to influence the amount of the returns it obtains.

Accounting method

The consolidated financial statements include all of the assets, liabilities and comprehensive income of the subsidiary.

Non-controlling interests represent the share of interest which is not directly or indirectly attributable to the Group. The results and other items of comprehensive income are divided between the Group and non-controlling interests. The comprehensive income of the subsidiaries is divided between the Group and the non-controlling interests, including when this distribution results in allocating a loss to the non-controlling interests.

Changes in the percent interest in subsidiaries that do not result in a change of control are considered transactions impacting equity, as they are transactions that are performed with shareholders acting in this capacity.

The effects of these transactions are recorded in equity for the net tax amount and thus do not have an impact on the Group's consolidated income statement.

These transactions are moreover presented in the cash flow statement under financing or investment operations, as applicable.

The financial results of acquired companies are included in the consolidated income statement from their effective acquisition dates. The results of companies sold are included until the date control ceases.

Cash flows on the income statement and statement of financial position related to intra-Group commercial and financial transactions are eliminated.

2.3.2 CONSOLIDATION OF JOINT OPERATIONS

Definition

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement.

Joint operations

The Group, as a co-participant in a joint operation, records the following items as concerns its interests in the joint operation:

- its assets, including its share of the assets that are jointly held, where applicable;
- its liabilities, including its share of the liabilities that are jointly held, where applicable;
- the income it has drawn from the sale of its share of the production that is generated by the joint operation;
- the expenses it has incurred, including its share of the expenses jointly incurred, where applicable.

The consolidated financial statements include, line-by-line, the representative portion of the Group's interests in each item of the assets, liabilities and comprehensive income, established in compliance with IFRS.

Over the course of 2016, the Group took control of its main joint operation, conducted in partnership with Nippon Steel Sumitomo Metal Corp. (NSSMC) in the Vallourec & Sumitomo Tubos do Brasil (VSB) entity. Up until 1 October 2016, the qualification of this entity as a joint operation was underpinned by the legal form and the terms of the partnership agreement.

2.3.3 INTERESTS IN JOINT VENTURES AND ASSOCIATES

Definition

Associates are companies in which the Group exercises significant influence over operating and financial policies without having control.

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement.

The Group's investments in joint ventures and associates are accounted for using the equity method.

Equity Associates

The equity method provides for an investment in an associate being initially recorded at cost, and then subsequently adjusted for the change in the Group's share in the income and other comprehensive income of the associate.

An investment is recorded under the equity method as of the date when the entity becomes an associate or joint venture. When an associate or joint venture is acquired, the difference between the cost of the investment and the Group share in the net fair value of the identifiable assets and liabilities of the entity is recorded under goodwill. In the event that the net fair value of the identifiable assets and liabilities of the entity is higher than the cost of the investment, the difference is recorded under income.

Shares in the net income of associates are incorporated in the net income of the activities pursued, whether or not their activities are an extension of the Group's activities.

Impairment testing

The provisions of IAS 39 – Financial Instruments: Recognition and Measurement apply to determine whether or not it is necessary to perform an impairment test for its investment in an associate. If necessary, the total book value of the investment (including goodwill) undergoes impairment testing according to the provisions prescribed by IAS 36 – Impairment of Assets.

2.3.4 CHANGE OF CONTROL

Loss of significant influence or joint control

When the investment no longer constitutes an associate, the equity method is no longer applied. Any retained interest in the former associate that constitutes a financial asset is measured at fair value on the date the interest ceases to be an associate or joint venture.

Acquisition of a joint operation or equity-accounted company

Pursuant to IFRS 3, the previously held equity interests are remeasured at fair value, giving rise to gains and losses on disposals ("Assets disposals, restructuring costs and non-recurring items"), and the assets acquired and liabilities assumed are accounted for at fair value as at the acquisition date.

2.4 Foreign currency translation

2.4.1 TRANSLATION OF SUBSIDIARIES' FOREIGN CURRENCY FINANCIAL STATEMENTS

The presentation currency of the consolidated financial statements is the euro.

Assets and liabilities of foreign subsidiaries, including goodwill, are translated at the official exchange rates on the reporting date. The income statements of foreign subsidiaries are translated at the average exchange rate for the period.

The ensuing translation differences are recorded in equity. The Group's share of such differences is recorded on the separate line, "Foreign currency translation reserve".

2.4.2 TRANSLATION OF FOREIGN CURRENCY TRANSACTIONS

Foreign currency transactions are translated into the company's functional currency. When the transaction is subject to a hedge (see paragraph 2.16.4), it is translated at the spot rate on the day the hedging instrument is set up. In the absence of a hedge, foreign currency transactions are translated at the prevailing exchange rates on the transaction date.

Monetary assets and liabilities denominated in foreign currencies are translated at the closing exchange rates prevailing on that date. Translation differences resulting from differences between these rates and the rates at which the transactions were initially recorded are included in financial income or loss.

2.5 Property, plant and equipment and biological assets

2.5.1 MEASUREMENT AT COST NET OF DEPRECIATION AND IMPAIRMENT

Except when acquired as part of a business combination, property, plant and equipment are recorded at their acquisition or production cost. They are not subject to remeasurement. At each reporting date, the acquisition cost is reduced by accumulated depreciation and any provisions for impairment determined in accordance with IAS 36 – Impairment of Assets (see paragraph 2.9).

2.5.2 COMPONENT APPROACH

The main components of an asset having a useful life different from that of the main asset (furnaces, heavy industrial equipment, etc.) are identified by the technical departments and depreciated over their own useful lives.

Subsequent expenditure on replacement of the component (i.e. the cost of the new component) is capitalized, provided that future economic benefits are still expected to be derived from the main asset.

The component approach is also applied to expenditure on major overhauls that are planned and carried out at intervals of over one year. Such expenditure is identified as a component of the asset's acquisition price, and is depreciated over the period between two overhauls.

2.5.3 MAINTENANCE AND REPAIR COSTS

Recurring maintenance and repair costs that do not meet the criteria for the component approach are expensed when they are incurred.

2.5.4 AMORTIZATION AND DEPRECIATION

Depreciation of property, plant and equipment is calculated on a straight-line basis over the useful lives summarized below. Land is not depreciated.

Main categories of property, plant and equipment	Straight-line depreciation Useful life
Buildings	
Administrative and commercial buildings	40
Industrial buildings/Infrastructure	30
Fixtures and fittings	10
Technical plant, equipment and tools	
Industrial plant	25
Specific production equipment	20
Standard production equipment	10
Other (automated equipment, etc.)	5
Other tangible assets	
Motor vehicles	5
Office equipment and furniture	10
Computer equipment	3

Depreciation of new industrial sites in the development stage is calculated according to the production-units method for assets used directly in the production process, and the straight-line depreciation method for other assets.

2.5.5 PROPERTY, PLANT AND EQUIPMENT ACQUIRED AS PART OF A BUSINESS COMBINATION

Property, plant and equipment acquired as part of a business combination are measured at fair value on the acquisition date. They are depreciated using the straight-line method over the remaining useful life at the acquisition date.

2.5.6 BIOLOGICAL ASSETS

The Group owns biological assets in Brazil, which mainly consist of eucalyptus plantations cultivated for the Group's coke requirements. They are valued according to the principles defined by IAS 41 – Agriculture. The existence of an active market in Brazil requires the Group to measure these assets at fair value less selling costs upon initial recognition and at each reporting date.

2.6 Leases

Assets financed by finance leases, which transfer almost all of the risks and rewards of ownership to the Group, are capitalized on the statement of financial position at the lesser of the fair value of the leased property or the present value of the minimum lease payments. The corresponding liability is recorded under financial liabilities.

Lease payments are split between interest expense and amortization of the obligation so as to obtain a constant interest rate on the balance of the loan liability.

Assets leased under finance leases are depreciated over their useful life in accordance with Group rules (see paragraph 2.5) or the lease term, whichever is shorter.

Leases under which the lessor retains almost all of the risks and rewards of ownership are operating leases. Payments on operating leases are expensed on a straight-line basis over the term of the contract.

2.7 Goodwill

The Group measures goodwill as the surplus of:

- the total of:
  - the fair value of the consideration transferred,
  - the amount of any non-controlling interests in the acquired entity,
  - in the case of a step acquisition, the fair value at the acquisition date of the acquirer's previously held interest in the acquiree;
- as well as the net fair value at the acquisition date of the identifiable assets acquired and liabilities assumed.

For major acquisitions, fair value measurements are done with the help of independent experts.

The decision to apply the partial or total goodwill method is made separately for each business combination.

Pursuant to IAS 36 – Impairment of Assets, they are tested for impairment at least once a year, or more frequently if there is an indication of impairment. The testing procedures are designed to ensure that the recoverable amount of the cash-generating unit to which the goodwill is assigned or allocated is at least equal to its net carrying amount (see paragraph 2.9 – Impairment of property, plant and equipment and intangible assets). If an impairment loss is recognized, an irreversible provision is recorded in operating profit under "Impairment of assets and goodwill".

Pursuant to IFRS 3 and IAS 10.22, the Group recognizes in equity the difference between the price paid and the share of non-controlling shareholders acquired or sold in controlled companies.

Acquisition costs incurred by the Group in carrying out the business combination, such as referral agents' commissions, legal and due diligence fees and other professional or consultancy fees, are expensed when they are incurred.

2.8 Intangible assets

2.8.1 RESEARCH AND DEVELOPMENT COSTS

In accordance with IAS 38 – Intangible Assets, research costs are expensed and development costs are capitalized as intangible assets if the company can show:

- its intention, and its financial and technical capability, to bring the development project to completion;
- that it is probable that the future economic benefits attributable to the development expenditure will flow to the company;
- its ability to reliably measure the cost of the intangible asset during its development phase;
- its ability to use or sell the intangible asset.

Significant R&D projects are reviewed based on information available from the corporate departments coordinating the research in order to identify and analyze any current projects that have entered the development phase, as defined under IAS 38.

The Group's development projects to design new or improved products and manufacturing processes, particularly in its oil and energy-related activities, are already at a very advanced stage before they qualify for capitalization as assets under IAS 38 criteria. It is very difficult to show the existence of long-term additional future economic benefits that can be clearly distinguished from the normal costs of maintaining and upgrading production plants and products to preserve the Group's technological and competitive edge. As a result, in 2017 as in 2016, no costs incurred on major projects were identified that met the standard's criteria.

2.8.2 OTHER INTANGIBLE ASSETS

Intangible assets acquired separately are recognized at cost. They are mainly patents and trademarks, which are amortized on a straight-line basis over their useful lives.

Intangible assets acquired as part of a business combination are recorded separately from goodwill if their fair value can be measured during the acquisition phase. Those with a finite life are amortized over their estimated useful lives for the Company.

Greenhouse gas emission allowances received free of charge are recognized at nil value (in accordance with IAS 20). A provision is recognized when allowances granted by the government are inadequate to cover actual emissions. Notes 17 and 22 to the financial statements contain information about the methods used to value unused allowances at the end of the reporting period.

2.8.3 IMPAIRMENT

Intangible assets are tested for impairment in accordance with the provisions of IAS 36 – Impairment of Assets (see paragraph 2.9).

2.9 Impairment of property, plant and equipment and intangible assets

To perform impairment tests, property, plant and equipment and intangible assets are grouped into Cash-Generating Units (CGUs). CGUs are standard groups of assets whose on-going use generates cash inflows which are largely independent of the cash inflows generated by other groups of assets.

The recoverable value of a CGU is the higher of the following:

- its value in use, which corresponds to the present value of the forecast future cash flows it generates, without taking into account planned investment into capacity and expected gains in terms of productivity;
- its fair value less costs of disposal.

The test base of a CGU is comprised of net current and non-current operating assets.

An impairment test is carried out:

- at least once a year for CGUs with indefinite useful lives, a category that, for the Group, is limited to goodwill;
- for the other CGUs, if indications of impairment appear.

A Group stock market value that is less than its consolidated net assets during a business cycle, or a negative outlook associated with the economic, legislative or technological environment or with the business sector constitutes general indications of impairment liable to result in impairment tests on all the Group's CGUs.

Impairment tests involve comparing the recoverable amount of the CGU with its test base. An impairment is recognized if the value in use is lower than the carrying amount.

When the recoverable amount of the CGU is less than its carrying amount, an impairment loss is recognized on a separate line in the income statement. When a CGU includes goodwill, the impairment loss is first deducted from goodwill and then, where applicable, the CGU's other assets.

2.10 Inventories and work in progress

Inventories are valued at the lesser of cost or net realizable value, and provisions for impairment are recognized if necessary.

Net realizable value is the estimated selling price in the ordinary course of business less estimated costs of completion and the estimated costs necessary to make the sale.

Inventory costs of raw materials, goods for resale and other supplies comprises the purchase price excluding taxes, less discounts, rebates and other payment deductions obtained, plus incidental costs of purchase (transportation, unloading expenses, customs duties, buying commissions, etc.). These inventories are measured at weighted average cost.

The cost of work in progress and intermediate and finished goods consists of the production cost excluding financial expenses. Production costs comprise raw materials, factory supplies and labor, and direct and indirect industrial overheads attributable to processing and production, based on normal capacity. General and administrative expenses are excluded from this measurement.

With the exception of safety reserves recorded in property, plant and equipment, spare parts and consumables are recorded in inventory, including in the event of a consumption forecast beyond one year.

2.11 Assets held for sale and discontinued operations

A non-current asset or group of related assets and liabilities is considered to be held for sale, in accordance with IFRS 5 – Non-current Assets Held for Sale and Discontinued Operations, when:

- it is available for immediate sale in its current condition; and
- its sale is highly probable. This is the case when management is committed to a plan to sell the asset and an active program to locate a buyer at a reasonable price, and the sale is expected to take place in less than one year.

Non-current assets, groups of assets or activities held for sale are measured at the lower of their carrying amount and their fair value (estimated selling price), net of selling costs. They are presented on a separate line in assets and liabilities and are no longer amortized or depreciated.

Only entire business lines of discontinued operations are disclosed separately in the income statement.

2.12 Provisions

A provision is recognized when, at the reporting date, the Group has a present obligation (legal or constructive) as a result of a past event and it is probable that an outflow of resources embodying future economic benefits will be required to settle the obligation.

Provisions are discounted to present values if the time value of money is material (for example, in the event of provisions for environmental risks or site clean-up costs). The increase in the provisions associated with the passage of time is recognized as a financial expense.

In the case of restructuring, a provision may be recognized only if, at the reporting date, the Company has announced the restructuring and drawn up a detailed plan or started to implement the plan.

Provisions are booked with regard to disputes (technical, guarantees, tax audits, etc.) if the Group has an obligation to a third party at the reporting date. They are determined based on the best estimate of the expense likely to be required to settle the obligation.

2.13 Retirement commitments and similar obligations

The Group participates in the funding of supplementary retirement plans and other long-term employee benefits, in accordance with constructive or legal requirements. The Group offers these benefits by means of either defined contribution or defined benefit plans.

In the case of defined contribution plans, the Group's only obligation is the payment of premiums. Contributions paid to the plans are recognized as expenses for the period. If applicable, provisions are recognized for outstanding contributions at the reporting date.

Provisions are recognized for retirement commitments and similar obligations arising from defined benefit plans and are measured based on an actuarial calculation performed at least once a year by independent actuaries. The projected unit credit method is applied as follows: each period of service creates an additional unit of benefit entitlement, and each of these units is measured separately to determine the Group's employee benefit obligations.

The calculations take into account the specific features of the various plans and assumptions for the retirement date, career advancement, salary increases, as well as the probability of the employee still being employed by the Group at retirement age (turnover rates, mortality tables, etc.). The obligation is discounted based on the interest rates of long-term bonds of prime issuers.

Retirement commitments and similar obligations mainly relate to the Group's French subsidiaries and its subsidiaries in Germany, the United Kingdom, the United States and Brazil.

Other employee benefits for which the Group recognizes provisions are:

- in the case of French and foreign subsidiaries, benefits in connection with long-service awards;
- in the case of certain subsidiaries in the United States and Brazil, coverage of medical expenses.

The obligation is presented on the statement of financial position, net of plan assets measured at fair value (if applicable).

2.14 Share-based payments

IFRS 2 "Share-based Payment" requires the measurement and recognition of the benefits arising from share option and performance share allocation plans that are equivalent to compensation of the beneficiaries: these are recognized as payroll costs spread over the vesting period, with a corresponding increase in equity.

Changes in value after the award date have no impact on the option's initial measurement. The number of options taken into account in measuring the plan is adjusted at each reporting date to reflect the probability of the beneficiaries' continued service at the end of the vesting period.

- Some members of executive management and employees benefit from the share subscription or share purchase options that entitle them to purchase an existing share or to subscribe to a capital increase at an agreed price. Options must be measured using the Black & Scholes model on the date they are awarded.
- Some members of executive management and employees benefit from share allocation plans where vesting conditions are related to performance criteria (percentage of consolidated EBITDA). These plans are measured using a binomial model to project share prices.
- Vallourec offers employee shareholding plans reserved for its employees. These plans are measured using a binomial model to project share prices.

2.15 Treasury shares

Treasury shares held by the Group are recognized at their acquisition cost as a deduction from equity. Proceeds from the sale of these shares are booked directly as an increase in equity so that gains or losses on disposal do not affect consolidated profit.

2.16 Financial instruments

Financial instruments include financial assets and liabilities as well as derivatives.

The presentation of financial instruments is defined by IFRS 7 and IAS 32. The measurement and recognition of financial instruments are governed by IAS 39 and IFRS 13.

Changes in the fair value of derivatives are recognized in the financial statements. Changes in the fair value of hedged items are also recognized at each reporting date (see paragraph 2.16.4 – Derivative instruments and hedge accounting).

In addition, in accordance with IAS 32, the sale of puts to non-controlling interest shareholders of a company under exclusive control results in the recognition of a financial liability equal to the discounted fair value of the estimated repurchase amount. The Group recognizes this financial liability by deducting it from the amount attributable to non-controlling interests and, for the remaining portion of the liability, by deducting it from equity, Group share.

2.16.1 FINANCIAL ASSETS (EXCLUDING HEDGE DERIVATIVES)

Financial assets include:

- non-current financial assets: other equity interests and associated receivables, construction participation loans and guarantees;
- current financial assets, including accounts receivable and other trade receivables, short-term derivative instruments and cash and cash equivalents (investment securities).

Initial measurement

Non-derivative financial assets are initially measured at fair value on the transaction date, including transaction costs, except for assets measured at fair value through profit or loss.

In most cases, the fair value on the transaction date is the historical cost, (i.e. the acquisition cost of the asset).

Classification and measurement at the end of the reporting period

Financial assets (excluding hedging derivatives) are classified according to IAS 39 in one of the following four categories for their measurement on the balance sheet:

Category	Measurement	Recognition of changes in value
Financial assets measured at fair value through profit or loss	Fair value	Changes in fair value recognized in profit or loss
Held-to-maturity assets	Amortized cost	Not applicable
Loans and receivables	Amortized cost	Not applicable
Available-for-sale financial assets	General convention: fair value But amortized cost for equity instruments whose fair value cannot be reliably estimated (e.g. shares not listed on an active market)	Changes in fair value recognized in other comprehensive income Not applicable

Financial assets for which changes in fair value are recognized in profit or loss

This category of assets includes:

- assets held for transactional purposes, i.e. that have been acquired by the business with the aim of generating short-term income; in the Group, the assets concerned are all cash assets (investment securities, cash and cash equivalents, etc.).

  Investment securities (French SICAV and FCP mutual funds, etc.) are measured at fair value at the reporting date, and changes in fair value are recognized in financial income/(loss). They are therefore not tested for impairment. Fair value is determined mainly by reference to market quotations;
- asset derivative instruments that are not expressly designated as hedging instruments.

Held-to-maturity assets

These are non-derivative financial assets with fixed or determinable payments and fixed maturities that the Company has the intention and ability to hold to maturity, other than loans and receivables and financial assets classified by the Company in the other two categories (measured at fair value through profit or loss; available-for-sale).

In the Group, the only assets in this category are security deposits and guarantees.

Loans and receivables

These are mainly non-derivative financial assets with fixed or determinable payments that are not listed on an active market.

In the Group, this category includes:

- receivables associated with participating interests, long-term loans and construction participation loans;
- accounts receivable and other trade receivables.

The amortized cost of short-term receivables such as trade receivables is usually equal to their historical cost.

Loans to employees are measured using the effective interest rate method applied to estimated future cash flows until the maturity dates of the loans.

Available-for-sale financial assets

Available-for-sale financial assets are mainly those that have not been classified in any of the other three categories.

In the Group, the main assets in this category are investments in equity instruments. In general, these are:

- unlisted shares whose fair value cannot be reliably estimated. They are recorded at their cost and undergo impairment testing when the consolidated financial statements are prepared;
- listed shares measured at their fair value at the reporting date. This fair value is determined based on the stock market price at the reporting date.

Changes in fair value are recognized directly in equity, unless a significant or long-term fall in fair value below the acquisition cost is recorded. In this case, the corresponding loss is definitively recorded in the income statement.

The "significant or long-term" nature is defined in Note 4 – Other non-current assets, on a case-by-case basis.

Impairment testing of financial assets

Financial assets measured at amortized cost and available-for-sale financial assets measured at cost must be tested for impairment at each reporting date if there is any indication of impairment, such as:

- significant financial difficulties or a high probability that the counterparty will suffer bankruptcy or restructuring;
- a high risk of non-recovery of receivables;
- the lender, for economic or legal reasons relating to the borrower's financial difficulties, granting the borrower payment facilities not initially provided for;
- an effective breach of contract, such as the failure to make a payment (of interest, principal or both);
- the disappearance of an active market for the financial asset concerned.

In the case of assets measured at amortized cost, the amount of impairment is equal to the difference between the carrying amount of the asset and the present value of the estimated future cash flows, taking into account the counterparty's situation, and determined on the basis of the financial instrument's original effective interest rate.

The impairment thus determined is recognized in financial income or loss for the period.

As regards held-to-maturity assets and loans and receivables, if, during subsequent financial years, the conditions that led to the impairment cease to exist, the impairment must be reversed, although the reversal must not result in a carrying amount that, on the date the impairment is reversed, exceeds what the amortized cost would have been had the impairment not been recognized.

As regards unlisted equity interests classified as available-for-sale whose fair value cannot be reliably determined, no impairment previously recognized in the income statement may be reversed in subsequent periods, even in the event of an increase in the value of the securities concerned.

2.16.2 CASH AND CASH EQUIVALENTS

This item consists of current bank account balances and investment securities (units in short-term cash UCITS and mutual and investment funds) that are immediately available (not pledged), risk-free and have a low volatility level.

The cash flow statement is drawn up on the basis of the cash as defined above, net of overdrafts and other short-term bank borrowings that mature in less than three months.

The net debt referred to in the cash flow statement corresponds to total financial debt less cash and cash equivalents.

2.16.3 FINANCIAL LIABILITIES

The Group's financial liabilities include bank loans which bear interest, bond issues, Bonds Convertible into New Shares and/or Exchangeable for Existing Shares (OCEANE) and finance leases, as well as liability derivatives.

Borrowings are classified as current liabilities for the portion to be repaid within 12 months after the reporting date and as non-current liabilities for payments due in more than 12 months.

Interest-bearing borrowings are initially recorded at fair value less associated transaction costs. These costs (loan issue expenses and premiums) are taken into account in the calculation of the amortized cost using the effective interest rate method. They are recognized in financial profit or loss on an actuarial basis over the life of the liability.

OCEANE are initially recorded by distinguishing between two components: a debt component recorded under amortized cost, calculated using an estimated market interest rate for an equivalent non-convertible bond issue, and a conversion option component, recorded under equity for an amount that is equal to the difference between the OCEANE issue value and the debt component. Issue expenses are allocated between the two components, pro rata of their respective values.

At each reporting date, financial liabilities are then measured at amortized cost using the effective interest rate method, in addition to the specific procedures associated with hedge accounting (see below).

Variable rate borrowings for which interest rate swaps have been entered into are accounted for using the cash flow hedge method. Changes in the fair value of swaps, linked to movements in interest rates, are recognized in equity for the effective portion, with the balance being recognized in financial profit or loss.

2.16.4 DERIVATIVE INSTRUMENTS AND HEDGE ACCOUNTING

Group exposure to foreign exchange risk on commercial transactions

In addition to the hedging of certain financial liabilities (see paragraph 2.16.3), the Group enters into hedging contracts mainly to manage its exposure to foreign exchange risks arising from the orders and sales of certain subsidiaries in currencies other than their functional currency. In particular, a significant share of Vallourec's revenue is invoiced by European companies in US dollars. Exchange rate fluctuations between the euro and the dollar may therefore affect the Group's operating margin.

The Group manages its exposure to foreign exchange risk by setting up hedges based on regularly updated forecasts of customer orders. Operating receivables and incomes that will be generated by the orders are thus hedged by financial instruments, mainly forward currency sales.

To a lesser extent, the Group also enters into forward currency purchases to hedge its foreign currency purchase commitments.

Measurement and presentation of derivatives

Changes in the value of derivatives with respect to their date of implementation are measured at each reporting date.

The fair value of forward currency contracts is calculated on the basis of market data and conditions. Since they hedge commercial transactions, these derivatives are presented on the statement of financial position under current assets and current liabilities.

Hedge accounting

Hedging of commercial transactions falls within the category of cash flow hedges.

The Group applies hedge accounting in strict compliance with the criteria of IAS 39:

- documentation of the hedging relationship: nature of the underlying hedged item, term of the hedge, hedging instrument used, spot rate of the hedge, forward points, etc.;
- in the case of cash flow hedges, carrying out an effectiveness test on implementation of the derivative and updating the test at least once per quarter.

Hedge accounting within the Group is as follows:

At the reporting date, changes in the hedging instrument with respect to its date of implementation are measured at fair value and recognized on the statement of financial position as derivative assets or liabilities. The following are shown separately:

- the change in the intrinsic value of the hedging instrument (difference between the spot rate on the date of implementation of the hedge and the spot rate on the measurement date, i.e. the reporting date).

  If the hedge is effective, and as long as the revenue (or purchase) hedged is not recognized, changes in the intrinsic value are recognized in equity, in accordance with the principles of cash-flow hedge accounting.

  If the hedging instrument is not effective (a rare occurrence, given the procedures introduced by the Group), the change in the intrinsic value of the derivative is recognized in financial income or loss;
- the change in the time value (premium/discount). This change is systematically recognized in financial profit or loss, since this component is not included in the hedging relationship.

The revenue (purchase) corresponding to the sales forecasts (purchase orders) hedged is recognized at the spot rate on the date of implementation of the hedging contract. The account receivable (account payable) is initially recognized at the same spot rate.

At the end of each reporting period, hedged foreign currency accounts receivable and accounts payable are measured and recognized at the exchange rate applicable on the reporting date. The difference between that rate and the rate used on initial recognition (spot rate on the date of implementation of the hedge) or the rate applicable on the last reporting date constitutes an exchange gain or loss recognized in financial profit or loss for the period.

Once the hedged item (foreign currency receivable or payable) is recorded on the statement of financial position, the change in the intrinsic value of the hedging instrument previously recognized in equity is recorded in financial income or loss. Changes in the value of the hedging instrument and the receivable or debt covered then have a symmetrical impact on financial income or loss.

2.17 Income tax

Income tax expense comprises current tax and deferred tax.

In accordance with IAS 12, deferred taxes are recognized, using the liability method, for temporary differences existing at the reporting date between the tax bases of assets and liabilities and their carrying amounts and unused tax losses, under the conditions set out below.

The main types of deferred tax recognized are:

- long-term deferred tax assets (provisions for retirement commitment of French companies), which are likely to be recovered in the foreseeable future;
- deferred tax assets for short-term recurring items (provision for paid time off, etc.) or non-recurring items (employee profit-sharing, provisions for liabilities that are not deductible for tax purposes, etc.) when they are likely to be recovered in the foreseeable future;
- deferred tax associated with the cancellation of entries made solely for tax purposes in local financial statements (regulated provisions, etc.) and any restatements to ensure the consistency and comparability of the parent company or consolidated financial statements;
- tax loss carryforwards.

The rates used to calculate deferred taxes are the tax rates expected to apply during the period in which the asset will be realized or the liability settled, based on tax regulations that have been adopted or substantially adopted at the reporting date.

Deferred taxes are not discounted to present value.

Current and deferred tax expenses are recognized as income or expenditure in the income statement unless they relate to a transaction or event that is recognized under other comprehensive income or directly in equity (see hedge accounting in paragraph 2.16.4 and actuarial gains and losses on post-employment obligations in 2.13 – Retirement commitments and similar obligations).

Deferred taxes are presented on separate lines in the statement of financial position under non-current assets and non-current liabilities.

Net deferred tax assets are recognized only for those companies and tax groups that, based on a review at each reporting date, appear reasonably likely to recover these assets in the foreseeable future.

2.18 Revenue

Revenues from the sale of finished goods are recognized in the income statement when the following conditions are satisfied:

- the main risks and rewards of ownership have been transferred to the buyer;
- the seller retains neither managerial involvement to the degree usually associated with ownership nor effective control over the goods sold;
- it is likely that the financial benefits associated with the sale will flow to the entity;
- the amount of the revenues and costs incurred (or to be incurred) as a result of the sale can be reliably determined.

Revenues from services are recognized in the income statement in proportion to the stage of completion at the reporting date.

No revenue is recognized if there are significant uncertainties as to the recovery of the amount due or the associated costs.

In the event of a sale with reservation of title, the sale is recognized on delivery of the goods if the risks and rewards have been transferred to the buyer.

Revenues are measured at the fair value of the consideration received or receivable, as determined by the agreement entered into between the Company and the customer, net of any trade discounts or volume rebates agreed.

See paragraphs 2.4.2 and 2.16.4 for the procedures for recognizing revenue denominated in foreign currencies.

2.19 Determination of operating income

The income statement format used by the Group employs a classification by function.

Operating income or loss is calculated as the difference between pre-tax revenues and expenses other than those of a financial nature or relating to the income or losses of associates, and excluding any income or losses from discontinued operations or assets held for sale.

EBITDA is an important indicator for the Group, enabling it to measure its performance from continuing operations. It is calculated by taking operating profit before amortization and depreciation and excluding certain operating revenues and expenses that are unusual in nature or occur rarely, such as:

- impairment of goodwill and fixed assets determined in the context of impairment tests in accordance with IAS 36 (see paragraph 2.9);
- significant restructuring expenses, or those related to adjustments to headcount in respect of major events or decisions;
- capital gains or losses on disposals;
- revenue and expenses resulting from major litigation, significant roll-out operations or capital transactions (e.g. costs of integrating a new activity).

2.20 Earnings per share

Net earnings per share are calculated by dividing consolidated net profit or loss by the weighted average number of shares outstanding during the fiscal year.

Diluted earnings per share are calculated taking into account the maximum impact of the conversion of dilutive common shares (options, performance shares) and using the “share repurchase” method as defined in IAS 33 “Earnings per Share”.

3. Segment information

The segments presented according to the Group’s internal organization comply with the definition of operating segments identified and grouped according to IFRS 8. This information corresponds to that reviewed by the Executive Committee.

The Group presents its segment information based on the following operating segments, reconciled with consolidated data:

- Seamless tubes. This segment covers all the entities with production and marketing plants dedicated to the Group’s main activity, i.e. the production of hot-rolled seamless carbon and alloy steel tubes, both smooth and threaded, for the oil and gas industry. This activity is characterized by a highly integrated manufacturing process, from production of the steel and hot-rolling to the final stages, facilitating the manufacture of products that are suitable for a variety of markets (including Oil & Gas, Power Generation, Chemicals and Petrochemicals, Automotive and Mechanical Engineering);
- Specialty Products. This segment incorporates a number of activities whose characteristics are very different from those described above, but which are not presented separately due to their relative immateriality. This treatment is authorized by IFRS 8. This activity includes the production of stainless steel and titanium tubes as well as specific forming and machining activities.

In addition, geographical information is presented, distinguishing between five areas determined based on an analysis of the specific risks and returns associated with them:

- the European Union;
- North America (United States, Mexico and Canada);
- South America (mainly Brazil);
- Asia;
- rest of the world (mainly the Middle East).

Operating segments

Note 32 shows, for each operating segment, information on the income and results as well as selected information on the assets, liabilities and capital expenditure for fiscal years 2017 and 2016.

Geographical information

In addition to segment information, Note 32 shows, by geographical area, information on revenue (by geographical location of customers), capital expenditure and selected information on assets (by operating areas) for fiscal years 2017 and 2016.

B – Consolidation scope

	% interest 31/12/2016	% control 31/12/2016	% interest 31/12/2017	% control 31/12/2017
Fully consolidated companies				
Kestrel Wave Investment Ltd – Hong Kong	100.0	100.0	100.0	100.0
P.T. Citra Tubindo Tbk – Indonesia	81.72	81.72	81.72	81.72
Serimax Angola Ltd – United Kingdom (6)	80.0	80.0	80.0	80.0
Serimax Australia Pty Ltd – Australia (6)	80.0	80.0	80.0	80.0
Serimax Do Brasil Serviços de Soldagem e Fabricaçao Ltda – Brazil (6)	80.0	80.0	80.0	80.0
Serimax Field Joint Coating Ltd – United Kingdom (6)	48.0	80.0	48.0	80.0
Serimax Holdings S.A.S. – France (6)	80.0	80.0	80.0	80.0
Serimax Ltd – United Kingdom (6)	80.0	80.0	80.0	80.0
Serimax North America Llc – United States (6)	80.0	80.0	80.0	80.0
Serimax OOO – Russia (6)	80.0	80.0	80.0	80.0
Serimax Russia S.A.S. – France (6)	80.0	80.0	80.0	80.0
Serimax S.A.S. – France (6)	80.0	80.0	80.0	80.0
Serimax South East Asia Pte Ltd – Singapore (6)	80.0	80.0	80.0	80.0
Serimax Welding Services Malaysia sdn bhd – Malaysia (6)	80.0	80.0	80.0	80.0
Tianda Oil Pipe Co. Ltd – China (7)	99.0	99.0	99.7	99.7
Tubos Soldados Atlântico – Brazil	100.0	100.0	100.0	100.0
Vallourec Al Qahtani Tubes LLC – Saudi Arabia	75.0	75.0	75.0	75.0
Valinox Nucléaire S.A.S. – France	100.0	100.0	100.0	100.0
Valinox Nucléaire Tubes Guangzhou Co. Ltd – China	100.0	100.0	100.0	100.0
Vallourec Changzhou Co.Ltd – China	100.0	100.0	100.0	100.0
Vallourec Asia Pacific Corp. Pte Ltd – Singapore	100.0	100.0	100.0	100.0
Vallourec Automotive Components (Changzhou) Co., Ltd – China (3)	-	-	-	-
Vallourec Bearing Tubes – France	100.0	100.0	100.0	100.0
Vallourec Beijing Co. Ltd – China	100.0	100.0	100.0	100.0
Vallourec Canada Inc – Canada	100.0	100.0	100.0	100.0
Vallourec Deutschland GmbH – Germany	100.0	100.0	100.0	100.0
Vallourec Drilling Oil Equipment Manufacturing LLC – United Arab Emirates (2)	100.0	100.0	100.0	100.0
Vallourec Drilling Products France – France (2)	100.0	100.0	100.0	100.0
Vallourec Drilling Products Middle East FZE – Dubai (2)	100.0	100.0	100.0	100.0
Vallourec Drilling Products USA Inc. – United States (2)	100.0	100.0	100.0	100.0
Vallourec Fittings – France	100.0	100.0	100.0	100.0
Vallourec Florestal Ltda – Brazil	100.0	100.0	100.0	100.0
Vallourec Heat Exchanger Tubes – France (3)	-	-	-	-
Vallourec Heat Exchanger Tubes (Changzhou) Co., Ltd – China (3)	-	-	-	-
Vallourec Heat Exchanger Tubes Asia – France (3)	-	-	-	-
Vallourec Heat Exchanger Tubes Inc. – United States (3)	-	-	-	-
Vallourec Heat Exchanger Tubes Ltd – India (3)	-	-	-	-
Vallourec Holdings Inc. – United States	100.0	100.0	100.0	100.0
Vallourec Industries Inc. – United States	100.0	100.0	100.0	100.0
Vallourec Middle East FZE – United Arab Emirates	100.0	100.0	100.0	100.0
Vallourec Mineração Ltda – Brazil	100.0	100.0	100.0	100.0
Vallourec Nigeria Ltd – Nigeria	100.0	100.0	100.0	100.0

	% interest 31/12/2016	% control 31/12/2016	% interest 31/12/2017	% control 31/12/2017
Vallourec O and G Nigeria Ltd – Nigeria	100.0	100.0	100.0	100.0
Vallourec Oil & Gas (China) Co., Ltd – China	100.0	100.0	100.0	100.0
Vallourec Oil & Gas France S.A.S. – France	100.0	100.0	100.0	100.0
Vallourec Oil & Gas Kenya Limited. – Kenya	100.0	100.0	100.0	100.0
Vallourec Oil & Gas Nederland B.V. – Netherlands (2)	100.0	100.0	100.0	100.0
Vallourec Oil & Gas UK Ltd – United Kingdom	100.0	100.0	100.0	100.0
Vallourec Oil & Gas Mexico SA de CV – Mexico	100.0	100.0	100.0	100.0
Vallourec One S.A.S. – France	100.0	100.0	100.0	100.0
Vallourec Russia – Russia	100.0	100.0	100.0	100.0
Vallourec S.A. – France	100.0	100.0	100.0	100.0
Vallourec Saudi Arabia Ltd – Saudi Arabia	80.0	80.0	80.0	80.0
Vallourec Services S.A. – France	100.0	100.0	100.0	100.0
Vallourec Star, LP – United States	80.5	80.5	80.5	80.5
Vallourec Soluções Tubulares do Brasil – Brazil (5)	84.6	84.6	84.6	84.6
Vallourec Transportes e Serviços do Brasil Ltda – Brazil	100.0	100.0	100.0	100.0
Vallourec Tube-Alloy LP – United States	100.0	100.0	100.0	100.0
Vallourec Tubes France S.A.S. – France	100.0	100.0	100.0	100.0
Vallourec Tubes S.A.S. – France	100.0	100.0	100.0	100.0
Vallourec Tubos do Brasil S.A. – Brazil	100.0	100.0	100.0	100.0
Vallourec Umbilicals S.A.S. – France	100.0	100.0	100.0	100.0
Vallourec Uruguay S.A	-	-	100.0	100.0
Vallourec USA Corporation – United States	100.0	100.0	100.0	100.0
VAM Changzhou Oil & Gas Premium Equipments – China (4)	100.0	100.0	100.0	100.0
VAM Far East – Singapore	51.0	51.0	51.0	51.0
VAM Field Services Angola – Angola	100.0	100.0	100.0	100.0
VAM Field Services Beijing – China	51.0	51.0	51.0	51.0
VAM Holding Hong Kong Limited – Hong Kong (4)	100.0	100.0	100.0	100.0
VAM USA – United States	51.0	51.0	51.0	51.0
Joint operations				
Vallourec & Sumitomo Tubos do Brasil Ltda – Brazil (5)	-	-	-	-
Associates				
Hüttenwerke Krupp Mannesmann (HKM) – Germany	20.0	20.0	20.0	20.0
Ascoval (1)	-	-	40.0	40.0
Poongsan Valinox – Korea (3)	-	-	-	-
Xi'an Baotimet Valinox Tubes – China (3)	-	-	-	-

- 2017:

(1) On 26 January 2017, Vallourec and Asco Industries finalized the latter's acquisition of a majority interest in the Saint-Saulve steel mill, which appeared in the statement of financial position as at 31 December 2016 under assets and liabilities held for sale. SAS Ascoval is 60% owned by Asco Industries and 40% by Vallourec Tubes France, and has been consolidated using the equity method as from the date of the transaction.

(2) On 11 December 2017, Vallourec announced that, following exclusive negotiations with the American oil services group NOV, it had received a firm offer for the repurchase of the "Drilling Products" activity. For the operation, which meets IFRS 5 criteria, associated assets and liabilities were reclassified under assets/liabilities held for sale.

- 2016:

The main changes in scope were as follows:

(3) On 29 April 2016, Vallourec completed the sale of its subsidiary Vallourec Heat Exchanger Tubes to American Industrial Acquisition Corporation (AIAC).

(4) In August 2016, Vallourec acquired all shares in VAM Holding Hong Kong Ltd, a holding company, and in VAM Changzhou Oil and Gas (a threading business in China). These two companies were consolidated as joint operations until 30 September 2016, then fully consolidated into the Group's financial statements.

(5) On 1 October 2016, Vallourec finalized the contribution of the tubular activity of Vallourec Tubos do Brasil (VBR), a wholly-owned subsidiary, to Vallourec & Sumitomo Tubos do Brasil (VSB), a joint operation in which Vallourec held a 56% interest. This transaction resulted in Vallourec acquiring control of VSB (renamed Vallourec Soluções Tubulares do Brasil), by increasing its holding from 56% to 84.6%, with the remaining 15.4% non-controlling interests being transferred to the NSSMC and Sumitomo Corp. partners. The new entity, VSB, was fully consolidated in the Group's financial statements as from 1 October 2016, and the Japanese partners' interests are recorded as non-controlling interests.

(6) On 28 October 2016, Serimax and Technip finalized a strategic partnership in the field of offshore pipeline welding. As part of this partnership, Technip acquired a 20% shareholding in Serimax.

(7) As of 2 December 2016, Vallourec held 99.0% of the capital of Tianda Oil Pipe after acquiring in November a majority share of 50.6% and 28.9% by an unconditional mandatory takeover bid followed by withdrawal from the Hong Kong stock market. Tianda Oil Pipe was consolidated using the equity method (19.5%) for 2016 and the acquisition was recorded in the Group's statement of financial position as at 31 December 2016.

If the changes in scope had taken place on 1 January 2016, Group revenue would have stood at €3,277 million, compared to €2,965 million.

There are no significant unconsolidated subsidiaries or interests.

C – Notes to the financial statements (in € thousand)

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NOTE 1 Intangible assets and goodwill

	Concessions, patents, licenses and other rights	Other intangible assets	Total intangible assets	Goodwill
GROSS VALUES				
As at 31/12/2015	**99,529**	**522,270**	**621,799**	**597,703**
Acquisitions	412	1,091	1,503	-
Disposals	-	(575)	(575)	-
Acquisitions from business combinations (see Note 34)	1,044	-	1,044	40,239
Disposals from business combinations	(5,332)	-	(5,332)	-
Reclassification to assets held for sale and discontinued operations	(1,132)	-	(1,132)	-
Impact of changes in exchange rates	3,207	17,398	20,605	18,693
Other changes	(3,764)	1,773	(1,991)	(3,509)
As at 31/12/2016	**93,964**	**541,957**	**635,921**	**653,126**
Acquisitions	2,409	1,179	3,588	-
Disposals	(75)	(536)	(611)	-
Reclassification to assets held for sale and discontinued operations	(3,322)	(20,246)	(23,568)	(18,019)
Impact of changes in exchange rates	(2,157)	(55,599)	(57,756)	(69,211)
Other changes	(5,089)	(84)	(5,173)	12,212
AS AT 31/12/2017	**85,730**	**466,671**	**552,401**	**578,108**
DEPRECIATION AND IMPAIRMENT				
As at 31/12/2015	**(70,691)**	**(402,287)**	**(472,978)**	**(268,134)**
Net depreciation expenses for the fiscal year	(6,898)	(25,236)	(32,134)	-
Impairment (see Notes 2.3, 28 and 29)	(82)	-	(82)	-
Disposals	-	569	569	-
Disposals from business combinations	4,640	-	4,640	-
Reclassification to assets held for sale and discontinued operations	888	-	888	-
Impact of changes in exchange rates	(2,863)	(12,681)	(15,544)	(5,948)
Other changes	3,086	616	3,702	3,640
As at 31/12/2016	**(71,920)**	**(439,019)**	**(510,939)**	**(270,442)**
Net depreciation expenses for the fiscal year	(5,565)	(22,634)	(28,199)	-
Impairment (see Notes 2.3, 28 and 29)	-	-	-	-
Disposals	75	536	611	-
Reclassification to assets held for sale and discontinued operations	2,998	20,245	23,243	18,019
Impact of changes in exchange rates	1,633	45,941	47,574	22,455
Other changes	4,004	-	4,004	60
AS AT 31/12/2017	**(68,775)**	**(394,931)**	**(463,706)**	**(229,908)**
NET VALUES				
As at 31/12/2016	**22,044**	**102,938**	**124,982**	**382,684**
AS AT 31/12/2017	**16,955**	**71,740**	**88,695**	**348,200**

Intangible assets

Vallourec devotes significant efforts on an ongoing basis to Research and Development, particularly in the field of energy. These efforts cover three main areas:

- manufacturing processes (charcoal, steel-making, tube-rolling, non-destructive testing, forming, welding and machining);
- new products and product improvements;
- new services (customer support for tube design, use and processing).

No costs were identified in connection with major projects that meet the criteria for capitalization as assets.

Other intangible assets relate to technology and know-how, trademarks, order books and customer relationships acquired mainly in connection with business combinations. They are amortized on a straight-line basis over their useful life (amortization period of 5.5 to 15 years).

Other than goodwill, there are no intangible assets with indefinite useful lives.

Goodwill

Cash-generating unit (CGU) (see paragraph 2.9 – Impairment of property, plant and equipment and intangible assets)	Vallourec do Brasil	Vallourec North America	Vallourec Europe	Serimax	Others	Total
AS AT 31/12/2015	**3,081**	**326,488**	**-**	**-**	**-**	**329,569**
Impact of changes in exchange rates and other	2,021	10,855	-	-	-	12,876
Impairment (see Notes 2.3, 28 and 29)	-	-	-	-	-	-
Acquisitions (see Note 34)	35,625	-	4,614	-	-	40,239
AS AT 31/12/2016	**40,727**	**337,343**	**4,614**	**-**	**-**	**382,684**
Impact of changes in exchange rates and other	(5,413)	(40,842)	(501)	-	-	(46,756)
Impairment (see Notes 2.3, 28 and 29)	-	-	-	-	-	-
Other changes	2,713	-	9,559	-	-	12,272
AS AT 31/12/2017	**38,027**	**296,501**	**13,672**	**-**	**-**	**348,200**

The other changes correspond to adjustments of goodwill, primarily for Tianda Oil Pipes Co. Ltd and Vallourec Soluções Tubulares do Brasil within one year.

The impairment tests as at 31 December 2017 are presented in Note 2.3.

NOTE 2.1 Property, plant and equipment

	Land	Buildings	Technical installations, industrial equipment and tools	Current property, plant and equipment	Other tangible assets	Total
GROSS VALUES						
As at 31/12/2015	**104,450**	**958,604**	**4,631,086**	**241,036**	**270,234**	**6,205,411**
Acquisitions	-	7,055	38,538	110,819	11,978	168,390
Disposals	(3,511)	(1,424)	(41,655)	(2,822)	(6,930)	(56,342)
Reclassification to assets held for sale and discontinued operations	(200)	(59,649)	(230,658)	(3,440)	(1,998)	(295,945)
Acquisitions from business combinations (see Note 34)	23,570	106,734	600,149	31,486	3,492	765,431
Disposals from business combinations	(2,803)	(196,442)	(758,293)	(17,294)	(29,634)	(1,004,466)
Impact of changes in exchange rates	15,625	65,254	319,974	13,207	35,968	450,028
Other changes	13,729	27,068	211,756	(238,585)	104,722	118,690
As at 31/12/2016	**150,860**	**907,200**	**4,770,897**	**134,407**	**387,832**	**6,351,197**
Acquisitions	-	3,660	33,853	100,110	7,557	145,180
Disposals	(163)	(2,471)	(38,628)	-	(19,822)	(61,084)
Reclassification to assets held for sale and discontinued operations	(1,277)	(21,693)	(133,100)	(1,038)	(5,744)	(162,852)
Impact of changes in exchange rates	(15,388)	(80,927)	(398,348)	(9,455)	(40,046)	(544,164)
Other changes	1,292	10,978	81,330	(109,128)	21,872	6,344
AS AT 31/12/2017	**135,324**	**816,747**	**4,316,004**	**114,896**	**351,649**	**5,734,621**
DEPRECIATION AND IMPAIRMENT						
As at 31/12/2015	**(24,325)**	**(430,467)**	**(2,429,115)**	**(4,825)**	**(155,618)**	**(3,044,350)**
Net depreciation expenses for the fiscal year	(1,324)	(32,533)	(221,442)	837	(37,963)	(292,425)
Impairment losses (Note 2.3)	(10,013)	(207)	(44,356)	(3,034)	(462)	(58,072)
Disposals	3,510	2,399	36,723	2,593	2,020	47,245
Disposals from business combinations	1,340	112,777	448,316	-	13,010	575,443
Reclassification to assets held for sale and discontinued operations	48	56,431	218,413	-	1,793	276,685
Impact of changes in exchange rates	(4,927)	(26,159)	(151,007)	122	(16,529)	(198,500)
Other changes	(6,321)	(11,719)	(9,466)	445	(12,548)	(39,609)
As at 31/12/2016	**(42,012)**	**(329,478)**	**(2,151,934)**	**(3,862)**	**(206,297)**	**(2,733,583)**
Net depreciation expenses for the fiscal year	(1,365)	(31,773)	(247,912)	-	(23,625)	(304,675)
Impairment losses (Note 2.3)	(510)	(259)	(64,336)	-	-	(65,105)
Disposals	17	1,899	37,950	-	3,859	43,725
Reclassification to assets held for sale and discontinued operations	-	12,694	101,219	-	4,190	118,103
Impact of changes in exchange rates	4,608	23,996	141,702	147	20,880	191,333
Other changes	(1,045)	(11,379)	4,050	354	490	(7,530)
AS AT 31/12/2017	**(40,307)**	**(334,300)**	**(2,179,261)**	**(3,361)**	**(200,503)**	**(2,757,732)**
NET VALUES						
As at 31/12/2016	**108,848**	**577,722**	**2,618,963**	**130,545**	**181,535**	**3,617,614**
AS AT 31/12/2017	**95,017**	**482,447**	**2,136,743**	**111,535**	**151,146**	**2,976,889**

“Impairment losses” recorded as at 31 December 2017 are primarily linked to impairments of isolated assets which reflect supplementary initiatives under the transformation plan at industrial sites in Brazil, Europe and China.

“Impairment losses” recorded as at 31 December 2016 are primarily linked to the strategic initiatives announced on 1 February 2016, chiefly consisting in the closure of two rolling mills (Saint-Saulve and Deville in France), one threading line (Mülheim in Germany), one heat treatment line (Bellshill in Scotland), and a blast furnace in Brazil.

Capital expenditure excluding changes in scope

	2016		2017	
	Intangible assets and property, plant and equipment	Biological (see Note 2.2)	Intangible assets and property, plant and equipment	Biological (see Note 2.2)
Europe	95,600	-	85,186	-
North America	18,001	-	26,224	-
South America	47,151	6,584	26,700	6,184
Asia	9,020	-	10,519	-
Others	120	-	139	-
TOTAL	**169,892**	**6,584**	**148,768**	**6,184**
	176,476		**154,952**	
Note 1: acquisition of intangible assets	1,503	-	3,588	-
Note 2.1: acquisition of property, plant and equipment	168,390	6,584	145,180	6,184
TOTAL CAPITAL EXPENDITURE	**169,893**	**-**	**148,768**	**-**
Changes in fixed asset liabilities and partner contributions	(1,090)		(3,425)	
TOTAL	**168,802**	**6,584**	**145,343**	**6,184**
Statement of cash flows: capital expenditure paid out during the period:	175,386		151,527	

Leases

The finance lease signed in 2010 by Vallourec Soluções Tubulares do Brasil (formerly VSB) for the construction of a water treatment facility had a net carrying amount of €58 million as at 31 December 2017.

NOTE 2.2 Biological assets

Change in biological assets	2016	2017
As at 1 January	**154,694**	**88,411**
Investments	6,584	6,184
Valuation at fair value	6,756	3,136
Net depreciation expenses for the period	(7,237)	(8,603)
Impairment losses	(3,957)	-
Reclassification to inventory	(9,660)	(4,514)
Foreign exchange differences	28,033	(11,576)
Other changes	(86,802)	(1,544)
AS AT 31 DECEMBER	**88,411**	**71,494**

The Group's Brazilian subsidiary Vallourec Florestal cultivates eucalyptus plantations mainly to produce the charcoal used in the blast furnaces of Vallourec Soluções Tubulares do Brasil.

As at 31 December 2017, the company cultivated approximately 113,046 hectares of eucalyptus over a total area of 230,377 hectares.

In 2017, Vallourec Florestal posted revenue of €53.5 million, as compared to €54.2 million in 2016.

As a result of the amendments to IAS 16 and IAS 41 applicable as of 1 January 2016, eucalyptus roots are considered as bearer biological assets, and are reclassified under property, plant and equipment (see Note 2.1).

NOTE 2.3 Impairment of property, plant and equipment and intangible assets

Cash-Generating Units

The CGUs as at 31 December 2017 are Vallourec Europe, Vallourec do Brasil, Vallourec North America, Valinox Nucléaire and Serimax, with no change in comparison to 2016.

Impairment indications

The Group was faced with a deteriorated economic environment (drop in exploration and production investments, and in production by oil operators, volatility of the price of raw materials and energy, extremely competitive international environment). In response to the continued decline in oil and gas prices since the end of 2014, oil and gas companies have further tightened their cost control, leading them to reduce capital expenditure and streamline inventories in the areas of exploration, production and development of oil and natural gas reserves. This has had a significant impact on the demand for pipes and on their prices. This reduction in demand, combined with lower prices resulting from competitive pressures from incumbent gas operators and the arrival of new competitors, exacerbated by the deflationary pressures of our customers, has significantly altered the Group's competitiveness and the profitability of activities, and has been analyzed as a general indication of impairment, requiring the implementation of impairment tests for all the Group's CGUs as from late 2014.

To that end, the Group ultimately recorded impairment on 31 December 2014 of property, plant and equipment and intangible assets of the Vallourec Europe CGUs and of assets from the Jeceaba (Brazil) plant held in the "Vallourec & Sumitomo do Brasil" joint venture. In 2016, the acquisition of VSB had the result of solidifying the impairment recorded in 2014.

As at 31 December 2017, the Group has performed impairment tests on all CGUs in order to monitor impairment on property, plant and equipment recorded in 2014 for the Vallourec Europe CGU, and to test the goodwill of other CGUs.

Tested bases

The CGUs with the strongest sensitivity to the assumptions are presented below:

In € million	Vallourec Europe	Vallourec North America
Non-current operating assets	886	1,437
Current operating assets	364	189
Test base	1,250	1,626

The test base of the Vallourec Europe CGU comprises the assets of several subsidiaries that are active in the production cycle of the products marketed by this CGU: tube production units and integrated finishing lines in France, Germany and in the Middle East-Asia area.

Recoverable value

For each CGU tested, the recoverable value is considered as equal to the value in use.

It therefore corresponds to the present value of the forecasted future cash flows it generates.

Future cash flows

For the term of the BPs, i.e. 5 years

The Group's five-year strategic plan was presented to the Supervisory Board in December 2017. In this plan, the Group used assumptions for 2018 that were consistent with the data recorded in late 2017. Its assumptions also included a gradual recovery of the business.

The next five years should bring a gradual increase in investment by oil companies, as well as a deflationary environment in part offset by (i) optimization of the new industrial routes presented in the Vallourec transformation plan in February 2016, and (ii) the benefits of the competitiveness plans launched by the Group since 2015.

Exchange rate assumptions are consistent over the period with those used at the end of 2017.

For the Europe CGU, commercial assumptions were refined and take into account the impact of the change between exchange rates used when establishing the strategic plan and the closing rates of 31 December 2017.

A three-year extrapolation period from 2023 to 2025

Given that the main players in the Oil & Gas market have been subject to profound structural changes since 2014, the effects of which are expected beyond the five-year period, the return of oil investment to normal levels is not expected by the end of the term of the strategic plan.

These new circumstances have led us to model a three-year extrapolation period after the final year of the strategic plan.

This period, taken into account for the first time in 2016, also makes it possible to gradually converge the revenue growth rates for the final year of the strategic plan towards the perpetuity growth rate.

The perpetuity growth rates were reviewed on 31 December 2017 in order to make the latter consistent with the currency in which the weighted average cost of capital ("WACC") and the future cash flows were calculated. Consequently, 2026 is projected to perpetuity by applying a unique growth rate of 1.9% to all CGUs. This rate corresponds to long-term inflation forecasts in the euro zone.

Discount rate

The CGU discount rates correspond to their weighted average cost of capital ("WACC"), corresponding to the weighted average cost of equity and the cost of debt after tax.

The main components of weighted average cost of capital are:

- the risk-free rate corresponding to the 10-year French Treasury bond (OAT) rate;
- the systematic risk obtained by combining:
  - the Europe share market risk premium corresponding to the expected yield rate on this market minus the risk-free rate,
  - the betas per activity calculated on the basis of samples of listed companies in the sector strictly comparable to the CGU in terms of activity;
- the specific risk linked to countries ("country risk") for activities situated outside of Europe.

The cost of debt after tax is calculated by adding to the risk-free rate the loan spread observed on the bond maturing on 30 September 2024 issued by Vallourec and taking tax into account.

Sectoral gearing which makes it possible to weight the cost of equity and the cost of debt after tax, and which corresponds to the net financial debt/stock market capitalization median of comparable companies.

All of the above parameters have been calculated over an average period of five years.

Applying these parameters leads to a discount rate of 7.7% for Europe, 7.6% for North America, 8.6% for Vallourec do Brasil, 7.4% for Serimax and 6.9% for Valinox Nucléaire.

Impairment test results

The tests performed do not result in the recognition of impairment losses.

The adaptations to the seamless pipe production units have led to the recognition of €65 million in impairment (€35 million for the Vallourec Europe CGU relating to the Vallourec China plant and €30 million for the Vallourec do Brasil and Vallourec North America CGUs).

Sensitivity analyses

The sensitivity analyses presented in the table below were calculated by changing a single parameter. Therefore, they correspond to a mechanical calculation which is not representative of a consistent change in all of the sales parameters, nor of additional measures that the group might end up taking under such circumstances.

The results of the sensitivity analyses of the Vallourec Europe and Vallourec North America CGUs are presented in the table below:

Sensitivity analyses of the CGUs *(in € million)*		**Vallourec Europe**	**Vallourec North America**
Tested bases as at 31/12/2017		1,250	1,626
CGU VALUE IN USE		**1,326**	**2,241**
Sensitivity to the discount rate	+0.5 pt	1,156	2,063
	-0.5 pt	1,529	2,453
EBITDA sensitivity	-10% per year	1,039	1,877
	+10% per year	1,612	2,599
EUR/USD foreign exchange rate sensitivity	+5 cts	548	2,054
	+ 5 cts	2,066	2,155
Perpetuity growth rate sensitivity	+0.5 pt	1,438	2,386
	-0.5 pt	1,231	2,120
IMPAIRMENT LOSS		-	-

The table above shows that:

- for the Vallourec Europe and Vallourec North America CGUs, the values in use as at 31 December 2017 are higher than the tested bases, as indicated above;
- the future cash flows of these CGUs are sensitive to changes in the value of their export transactions denominated in a currency other than that of the country where they are based (mainly USD). Unhedged cash flows were measured at the exchange rate of 31 December 2017, consistent with the balance sheet values to be tested.

Given the sensitivity of DCF calculations to the assumptions used, the Group decided to maintain the impairment losses recorded at the end of 2014 and 2015 for the Vallourec Europe CGU.

NOTE 3 Associates

The Group's main associates (individual carrying amount greater than €50 million) are listed below.

	HKM	Tianda Oil Pipe	Others	Total
Activity	**Steel mill**	**Tube manufacturing**		
Business location	**Germany**	**China**		
As at 31/12/2015	**80,682**	**53,108**	**43,045**	**176,835**
Capital increase		-		
Impact of changes in exchange rates	-	(2,726)	1,098	(1,628)
Dividends paid	(1)	(7,261)	-	(7,262)
Changes in consolidation scope	-	(35,521)	379	(35,142)
Others	-	-	-	-
Contribution to net income of the period	5	(7,600)	(408)	(8,003)
As at 31/12/2016	**80,686**	**-**	**44,114**	**124,800**
Capital increase	-	-	-	-
Impact of changes in exchange rates	-	-	(10,874)	(10,874)
Dividends paid	(1)	-	(4,659)	(4,660)
Changes in consolidation scope	-	-	12,183	12,183
Depreciation of shares	-	-	(12,000)	(12,000)
Others	(3)	-	(4,744)	(4,747)
Contribution to net income of the period	6	-	(3,179)	(3,173)
AS AT 31/12/2017	**80,688**	**-**	**20,841**	**101,529**

On 26 January 2017, Vallourec and Asco Industries finalized the latter's acquisition of a majority interest in the Saint-Saulve steel mill, which appeared in the statement of financial position as at 31 December 2016 under assets and liabilities held for sale. SAS Ascoval is 60% owned by Asco Industries and 40% by Vallourec Tubes France, and has been consolidated using the equity method as from the date of the transaction. On 30 November 2017, the Regional Court of Strasbourg decided to place Ascoval under a "safeguard procedure"; consequently, the contribution of this joint venture was fully written off.

On 31 December 2016, Vallourec acquired Tianda Oil Pipe, which is now fully consolidated with a holding rate of 99.03%, after the acquisition in November of a majority share of 50.61% and the successful unconditional mandatory takeover bid. Tianda Oil Pipe was consolidated using the equity method (19.5%) for 2016 and the acquisition was recorded in the Group's balance sheet as at 31 December 2016 (see Note 34).

The condensed financial data (100%) for HKM is presented below.

HKM	31/12/2016	31/12/2017
Non-current assets	689,483	648,050
Current assets	689,409	655,989
Non-current liabilities	465,117	505,630
Current liabilities	510,343	394,971
Net assets	**403,432**	**403,438**
Sales	1,831,087	2,511,496
Operating income/(loss)	2,706	26,149
Net income from continuing operations	-	-
Other comprehensive income (loss)	-	-
Total comprehensive income (loss)	25	31
Dividends paid to the Group	5	5

The reconciliation of the condensed financial data from the HKM associate with the book value of the Group's interests in this associate is as follows:

HKM	31/12/2016	31/12/2017
Net assets	403,432	403,438
Group's percentage interest in HKM	20%	20%
Goodwill	-	-
Others	-	-
Value of investments in equity affiliates	80,686	80,688
HKM net income/(loss)	25	31
Group's percentage interest in HKM	20%	20%
Share of net income	5	6

The Group likewise holds interests in other associates (which, considered individually, are not significant) for an overall book value of €21 million as at 31 December 2017, compared with €44 million as at 31 December 2016.

NOTE 4 Other non-current assets

	Other equity interests	Loans	Other financial assets	Other non-current assets	Provisions	Total
As at 31/12/2015	**67,166**	**4,659**	**36,662**	**125,925**	**(1,279)**	**233,133**
Impact of changes in exchange rates	548	124	6,047	22,193	(523)	28,389
Changes in gross values	9,278	(8)	3,396	20,714	-	33,380
Increase in provisions	-	-	-	-	(1,828)	(1,828)
Reversals of provisions	-	-	-	-	2,919	2,919
Acquisitions from business combinations (see Note 34)	-	853	7,478	104,823	-	113,154
Disposals from business combinations	-	(477)	(4,188)	(67,581)	-	(72,246)
Other changes	2,584	(120)	8,639	9,209	(8,642)	11,670
As at 31/12/2016	**79,576**	**5,031**	**58,034**	**215,283**	**(9,353)**	**348,571**
Impact of changes in exchange rates	(549)	(123)	(4,696)	(17,237)	763	(21,842)
Changes in gross values	(73,282)	17,021	(8,130)	(89,469)	-	(153,860)
Increase in provisions	-	-	-	-	(16,983)	(16,983)
Reversals of provisions	-	-	-	-	1,258	1,258
Reclassification to assets held for sale and discontinued operations	-	-	(375)	-	-	(375)
Other changes	-	(220)	(8,911)	(9,619)	(856)	(19,606)
AS AT 31/12/2017	**5,745**	**21,709**	**35,922**	**98,958**	**(25,171)**	**137,163**

Available-for-sale equity securities (included in "Other equity interests") in late December 2016 related almost exclusively to Nippon Steel & Sumitomo Metal Corp., listed on the Tokyo Stock Exchange and acquired in 2009 for a total of €81.9 million.

In view of the strategic and long-term nature of the investment, Vallourec set thresholds above which a decline in net asset value of the Nippon Steel & Sumitomo Metal Corp. shares would be an event of a "significant or prolonged nature" requiring the recognition of an impairment loss in the income statement:

- 3 years for the prolonged nature of a decline;
- 40% for the significant nature of a decline.

As at 31 December 2016, the change in fair value of these shares, based on their NAV of €73.3 million, i.e. a cumulative loss of €8.6 million in late December 2016, was recognized in equity. This loss was reclassified in financial income/(loss) in 2017. They were sold during the fiscal year at a price of €69.0 million. The capital loss on disposal of €4.3 million is presented in the income/(losses) on disposals.

Other financial investments consist mainly of interest-bearing security deposits, mainly paid in connection with tax disputes in Brazil (€22.0 million as at 31 December 2017; see also Note 16).

Other non-current assets consist mainly of €80.8 million in deferred tax receivables in Brazil and the United States.

Maturities of other non-current assets	1 to 5 years	5 years or more	Total
GROSS VALUES AS AT 31/12/2016			
Loans	3,414	1,617	5,031
Other equity interests	-	79,576	79,576
Other financial assets	208,287	65,030	273,317
TOTAL	**211,701**	**146,223**	**357,924**
GROSS VALUES AS AT 31/12/2017			
Loans	19,662	2,047	21,709
Other equity interests	-	5,745	5,745
Other financial assets	72,413	62,467	134,880
TOTAL	**92,075**	**70,259**	**162,334**

NOTE 5 Deferred taxes

The main bases used to calculate deferred taxes are:

- recurring: provisions for paid leave and the additional social security levy on businesses (*contribution sociale de solidarité des sociétés*), etc.;
- non-recurring: cancellation of regulated provisions, employee profit-sharing, non-tax-deductible provisions for contingencies and liabilities, and any restatements to ensure the consistency and comparability of the parent company or consolidated financial statements;
- long-term recurring: non-tax deductible provisions for retirement commitments, non-tax-deductible provisions for assets and remeasurements of assets acquired in connection with a business combination.

Deferred taxes are recognized using the liability method.

The rates used are the recovery rates known at the reporting date.

The French supplementary business taxes *(Cotisation Foncière des Entreprises* and *Cotisation sur la Valeur Ajoutée des Entreprises)* are recognized as operating expenses.

	2016	2017
Deferred tax assets	190,269	242,440
Deferred tax liabilities	80,494	18,284
NET DEFERRED TAX ASSETS/(DEFERRED TAX LIABILITIES)	**109,775**	**224,156**

Presentation of deferred taxes by type

As at 31/12/2017	Assets	Liabilities	Net deferred tax liabilities
Non-current assets	-	114,079	
Other assets and liabilities	31,563	-	
Inventories	22,023	-	
Employee benefit commitments	1,900	-	
Derivatives	-	704	
Distributable reserves and foreign currency translation reserves	-	-	
NET BALANCE	**55,486**	**114,783**	**(59,297)**
Recognition of tax losses	283,453	-	283,453
TOTAL	**338,939**	**114,783**	**224,156**

As at 31/12/2016	Assets	Liabilities	Net deferred tax liabilities
Non-current assets	-	241,012	
Other assets and liabilities	39,836	-	
Inventories	28,154	-	
Employee benefit commitments	9,380	-	
Derivatives	748	-	
Distributable reserves and foreign currency translation reserves	-	1,851	
NET BALANCE	**78,118**	**242,863**	**(164,745)**
Recognition of tax losses	274,520	-	274,520
TOTAL	**352,638**	**242,863**	**109,775**

The Group's deferred taxes (gross values) as at 31 December 2017 and 31 December 2016 are broken down as follows:

As at 31/12/2017	Gross value	Corresponding deferred tax	Recognized deferred tax	Unrecognized or impaired deferred tax
Tax loss carryforwards	3,147,994	942,995	283,453	659,541
Other tax assets	-	-	(41,013)	330,361
TOTAL TAX ASSETS	**-**	**947,460**	**242,440**	**989,902**
Tax liabilities	-	-	(18,284)	-
TOTAL TAX LIABILITIES	**-**	**-**	**(18,284)**	**-**
TOTAL	**-**	**-**	**224,156**	**989,902**

As at 31/12/2016	Gross value	Corresponding deferred tax	Recognized deferred tax	Unrecognized or impaired deferred tax
Tax loss carryforwards	2,447,210	787,571	274,520	513,051
Other tax assets	-	-	(84,251)	421,281
TOTAL TAX ASSETS	**-**	**787,571**	**190,269**	**934,332**
Tax liabilities	-	-	(80,494)	-
TOTAL TAX LIABILITIES	**-**	**-**	**(80,494)**	**-**
TOTAL	**-**	**-**	**109,775**	**934,332**

Tax loss carryforwards relate mainly to Vallourec Soluções Tubulares do Brasil (formerly VSB), the French tax group, Vallourec Changzhou (China), Vallourec Star (United States) and Vallourec Deutschland (Germany) and Vallourec Saudi Arabia.

The deferred tax assets are recognized when there is reasonable assurance of being able to recover these deferred tax assets in the foreseeable future (between 5 and 10 years). When it is estimated that allocating these carryforwards to future taxable profits would be uncertain, no deferred tax asset is recognized and, where applicable, deferred tax assets at the opening date are impaired.

Changes in deferred taxes are broken down as follows:

Net deferred tax assets/(liabilities)	2016	2017
AS AT 1 JANUARY	**(67,389)**	**109,775**
Impact of changes in exchange rates	20,244	(25,398)
Recognized in profit or loss	119,500	147,024
Recognized in reserves	(4,725)	(689)
Reclassification to assets held for sale and discontinued operations	-	-
Others	42,145	(6,556)
AS AT 31 DECEMBER	**109,775**	**224,156**

The amount of the deferred tax recognized in reserves corresponds mainly to the change in deferred taxes calculated on derivatives and actuarial gains and losses on retirement commitments and similar obligations.

NOTE 6 Inventories and work in progress

	Raw materials and merchandise	Goods in production	Intermediate and finished goods	Total
GROSS VALUES				
As at 31/12/2015	**468,571**	**357,999**	**407,477**	**1,234,047**
Changes in inventories recognized in the income statement	(51,142)	(43,414)	(73,642)	(168,198)
Impact of changes in exchange rates	25,584	1,494	26,953	54,031
Acquisitions from business combinations (see Note 34)	133,274	1,546	104,534	239,354
Disposals from business combinations	(56,308)	(622)	(55,014)	(111,944)
Reclassification to assets held for sale and discontinued operations	(24,500)	-	-	(24,500)
Other changes	3,241	1,812	12,670	17,723
As at 31/12/2016	**498,720**	**318,815**	**422,977**	**1,240,512**
Changes in inventories recognized in the income statement	(1,338)	94,402	(11,145)	81,919
Impact of changes in exchange rates	(35,420)	(25,203)	(32,133)	(92,756)
Reclassification to assets held for sale and discontinued operations	(21,613)	(12,200)	(8,999)	(42,812)
Other changes	(3,519)	-	493	(3,026)
AS AT 31/12/2017	**436,830**	**375,814**	**371,193**	**1,183,837**
IMPAIRMENT				
As at 31/12/2015	**(92,393)**	**(20,330)**	**(55,159)**	**(167,882)**
Impact of changes in exchange rates	(3,220)	247	(4,428)	(7,401)
Provisions [(a)]	(52,973)	(11,806)	(32,761)	(97,540)
Reversals of provisions	33,904	6,666	35,112	75,683
Disposals from business combinations	57	-	5,515	5,572
Reclassification to assets held for sale and discontinued operations	11,211	-	-	11,211
Other changes	(3,018)	655	(23,043)	(25,406)
As at 31/12/2016	**(106,432)**	**(24,567)**	**(74,764)**	**(205,763)**
Impact of changes in exchange rates	4,570	1,451	3,532	9,553
Allowances	(32,763)	(11,894)	(31,983)	(76,640)
Reversals of provisions	40,231	2,916	37,940	81,087
Reclassification to assets held for sale and discontinued operations	7,073	16	2,559	9,648
Other changes	13,189	(6,975)	(4,103)	2,111
AS AT 31/12/2017	**(74,132)**	**(39,053)**	**(66,819)**	**(180,004)**

(a) *Provisions for inventories of raw materials and consumables include a €9 million impairment loss in 2016 for spare parts related to industrial assets.*

The cost of any underutilized capacity is excluded from the value of inventories. Made-to-order products are impaired, where applicable, for the unaffected portion and valued at scrap-metal prices (if applicable). Inventories are impaired based on their net realizable values.

Net values	Raw materials and merchandise	Goods in production	Intermediate and finished goods	Total
As at 31/12/2016	392,288	294,248	348,213	1,034,749
AS AT 31/12/2017	**362,698**	**336,761**	**304,374**	**1,003,833**

NOTE 7 Trade and other receivables

	Advances and partial payments on orders	Trade and other receivables (gross)	Provisions for depreciation	Total
As at 31/12/2015	**12,637**	**587,082**	**(54,815)**	**544,904**
Impact of changes in exchange rates	1,580	22,879	(3,429)	21,030
Changes in gross values	(2,870)	(120,533)	-	(123,403)
Increase in provisions	-	-	(8,690)	(8,690)
Reversals of provisions	-	-	28,654	28,654
Acquisitions from business combinations (see Note 34)	21,139	90,322	-	111,461
Disposals from business combinations	(1,326)	(21,092)	147	(22,271)
Reclassification to assets held for sale and discontinued operations	(13)	(7,217)	-	(7,230)
Other changes	(3,032)	(388)	5,183	1,763
As at 31/12/2016	**28,115**	**551,053**	**(32,950)**	**546,218**
Impact of changes in exchange rates	(1,763)	(45,763)	1,193	(46,333)
Changes in gross values	8,052	77,940	-	85,992
Increase in provisions	-	-	(12,995)	(12,995)
Reversals of provisions	-	-	8,675	8,675
Reclassification to assets held for sale and discontinued operations	-	(13,590)	153	(13,437)
Other changes	44	(434)	193	(197)
AS AT 31/12/2017	**34,448**	**569,206**	**(35,731)**	**567,923**

In 2017, the Group completed operations to mobilize receivables without recourse with financial institutions in the amount of €48 million. The amount of the corresponding receivables thus no longer appears in the Group's consolidated balance sheet.

NOTE 8 Financial instruments

Financial assets and liabilities

Financial assets and liabilities are measured and presented in the balance sheet in accordance with the various categories specified by IAS 39.

8.1 Impact of IAS 32 and IAS 39 on equity and net income

As explained in paragraph 2.16 on accounting principles and methods, the main impact of IAS 32 and IAS 39 relates to the accounting treatment of hedging contracts entered into by the Group in connection with commercial purchase and sale transactions in foreign currencies and the accounting treatment of available-for-sale financial assets. The other effects of the transition to IAS 32 and IAS 39 have had little impact on the financial statements (measurement of housing loans to employees using the effective interest rate method and measurement at fair value of investment securities).

Regarding foreign exchange hedges, the hedging relationship is based on the spot exchange rates. Premiums and discounts on derivatives are systematically considered ineffective and recognized in the income statement (financial income or loss). Currency receivables and payables have been revalued at the spot rate as at 31 December.

From a net liability position of €47.3 million as at 31 December 2016, hedging assets moved to a net asset position of €19.6 million as at 31 December 2017.

Fluctuations in the euro against the US dollar in 2017 account for most of the €33.9 million change in the intrinsic value of hedges of forecast sales and purchases in foreign currencies and the €28.2 million change in the intrinsic value of hedges of foreign currency receivables and payables.

Financial instruments of a speculative nature remain exceptional and arise when a hedging relationship is ineffective under the terms of IAS 39. Their changes in value do not have a material impact on foreign exchange gains or losses.

Statement of financial position items	As at 31/12/2016	As at 31/12/2017	Changes in 2017 Total	Reserves	Reclassification [c]	Net Income
1 – Derivatives recognized in the statement of financial position [a]						
Changes in the intrinsic value of forward sales of currencies and forward purchases [b] associated with order books and commercial tenders	(24,626)	9,302	33,928	34,100	(1,507)	1,335
Changes in the intrinsic value of forward sales of currencies (and forward purchases) associated with trade receivables (and accounts payable [b])	(17,140)	11,019	28,159	183	2,990	24,986
Changes in the intrinsic value of forward sales of currencies (and forward purchases) associated with finance receivables (and financial payables)	(18,193)	4,555	22,748	(28)	-	22,776
Recognition of premium/discount	9,785	(7,140)	(16,925)	(806)	(15,830)	(289)
Recognition of changes in fair value of interest rate swaps	-	-	-	-	-	-
Changes in values linked to hedging instruments set up under employee share ownership plans	2,866	1,821	(1,045)	(142)	-	(903)
SUBTOTAL: DERIVATIVES	**(47,308)**	**19,557**	**66,865**	**33,307**	**(14,347)**	**47,905**
■ Of which derivatives – assets	57,985	32,451				
■ Of which derivatives – liabilities	105,293	12,894				
■ Of which reclassification to assets held for sale	-	-				
2 – Receivables (payables) used for commercial hedges						
Order book		(2,084)	(2,084)	(3,591)	1,507	-
Trade receivables		(2,842)	(2,842)	-	12,840	(15,683)
3 – Receivables (payables [b]) hedged in currencies – translation gain/loss						
Measurement as at the reporting date exchange rate (trade payables [b] and accounts receivable)	20,389	4,334	(16,055)	-	-	(16,055)
Measurement as at the reporting date exchange rate (financial liabilities and accounts receivable)	16,907	(2,254)	(19,161)	-	-	(19,161)
IMPACT OF HEDGING TRANSACTIONS	**(10,012)**	**16,711**	**26,723**	**29,716**	**-**	**(2,994)**
4 – Measurement of other investments in equity instruments at fair value	**(8,665)**	**-**	**8,665**	**-**	**-**	**8,665**
TOTAL	**(18,677)**	**16,711**	**35,388**	**29,716**	**-**	**5,671**

(a) Assets and liabilities offset in this table: + = asset, ( ) = liability.

(b) Non-significant amounts.

(c) The reclassification concerns hedging operations in the Brazilian subsidiaries.

The change in the fair value of financial instruments hedging foreign exchange risk, which affected equity as at 31 December 2016, was -€24.6 million. In 2017, around 94% of the positive change in fair value attached to the order book and commercial tenders at the end of 2016 was transferred from equity to the statement of comprehensive income, under “translation gain/loss”. This amount represents the impact of the changes in value of foreign exchange hedges for the order book and commercial tenders as at 31 December 2016, which were fully or partially unwound or converted into receivables during 2017.

This corresponds mainly to the hedges of receivables in US dollars, which represented nearly all the hedges with an impact on equity as at 31 December 2017.

Statement of financial position items	As at 31/12/2015	As at 31/12/2016	Changes in 2016 Total	Reserves	Net Income
1 – Derivatives recognized in the statement of financial position [a]					
Changes in the intrinsic value of forward sales of currencies and forward purchases [b] associated with order books and commercial tenders	(40,727)	(24,626)	16,101	13,149	2,952
Changes in the intrinsic value of forward sales of currencies (and forward purchases) associated with trade receivables (and accounts payable [b]) [c]	(41,788)	(17,140)	24,648	2,109	22,539
Changes in the intrinsic value of forward sales of currencies (and forward purchases) associated with finance receivables (and finance payables)	(54,701)	(18,193)	36,508	180	36,328
Recognition of premium/discount [c]	4,062	9,785	5,723	8,012	(2,289)
Recognition of changes in fair value of interest rate swaps	-	-	-	-	-
Changes in values linked to hedging instruments set up under employee share ownership plans	1,625	2,866	1,241	56	1,185
SUBTOTAL: DERIVATIVES	**(131,529)**	**(47,308)**	**84,221**	**23,506**	**60,715**
■ Of which derivatives – assets	20,341	57,985			
■ Of which derivatives – liabilities	152,429	105,293			
■ Of which reclassification to assets held for sale	(559)	-			
2 – Receivables (payables [b]) hedged in currencies – translation gain/loss					
Measurement as at the reporting date exchange rate (trade payables [b] and accounts receivable)	36,877	20,389	(16,488)	-	(16,488)
Measurement as at the reporting date exchange rate (financial liabilities and accounts receivable)	55,299	16,907	(38,392)	-	(38,392)
IMPACT OF HEDGING TRANSACTIONS	**(39,353)**	**(10,012)**	**29,341**	**23,506**	**5,835**
3 – Measurement of other investments in equity instruments at fair value	**(13,951)**	**(8,665)**	**5,286**	**5,286**	**-**
TOTAL	**(53,304)**	**(18,677)**	**34,627**	**28,792**	**5,835**

(a) Assets and liabilities offset in this table: + = asset, ( ) = liability.

(b) Non-significant amounts.

(c) The impact on reserves includes, in particular, the effects of the acquisition of Vallourec & Sumitomo Tubos do Brasil.

The change in the fair value of financial instruments hedging foreign exchange risk, which affected equity as at 31 December 2015, was -€40.7 million. In 2016, around 94% of the positive change in fair value attached to the order book and commercial tenders at the end of 2015 was transferred from equity to the statement of comprehensive income, under “translation gain/loss”. This amount represents the impact of the changes in value of foreign exchange hedges for the order book and commercial tenders as at 31 December 2015, which were fully or partially unwound or converted into receivables during 2016.

This corresponds mainly to the hedges of receivables in US dollars, which represent 85% of the hedges with an impact on equity as at 31 December 2016.

8.2 Information on the nature and extent of market risk and how it is managed by the Group

Market risk is comprised of interest rate, foreign exchange (conversion and transactions), credit and equity risk. Liquidity risk is addressed in Note 16.

Interest rate risk

Management of medium- and long-term financing within the euro zone is centralized at Vallourec and the sub-holding company Vallourec Tubes.

Total liabilities

As at 31/12/2017	Other borrowings	Cash
Fixed rate on date granted	2,381,008	-
Variable rate on date granted swapped to fixed rate	-	-
Fixed rate	**2,381,008**	**-**
Variable rate	**182,331**	**1,021,035**
TOTAL	**2,563,339**	**1,021,035**

As at 31/12/2016	Other borrowings	Cash
Fixed rate on date granted	2,325,628	-
Variable rate on date granted swapped to fixed rate	-	-
Fixed rate	**2,325,628**	**-**
Variable rate	**247,460**	**1,286,722**
TOTAL	**2,573,088**	**1,286,722**

The Group is exposed to interest rate risk on its variable rate debt.

The amount of loans with fixed rates on the dates granted primarily consists of bonds and commercial paper issued by Vallourec:

- in August 2012, two long-term private bond issues for a total of €455 million. The amounts and terms of these two private bond issues are €400 million for seven years with an annual coupon of 3.25% for one, and €55 million for 15 years with an annual coupon of 4.125% for the other;
- on 30 September 2014, a €500 million bond issue, maturing in September 2024, with a fixed annual coupon of 2.25%;
- on 27 September 2017, a €250 million bond issue, consisting of Bonds Convertible into New Shares and/or Exchangeable for Existing Shares, maturing in October 2022, with a fixed annual coupon of 4.125%, a 37.5% conversion premium and a 6.89 strike;
- on 11 October 2017, Vallourec issued a €400 million bond, which received a matching contribution on 23 October 2017 in the amount of €150 million (i.e. €550 million in total) maturing in October 2022 with a fixed annual coupon of 6.625%. This bond is callable pursuant to the contractual terms as from 15 October 2020;
- outstanding commercial paper in the amount of €396.8 million.

Furthermore, in December 2009, Vallourec Soluções Tubulares do Brasil took out a loan with BNDES (Banco National de Desenvolvimento Econômico e Social). As at 31 December 2017, BRL 4.4 million of this loan, at a fixed rate of 4.5%, had been drawn. Vallourec Soluções Tubulares do Brasil also concluded a fixed-rate finance lease in 2010.

As at 31 December 2017, financial debt exposed to changes in variable interest rates was €182.3 million (about 7% of total gross debt).

No significant line of fixed-rate financing will reach contractual maturity during the 12 months after 31 December 2017, except for:

- €396.8 million in outstanding commercial paper maturing in more than one year;
- the US finance lease in the amount of €23.2 million;
- €68.4 million for various lines of financing in the Group's subsidiaries.

Given the Group's interest rate risk hedging policy, the impact of a 1% rise in short-term rates in the euro zone, on Brazilian and Chinese rates and UK and US money market rates would result in a €1.8 million increase in the Group's annual financial expenses, based on an assumption of complete stability of the financial liabilities and constant exchange rates, and after taking into account the effects of any hedging instruments. This impact does not take into account the interest rate risk on commercial paper with a more than one year maturity or on short-term cash investments (of no more than three months).

Foreign currency translation risk

The assets, liabilities, revenues and expenses of the Group's subsidiaries are expressed in various currencies. The Group financial statements are presented in euros. The assets, liabilities, revenues and expenses denominated in currencies other than the euro have to be translated into euros at the applicable rate so that they can be consolidated.

If the euro rises (or falls) against another currency, the value in euros of the various assets, liabilities, revenues and expenses initially recognized in that other currency will fall (or rise). Therefore, changes in the value of the euro may have an impact on the value in euros of the assets, liabilities, revenues and costs not denominated in euros, even if the value of these items in their original currency has not changed.

In 2017, net income, Group share was generated to a significant extent by subsidiaries that prepare their financial statements in currencies other than the euro (mainly in US dollars and the Brazilian real). A 10% change in exchange rates would have had an upward or downward impact on net income, Group share of around €2.1 million.

In addition, the Group's sensitivity to long-term foreign exchange rate risk is reflected in the changes that have occurred in recent years in the foreign currency translation reserves booked to equity (-€564.5 million as at 31 December 2017) which, in recent years, have been linked mainly to movements in the US dollar and Brazilian real.

Foreign currency translation reserve – Group share	31/12/2016	31/12/2017
USD	343,878	193,059
GBP	(11,583)	(12,107)
BRL	(529,697)	(738,432)
CNY	34,276	19,532
Others	(13,448)	(26,513)
TOTAL	**(176,574)**	**(564,461)**

Transaction risk

The Group is subject to exchange rate risks due to its business exposure linked to sales and purchase transactions entered into by some of its subsidiaries in currencies other than their functional currency.

The main foreign currency involved is the US dollar (USD): a significant portion of Vallourec's transactions (approximately 38% of Group sales in 2017) is invoiced in US dollars by companies whose functional currency is not the US dollar.

Exchange rate fluctuations between the euro, the Brazilian real (BRL) and the US dollar may therefore affect the Group's operating margin. Their impact is, however, very difficult to quantify for two reasons:

1. there is an adjustment effect on selling prices denominated in US dollars related to market conditions in the various sectors of activity in which Vallourec operates;
2. certain sales and purchases, even though they are denominated in euros or Brazilian reals, are influenced by the level of the US dollar. They are therefore indirectly and at some time in the future affected by movements in the US currency.

The Group actively manages its exposure to foreign exchange risk to reduce the sensitivity of its net profits to currency fluctuations by setting up hedges once the order is placed and sometimes once a quotation is given.

Order cancellations could therefore result in the cancellation of hedges in place, leading to the recognition in the consolidated income statement of gains and losses with regard to these canceled hedges.

We estimate that a 10% rise or fall in the currencies used in all hedges implemented by the Group would result in a €47.5 million decrease or increase in the intrinsic value recognized in consolidated equity as at 31 December 2017. Most of these amounts would be due to changes in the US dollar against the euro, and to a lesser extent, the Brazilian real against the US dollar.

To be eligible for hedge accounting as defined under IAS 39, the Vallourec Group has developed its cash management and invoicing systems to facilitate the traceability of hedged transactions throughout the duration of the hedging instruments.

As at 31 December 2017, the following amounts were outstanding under forward foreign exchange contracts to hedge purchases and sales denominated in foreign currencies:

Hedging contracts with regard to commercial transactions – Exchange rate risk	2016	2017
Forward exchange contract: forward sales	1,074,559	805,754
Forward exchange contract: forward purchases	45,218	64,563
Currency options: sales	-	-
Currency options: purchases	-	-
Raw materials and energy – purchases, options	-	-
TOTAL	**1,119,777**	**870,317**

Contract maturities as at 31 December 2017

Contracts on commercial transactions	Total	< 1 year	1 to 5 years	> 5 years
Exchange contracts: forward sales	805,754	805,754	-	-
Exchange contracts: forward purchases	64,563	64,563	-	-
Currency options: sales	-	-	-	-
Currency options: purchases	-	-	-	-
Raw materials and energy – purchases, options	-	-	-	-
TOTAL	**870,317**	**870,317**		**-**

Forward sales (€806 million of the €870 million total) correspond mainly to sales of US dollars. These contracts were transacted at an average forward EUR/USD rate of 1.18 and an average forward USD/BRL rate of 3.29.

In 2017, as in 2016, the hedges entered into generally covered an average period of about 10 months and mainly hedged highly probable future transactions and foreign currency receivables.

In addition to hedges on commercial transactions, Vallourec has implemented hedging contracts for financial loans and receivables denominated in foreign currencies:

- forward sales for 200.8 million in US dollars (€168.8 million);
- forward sales for 75.0 million in Chinese yuan (€9.5 million).

These instruments are intended to hedge either the debt denominated in USD, or the foreign currency loans established by the financial holding company Vallourec Tubes in the currency of the subsidiaries receiving them. The forward purchases and sales mature at various times in 2018, as and when the hedged loans and borrowings mature.

Other than its foreign-currency-denominated borrowings, Vallourec does not hedge any of the other foreign currency assets and liabilities in its consolidated statement of financial position (foreign currency translation risks).

Credit risks

Vallourec is subject to credit risk on financial assets for which no impairment provision has been made and whose non-recovery could affect the Company's results and financial position.

The Group has identified four main types of receivables that have these characteristics:

- 1% building loans granted to Group employees;
- security deposits paid in connection with tax disputes and the tax receivables due to the Group in Brazil;
- trade and other receivables;
- derivatives that have a positive fair value.

1. 1% building loans granted to the Group's employees: these loans do not expose the Group to any credit risk since the full amount of the loan is written off as soon as there is any delay in the collection of the amounts due. It should be noted that these loans are valued using the effective interest rate method applied to the expected cash flows until the maturity date of these loans (contractual interest rates may be lower);
2. Security deposits and tax receivables due to the Group in Brazil: there is no specific risk in respect of these receivables, even if the outcome of the disputes is unfavorable, since the risk has already been assessed and a provision recognized in respect of these receivables, and the funds have already been paid in full or in part;
3. The Group's policy on the impairment of trade receivables is to recognize a provision when indications of impairment are identified. The impairment is equal to the difference between the carrying amount of the asset and the present value of expected future cash flows, taking into account the position of the counterparty.

   The Group considers that as at 31 December 2017, there is no reason to assume that there is any risk in respect of receivables for which no provision has been made and which are less than 90 days overdue. Trade receivables more than 90 days past due and not impaired amounted to €38.4 million as at 31 December 2017, or 7% of the Group's total net trade receivables.

   Vallourec considers that the risk is limited given its existing customer risk management procedures, which include:

   - the use of credit insurance and documentary credits;
   - the long-standing nature of the Group's commercial relations with major customers;
   - the commercial collection policy.

   Vallourec remains subject to country risk, which could impact the payment of some of its receivables.

   In addition, as at 31 December 2017, trade receivables not yet due amounted to €435.6 million, or 80% of total net trade receivables;
4. As concerns the derivatives that have a positive fair value, the Group only deals with highly-rated counterparties. The credit risk is considered to be insignificant.

   The maturities of these trade receivables are as follows (in € thousand):

As at 31/12/2017	0 to 30 days	30 to 60 days	60 to 90 days	90 to 180 days	> 180 days	Total
Trade receivables outstanding	276,459	97,830	16,703	40,959	3,602	435,553

Equity risk

Treasury shares held by Vallourec as at 31 December 2017 include shares allocated to allocation operations for certain members of the staff, managers or executive corporate officers of the Group.

In this context, Vallourec holds:

- 165 treasury shares acquired in 2011 under the share buyback plan of 7 June 2011, after definitive allocation of 27,534 shares in 2012, 86,377 shares in 2013, 91,929 shares in 2014, 108,600 shares in 2015, 30,524 shares in 2016 and 54,871 shares in 2017 under the various performance share plans;
- 1,131 treasury shares acquired in 2012 under the share buyback plan of 31 May 2012, upon the definitive allocation of 94,600 shares in 2014, 225,684 shares in 2016, and 78,585 shares in 2017 under the various performance share plans;
- 171,311 treasury shares acquired in 2014 after the definitive allocation of 128,689 shares in 2017 for the various performance share plans.

The Management Board, in consultation with the Supervisory Board, has decided to allocate these treasury shares to cover the Group's performance share and employee share ownership plans.

On 18 December 2017, Vallourec decided to terminate the liquidity contract entered into on 26 June 2012 with Rothschild & Cie Banque.

To the best of its knowledge, the Group had no other exposure to equity risk as at 31 December 2017.

Classification and measurement of financial assets and liabilities

The amounts recognized in the statement of financial position are based on the measurement methods used for each financial instrument.

2017	Notes	Category [(a)]	Gross value as at 31/12/2017	Amortized cost	Fair value through equity	Fair value through profit or loss
ASSETS						
Other non-current assets	4					
Listed equity interests		AFS	-	-	-	-
Other equity interests		AFS	5,745	-	5,745	-
Loans		L&R	21,709	21,709	-	-
Other financial assets		L&R/AHM [(a)]	35,922	35,922	-	-
Trade and other receivables	7	**L&R**	**569,206**	**569,206**	**-**	**-**
Derivatives – assets	8					
Hedging financial instruments		CFH	12,478	-	12,478	-
Hedging financial instruments [(d)]		A-FVTPL	18,556	-	-	18,556
Speculative financial instruments		A-FVTPL	1,417	-	-	1,417
Other current assets	9	**L&R**	**230,612**	**230,612**	**-**	**-**
Cash and cash equivalents	10	**A-FVTPL**	**1,021,035**	**-**	**-**	**1,021,035**
LIABILITIES						
Bank loans and other borrowings [(b) (c)]	16	**AC-EIR**	**137,279**	**137,279**	**-**	**-**
Others	16	**AC-EIR**	**634,566**	**634,566**	**-**	**-**
Finance leases	16	**AC-EIR**	**65,874**	**65,874**	**-**	**-**
Bond issues	16	**AC-EIR**	**1,714,908**	**1,714,908**	**-**	**-**
Current bank overdrafts	16	**AC-EIR**	**10,712**	**10,712**	**-**	**-**
Trade and other payables		**AC**	**581,622**	**581,622**	**-**	**-**
Derivatives – liabilities	8					
Hedging financial instruments		CFH	4,592	-	4,592	-
Hedging financial instruments		L-FVTPL	8,302	-	-	8,302
Speculative financial instruments		L-FVTPL	-	-	-	-
Other current liabilities	20	**AC**	**305,881**	**305,881**	**-**	**-**

(a) A-FVTPL – Financial assets measured at fair value through profit or loss.

AHM: Assets held to maturity.

L&R: Loans and receivables.

AFS: Available-for-sale financial assets.

CFH: Cash flow hedges.

L-FVTPL: Financial liabilities measured at fair value through profit or loss.

AC: Amortized cost.

AC-EIR: Amortized cost according to the effective interest rate method.

(b) Borrowings classified within non-current liabilities maturing in more than 12 months.

(c) Variable rate borrowings for which interest rate swaps have been entered into are accounted for using the cash flow hedge method. Changes in the fair value of the swap contracts, linked to interest rate movements, are recognized in equity to the extent of their effectiveness. Otherwise, they are recognized under financial income.

(d) Including the Value 13, Value 14, Value 15, Value 16 and Value 17 warrants, whose fair value as at 31 December 2017 was €0.8 million.

Financial instruments measured at fair value are classified by category on the basis of their measurement method. Fair value is measured:

(A) Mainly based on quoted prices on an active market; equity securities are valued this way.

(B) On the basis of observable methods and data and with reference to the financial markets (yield curve, forward prices, etc.).

			Fair value		
2017 Balance sheet headings and classes of instruments	**Category**	**Total fair value on statement of financial position**	**Listed prices (A)**	**Internal model with observable inputs (B)**	**Internal model with unobservable inputs**
ASSETS					
Listed equity interests	AFS	-	-	-	-
Other equity interests	AFS	5,745	-	5,745	-
Derivatives – assets					
Hedging financial instruments	CFH	31,034	-	31,034	-
Speculative financial instruments	L-FVTPL	1,417	-	1,417	-
Cash and cash equivalents	**A-FVTPL**	**1,021,035**	**1,021,035**	**-**	**-**
LIABILITIES					
Derivatives – liabilities					
Hedging financial instruments	CFH	12,894	-	12,894	-
Speculative financial instruments	L-FVTPL	-	-	-	-

2016	Notes	Category [a]	Gross value at 31/12/2016	Amortized cost	Fair value through equity	Fair value through profit or loss
ASSETS						
Other non-current assets	4					
Listed equity interests		AFS	73,282	-	73,282	-
Other equity interests		AFS	6,294	-	6,294	-
Loans		L&R	5,031	5,031	-	-
Other financial assets		L&R/AHM [2]	58,034	58,034	-	-
Trade and other receivables	7	**L&R**	**5,551,053**	**5,551,053**	**-**	**-**
Derivatives – assets	8					
Hedging financial instruments		CFH	1,764	-	1,764	
Hedging financial instruments [d]		A-FVTPL	54,664			54,664
Speculative financial instruments		A-FVTPL	1,558	-	-	1,558
Other current assets	9	**L&R**	**283,019**	**283,019**	**-**	**-**
Cash and cash equivalents	10	**A-FVTPL**	**1,286,722**	**-**	**-**	**1,286,722**
LIABILITIES						
Bank loans and other borrowings [b] [c]	16	**AC-EIR**	**214,556**	**214,556**	**-**	**-**
Others	16	**AC-EIR**	**636,348**	**636,348**	**-**	**-**
Finance leases	16	**AC-EIR**	**113,031**	**113,031**	**-**	**-**
Bond issue	16	**AC-EIR**	**1,600,201**	**1,600,201**	**-**	**-**
Current bank overdrafts	16	**AC-EIR**	**9,608**	**9,608**	**-**	**-**
Trade and other payables		**AC**	**530,391**	**530,391**	**-**	**-**
Derivatives – liabilities	8					
Hedging financial instruments		CFH	26,390	-	26,390	
Hedging financial instruments		L-FVTPL	78,901			78,901
Speculative financial instruments		L-FVTPL	2	-	-	2
Other current liabilities	20	**AC**	**299,462**	**299,462**	**-**	**-**

(a) A-FVTPL – Financial assets measured at fair value through profit or loss.

AHM: Assets held to maturity.

L&R: Loans and receivables.

AFS: Available-for-sale financial assets.

CFH: Cash flow hedges.

L-FVTPL: Financial liabilities measured at fair value through profit or loss.

AC: Amortized cost.

AC-EIR: Amortized cost according to the effective interest rate method.

(b) Borrowings classified within non-current liabilities maturing in more than 12 months.

(c) Variable rate borrowings for which interest rate swaps have been entered into are accounted for using the cash flow hedge method. Changes in the fair value of the swap contracts, linked to interest rate movements, are recognized in equity to the extent of their effectiveness. Otherwise, they are recognized under financial income.

(d) Including the Value 12, Value 13, Value 14, Value 15 and Value 16 warrants, whose fair value as at 31 December 2016 was €1.7 million.

Financial instruments measured at fair value are classified by category on the basis of their measurement method. Fair value is measured:

(A) Mainly based on quoted prices on an active market; equity securities are valued this way.

(B) On the basis of observable methods and data and with reference to the financial markets (yield curve, forward prices, etc.).

2016 Balance sheet headings and classes of instruments	Category	Total fair value on statement of financial position	Fair value Listed prices (A)	Internal model with observable inputs (B)	Internal model with unobservable inputs
ASSETS					
Listed equity interests	AFS	73,282	73,282	-	-
Other equity interests	AFS	6,294	-	6,294	-
Derivatives – assets					
Hedging financial instruments	CFH	56,428	-	56,428	-
Speculative financial instruments	L-FVTPL	1,558	-	1,558	-
Cash and cash equivalents	**A-FVTPL**	**1,286,722**	**1,286,722**	**-**	**-**
LIABILITIES					
Derivatives – liabilities					
Hedging financial instruments	CFH	105,291	-	105,291	-
Speculative financial instruments	L-FVTPL	2	-	2	-

NOTE 9 Other current assets

	Employee-related receivables and recoverable payroll taxes	Tax receivables excluding income tax	Prepaid expenses	Government, income tax	Other receivables	Total
As at 31/12/2015	**3,929**	**77,853**	**49,723**	**53,103**	**122,866**	**307,474**
Impact of changes in exchange rates	436	10,232	2,804	6,636	11,320	31,428
Provision allowances or reversals	-	-	-	-	4,110	4,110
Acquisitions from business combinations (see Note 34)	85	29,635	3,173	10,479	79,790	123,162
Disposals from business combinations	(48)	(16,596)	(1,776)	(5,868)	(28,834)	(53,122)
Reclassification to assets held for sale and discontinued operations	(139)	(801)	(718)	-	-	(1,658)
Other changes	592	11,233	(2,183)	(25,697)	(112,320)	(128,375)
As at 31/12/2016	**4,855**	**111,556**	**51,023**	**38,653**	**76,932**	**283,019**
Impact of changes in exchange rates	(352)	(9,798)	(3,446)	(6,077)	(4,632)	(24,305)
Provision allowances or reversals	-	-	-	-	(1,071)	(1,071)
Reclassification to assets held for sale and discontinued operations	(38)	-	(311)	-	(502)	(851)
Other changes	(601)	(6,066)	(3,629)	5,428	(21,312)	(26,180)
AS AT 31/12/2017	**3,864**	**95,692**	**43,637**	**38,004**	**49,415**	**230,612**

In 2016, the decrease in the “Other changes” item is explained by the elimination of the 44% share in the receivables with VSB.

The Group completed operations to mobilize receivables without recourse with financial institutions in the amount of €40 million. The amount of the corresponding receivables thus no longer appears in the Group’s consolidated balance sheet.

NOTE 10 Cash and cash equivalents

	Investment securities (gross)	Cash and cash equivalents	Total
As at 31/12/2015	**460,526**	**170,014**	**630,540**
Impact of changes in exchange rates	50,408	(5,856)	44,552
Reclassification to assets held for sale and discontinued operations	-	(4,646)	(4,646)
Acquisitions from business combinations (see Note 34)	47,871	6,953	54,824
Disposals from business combinations	(25,921)	(688)	(26,609)
Other changes	417,592	170,469	588,061
As at 31/12/2016	**950,476**	**336,246**	**1,286,722**
Impact of changes in exchange rates	(45,369)	1,969	(43,400)
Other changes	(99,740)	(122,547)	(222,287)
AS AT 31/12/2017	**805,367**	**215,668**	**1,021,035**

“Cash and cash equivalents” comprises cash in bank checking accounts and investment securities (shares in short-term cash UCITS and mutual and investment funds) that are immediately available (not pledged), risk-free and have a low volatility level.

NOTE 11 Assets held for sale and discontinued operations

Net values	31/12/2016	31/12/2017
Assets held for sale and discontinued operations	46,327	64,119
Liabilities held for sale and discontinued operations	(43,211)	(12,654)
NET CARRYING AMOUNT OF ASSETS/LIABILITIES HELD FOR SALE	**3,116**	**51,465**

These assets and liabilities are as follows:

	31/12/2016	31/12/2017
Non-current assets	19,505	19,100
Current assets	26,822	45,019
Non-current liabilities	(3,232)	(1,654)
Current liabilities	(39,979)	(11,000)
NET CARRYING AMOUNT OF ASSETS/LIABILITIES HELD FOR SALE	**3,116**	**51,465**

On 11 December 2017, Vallourec announced that, following exclusive negotiations with the American oil services group NOV, it had received a firm offer for the repurchase of the “Drilling Products” business. For the operation, which meets IFRS 5 criteria, associated assets and liabilities were valued at fair value and reclassified under assets/liabilities held for sale.

As at 31 December 2016, the Saint-Saulve steel mill contributed to Ascoval, 40% held by Vallourec Tubes France since 26 January 2017, and was classified under available-for-sale assets.

NOTE 12 Change in cash flows

Change in Working Capital

Gross values	31/12/2016	Translation difference	Change	Reclassification and other	31/12/2017
Inventories	1,240,512	(92,756)	81,919	(45,838)	1,183,837
Trade receivables	579,168	(47,526)	85,992	(13,981)	603,653
Trade payables	(530,391)	38,567	(103,566)	13,768	(581,622)
Other receivables and payables	82,678	(3,549)	(148,045)	(1,961)	(70,877)
Gross working capital (1)	**1,371,967**	**(105,264)**	**(83,700)**	**(48,012)**	**1,134,991**
Impact of hedging instruments (2)			**23,145**		
TOTAL (1) + (2)			**(60,555)**		
Change in working capital in the statement of cash flows			60,555		

The change in other receivables and payables during 2017 primarily corresponds to the recovery of tax credits in Brazil (€94 million).

Gross values	31/12/2015	Translation difference	Change	Reclassification and other	31/12/2016
Inventories	1,234,047	54,031	(168,198)	120,632	1,240,512
Trade receivables	599,719	24,459	(123,403)	78,393	579,168
Trade payables	(523,476)	(8,235)	84,172	(82,852)	(530,391)
Other receivables and payables	7,306	28,826	5,281	41,265	82,678
Gross working capital (1)	**1,317,596**	**99,081**	**(202,148)**	**157,438**	**1,371,967**
Impact of hedging instruments (2)			**22,517**		
TOTAL (1) + (2)			**(179,631)**		
Change in working capital in the statement of cash flows			179,631		

Change in financial liabilities

	31/12/2016	Translation difference	Proceeds drawn from new borrowings	Repayments of borrowings	Current/ non-current reclassifications and other	31/12/2017
Non-current financial liabilities	1,120,648	(18,593)	821,888	(6,497)	(100,327)	1,817,119
Current financial liabilities	1,453,096	(76,477)	129,958	(846,005)	85,648	746,220
Financial liabilities (1)	**2,573,744**	**(95,070)**	**951,846**	**(852,502)**	**(14,679)**	**2,563,339**
Impact of hedging instruments and other (2)			**(25,088)**	**27,459**		
TOTAL (1) + (2)			**926,758**	**(825,043)**		
Change in financial liabilities in the statement of cash flows			926,758	(825,043)		

	31/12/2015	Translation difference	Proceeds drawn from new borrowings	Repayments of borrowings	Current/ non-current reclassifications and other	31/12/2016
Non-current financial liabilities	1,762,955	17,619	942	(53,592)	(607,276)	1,120,648
Current financial liabilities	386,842	60,731	719,346	(497,022)	783,199	1,453,096
Financial liabilities (1)	**2,149,797**	**78,350**	**720,288**	**(550,614)**	**175,923**	**2,573,744**
Impact of hedging instruments and other (2)			**(465)**	**(34,987)**		
TOTAL (1) + (2)			**719,823**	**(585,601)**		
Change in financial liabilities in the statement of cash flows			719,823	(585,601)		

NOTE 13 Equity

Capital

Vallourec's issued capital is comprised of 457,987,760 ordinary shares with a nominal value of €2 per share, fully paid-up, compared with 451,238,005 as at 31 December 2016.

2017

On 14 December 2017, under the Value 17 employee share ownership plan, 6,749,755 new shares were subscribed at a price of €4.00 for the leveraged plan and €3.77 for the standard plan, for a capital increase of €26.6 million, including issue premium net of expenses.

2016

On 3 May 2016, Vallourec increased its capital maintaining shareholders' preferential subscription rights for a gross amount of €480 million, resulting in the creation of 217,101,488 new shares. This capital increase, combined with the reserved issuance of mandatory convertible bonds for a gross amount of €514 million subscribed by Bpifrance Participations SA and Nippon Steel & Sumitomo Metal Corporation, enabled Vallourec to complete the overall capital increase for a net amount of €951 million.

Upon the issuance of the capital increase maintaining shareholders' preferential subscription rights and redemption of the bonds on 3 May 2016 for BPI and on 20 June 2016 for NSSMC, the capital stands at 444,638,049 ordinary shares with a par value of €2 each (compared to 135,688,432 as at 31 December 2015).

On 14 December 2016, under the Value 16 employee share ownership plan, 6,599,956 new shares were subscribed at a price of €3.99 for the leveraged plan and €3.75 for the standard plan, for a capital increase of €25.9 million, including issue premium net of expenses.

Reserves, financial instruments

Under IAS 39 – Financial Instruments, postings to this reserve account are made for two types of transactions:

- effective currency hedges assigned to the order book and commercial tenders. Changes in the intrinsic values at year-end are recognized in equity;
- variable rate borrowings for which interest rate swaps (fixed rate) have been contracted. These are accounted for in accordance with the cash flow hedge method. Changes in the fair value of the swap contracts, linked to interest rate movements, are recognized in equity.

Foreign currency translation reserve

This reserve arises as a result of the translation of the equity of subsidiaries outside the euro zone. The change in the reserve corresponds to fluctuations in exchange rates used to translate the equity and net profit of these subsidiaries. Components of the reserve are reversed to income only in the case of a partial or total disposal and loss of control of the foreign entity.

	USD	GBP	BRL	CNY	Others	Total
As at 31/12/2015	**320,968**	**(5,789)**	**(863,699)**	**58,473**	**(10,528)**	**(500,575)**
Change	22,910	(5,794)	334,002	(24,197)	(2,920)	324,001
As at 31/12/2016	**343,878**	**(11,583)**	**(529,697)**	**34,276**	**(13,448)**	**(176,574)**
Change	(150,819)	(524)	(208,735)	(14,744)	(13,065)	(387,887)
AS AT 31/12/2017	**193,059**	**(12,107)**	**(738,432)**	**19,532**	**(26,513)**	**(564,461)**

Main exchange rates used (euro/currency): translation of balance sheet items (closing rate) and income statement items (average rate).

For €1.00	USD	GBP	BRL	CNY
2016				
Average rate	1,11	0.82	3.86	7.35
Closing rate	1,05	0.86	3.43	7.32
2017				
Average rate	1,13	0.88	3.61	7.63
Closing rate	1,20	0.89	3.97	7.80

NOTE 14 Earnings per share

Basic earnings per share are calculated by dividing the net income for the year attributable to ordinary shareholders by the weighted average number of ordinary shares outstanding in the same period.

Diluted earnings per share are calculated by dividing the net income for the year attributable to ordinary shareholders by the weighted average number of ordinary shares outstanding in the same period, adjusted for the dilution effect of options.

Details of the earnings and numbers of shares used to calculate basic and diluted earnings per share are presented below:

Earnings per share	2016	2017
Net income (loss) attributable to ordinary shareholders for basic earnings per share	**(758,016)**	**(536,691)**
Weighted average number of ordinary shares for basic earnings per share	332,737,362	451,552,377
Weighted average number of treasury shares for basic earnings per share	(2,279,971)	(2,628,832)
Weighted average number of shares for earnings per share	330,457,391	448,923,545
EARNINGS PER SHARE *(in €)*	**(2.3)**	**(1.2)**
Earnings per share comparable to 2017 *(in €)*	(1.7)	
Dilution effect – stock purchase and subscription options and performance shares	155,548	-
Weighted average number of ordinary shares for diluted earnings per share	330,612,939	448,923,545
DILUTED EARNINGS PER SHARE *(in €)*	**(2.3)**	**(1.2)**
Earnings per share comparable to 2017 *(in €)*	(1.7)	

Dividends paid during the year:	2016	2017
■ for the previous fiscal year *(in €)*	-	-
■ interim dividend for the current fiscal year *(in €)*	-	-

NOTE 15 Non-controlling interests

	Reserves	Translation difference	Net income/ (loss)	Total
As at 31/12/2016	450,892	93,070	(49,530)	494,432
AS AT 31/12/2017	**454,300**	**27,283**	**(23,038)**	**458,545**

Contribution at reporting date	As at 31/12/2016	As at 31/12/2017
Main American entities [(a)]	330,144	268,337
Others	164,288	190,208
TOTAL	**494,432**	**458,545**

(a) Non-controlling interests are primarily held by Sumitomo Corp. and Nippon Steel Sumitomo Metal Corp.

Contributions to income/(loss)	As at 31/12/2016	As at 31/12/2017
Main American entities [(a)]	(48,404)	(23,110)
Others	(1,126)	72
TOTAL	**(49,530)**	**(23,038)**

(a) Non-controlling interests are primarily held by Sumitomo Corp. and Nippon Steel Sumitomo Metal Corp.

The amounts presented are the amounts which appear in the financial statements for wholly-owned entities, which were prepared in accordance with IFRS, upon fair value adjustments made at the time of acquisition, and adjustments for standardization with the Group's accounting principles.

Main American entities	As at 31/12/2016	As at 31/12/2017
Current assets	222,682	294,561
Non-current assets	1,632,387	1,347,957
Current liabilities	393,127	507,806
Non-current liabilities	191,400	103,753
NET ASSETS	**1,270,542**	**1,030,959**
Non-controlling interests	330,144	268,337
Revenue	426,730	875,544
Net income	(207,413)	(90,483)
Other comprehensive income (loss)	28,079	(132,449)
TOTAL COMPREHENSIVE INCOME	**(179,334)**	**(222,932)**
Net income attributable to non-controlling interests	(48,404)	(23,110)
Other items of comprehensive income attributable to non-controlling interests	10,438	(38,548)
Cash flow from operating activities	(52,381)	(24,937)
Cash flow used in investing activities	(16,045)	(19,744)
Cash flow from (used in) financing activities	(36,393)	(53,798)
Impact of changes in exchange rates	(7,624)	28,083
NET CASH FLOWS	**(112,443)**	**(70,396)**

NOTE 16 Bank loans and other borrowings

Liquidity risk

The Group's financial resources are composed of bank financing and market financing.

The majority of long-term and medium-term bank financing has been put in place in Europe through Vallourec and to a lesser extent via the subsidiaries in Brazil and the United States (see below).

Market financing is arranged exclusively by Vallourec.

In Europe

In February 2014, Vallourec took out a revolving credit facility for the amount of €1.1 billion, maturing in February 2019, plus two one-year extension options. In addition to the first one-year extension obtained for €1.078 billion, the second extension was granted in July 2016 for the sum of €989 million, which was then raised to 1,034 million in July 2017. The new maturity date is in 2021. This credit line is available for the Group's general funding purposes. As at 31 December 2017 this line had not been drawn.

In June 2015, Vallourec agreed to a confirmed bilateral line of €90 million until February 2019 with two one-year extension options, which were granted in July 2016. As at 31 December 2017 this line had not been drawn.

In September 2015, Vallourec took out a confirmed credit facility for €400 million, maturing in July 2019, with a one-year extension option which was granted in July 2016 for the full amount, and maturity rescheduled for 2020. This replaced four medium-term bilateral lines of €100 million each, which were originally granted to Vallourec Tubes, maturing in July 2017. As at 31 December 2017 this line had not been drawn.

In May 2016, Vallourec took out a revolving credit line for €450 million maturing in February 2020. As at 31 December 2017 this line had not been drawn.

Each of these bank facilities requires Vallourec to maintain its consolidated net debt-to-equity ratio at no more than 75%, calculated as at 31 December each year. For 2018, 2019, and 2020, this ratio was taken to 100% for all Vallourec's bank facilities through amendments of 17 March 2017. In the event of non-compliance with this ratio requirement, lenders would be entitled to demand early repayment of the outstanding drawn amounts. Vallourec was in compliance with this ratio requirement as at 31 December 2017. As defined in the financing agreements, the "bank covenant ratio" is the ratio between the Group's net consolidated debt and the Group's equity, restated for gains and losses on derivatives and valuation differences (gains and losses on the consolidated subsidiaries in foreign currencies).

In addition to bank financing, the Group has sought to diversify its funding sources by using market financing. For example, Vallourec launched a commercial paper program on 12 October 2011 to meet its short-term needs. The program has a €1 billion ceiling.

At 31 December 2017, Vallourec had an outstanding debt of €396.8 million for maturities of up to one year. This commercial paper program was rated B by Standard & Poor's.

In August 2012, Vallourec also issued two long-term private bonds totaling €455 million. The amounts and terms of these two private bond issues are €400 million for seven years with an annual coupon of 3.25% for one, and €55 million for 15 years with an annual coupon of 4.125% for the other.

On 30 September 2014, Vallourec issued a €500 million bond, maturing in September 2024, with a fixed annual coupon of 2.25%.

On 27 September 2017, Vallourec issued a €250 million bond issue, consisting of Bonds Convertible into New Shares and/or Exchangeable for Existing Shares, maturing in October 2022, with a fixed annual coupon of 4.125%, a 37.5% conversion premium and a 6.89 strike.

On 11 October 2017, Vallourec issued a €400 million bond, which received a matching contribution on 23 October 2017 in the amount of €150 million (i.e. €550 million in total) maturing in October 2022 with a fixed annual coupon of 6.625%. This bond is callable pursuant to the contractual terms as from 15 October 2020.

As at 31 December 2017, the market value of these fixed-rate bonds was €410.4 million, €61.5 million, €521.7 million, and €549.0 million, respectively.

These bond issues were intended to diversify and increase the amount and extend the maturity of the financial resources available to the Group.

These bond issues specifically include a change-of-control clause that would trigger the mandatory prepayment of the bonds at the request of each bondholder in the event of a change of control of the Company (in favor of a person or a group of people acting in concert) leading to a downgrade of Vallourec's financial rating.

In addition, these bonds may be subject to a request for prepayment should any of the common default scenarios for this type of transaction arise. Early redemption may also be requested in some cases by either the Company or the bondholder, particularly in respect of a change in Vallourec's position or tax status.

As at 31 December 2017, the Group complied with its commitments and the terms and conditions for obtaining and maintaining all of the above facilities. Together, the above resources were sufficient to cover the Group's cash requirements as at 31 December 2017.

In Brazil

In 2010, Vallourec Soluções Tubulares do Brasil (formerly VSB) entered into a finance lease with a nominal value of BRL 570 million relating to equipment needed to operate the plant at Jeceaba. As at 31 December 2017, the residual amount outstanding on this finance lease was BRL 287 million.

In the United States

Vallourec Star benefits from a bilateral bank line of credit established in 2016 for a total amount of USD 80 million. The amount used as at 31 December 2017 totaled USD 80 million. This line contains clauses relating to the indebtedness of Vallourec Star and a change of control clause.

In 2013, Vallourec Star set up a finance lease with a nominal value of USD 64.3 million and a final maturity of five years. As at 31 December 2017, the residual amount outstanding on this finance lease was USD 27.9 million.

Financial liabilities – Non-current liabilities

	Bank borrowings	Finance leases	Convertible bond issue	Non-convertible bond issue	Other borrowings	Total
As at 31/12/2015	**78,704**	**78,017**	**-**	**1,597,916**	**8,318**	**1,762,955**
Issuance of new debt	-	-	-	942	-	942
Repayments	(39,526)	(13,834)	-	-	(232)	(53,592)
Impact of changes in exchange rates	15,075	12,833	-	-	(10,289)	17,619
Current/non-current reclassifications	-	-	-	(648,485)	(21)	(648,506)
Acquisitions from business combinations (see Note 34)	4,865	81,853	-	-	(4,527)	82,191
Disposals from business combinations	(2,724)	(45,838)	-	-	7,761	(40,801)
Other changes	-	-	-	-	(160)	(160)
As at 31/12/2016	**56,394**	**113,031**	**-**	**950,373**	**850**	**1,120,648**
Issuance of new debt	4,685	27,505	247,015	542,283	400	821,888
Repayments	(6,249)	(245)	-	-	(3)	(6,497)
Impact of changes in exchange rates	(6,309)	(12,284)	-	-	-	(18,593)
Current/non-current reclassifications	(13,459)	(62,133)	-	-	-	(75,592)
Other changes	-	-	(24,763)	-	28	(24,735)
AS AT 31/12/2017	**35,062**	**65,874**	**222,252**	**1,492,656**	**1,275**	**1,817,119**

Financial liabilities – Current liabilities

	Bank overdrafts	Non-convertible bond issue	Bank borrowings (< 1 year)	Accrued interest not yet due on bank borrowings	Other financial liabilities (< 1 year)	Total
As at 31/12/2015	**5,981**	-	**159,306**	**33,372**	**188,183**	**386,842**
Current/non-current reclassifications	-	648,485	-	(3)	21	648,503
Impact of changes in exchange rates	41	-	15,751	-	44,939	60,731
Acquisitions from business combinations (see Note 34)	-	-	49,085	-	250,683	299,768
Disposals from business combinations	-	-	(27,487)	-	(144,109)	(171,596)
Other changes	3,586	1,343	(38,493)	74	262,338	228,848
As at 31/12/2016	**9,608**	**649,828**	**158,162**	**33,443**	**602,055**	**1,453,096**
Current/non-current reclassifications	-	-	13,459	-	62,133	75,592
Impact of changes in exchange rates	(22,142)	-	(14,312)	(13)	(40,010)	(76,477)
Other changes	23,246	(649,828)	(55,092)	(14,392)	(9,925)	(705,991)
AS AT 31/12/2017	**10,712**	-	**102,217**	**19,038**	**614,253**	**746,220**

Debt by currency

	USD	EUR	BRL	Others	Total
As at 31/12/2016 – in thousands of currency unit	448,869	1,948,186	604,012	n/a	n/a
As at 31/12/2016 – in € thousand	425,832	1,948,186	176,071	23,655	2,573,744
As at 31/12/2017 – in thousands of currency unit	**336,267**	**2,136,553**	**449,903**	**n/a**	**n/a**
AS AT 31/12/2017 – IN € THOUSAND	**280,386**	**2,136,553**	**113,243**	**33,157**	**2,563,339**

Breakdown by maturity of non-current loans and other financial liabilities (> 1 year)

	> 1 year	> 2 years	> 3 years	> 4 years	5 years or more	Total
As at 31/12/2016	**53,996**	**421,612**	**23,023**	**14,663**	**607,354**	**1,120,648**
Finance leases	9,368	9,211	9,260	9,299	28,735	65,873
Other non-current borrowings	403,675	3,076	4,378	770,705	569,412	1,751,246
AS AT 31/12/2017	**413,043**	**12,287**	**13,638**	**780,004**	**598,147**	**1,817,119**

Breakdown by maturity of current loans and other financial liabilities

2017	< 3 months	> 3 months and < 1 year	Total
Bank borrowings	25,053	77,164	102,217
Other borrowings	378,362	203,202	581,564
Finance lease liabilities	26,373	6,159	32,532
Accrued interest on borrowings	287	18,751	19,038
Bank overdrafts (negative cash and cash equivalents)	10,795	74	10,869
AS AT 31/12/2017	**440,870**	**305,350**	**746,220**

Debt by interest rate

The following table groups the current and non-current portions of bank and other borrowings.

	Rate < 3%	Rate 3 to 6%	Rate 6 to 10%	Rate > 10%	Total
As at 31/12/2016					
Fixed rate on date granted	814,145	1,481,302	12,521	18,316	2,326,284
Variable rate on date granted swapped to fixed rate	-	-	-	-	
Fixed rate	814,145	1,481,302	12,521	18,316	2,326,284
Variable rate	2,256	127,123	116,051	2,030	247,460
TOTAL	**816,401**	**1,608,425**	**128,572**	**20,346**	**2,573,744**
As at 31/12/2017					
Fixed rate on date granted	514,244	1,286,715	580,049	-	2,381,008
Variable rate on date granted swapped to fixed rate	-	-	-	-	-
Fixed rate	514,244	1,286,715	580,049	-	2,381,008
Variable rate	7,399	90,000	11,480	73,452	182,331
TOTAL	**529,643**	**1,376,715**	**591,529**	**73,452**	**2,563,339**

Debt contracted at a rate higher than 6% relates to companies based in Brazil.

Debt at a fixed rate of less than 3% on the date granted relates mainly to commercial paper and to the €500 million bond issue.

NOTE 17 Provisions

Non-current liabilities	Provisions for environmental risks	Reorganization measures	Tax risks (income and other taxes, inspections, etc.)	Others	Total
As at 31/12/2015	**10,515**	-	-	-	**10,515**
Provisions for the period	629	13,988	14,222	6,451	35,290
Provisions used	(8)	(3,034)	(2,935)	(5,301)	(11,278)
Impact of changes in exchange rates	2,921	89	8,041	497	11,548
Acquisitions from business combinations (see Note 34)	-	-	-	2,780	2,780
Disposals from business combinations	-	-	-	(477)	(477)
Current/non-current reclassifications	-	11,000	25,512	9,172	45,684
Other changes	1,323	140	929	(766)	1,626
As at 31/12/2016	**15,380**	**22,183**	**45,769**	**12,356**	**95,688**
Provisions for the period	682	2,294	5,087	4,067	12,130
Provisions used	(5)	(5,685)	(5,408)	(5,730)	(16,828)
Impact of changes in exchange rates	(2,181)	(188)	(3,736)	(568)	(6,673)
Other changes [(a)]	306	(4,047)	(26,839)	(3,185)	(33,765)
AS AT 31/12/2017	**14,182**	**14,557**	**14,873**	**6,940**	**50,552**

(a) The “other changes” in “tax risks” are essentially linked to the review of the tax risk in Brazil.

In 2016, provisions for use in over one year (e.g. provisions for tax disputes in Brazil) were reclassified as non-current.

Provisions for environmental risks

The environment provision covers the cost of treating industrial land, as well as the clean-up costs for the mine in Brazil: amounts are provided as and when minerals are extracted, based on the volumes extracted.

Provision for tax risks

This provision mainly relates to risks in connection with tax disputes in Brazil, some of which are covered by security deposits (see Note 4).

Current liabilities	Disputes and commercial commitments	Unfilled orders – losses on completion	Reorganization measures	Tax risks (income and other taxes, inspections, etc.)	Others	Total
As at 31/12/2015	**37,421**	**60,860**	**81,120**	**25,743**	**32,963**	**238,107**
Provisions for the period	37,566	65,912	98,336	75	20,499	222,388
Provisions used	(22,607)	(20,429)	(34,965)	(10)	(28,958)	(106,969)
Other reversals	(4,719)	(2,433)	-	-	-	(7,152)
Impact of changes in exchange rates	5,109	2,592	(168)	(1)	5,845	13,377
Acquisitions from business combinations (see Note 34)	-	22,497	-	-	1,067	23,564
Disposals from business combinations	-	-	-	-	(598)	(598)
Reclassification to liabilities held for sale and discontinued operations	-	-	(26,000)	-	(40)	(26,040)
Current/non-current reclassifications	(3,673)	(32)	(11,000)	(25,512)	(5,467)	(45,684)
Other changes	112	(20,657)	(20,569)	-	10,417	(30,697)
As at 31/12/2016	**49,209**	**108,310**	**86,754**	**295**	**35,728**	**280,296**
Provisions for the period	13,143	46,680	285	-	19,251	79,359
Provisions used	(21,394)	(114,831)	(21,236)	(48)	(10,789)	(168,298)
Other reversals [(a)]	(11,357)	-	(17,493)	(23)	(4,912)	(33,785)
Impact of changes in exchange rates	(2,948)	(5,587)	(210)	(5)	(4,785)	(13,535)
Other changes	1,236	2,713	255	-	558	4,762
AS AT 31/12/2017	**27,889**	**37,285**	**48,355**	**219**	**35,051**	**148,799**

(a) The "other reversals" of "reorganization measures" are primarily related to the updating of restructuring provisions in France and Germany.

Provisions for disputes, commercial commitments and losses on unfilled orders

Provisions are booked with regard to disputes if the Group has an obligation to a third party at the reporting date. They are determined based on the best estimate of the expense likely to be required to settle the obligation.

Provisions for adaptation and restructuring measures

The provisions for adaptation and restructuring measures cover the estimated costs of the plans announced in 2015 and 2016, mainly concerning Europe. They include the following costs:

- redundancy and end-of-contract compensation paid to personnel no longer required by the company;
- costs of maintaining personnel after the shutdown of operations and until the site closure (compensation for unworked notice periods, for example);
- contract termination compensation paid to suppliers;
- outstanding rents payable after the shutdown of operations until the end of the rental agreement.

Other current provisions

This item comprises various provisions with regard to customer discounts, late payment penalties and other risks identified at the reporting date, with none being individually material.

Contingent liabilities

In connection with investigations by Brazilian authorities relating to procedures involving Petrobras and targeting its tube suppliers, V&M do Brasil S.A. was cited in the decision of a federal judge dated 19 May 2016. This decision provided for authorities to visit the facilities of certain tube suppliers for purposes of collecting evidence. V&M do Brasil S.A. was not included. The police investigation was closed 9 February 2017. The company has made itself available to the judicial authorities to cooperate in the investigations. No provision has been constituted in relation to this matter.

For 2017 and 2016, actual annual greenhouse gas emissions were lower than the allowance granted by the French government, so no provisions were booked in this regard.

NOTE 18 Other long-term liabilities

Other long-term liabilities	
As at 31/12/2015	31,731
Impact of changes in exchange rates	4,637
Other changes	(10,656)
As at 31/12/2016	25,712
Impact of changes in exchange rates	(1,113)
Other changes	(14,028)
AS AT 31/12/2017	**10,571**

The other long-term liabilities mainly consist of other non-operating liabilities that are more than one year.

NOTE 19 Employee benefit commitments

	Germany	France	United Kingdom	Others	Total
As at 31/12/2016					
Present value of the obligation	**315,841**	**38,251**	**135,041**	**94,818**	**583,951**
Retirement benefits	260,016	36,657	135,041	70,723	502,437
Early retirement commitments	39,765	-	-	-	39,765
Long-service awards and medical benefits	16,060	1,594	-	24,095	41,749
Fair value of plan assets	(166,984)	(8,022)	(148,517)	(33,665)	(357,188)
NET LIABILITY	**148,857**	**30,229**	**(13,476)**	**61,153**	**226,763**
As at 31/12/2017					
Present value of the obligation	**328,112**	**37,637**	**117,940**	**92,776**	**576,465**
Retirement benefits	257,631	35,958	117,940	89,478	501,007
Early retirement commitments	53,809	-	-	-	53,809
Long-service awards and medical benefits	16,672	1,679	-	3,298	21,649
Fair value of plan assets	(179,974)	(8,106)	(143,486)	(36,334)	(367,900)
NET LIABILITY	**148,138**	**29,531**	**(25,546)**	**56,442**	**208,565**

The main actuarial assumptions used for the measurement of post-employment benefit obligations, taking account of the plans' durations, are as follows:

Main actuarial assumptions	Germany	France	United Kingdom	Others
As at 31/12/2016				
Discount rate	1.55%	1.55%	2.70%	from 4.15% to 10.39%
Actual return on plan assets	1.55%	1.55%	2.70%	from 4.15% to 10.39%
Salary increase rate	2.00%	1.40%	3.50%	from 3% to 10%
As at 31/12/2017				
Discount rate	1.55%	1.55%	2.50%	from 3.6% to 9.58%
Long-term return on plan assets	1.55%	1.55%	2.50%	from 3.6% to 9.58%
Salary increase rate	2.00%	1.10%	4.20%	from 3% to 10%

Commitments are valued by independent actuaries. The assumptions used take account of the specific characteristics of the plans and companies concerned.

Experience gains and losses in 2017 generated €3.8 million in gains for the Group (against €9.7 million in gains in 2016). In 2018, the Group expects to pay €39.7 million in benefits under defined benefit plans, including €27.7 million in Germany, €4 million in the United Kingdom, €4.2 million in France and €2 million in Brazil.

Plans that are fully or partially outsourced represented a total obligation of €496 million as at 31 December 2017 for assets of €368 million.

In the euro zone, the discount rate is based on the iBoxx index (AA-rated corporate bonds with a maturity of 10 or more years, estimated on the date the obligations are valued). This index uses a basket of bonds of financial and non-financial companies. The rates have not been restated to reflect credit risk not factored into the selected bond baskets.

Actual returns on plan assets exceeded the estimate of €13.5 million. In 2017, a general drop in discount rates resulted in an overall increase in liabilities, generating actuarial losses for the year of €8.9 million.

The Group has continued the restructuring efforts it began in previous years, in particular making commitments to staff in Germany, and to a lesser extent France and Brazil.

France

Obligations in France correspond to retirement benefits, supplemental pension plans and long-service award-type benefits.

On 31 December 2017, a sensitivity analysis of the discount rate was performed: a 1% increase of this rate would result in a drop of about €3.5 million in these commitments.

On 14 September 2005, a supplementary pension plan with its own plan assets was set up for executive management. The plan is partially outsourced to an insurance company. Since it is a defined benefit plan, it is valued on an actuarial basis and recognized in accordance with revised IAS 19 in the case of active employees.

The plan was closed in 2016 and the rights frozen.

As at 31 December 2017, the obligation represents €11.5 million for assets of €7.9 million.

Germany

The Group's employees in Germany benefit from a variety of mechanisms (retirement benefits, deferred compensation, long-service awards and early retirement), which constitute long-term obligations for the Group.

On 31 December 2017, a sensitivity analysis of the discount rate was performed: a 1% increase of this rate would result in a drop of about €30.8 million in these commitments.

United Kingdom

The Group helps fund a defined benefit pension plan for Group employees. The obligations are outsourced and managed by leading institutions in the financial markets.

On 31 December 2017, a sensitivity analysis of the discount rate was performed: a 1% increase of this rate would result in a drop of about €20.3 million in these commitments.

Brazil

In Brazil, the Group is participating in funding retirement benefits, long-service awards and a retirement health expense system (closed).

Retirement benefits are partially outsourced in a fund with total assets of €1.5 million in 2017 (vs. €1.1 million in 2016). The Group paid a €0.7 million contribution this year (€0.8 million in 2016).

Mexico

Obligations in Mexico and in Indonesia are not material for the Group.

United States

The assumption for increased medical benefits is regressive from 2017 to 2021: from 5.5% to 4.0% for workers and retirees.

There were no significant events during 2017 that could have a material impact on the obligation.

Other countries

Provisions are made for obligations in other countries in accordance with local standards. They are not considered material at Group level.

Expenses incurred during the year include the additional rights acquired for an additional year of service, the change in existing rights at the beginning of the year due to discounting, past service costs recorded in the period, the expected return on plan assets, the effects of plan reductions or liquidations and the amortization of actuarial gains and losses. The portion relating to the discounting of rights is recognized in financial income/(loss), and the return on plan assets is recorded in investment income. These expenses are broken down as follows:

Expenses for the fiscal year

	Germany	France	United Kingdom	Others	Total
As at 31/12/2017					
Current service cost	9,868	1,663	2,949	3,492	17,972
Interest expense	4,717	587	3,485	5,792	14,581
Actual return on plan assets	(2,608)	(124)	(3,887)	(1,414)	(8,033)
Net actuarial losses/(gains) for the year	4,214	(38)	-	(206)	3,970
Cost of past services	-	-	-	-	-
Impact of any reduction or liquidation [a]	15,661	(1,241)	-	(1,001)	13,419
NET EXPENSE	**31,852**	**847**	**2,547**	**6,663**	**41,909**
ACTUAL RETURN ON PLAN ASSETS	**4,925**	**172**	**11,430**	**4,984**	**21,511**

(a) *Essentially includes restructurings in Germany (increase in early retirement plan).*

	Germany	France	United Kingdom	Others	Total
As at 31/12/2016					
Current service cost	9,336	2,173	2,719	3,529	17,757
Interest expense	5,882	923	4,682	6,481	17,968
Actual return on plan assets	(3,179)	(165)	(5,295)	(1,293)	(9,932)
Net actuarial losses/(gains) for the year	2,612	45	-	1,145	3,802
Cost of past services [b]	-	(4,922)	-	(4,680)	(9,602)
Impact of any reduction or liquidation [a]	16,388	(10,556)	1,073	(3,677)	3,228
NET EXPENSE	**31,039**	**(12,502)**	**3,179**	**1,505**	**23,221**
ACTUAL RETURN ON PLAN ASSETS	**7,617**	**147**	**28,289**	**1,884**	**37,937**

(a) *Primarily consists of the restructurings in France (reduction of commitment in return for the allowance of a restructuring provision) and in Germany (increase in the early retirement plan).*

(b) *In France, corresponds to the closing and freezing of the 2005 supplementary pension plan for executive management.*

The changes in assets associated with these benefits are as follows:

Changes in related assets	Germany	France	United Kingdom	Others	Total
As at 31/12/2015	**151,402**	**7,875**	**156,572**	**29,379**	**345,228**
Value of assets	151,402	7,875	156,572	29,379	345,228
Actual return on assets	7,617	147	28,289	1,884	37,937
Contributions	7,965	-	5,514	2,827	16,306
Benefits paid	-	-	(18,872)	(1,413)	(20,285)
Acquisitions, disposals, liquidations	-	-	-	97	97
Impact of changes in exchange rates	-	-	(22,986)	891	(22,095)
As at 31/12/2016	**166,984**	**8,022**	**148,517**	**33,665**	**357,188**
Value of assets	166,984	8,022	148,517	33,665	357,188
Actual return on assets	4,925	172	11,430	4,984	21,511
Contributions	8,065	-	4,566	4,172	16,803
Benefits paid	-	(88)	(15,836)	(1,406)	(17,330)
Acquisitions, disposals, liquidations	-	-	-	-	-
Impact of changes in exchange rates	-	-	(5,191)	(5,081)	(10,272)
AS AT 31/12/2017	**179,974**	**8,106**	**143,486**	**36,334**	**367,900**

Changes in the obligation	Germany	France	United Kingdom	Others	Total
As at 31/12/2015	**289,596**	**54,246**	**140,527**	**85,336**	**569,705**
Current service cost	9,336	2,173	2,719	3,529	17,757
Interest expense	5,882	923	4,682	6,481	17,968
Employee contributions	-	-	582	38	620
Actuarial losses (+)/gains (-) generated during the year	-	-	-	-	-
Remeasurements:	-	-	-	-	-
■ experience-related adjustments	(168)	(1,694)	(5,938)	(1,891)	(9,691)
■ actuarial gains and losses arising from changes in demographic assumptions	-	-	-	(813)	(813)
■ actuarial gains and losses arising from changes in financial assumptions	11,829	2,726	30,977	3,018	48,550
Acquisitions/disposals	(93)	(72)	-	627	462
Benefits payments	(17,134)	(1,450)	(18,872)	(3,889)	(41,345)
Plan amendments	-	(4,922)	-	(4,325)	(9,247)
Reclassification to assets/liabilities held for sale	-	(3,192)	-	-	(3,192)
Foreign exchange differences	-	-	(20,709)	7,822	(12,887)
Other [(a)]	16,593	(10,487)	1,073	(1,115)	6,064
As at 31/12/2016	**315,841**	**38,251**	**135,041**	**94,818**	**583,951**

(a) Primarily consists of the restructurings in France (reduction of commitment in return for the allowance of a restructuring provision) and in Germany (increase in the early retirement plan).

Changes in the obligation	Germany	France	United Kingdom	Others	Total
As at 31/12/2016	**315,841**	**38,251**	**135,041**	**94,818**	**583,951**
Current service cost	9,868	1,663	2,949	2,939	17,419
Interest expense	4,717	587	3,485	5,792	14,581
Employee contributions	-	-	431	60	491
Actuarial losses (+)/gains (-) generated during the year	-	-	-	-	-
Remeasurements:					
■ experience-related adjustments	3,734	(829)	(6,269)	(451)	(3,815)
■ actuarial gains and losses arising from changes in demographic assumptions	-	-	-	(380)	(380)
■ actuarial gains and losses arising from changes in financial assumptions	-	-	2,708	6,199	8,907
Acquisitions/disposals	-	842	-	-	842
Benefits payments	(21,709)	(881)	(15,835)	(3,651)	(42,076)
Plan amendments	-	-	-	-	-
Reclassification to assets/liabilities held for sale	-	(755)	-	-	(755)
Foreign exchange differences	-	-	(4,570)	(12,604)	(17,174)
Other [(a)]	15,661	(1,241)	-	54	14,474
As at 31/12/2017	**328,112**	**37,637**	**117,940**	**92,776**	**576,465**

(a) Essentially includes restructurings in Germany (increase in early retirement plan).

Movements during the year in net liabilities recognized on the statement of financial position were as follows:

Change in net liability	Germany	France	United Kingdom	Others	Total
NET LIABILITY/(ASSET) AT 31/12/2015	**138,194**	**46,371**	**(16,045)**	**55,957**	**224,477**
Total expense for the period	31,039	(12,502)	3,179	1,505	23,221
Amount recognized in Other comprehensive income – Remeasurement	4,611	1,008	2,045	1,351	9,015
Benefits or contributions to funds	(25,099)	(1,450)	(4,932)	(5,264)	(36,745)
Reclassification to assets/liabilities held for sale	-	(3,192)	-	-	(3,192)
Impact of changes in exchange rates	-	-	2,277	6,569	8,846
Changes in scope and other	112	(6)	-	1,035	1,141
NET LIABILITY/(ASSET) AT 31/12/2016	**148,857**	**30,229**	**(13,476)**	**61,153**	**226,763**
Total expense for the period	31,852	847	2,547	6,663	41,909
Amount recognized in Other comprehensive income – Remeasurement	(2,797)	(840)	(11,104)	2,003	(12,738)
Benefits or contributions to funds	(29,774)	(793)	(4,135)	(6,358)	(41,060)
Reclassification to assets/liabilities held for sale	-	(754)	-	-	(754)
Impact of changes in exchange rates	-	-	621	(8,077)	(7,456)
Changes in scope and other	-	842	1	1,058	1,901
NET LIABILITY/(ASSET) AT 31/12/2017	**148,138**	**29,531**	**(25,546)**	**56,442**	**208,565**

Plan assets are broken down as follows:

United Kingdom	31/12/2017 In share	31/12/2016 In share
Equities (UK and overseas)	43.00%	43.00%
Bonds	-	4.00%
Real Estate	12.00%	13.00%
Other (Cash and Index-Linked Gilts)	45.00%	40.00%

United States	31/12/2017 In share	31/12/2016 In share
Equities	56.12%	53.00%
Bonds	36.27%	37.00%
Real Estate	7.43%	8.00%
Others	0.18%	2.00%

Germany	31/12/2017 In share	31/12/2016 In share
Equities	22.09%	24.00%
Bonds	77.03%	76.00%
Real Estate	-	-
Others	0.88%	-

In France, 100% of the assets are placed in the general assets of an insurance company.

Sensitivity analysis

Calculating the projected obligation of a defined benefit plan is sensitive to the above assumptions.

A change of 1% in the respective assumptions would have the following impacts on the defined benefit obligation at the reporting date:

In € million	1% increase	1% decrease
Discount rate	(65)	78
Salary increase rate	14	(12)
Guaranteed rate of pension increase	36	(31)

Amounts expensed for defined contribution plans	Production staff	Directors, management, technical and supervisory staff	Total
As at 31/12/2016			
Employer's share of retirement contributions	4,026	8,581	12,607
Life insurance paid by the employer	3,650	2,625	6,275
Other retirement contributions	-	567	567
TOTAL	**7,676**	**11,773**	**19,449**
As at 31/12/2017			
Employer's share of retirement contributions	3,290	7,979	11,269
Life insurance paid by the employer	2,841	2,392	5,233
Other retirement contributions	-	651	651
TOTAL	**6,131**	**11,022**	**17,153**

Other employee benefits (options and performance shares)

The impact on the income statement of employee share ownership plans is presented in Note 25.

Share subscription plans

CHARACTERISTICS OF THE PLANS

The Vallourec Management Board authorized share subscription plans from 2009 to 2017 for some executive management and corporate officers of the Group.

The characteristics of these plans are as follows (figures for the 2009 plan are restated to reflect the 2:1 stock split on 9 July 2010 and the subsequent doubling of the number of shares):

	2009 Plan	2010 Plan	2011 Plan	2012 Plan
Allocation date	01/09/2009	01/09/2010	01/09/2011	31/08/2012
Maturity date	01/09/2013	01/09/2014	01/09/2015	01/03/2017
Expiration date	01/09/2019	01/09/2020	01/09/2021	30/08/2020
Exercise price in euros	31.02	42.72	36.44	22.21
Number of options granted	964,107	853,641	1,140,431	883,602

	2013 Plan	2014 Plan	2015 Plan	2016 Plan	2017 Plan
Allocation date	02/09/2013	15/04/2014	15/04/2015	18/05/2016	18/05/2017
Maturity date	03/03/2018	15/04/2018	15/04/2019	18/05/2020	18/05/2021
Expiration date	01/09/2021	15/04/2022	15/04/2023	18/05/2024	18/05/2025
Exercise price in euros	27.7	23.13	13.57	3.9	6.02
Number of options granted	1,003,746	622,261	683,413	537,895	292,500

CHANGE IN NUMBER OF UNEXPIRED OPTIONS

For all of these plans, the change in the number of unexpired options is as follows:

In number of options	2016	2017
Options outstanding as at 1 January	2,860,088	5,002,867
Options exercised	-	-
Options lapsed	-	-
Options canceled	(62,852)	(1,282,166)
Impact of the capital increase [(a)] on the plans prior to 2016	1,667,736	-
Options distributed during the period	537,895	292,500
OPTIONS OUTSTANDING AS AT 31 DECEMBER	**5,002,867**	**4,013,201**
Options available for exercise	1,318,249	1,260,022

(a) After application of the adjustments provided for in Articles L. 228-99 and R. 228-91 of the French Commercial Code and pursuant to the rules governing performance share and share option plans. At its meeting on 2 May 2016, the Vallourec Supervisory Board sought to protect the rights of holders of performance shares and share options by ensuring that the capital increase decided on 7 April 2016 did not affect said rights.

The reported figures correspond to the number of options originally allocated, with a performance factor of 1 for plans that were vesting, and to the actual number of shares allocated for plans that had matured.

As at 31 December 2017, the average exercise price was €33.8 and the average remaining life five years.

Measurement of Plans [(a)]	2016 Plan	2017 Plan
Share price at allocation date	€3.36	€5.82
Volatility [(b)]	31.00%	31.00%
Risk-free rate [(c)]	0.35%	0.50%
Exercise price	€3.90	€6.02
Dividend rate [(d)]	3.00%	3.00%
Fair value of the option [(e)]	€0.53	€1.13

(a) The binomial model of projecting share prices has been used to measure the fair value of the options granted.

(b) Volatility corresponds to historical volatility observed over a period corresponding to the duration of the plans.

(c) The risk-free rate corresponds to the zero-coupon rate (source: French Institute of Actuaries – Institut des Actuaires).

(d) The expected dividend rates have been determined on the basis of analysts' expectations and the Group's dividend policy.

(e) The fair value for the Management Board and the Operational Committee is €1.13 for the 2017 plan.

Performance share plans

CHARACTERISTICS OF THE PLANS

The Vallourec Management Board authorized performance share plans from 2012 to 2017 for some employees and corporate officers of the Group.

The characteristics of these plans are as follows:

Performance share plans	2012 Plan	2013 Plan	2014 Plan	2015 Plan	2016 Plan	2017 Plan
Allocation date	30/03/2012	29/03/2013	16/12/2014	15/04/2015	18/05/2016	18/05/2017
Vesting period	2 years (French residents and members of the Management Board) or 4 years (non-French residents)	3 years (French residents and members of the Management Board) or 4 years (non-French residents)	3 years (French residents) or 4 years (non-French residents)	3 years (French residents) or 4 years (non-French residents)	3 years (French residents) or 4 years (non-French residents)	3 years (French residents) or 4 years (non-French residents)
Holding period	2 years (French residents and members of the Management Board) or none (non-French residents)	2 years (French residents and members of the Management Board) or none (non-French residents)	2 years (French residents) or none (non-French residents)	2 years (French residents) or none (non-French residents)	2 years (French residents) or none (non-French residents)	2 years (French residents) or none (non-French residents)
Performance conditions	Yes [(a)]	Yes [(b)]	Yes [(c)]	Yes [(d)]	Yes [(e)]	Yes [(f)]
Theoretical number of shares allocated	286,718	391,200	661,861	388,583	610,001	820,275

(a) *Definitive allocation of shares in 2014 for French residents and members of the Management Board, and in 2016 for non-French residents. For all beneficiaries (excluding Management Board members), it will be based on the ratio of consolidated EBITDA to consolidated revenue achieved by the Group in 2012 and 2013. The actual number is determined by applying a performance factor, calculated for the two years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.25. For members of the Executive Committee, the definitive allocation will be based on the following three criteria assessed for fiscal years 2012 and 2013: revenue growth on a like-for-like basis; the ratio of consolidated EBITDA to consolidated revenue on a like-for-like basis; and the performance of the Vallourec share on the regulated NYSE Euronext Paris stock market against a benchmark panel. The actual number is determined by applying a performance factor, calculated for the two years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.33. The number of shares allocated, as shown in the above table, corresponds to the application of a performance factor of 1.*

(b) *Definitive allocation of shares in 2016 for French residents and members of the Management Board, and in 2017 for non-French residents. For all beneficiaries (excluding Management Board members), it will be based on the ratio of consolidated EBITDA to consolidated revenue achieved by the Group in 2013, 2014 and 2015. The actual number is determined by applying a performance factor, calculated for the two years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.25. For members of the Management Board, the definitive allocation will be based on the following three criteria assessed for fiscal years 2013, 2014 and 2015: revenue growth on a like-for-like basis; the ratio of consolidated EBITDA to consolidated revenue on a like-for-like basis; and the performance of the Vallourec share on the regulated NYSE Euronext Paris stock market against a benchmark panel. The actual number is determined by applying a performance factor, calculated for the two years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.33. The number of shares allocated, as shown in the above table, corresponds to the application of a performance factor of 1.*

(c) *Definitive allocation of shares in 2017 for French residents and members of the Management Board, and in 2018 for non-French residents. For all beneficiaries (excluding Management Board members), it will be based on the ratio of consolidated EBITDA to consolidated revenue achieved by the Group in 2014, 2015 and 2016. The actual number is determined by applying a performance factor, calculated for the three years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.25. For members of the Executive Committee, final allocation shall depend on the following four criteria, assessed in 2014, 2015 and 2016: the rate of return on capital employed (ROCE), compared with the ROCE in the budget, consolidated revenue on a like-for-like basis, as compared with the revenue in the budget, the relative stock market performance of the Vallourec share on the regulated NYSE Euronext market in Paris, as compared with a benchmark panel, and the relative EBITDA performance as compared with the same panel as for the previous criterion. The actual number is determined by applying a performance factor, calculated for the two years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.33. The number of shares allocated, as shown in the above table, corresponds to the application of a performance factor of 1.*

(d) *Definitive allocation of shares in 2018 for French residents and members of the Management Board, and in 2019 for non-French residents. For all beneficiaries (excluding Management Board members), it will be based on the ratio of consolidated EBITDA to consolidated revenue achieved by the Group in 2015, 2016 and 2017. The actual number is determined by applying a performance factor, calculated for the three years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.25. For members of the Executive Committee, the final award will depend on the following two criteria, assessed for 2015, 2016 and 2017: the rate of return on capital employed on a consolidated basis (ROCE), compared to the ROCE in the strategic plan, and the Total Shareholder Return (TSR) for 2015, 2016 and 2017. The actual number is determined by applying a performance factor, calculated for the three years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.33. The number of shares allocated, as shown in the above table, corresponds to the application of a performance factor of 1.*

(e) *Definitive allocation of shares in 2019 for French residents and members of the Management Board, and in 2020 for non-French residents. For all beneficiaries (excluding Management Board members), it will be based on the ratio of consolidated EBITDA to consolidated revenue achieved by the Group in 2016, 2017 and 2018. The actual number is determined by applying a performance factor, calculated for the three years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.25. For members of the Executive Committee, the final award will depend on the following two criteria, assessed for 2016, 2017 and 2018: the rate of return on capital employed on a consolidated basis (ROCE), compared to the ROCE in the strategic plan, and the Total Shareholder Return (TSR) for 2016, 2017 and 2018. The actual number is determined by applying a performance factor, calculated for the three years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.33. The number of shares allocated, as shown in the above table, corresponds to the application of a performance factor of 1.*

(f) *For all beneficiaries (excluding members of the Management Board and Executive Committee), this will depend on cost reduction in 2017, 2018 and 2019, in comparison to the performance envisaged in the Group's medium-term plan for the same period, and on the Group's cumulative Free cash flow (FCF) for 2017, 2018 and 2019. The actual number is determined by applying a performance factor, calculated for the three years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.4. For members of the Management Board and Executive Committee, the definitive allocation will depend on the following two criteria: reducing costs in 2017, 2018 and 2019, in comparison to the Group's planned performance in the medium-term over the same period and the growth of the EBITDA margin between 2017 and 2019 in comparison to a panel of comparable companies. The actual number is determined by applying a performance factor, calculated for the two years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 2.*

International performance share allocation plans for employees	"2-4-6" plan (2012)	"2-4-6" plan (2013)	"2-4-6" plan (2014)
Allocation date	30/03/2012	29/03/2013	15/04/2014
Vesting period	2 years (French residents) or 4 years (non-French residents)	3 years (French residents) or 4 years (non-French residents)	3 years (French residents) or 4 years (non-French residents)
Holding period	2 years (French residents) or none (non-French residents)	2 years (French residents) or none (non-French residents)	2 years (French residents) or none (non-French residents)
Performance condition	Ratio of EBITDA to revenue (2012 and 2013)	Ratio of EBITDA to revenue (2013, 2014 and 2015)	Ratio of EBITDA to revenue (2014, 2015 and 2016)
Theoretical number of shares allocated	130,116	191,144	208,100

Free share allocation plans (without performance condition)	"Value 12" Plan	"Value 13" Plan	"Value 14" Plan	"Value 15" Plan	"Value 16" Plan	"Value 17" Plan
Allocation date	06/12/2012	10/12/2013	16/12/2014	15/12/2015	14/12/2016	14/12/2017
Vesting period	4.6 years	4.6 years	4.6 years	4.6 years	4.6 years	4.6 years
Theoretical number of shares allocated	7,032	6,445	6,336	2,744	3,344	3,409

In 2017, in order to meet the legal and tax requirements of each country, several different employee share ownership plans (ESOP) were offered:

- Leveraged company mutual fund *(fonds commun de placement entreprise levier – FCPE levier)*: employees subscribe via a company mutual fund to a number of Vallourec shares at a price discounted by 15% and receive, at the end of the vesting period, a performance multiple on their Vallourec shares as well as protection of their initial investment, excluding currency effects. The increase in the multiple is achieved through the transfer of the discount, from dividends and other financial rights related to ownership of the shares to the bank structuring the transaction through a swap contract.
- Standard company mutual fund *(fonds commun de placement classique – FCPE classique)*: employees subscribe via a company mutual fund to Vallourec shares at a price discounted by 20% and receive any dividends.
- Share and Stock Appreciation Rights (SAR): employees, by buying one share at a price discounted by 15%, receive one SAR (protection on their initial investment, excluding currency effects, and a performance multiple on said share), which will be paid by the employer, in cash, at the end of the holding period. The resulting liability (SAR) is covered by warrants provided to the employer by the bank structuring the transaction. The warrants are issued in consideration of the issue of shares reserved for the bank at a price discounted by 15%.
- Cash and Stock Appreciation Rights (SAR): employees, by depositing funds in an interest-bearing bank account, receive SARs (performance multiple on the deposit), which will be paid to the employee by the employer in cash at the end of the holding period. The resulting liability (SAR) is covered by warrants provided to the employer by the bank structuring the transaction. The warrants are issued in consideration of the issue of shares reserved for the bank at a price discounted by 15%.

The IFRS 2 expense resulting from the benefit granted to the employee under the terms of the ESOP is measured on the grant date. The fair value of the benefit corresponds, in the case of the standard offering, to the value of the economic benefit granted less the cost to the employee of the non-transferability of the share, and, for the leveraged plans, to the estimated present value of the amounts ultimately paid to the employee. In the case of the "Share and SAR" plan, the discount on the share held by the employee and the measurement of the option protecting the initial investment are added.

This benefit led to the recognition of a personnel cost of €0.6 million in 2017 compared to €1.3 million in 2016.

The IFRS 2 expense resulting from the SARs is measured again at each quarter-end by reference to the fair value corresponding to the estimated present value of the amounts ultimately paid to the employee. The liability to employees resulting from SARs resulted in an expense included in personnel costs of €0.9 million.

In accordance with IAS 39, the income from warrants is remeasured at each quarter-end by reference to the fair value of the derivative instrument.

The income corresponding to the warrants paid by the bank to the employer was added to the employees' investment and recognized in personnel expenses for €0.9 million in 2017 since it is intended to cover income associated with SARs (see above).

CHANGE IN NUMBER OF SHARES

For all of these plans, the change in the number of shares being vested is as follows:

In number of shares	2016	2017
Number of shares being vested as at 1 January	1,455,690	2,199,312
Shares delivered during the year	(252,486)	(160,170)
Shares canceled	(250,602)	(654,358)
Impact of the capital increase [a] on the plans prior to 2016	636,709	-
Shares allocated during the year	610,001	823,684
NUMBER OF SHARES BEING VESTED AS AT 31 DECEMBER	**2,199,312**	**2,208,468**

(a) After application of the adjustments provided for in Articles L. 228-99 and R. 228-91 of the French Commercial Code and pursuant to the rules governing performance share and share option plans. At its meeting on 2 May 2016, the Vallourec Supervisory Board sought to protect the rights of holders of performance shares and share options by ensuring that the capital increase decided on 7 April 2016 did not affect said rights.

The reported figures correspond to the number of shares originally allocated, with a performance factor of 1 for plans that were vesting, and to the actual number of shares allocated for plans that had matured.

Measurement of Plans [a]	2016 Plan	"Value 16" Plan	2017 Plan	"Value 17" Plan
Share price at allocation date	€3.36	€4.83	€5.82	€4.30
Risk-free rate [b]	-0.10% (France), -0.22% (foreign)	-0.29%	-0.12% (France), -0.32% (foreign)	-0.27%
Dividend rate [c]	3%	3%	3%	3%
Fair value of the share	€2.74 (French residents) or €2.97 (non-French residents)	€4.15	€4.84 (French residents) or €5.15 (non-French residents)	€3.69

(a) The binomial model of projecting share prices has been used to measure the fair value of the shares granted. The employee benefit corresponds to the fair value of the shares allocated, taking into account the impossibility of receiving dividends during the vesting period and the cost to the employee of the non-transferability of shares during the holding period.

(b) The risk-free rate corresponds to the zero-coupon rate (source: French Institute of Actuaries – Institut des Actuaires).

(c) The expected dividend rates were determined based on analysts' expectations (external information) and the Group's dividend policy.

NOTE 20 Other current liabilities

	Social security liabilities	Tax liabilities	Liabilities associated with the acquisition of assets	Deferred income	Other current liabilities	Total
As at 31/12/2015	**219,841**	**32,020**	**24,848**	**5,463**	**50,682**	**332,854**
Impact of changes in exchange rates	8,314	725	1,233	-	2,667	12,939
Acquisitions from business combinations (see Note 34)	16,235	3,129	1,208	-	16,542	37,114
Disposals from business combinations	(7,916)	(1,754)	(677)	-	(3,209)	(13,556)
Reclassification to liabilities held for sale and discontinued operations	(4,101)	(69)	(1,630)	-	-	(5,800)
Other changes	(34,991)	(4,154)	(4,488)	(4,179)	(16,277)	(64,089)
As at 31/12/2016	**197,382**	**29,897**	**20,494**	**1,284**	**50,405**	**299,462**
Impact of changes in exchange rates	(10,481)	(1,912)	(2,279)	(4)	(8,194)	(22,870)
Reclassification to liabilities held for sale and discontinued operations	(2,412)	(116)	-	-	(460)	(2,988)
Other changes	12,081	5,751	2,792	317	11,336	32,277
AS AT 31/12/2017	**196,570**	**33,620**	**21,007**	**1,597**	**53,087**	**305,881**

NOTE 21 Information on related parties

The following transactions were entered into with related parties:

	Sales to related parties	Purchases from related parties	Related party receivables	Related party payables
As at 31/12/2016				
HKM	601	212,294	21	46,340
As at 31/12/2017				
HKM	2,076	294,172	104	94,107
Ascoval	17,596	99,294	3,545	2,016

Purchases mainly concern the acquisition of steel rounds from HKM and Ascoval, which are used as raw manufacturing materials by the European rolling mills of Vallourec Deutschland and Vallourec Tubes France.

Compensation of the management and supervisory boards

The total compensation for members of the Executive Committee, as constituted at 31 December 2017 (11 people in 2017, compared to 9 in 2016), as well as pension liabilities at the reporting date, were as follows:

	2016	2017
Compensation and benefits in kind	5,489	7,220
Share-based payments [(a)]	95	1,378
Pension commitments	1,020	829
Supplementary pension commitments	7,857	5,589

(a) Information provided based on the 2017, 2016, 2015, 2014, 2013 and 2012 share subscription option, performance share and employee share ownership plans.

As regards post-employment benefits for executive management, there is no specific plan. Executive management is covered by the Vallourec Group's supplementary pension plan (a benefit plan introduced in 2005 and closed on 31 December 2015), as well as by plans under Articles 83 and 82 of the French General Tax Code set up on 1 April 2016. These plans do not give rise to any commitments.

As at 31 December 2017, no loans or guarantees had been granted to executive management by the parent company or its subsidiaries.

NOTE 22 Contingent liabilities and commitments

Due to its activities in Europe, Vallourec is concerned about the European Emissions Trading System (ETS). This system, established in 2005, has been in its third period since 2013, which will end in 2020.

Under this framework, Vallourec is still benefiting from free quotas, though reduced compared to previous periods. The other portion of the quotas allocated is no longer free, but subject to auction on the market. Vallourec operates in the metallurgy sector, which is considered to be exposed to the risk of "carbon leakage."

The Group was allocated a greenhouse gas emissions quota in 2017 of 95,294 metric tons for its French plants, and 172,275 metric tons for its German plants.

The European authorities recently agreed to rules applicable for the fourth period (2020-2030) with the objective of reducing emissions by 40% between now and 2030. These new rules will notably lead to a reduction in free quotas, a quicker drop in their annual level, a more dynamic allocation depending on level of activity, and to stricter eligibility conditions for obtaining the status of a company at risk of "carbon leakage".

Off-statement of financial position commitments received (excluding financial instruments)

	2016	2017
Firm non-current asset orders	12,203	4,449
Guarantees and commitments received	99,255	89,247
Other commitments received	14,697	11,180
TOTAL	**126,155**	**104,876**
OFF-STATEMENT OF FINANCIAL POSITION COMMITMENTS GIVEN (EXCLUDING FINANCIAL INSTRUMENTS)	**657,324**	**463,527**

Commitments given by maturity

	2017	< 1 year	> 1 year	> 5 years
Statement of financial position				
Long-term financial debts	2,563,339	746,220	1,218,972	598,147
Off-statement of financial position				
Market guarantees and letters of credit given	106,484	69,123	37,361	-
Other securities, mortgages and pledges given	117,721	-	2,051	115,670
Long-term lease [(a)]	146,614	22,155	67,983	56,476
Firm asset orders given	4,449	4,167	282	-
Other obligations	88,259	68,642	17,707	1,910
TOTAL	**463,527**	**164,087**	**125,384**	**174,056**

(a) In light of the future application of IFRS 16 – Leases, lease agreements have been subject to an extensive review.

	2016	< 1 year	> 1 year	> 5 years
Statement of financial position				
Long-term financial debts	2,573,744	1,453,096	513,294	607,354
Off-statement of financial position				
Market guarantees and letters of credit given	123,351	57,247	66,104	-
Other securities, mortgages and pledges given	136,688	-	2,255	134,433
Long-term lease	269,712	23,203	190,393	56,116
Firm asset orders given	12,203	12,203	-	-
Other obligations	115,370	45,923	69,447	-
TOTAL	**657,324**	**138,576**	**328,199**	**190,549**

The main exchange rates used for income statement items are set out in Note 13.

Income statement items are translated at the average rate.

NOTE 23 Revenue

	2016	2017
Europe	646,620	593,600
North America (NAFTA)	559,314	1,033,185
South America	466,819	612,094
Asia and the Middle East	847,677	1,175,404
Rest of the world	444,631	335,358
TOTAL	**2,965,061**	**3,749,641**

If the changes in scope had taken place on 1 January 2016, revenue would have stood at €3,277 million, compared to €2,965 million.

NOTE 24 Cost of sales

	2016	2017
Direct cost of sales	(157,163)	(223,337)
Cost of raw materials consumed	(934,634)	(1,369,434)
Labor costs	(746,980)	(837,374)
Other manufacturing costs	(891,984)	(908,458)
Change in non-raw material inventories	4,052	41,455
TOTAL	**(2,726,709)**	**(3,297,148)**
Accumulated depreciation and amortization	(283,274)	(297,020)
TOTAL (INCLUDING DEPRECIATION AND AMORTIZATION)	**(3,009,983)**	**(3,594,168)**

«Other manufacturing costs» mainly include the costs of energy and consumables, and the costs of outsourcing, maintenance and provisions.

NOTE 25 Administrative, sales and research costs

	2016	2017
Research and Development costs	(60,453)	(46,904)
Selling and marketing costs	(86,400)	(81,929)
General and administrative costs	(300,749)	(310,754)
TOTAL	**(447,602)**	**(439,587)**
Accumulated depreciation and amortization	(48,522)	(44,457)
TOTAL (INCLUDING DEPRECIATION AND AMORTIZATION)	**(496,124)**	**(484,044)**

Personnel expenses and average headcount of consolidated companies

	2016	2017
Personnel expenses		
Wages and salaries	(762,855)	(819,703)
Employee profit-sharing and bonuses	(18,716)	(21,674)
Expenses relating to share subscription and share purchase options, and performance shares [(a)]	(4,164)	(10,571)
Social security costs	(208,278)	(215,749)
TOTAL	**(994,013)**	**(1,067,697)**

(a) Including a €6.6 million expense for all share subscription plans for 2017 (compared to €0.8 million for 2016).

The increase in personnel expenses is mainly linked to the 100% consolidation of Vallourec Soluções Tubulares do Brasil in 2017.

Headcount as of year-end of consolidated companies	2016	2017
Managers	3,299	3,231
Technical and supervisory staff	3,107	3,048
Production staff	12,836	13,245
TOTAL	**19,242**	**19,524**

Group headcount as at 31 December 2017 was 19,524 people, compared with 19,242 people as at 31 December 2016.

NOTE 26 Other

	2016	2017
Profit-sharing and other	(21,605)	(20,637)
Fees for concessions and patents	20,798	20,424
Other income and expenses	(8,659)	(10,463)
TOTAL	**(9,466)**	**(10,676)**

Provision allowances, net of reversals	2016	2017
Provision allowances net of reversals included in EBITDA amounted to	(35,661)	81,191

NOTE 27 Fees paid to Statutory Auditors and members of their networks

	KPMG		Deloitte	
	Amount (excl tax)		Amount (excl tax)	
	2016	2017	2016	2017
Certification of parent company and consolidated financial statements				
Issuer	412	242	412	242
%	27%	15%	19%	20%
Fully consolidated subsidiaries	775	1,192	1,497	912
%	50%	72%	68%	74%
SUB-TOTAL	**1,187**	**1,434**	**1,909**	**1,154**
Other services directly associated with the statutory audit [a]				
Issuer	288	111	219	42
%	19%	7%	10%	3%
Fully consolidated subsidiaries	68	105	70	33
%	4%	6%	3%	3%
SUB-TOTAL	**356**	**216**	**289**	**75**
TOTAL	**1,543**	**1,650**	**2,198**	**1,229**

(a) *The services provided cover the other services directly associated with the statutory audit that are required by the legal and regulatory texts, as well as those services provided at the Group's request. For Deloitte & Associés, for the 2017 fiscal year, they primarily correspond to the completion of procedures conducted under the framework of (i) bond issues and (ii) the certification of the carbon certificates. For KPMG, for the 2017 fiscal year, they primarily correspond to the completion of procedures conducted under the framework of (i) bond issues, (ii) the engagement of an independent third-party entity in relation to the CSR information of the management report and (iii) compliance reviews of tax returns for subsidiaries outside the European Union.*

NOTE 28 Accumulated depreciation and amortization

	2016	2017
By function		
Depreciation of industrial assets	(283,274)	(297,020)
Depreciation and amortization – Research and Development	(11,006)	(10,371)
Depreciation and amortization – Sales and Marketing Department contracts	(11,510)	(11,398)
Depreciation and amortization – general and administrative expenses	(26,006)	(22,688)
TOTAL	**(331,796)**	**(341,477)**
By type		
Net amortization of intangible assets (see Note 1)	(32,134)	(28,199)
Net depreciation of property, plant and equipment (see Note 2)	(292,425)	(304,675)
Net depreciation and amortization of biological assets	(7,237)	(8,603)
TOTAL	**(331,796)**	**(341,477)**

NOTE 29 Impairment of assets and goodwill, asset disposals, restructuring and non-recurring items

	2016	2017
Reorganization measures (net of expenses and provisions)	(111,186)	(4,697)
Gains and losses on disposals of non-current assets and other non-recurring items	(16,285)	(74,539)
TOTAL	**(127,471)**	**(79,236)**

	2016	2017
Impairment of intangible assets (see Note 1)	(82)	-
Impairment of property, plant and equipment (see Note 2)	(58,072)	(65,105)
Impairment of goodwill (see Note 1)	-	-
Other impairment of assets	(13,237)	-
TOTAL	**(71,391)**	**(65,105)**

Asset depreciation reached -€65 million in 2017, as compared to -€71 million in 2016, and the "Asset disposals, restructuring and other" represented -€79 million in 2017, compared to -€127 million in 2016. In 2017, these items were a result of (i) the court-based reorganization procedure of Ascoval (steel mill in which the Group holds a minority interest), (ii) the disposal of non-strategic assets, and more specifically, Vallourec Drilling Products and (iii) impairment of assets recorded following the reduction in the number of coal power plants in Asia.

NOTE 30 Financial income/(loss)

	2016	2017
Financial income		
Income from investment securities	27,713	26,471
Income from disposals of investment securities	2,051	(464)
TOTAL	**29,764**	**26,007**
Interest expenses	**(124,922)**	**(155,129)**
Net interest expenses	**(95,158)**	**(129,122)**
Other financial income and expenses		
Income from securities	1,050	1,726
Income from loans and receivables	1,484	930
Exchange (losses) and gains and changes in premiums/discounts	(27,419)	(36,831)
Provision allowances, net of reversals	(2,859)	7,765
Other financial income and expenses	1,431	(5,600)
TOTAL	**(26,313)**	**(32,010)**
Other discounting expenses		
Interest expense pension obligation	(8,080)	(6,472)
Financial income from discounted assets and liabilities	(784)	(5,979)
TOTAL	**(8,864)**	**(12,451)**
FINANCIAL INCOME/(LOSS)	**(130,335)**	**(173,583)**

NOTE 31 Reconciliation of theoretical and actual tax expense

Breakdown of the tax expense	2016	2017
Current tax expense	(39,334)	(46,409)
Deferred taxes (see Note 5)	119,500	147,024
NET EXPENSE (-)/INCOME (+)	**80,166**	**100,615**
Consolidated net income/(loss)	(799,542)	(556,556)
Tax expense	80,166	100,615
CONSOLIDATED NET INCOME/(LOSS) BEFORE TAX	**(879,708)**	**(657,171)**
Statutory tax rate of consolidating company (see Note 5)	34.43%	34.43%
Theoretical tax	302,883	226,264
Impact of main tax loss carryforwards	(144,660)	(80,685)
Impact of permanent differences	(47,015)	(30,004)
Other impacts	(6,576)	(7,055)
Impact of differences in tax rates	(24,466)	(7,905)
NET EXPENSE (-)/INCOME (+)	**80,166**	**100,615**
ACTUAL TAX RATE	**9%**	**15%**

The 15% rate mainly reflects the items detailed below:

- The impact of tax loss carryforwards and timing differences mainly concerns the non-recognition of deferred tax assets (DTAs) for the year in France, Germany and China. Nevertheless, the rate improvement is explained by the recognition of deferred taxes on previous fiscal years for Brazil, Saudi Arabia and Tianda (Chinese subsidiary).
- Ongoing differences are analyzed by the results of non-controlling interests, performance share allocations and the reintegration of financial expenses.
- Differences in taxation mainly reflect the range of tax rates applied in each country (France 34.4%, Germany 31.6%, United States 35%, Brazil 34.0%, China 25.0% and Saudi Arabia 20%). As concerns the United States, the drop in income tax to 21% was used to calculate deferred taxes.

NOTE 32 Segment information

Operating segments

The following tables provide information on the income and results for each operating segment, as well as certain information on the assets, liabilities and investments for the 2017 and 2016 fiscal years.

Information on results, assets and liabilities by operating segment

2017	Seamless tubes	Specialty Products	Holdings & miscellaneous [(a)]	Inter-segment transactions	Total
Income statement					
Sales to external customers	3,680,599	68,248	794	-	3,749,641
EBITDA	47,892	(245)	(45,417)	-	2,230
Depreciation and amortization	(325,320)	(15,598)	(1,003)	444	(341,477)
Impairment of assets and goodwill	(65,105)	-	-	-	(65,105)
Asset disposals and restructuring costs	(63,501)	-	(15,735)	-	(79,236)
OPERATING INCOME/(LOSS)	**(406,034)**	**(15,843)**	**(62,155)**	**444**	**(483,588)**
Unallocated income					(6,003)
Unallocated expenses					(167,580)
Pre-tax income					(657,171)
Income tax					100,615
Net income of associates					(3,173)
Consolidated net income/(loss)					(559,729)
Statement of financial position					
Non-current assets	4,262,872	123,281	3,529,852	(3,949,595)	3,966,410
Current assets	1,770,517	51,104	123,368	(110,170)	1,834,819
Cash	465,495	2,901	1,054,009	(501,370)	1,021,035
Assets held for sale and discontinued operations	64,119	-	-	-	64,119
TOTAL ASSETS	**6,563,003**	**177,286**	**4,707,229**	**(4,561,135)**	**6,886,383**
Cash flows					
Property, plant and equipment, intangible assets and biological assets	(149,835)	(5,089)	(28)	-	(154,952)

(a) Vallourec and Vallourec Tubes.

2016	Seamless tubes	Specialty Products	Holdings & miscellaneous [a]	Inter-segment transactions	Total
Income statement					
Sales to external customers	2,857,621	106,666	774	-	2,965,061
EBITDA	(197,037)	(1,246)	(19,681)	(752)	(218,716)
Depreciation and amortization	(312,769)	(17,827)	(1,535)	335	(331,796)
Impairment of assets and goodwill	(71,391)	-	-	-	(71,391)
Asset disposals and restructuring costs	(128,977)	6,168	12,338	(17,000)	(127,471)
OPERATING INCOME/(LOSS)	**(710,174)**	**(12,905)**	**(8,878)**	**(17,417)**	**(749,374)**
Unallocated income					3,451
Unallocated expenses					(133,786)
Pre-tax income					(879,709)
Income tax					80,166
Net income of associates					(8,003)
Consolidated net income/(loss)					(807,546)
Statement of financial position					
Non-current assets	4,994,760	135,672	3,799,975	(4,053,076)	4,877,331
Current assets	1,850,276	48,149	92,267	(68,721)	1,921,971
Cash	523,980	670	1,341,008	(578,936)	1,286,722
Assets held for sale and discontinued operations	46,327	-	-	-	46,327
TOTAL ASSETS	**7,415,343**	**184,491**	**5,233,250**	**(4,700,733)**	**8,132,351**
Cash flows					
Property, plant and equipment, intangible assets and biological assets	(172,832)	(3,590)	(54)	-	(176,476)

(a) Vallourec and Vallourec Tubes.

Geographical regions

The following tables provide information by geographical region on sales (by location of the Group's customers) and capital expenditure as well as certain information on assets (by regions where the companies operate).

2017	Europe	North America	South America	Asia	Rest of the World	Total
Revenue						
Sales to external customers	593,600	1,033,185	612,094	1,175,404	335,358	3,749,641
Statement of financial position						
Property, plant & equipment, intangible assets, biological assets and goodwill (net)	603,246	1,435,102	1,096,520	350,143	267	3,485,278
Cash flows						
Property, plant and equipment, intangible assets and biological assets	85,186	26,224	32,884	10,519	139	154,952

2016	Europe	North America	South America	Asia	Rest of the World	Total
Revenue						
Sales to external customers	646,620	559,314	466,819	847,677	444,631	2,965,061
Statement of financial position						
Property, plant & equipment, intangible assets, biological assets and goodwill (net)	638,356	1,744,411	1,363,030	466,358	1,536	4,213,691
Cash flows						
Property, plant and equipment, intangible assets and biological assets	95,600	18,001	53,735	9,020	120	176,476

NOTE 33 Share in net income/(loss) of associates

The contribution to the consolidated net income of associates is as follows:

	2016	2017
HKM	5	6
Ascoval	-	26
Poongsan Valinox	117	-
Subsidiaries of P.T. Citra Tubindo	(327)	(3,205)
Tianda Oil Pipe	(7,600)	-
Xi'an Baotimet Valinox Tubes	(198)	-
TOTAL	**(8,003)**	**(3,173)**

NOTE 34 Business combinations

The Group monitored the allocation of assets and liabilities from business combinations with Vallourec Soluções Tubulares do Brasil and Tianda Oil Pipes Co. Ltd.

As at 31 December 2017, the goodwill of Vallourec Soluções Tubulares do Brasil and Tianda Oil Pipes Co. Ltd was adjusted during the fiscal year within a period of one year for €3 million and €9 million respectively. These adjustments are presented in Note 1.

NOTE 35 Subsequent events

Since 31 December 2017, no subsequent events have occurred that would call into question the truthfulness and reliability of the financial statements.

6.2 Parent company financial statements

6.2.1 Statement of financial position

Assets

In € thousand	31/12/2016	31/12/2017
NON-CURRENT ASSETS		
Intangible assets	414	414
Property, plant and equipment	93	88
Equity interests	3,856,437	3,856,437
Treasury shares	15,720	-
Long-term investments	75,202	-
Receivables, loans and other investments	1,700,000	1,700,000
TOTAL I	**5,647,866**	**5,556,939**
CURRENT ASSETS		
Operating receivables	5,294	4,203
Other receivables	534,764	808,865
Investment securities	25,485	8,834
Cash and cash equivalents	13	5
Prepaid expenses	10,577	14,216
Deferred expenses	4,799	16,362
Translation differences – unrealized losses	-	10
Premiums/discounts – assets	-	-
TOTAL II	**580,932**	**852,495**
TOTAL ASSETS (I + II)	**6,228,798**	**6,409,434**

Equity and liabilities

In € thousand	31/12/2016	31/12/2017
EQUITY		
Capital	902,476	915,976
Additional paid-in capital	1,408,476	1,421,586
Revaluation reserve	634	634
Reserves	85,886	85,886
Retained earnings	1,802,485	1,784,644
Net income/(loss) for the period	(17,841)	(39,056)
TOTAL I	**4,182,116**	**4,169,670**
PROVISIONS FOR CONTINGENCIES AND LIABILITIES	12,107	6,284
Financial liabilities	1,960,373	2,170,562
Operating liabilities	14,002	8,402
Other liabilities	60,200	54,295
Deferred income	-	221
Translation differences – unrealized gains	-	-
TOTAL II	**2,046,682**	**2,239,764**
TOTAL EQUITY AND LIABILITIES (I+II)	**6,228,798**	**6,409,434**

6.2.2 Income statement

In € thousand	31/12/2016	31/12/2017
Revenue	5,758	5,050
Provision reversals and expenses transferred	9,787	27,622
Other income	-	18
External services	(8,526)	(25,928)
Taxes and similar	(484)	(685)
Personnel expenses	(4,125)	(4,358)
Other operating expenses	(11,223)	(9,500)
Amortization, depreciation and provisions	(4,962)	(5,511)
OPERATING INCOME/(LOSS)	**(13,775)**	**(13,292)**
Financial income	**89,344**	**117,733**
From equity interests	461	-
Other long-term securities and receivables	53,533	77,465
Other interest and similar income	156	842
Provision reversals and financial expenses transferred	35,127	20,797
Foreign exchange gains	67	18,629
Net income on disposal of investment securities	-	-
Financial expenses	**(102,248)**	**(111,815)**
Amortization and provisions	(23,029)	(10)
Interest and similar expenses	(79,158)	(93,303)
Foreign exchange losses	(61)	(18,502)
Net capital gain/loss on disposal of marketable securities	-	-
FINANCIAL INCOME/(LOSS)	**(12,904)**	**5,918**
NET INCOME FROM CONTINUING OPERATIONS BEFORE TAX	**(26,680)**	**(7,374)**
Exceptional income	-	76,177
Exceptional expenses	-	(107,522)
EXCEPTIONAL INCOME/(LOSS)	**-**	**(31,345)**
Income tax	8,839	(337)
NET INCOME/(LOSS)	**(17,841)**	**(39,056)**

6.2.3 Notes to the parent company financial statements for the year ended 31 December 2017

In € thousand unless stated otherwise.

Notes to the statement of financial position (before allocation) for the year ended 31 December 2017, which totals €6,409.4 million, and to the income statement, which shows a loss of €39.1 million.

The fiscal year runs for 12 months, from 1 January to 31 December.

Vallourec prepares consolidated financial statements.

A – Significant events, measurement methods and comparability of financial statements

On 14 December 2017, under the Value 17 employee share ownership plan 6,749,755 new shares were subscribed at a price of €4.00 for the leveraged plan and €3.77 for the standard plan, for a capital increase of €26.6 million, including issue premium net of expenses.

The presentation and measurement methods used in the preparation of the financial statements for the year under review are the same as those used for the previous year. Regulation No. 2015-05 of 2 July 2015 relating to the forward financial instruments and hedging operations must be applied as from 1 January 2017. This first application represents a change in accounting method.

The other presentation and measurement methods used in the preparation of the financial statements for the year under review are the same as those used for the previous year.

B – Accounting principles

The parent company financial statements are prepared in accordance with French GAAP (ANC Regulation No. 2014-03) and the fundamental accounting concepts (independence of fiscal years, non-compensation, historic cost, intangibility of the opening balance sheet, going concern, true and fair view, conservatism and consistency of accounting methods).

Property, plant and equipment

In accordance with ANC Regulation No. 2014-03, the Company uses the component approach, which relies on technical analyses to individually account for significant parts of an item of property, plant and equipment, owing to their uses and utilization rates.

Measurement of property, plant and equipment includes:

- the acquisition or production cost, except for assets acquired before 31 December 1976 which are remeasured and stated at their transfer value;
- discounts, rebates and other payment deductions;
- costs directly attributable to asset implementation;
- any dismantling costs;
- financial expenses related to the asset's acquisition are excluded.

Depreciation of property, plant and equipment is calculated on a straight-line or accelerated basis over the expected useful life of the asset.

Tax depreciation is calculated using the diminishing value method over the shortest period between the useful life and the duration of use, except for components depreciated over their actual lives.

Impairment of property, plant and equipment, and intangible assets

The value in use of property, plant and equipment and intangible assets is tested whenever there is an indication of impairment; such indications are reviewed at each balance sheet date.

If an asset's market value falls significantly below its carrying amount, an impairment charge is booked and the asset is restated at its market value.

Associates

The gross value of equity interests comprises their purchase cost, excluding associated expenses, and the amount of any capital increases.

Securities acquired in foreign currencies are recorded at their acquisition price translated into euros at the rate applicable on the date of the transaction.

At the last year-end, the Company compared the net carrying amount of the equity interests at their value in present use and constitutes a provision when their value in present use is less than the net carrying amount.

The value in present use is determined using various criteria such as Vallourec Tubes' consolidated net worth, its profitability, the Company share price and the Group's growth outlook. The growth outlook is determined on the basis of cash flow and operating forecasts established by Management.

Treasury shares

Treasury shares recorded in non-current assets on the statement of financial position comprise:

- shares allocated to the Group's various share ownership plans for some employees, executive management and corporate officers;
- shares held under the terms of the liquidity contract.

Pursuant to CRC Regulation No. 2008-15 dated 4 December 2008 relating to the accounting treatment of share purchase or subscription plans and performance share plans for employees, shares allocated for these plans are not impaired based on market value due to the obligation to allocate such shares to employees and the provision recognized as a liability (see below in the section relating to provisions for contingencies and liabilities).

For treasury shares held under the terms of the liquidity contract, their carrying amount is the lower value of their acquisition cost and their market value (defined as the average price over the previous month).

Treasury shares are presented in the balance sheet as follows:

- treasury shares acquired before 2008 and available for allocation to employees are classified as non-current assets;
- treasury shares acquired since 2008 and available to be allocated to employees are classified as investment securities;
- treasury shares acquired for the liquidity contract are classified as non-current assets.

Receivables and payables

Receivables and payables are measured at their nominal value.

Trade receivables are impaired when there is a risk of non-recovery.

Impairment ratios are applied to each receivable based on probabilities of recovery.

CICE

In accordance with the ANC circular published on 28 February 2013, the French Competitiveness and Employment Tax Credit (CICE) is recorded as a reduction of personnel expenditure, offset by a receivable from the parent company in the form of a tax credit that may be applied against the corporate income tax liability.

Investment securities

Investment securities are measured at acquisition cost plus accrued income for the period, or at market value if lower.

Treasury shares acquired since 2008 and available to be allocated to employees are classified as investment securities.

Translation of transactions in foreign currencies and financial instruments

Receivables, cash and cash equivalents and payables in foreign currencies are stated on the statement of financial position using the exchange rate applicable on the reporting date.

Revenue and expenses denominated in foreign currencies backed by qualified hedges are recorded at the spot rate:

The aggregate value of the change in time value (i.e. the change between the forward price of the hedge on the reporting date and the initial spot rate) is recognized at each reporting date on the statement of financial position – Derivative instruments. The change in the premium/discount between the beginning and the end of the period impacts income/(loss). Since 1 January 2017, these changes have been recorded under operating income (see ANC Regulation 2015-05). They previously appeared under financial income/(loss).

The change in time value (premium/discount) is recognized separately from revenue.

In application of ANC Regulation 2015-05, the change in values of the isolated open-position operations are recorded in the balance sheet as a counterpart for suspense accounts:

- in assets for changes that correspond to an unrealized loss;
- in liabilities for changes that correspond to an unrealized gain;

Unrealized gains are not included in the income statement. When an operation results in an unrealized loss, a provision to financial income is made in the amount of this unrealized capital loss.

Provisions for contingencies and liabilities

Retirement pensions

Pensions are paid by an external organization and the Company therefore has no obligations in this respect.

Retirement benefits

Commitments in respect of benefits paid to retiring employees are measured based on an actuarial calculation and provisioned as a liability in the statement of financial position.

As at 31 December 2017 the discount rate was based on the iBoxx € Corporates AA 10+ index. This index uses a basket of bonds of financial and non-financial companies. They are based on the assumption that all employees leaving the Group will do so on a voluntary basis.

Actuarial gains or losses are amortized using the corridor rule over the average remaining working lives of employees.

The actuarial assumptions used vary depending on the specific arrangements of the Company's retirement plan(s) and collective agreement(s).

The following assumptions are used:

- discount rate of 1.55% (including inflation);
- inflation rate of 1%;
- staff turnover rate variable according to age and category;
- generational mortality table TPGF2005/TPGH2005.

Provisions on shares earmarked for employee share allocations

Pursuant to CRC Regulation No. 2008-15 dated 4 December 2008 relating to the accounting treatment of share purchase or subscription plans and performance share plans for employees; as soon as an outflow of resources becomes probable, the Company recognizes a provision for a contingent liability. This provision is measured based on the product of:

- the acquisition cost of the shares or their net carrying amount (when they were already owned) on the date they were allocated to the ESOP less the price likely to be paid by the beneficiaries;
- the number of shares that are expected to be allocated given the provisions of the allocation scheme (satisfaction of conditions regarding continuous service and performance) as assessed on the reporting date.

A provision for contingencies and liabilities has been recognized at each reporting date since these plans were put in place on a pro rata basis, equal to the costs relating to the allocations of performance shares to employees, executive management and corporate officers of Vallourec and its subsidiaries.

Other provisions

All disputes (technical, tax, etc.) and risks have been recognized as provisions for the estimated probable risk at the reporting date.

Exceptional income and expenses

In general, exceptional income and expenses comprise amounts of an extraordinary nature, i.e. those that fall outside the scope of the Company's continuing operations.

C – Notes to the statement of financial position

1. Movements in non-current assets

Non-current assets *In € thousand*	31/12/2016	Acquisition Allowances	Disposal Reversals of provisions	31/12/2017	Revaluation reserve	Related parties
INTANGIBLE ASSETS	**414**	**-**	**-**	**414**	**-**	**-**
Trademarks	414	-	-	414	-	-
PROPERTY, PLANT AND EQUIPMENT	**93**	**-**	**(5)**	**88**	**-**	**-**
Land	93	-	(5)	88	-	-
Buildings	113	-	(113)	-	-	-
Depreciation of buildings	(113)	-	113	-	-	-
Construction in progress	-	-	-	-	-	-
ASSOCIATES	**3,856,437**	**-**	**-**	**3,856,437**	**-**	**3,856,437**
Associates	3,856,437	-	-	3,856,437	-	3,856,437
Provisions for associates	-	-	-	-	-	-
LONG-TERM INVESTMENTS & TREASURY SHARES	**90,922**	**(8,743)**	**(82,179)**	**-**	**-**	**-**
Long-term investments	81,947	-	(81,947)	-	-	-
Provisions for long-term investments	(6,745)	(9,457)	16,202	-	-	-
Treasury shares	36,517	714	(37,231)	-	-	-
Provisions for treasury shares	(20,797)	-	20,797	-	-	-
RECEIVABLES, LOANS, OTHER INVESTMENTS	**1,700,000**	**-**	**-**	**1,700,000**	**-**	**1,700,000**
Loans	1,700,000	-	-	1,700,000	-	1,700,000
Accrued interest	-	-	-	-	-	-
TOTALS	**5,647,866**	**(8,743)**	**(82,184)**	**5,556,939**	**-**	**5,556,437**

Long-term investments & treasury shares

SHARES OF NIPPON STEEL SUMITOMO METAL CORPORATION (NSSMC)

As at 31 December 2016, NSSMC shares listed on the Tokyo stock exchange, acquired in 2009 for a total amount of €81.9 million, at an average price of 230.8 yen per share, had a net value of €75.2 million (valuation at the average price in December 2016).

These shares were sold during fiscal year 2017 at a price of €69.0 million.

TREASURY SHARES

a) Liquidity contract

Vallourec has a liquidity contract with Rothschild & Cie Banque, which has been in effect since 2 July 2012. The contract has a term of 12 months and is automatically renewable for successive 12-month terms. It complies with the Code of Conduct (Charte de déontologie) issued by the French Association of Financial Markets (Association Française des Marchés Financiers) and approved by the French securities regulator (Autorité des Marchés Financiers) on 21 March 2011.

On 18 December 2017, Vallourec decided to terminate the liquidity contract entered into on 26 June 2012 with Rothschild & Cie Banque and as of 31 December 2017 no longer holds treasury shares under this contract.

b) Other treasury shares

In 2017, Vallourec definitively allocated 266,370 shares under various performance plans and no longer holds, as of 31 December 2017, treasury shares acquired before 2010, which were allocated to employee allocation operations.

Receivables, loans and other investments

LOANS

On 31 December 2011, Vallourec arranged a €1.0 billion loan for subsidiary Vallourec Tubes to finance its long-term requirements. The loan had fixed rate interest of 4.6% per annum and matured on 31 December 2015.

On 11 December 2014, this loan was modified, increasing its amount to €1.70 billion, reducing its interest rate to 3.8% and extending its maturity to 31 December 2017.

On 30 December 2016, this loan was modified, increasing its interest rate to 4.4% and extending its maturity to 31 December 2019.

2. Investment securities

Investment securities include:

Mutual and investment funds

In € thousand	31/12/2016	31/12/2017	Measurement as at 31/12/2017	Loss provisioned	Unrealized gain
Time deposit account	5,000	5,000	5,000	-	-
Mutual and investment funds	7,999	-	-	-	-
TOTAL	**12,999**	**5,000**	**5,000**	**-**	**-**

Vallourec joins in euro and US dollar cash management centralization with its main European companies and centralized currency hedging transactions in respect of its US dollar sales within Vallourec Tubes.

Cash is invested in risk-free money market funds. Vallourec only enters into financial transactions with first-rate financial institutions.

Treasury shares

In € thousand	31/12/2016	Acquisition Allowance	Disposal Reversal	31/12/2017
Treasury shares	12,486	-	8,652	3,834
Impairment provision	-	-	-	-
TOTAL	**12,486**	**-**	**8,652**	**3,834**

Treasury shares recorded in investment securities are allocated to members of staff, executive management or corporate officers of the Group under the performance share allocation plan, and free share allocation plans for employees of the Group.

In this context, Vallourec holds:

- 165 treasury shares acquired in 2011 under the share buyback plan of 7 June 2011, after definitive allocation of 27,534 shares in 2012, 86,377 shares in 2013, 91,929 shares in 2014, 108,600 shares in 2015, 30,524 shares in 2016 and 54,871 shares in 2017 under the various performance share plans;
- 1,131 treasury shares acquired in 2012 under the share buyback plan of 31 May 2012, upon the definitive allocation of 94,600 shares in 2014 and 225,684 shares in 2016, and 78,585 shares in 2017 under the various performance share plans;
- 171,311 treasury shares acquired in 2014 after the definitive allocation of 128,689 shares in 2017 for the various performance share plans;

As at 31 December 2017, Vallourec holds 172,607 treasury shares, all allocated to a performance plan.

3. Statement of receivables and payables

Receivables *In € thousand*	Gross value	of which accrued receivables	of which related parties	Gross value < 1 year	Gross value > 1 year
FINANCIAL ASSET RECEIVABLES & PAYABLES	**1,700,000**	**-**	**1,700,000**	**-**	**1,700,000**
OPERATING RECEIVABLES	**4,203**	**-**	**3,454**	**4,203**	**-**
Advances & deposits paid to suppliers	18	-	-	18	-
Trade & other receivables	3,454	-	3,078	3,454	-
Other operating receivables	731	-	-	731	-
OTHER RECEIVABLES	**808,865**	**-**	**795,724**	**808,865**	**-**
Receivables related to tax consolidation	16	-	16	16	-
Government – Corporate income tax	13,141	-	-	13,141	-
Intercompany cash advance	795,708	-	795,708	795,708	-
Other receivables	-	-	-	-	-
TOTALS	**2,513,068**	**-**	**2,499,178**	**813,068**	**1,700,000**

Loans granted during the year: None.

Loans repaid during the year: None.

Receivables represented by commercial paper: None.

Payables *In € thousand*	Gross value	of which expenses payable	of which related parties	< 1 year	> 1 year	> 5 years
BORROWINGS	**2,170,562**	**18,751**	**-**	**415,562**	**1,200,000**	**555,000**
Non-convertible bond issues	1,505,000	-	-	-	950,000	555,000
Convertible bond issues	250,000	-	-	-	250,000	-
Bank loans and borrowings	18,751	18,751	-	18,751	-	-
Commercial paper	396,811	-	-	396,811	-	-
Other loans and borrowings	-	-	-	-	-	-
Intercompany cash advance	-	-	-	-	-	-
OPERATING LIABILITIES	**8,402**	**-**	**4,166**	**8,402**	**-**	**-**
Trade payables	5,236	-	4,166	5,236	-	-
Tax & social security liabilities	3,166	-	-	3,166	-	-
Customer advances & deposits	-	-	-	-	-	-
OTHER LIABILITIES	**54,295**	**-**	**19,788**	**54,295**	**-**	**-**
Other operating liabilities	-	-	-	-	-	-
Other non-operating liabilities	54,295	-	19,788	54,295	-	-
TOTALS	**2,233,259**	**18,751**	**23,954**	**478,259**	**1,200,000**	**555,000**

Financial liabilities

NON-CONVERTIBLE BOND ISSUES

In August 2012, Vallourec issued two long-term private bonds totaling €455 million. The amounts and terms of these two private bond issues are €400 million for seven years with an annual coupon of 3.25% for one, and €55 million for 15 years with an annual coupon of 4.125% for the other.

On 30 September 2014, Vallourec issued a €500 million bond, maturing in September 2024, with a fixed annual coupon of 2.25%.

On 11 October 2017, Vallourec issued a €400 million bond, which received a matching contribution on 23 October 2017 in the amount of €150 million (i.e. €550 million in total) maturing in October 2022 with a fixed annual coupon of 6.625%. This bond is callable pursuant to the contractual terms as from 15 October 2020.

These bond issues were intended to diversify and increase the amount and extend the maturity of the financial resources available to the Group.

These bond issues specifically include a change-of-control clause that would trigger the mandatory prepayment of the bonds at the request of each bondholder in the event of a change of control of the Company (in favor of a person or a group of people acting in concert) leading to a downgrade of Vallourec's financial rating. In addition, these bonds may be subject to a request for prepayment should any of the common default scenarios for this type of transaction arise. Early redemption may also be requested in some cases by either the Company or the bondholder, particularly in respect of a change in Vallourec's position or tax status.

CONVERTIBLE BOND ISSUES

On 27 September 2017, Vallourec issued a €250 million bond, consisting of Bonds Convertible into New Shares and/or Exchangeable for Existing Shares, maturing in October 2022, with a fixed annual coupon of 4.125%, and a unit value of €6.89, and a conversion premium of 37.5%.

BANK LOANS & DEBTS

In February 2014, Vallourec took out a revolving credit facility for the amount of €1.1 billion, maturing in February 2019, plus two one-year extension options. In addition to the first one-year extension obtained for €1.078 billion, the second extension was granted in July 2016 for the sum of €989 million, which was then raised to 1,034 million in July 2017. The new maturity date is in 2021. This credit line is available for the Group's general funding purposes. As at 31 December 2017 this line had not been drawn.

In June 2015, Vallourec agreed to a confirmed bilateral line of €90 million until February 2019 with two one-year extension options, which were granted in July 2016. As at 31 December 2017 this line had not been drawn.

In September 2015, Vallourec took out a confirmed credit facility for €400 million, maturing in July 2019, with a one-year extension option which was granted in July 2016 for the full amount, and maturity rescheduled for February 2020. This replaced four medium-term bilateral lines of €100 million each, which were originally granted to Vallourec Tubes, maturing in July 2017. As at 31 December 2017 this line had not been drawn.

In May 2016, Vallourec took out a revolving credit line for €450 million maturing in February 2020. As at 31 December 2017 this line had not been drawn.

Each of these bank facilities requires Vallourec to maintain its consolidated net debt-to-equity ratio at no more than 75%, calculated as at 31 December each year. For 2018, 2019, and 2020, this ratio was taken to 100% for all Vallourec's bank facilities through amendments of 17 March 2017. In the event of non-compliance with this ratio requirement, lenders would be entitled to demand early repayment of the outstanding drawn amounts. Vallourec was in compliance with this ratio requirement as at 31 December 2017. As defined in the financing agreements, the "bank covenant ratio" is the ratio between the Group's net consolidated debt and the Group's equity, restated for gains and losses on derivatives and valuation differences (gains and losses on the consolidated subsidiaries in foreign currencies).

COMMERCIAL PAPER

In addition to bank financing, the Group has sought to diversify its funding sources by using market financing. For example, Vallourec launched a commercial paper program on 12 October 2011 to meet its short-term needs. The program has a €1 billion ceiling. At 31 December 2017, Vallourec had an outstanding debt of €396.8 million for maturities of up to one year. This commercial paper program was rated B by Standard & Poor's. As at 31 December 2017, the Group complied with its covenants and the terms and conditions for obtaining and maintaining all of the above facilities. Together, the above resources were sufficient to cover the Group's cash requirements as at 31 December 2017.

For information about the Company's plans for financing after 31 December 2017, refer to Note E-5 on subsequent events.

4. Bond issue costs

In accordance with the method recommended by the French national accounting board (Conseil National de la Comptabilité), bond issue costs are spread in a straight line over the life of the bonds concerned.

In € thousand	31/12/2016	Increase	Decrease	31/12/2017
Bond issue costs	4,799	13,210	(1,647)	16,362

5. Equity

Changes in equity were as follows:

In € thousand	Number of shares	Capital	Net income/(loss) for the period	Additional paid-in capital and reserves	Equity
Position as at 31/12/2015	**135,688,432**	**271,377**	**61,538**	**2,890,029**	**3,222,944**
Allocation of 2015 net income/(loss)	-	-	(61,538)	61,538	-
Capital increase	315,549,573	631,099	-	345,914	977,013
Revaluation reserve	-	-	-	-	-
Dividend paid	-	-	-	-	-
Interim dividend	-	-	-	-	-
2016 net income/(loss)	-	-	(17,841)	-	(17,841)
Change	315,549,573	631,099	(79,379)	407,452	959,172
Position at 31/12/2016	**451,238,005**	**902,476**	**(17,841)**	**3,297,481**	**4,182,116**
Allocation of 2016 net income/(loss)	-	-	17,841	(17,841)	-
Capital increase	6,749,755	13,500	-	13,110	26,610
Revaluation reserve	-	-	-	-	-
Dividend paid	-	-	-	-	-
2017 net income/(loss)	-	-	(39,056)	-	(39,056)
Change	6,749,755	13,500	(21,215)	(4,731)	(12,446)
POSITION AS AT 31 DECEMBER 2017	**457,987,760**	**915,976**	**(39,056)**	**3,292,750**	**4,169,670**

Vallourec's issued capital comprises 457,987,760 ordinary shares with a nominal value of €2 per share fully paid-up as at 31 December 2017, compared with 451,238,005 shares with a par value of €2 each as at 31 December 2016.

At the end of the clearing period for subscriptions to the Value 17 international employee share ownership plan (see Chapter 7 below), at its meeting on 14 December 2017, the Management Board, under the terms of the twenty-second, twenty-third and twenty-fourth resolutions of the Ordinary and Extraordinary Shareholders' Meeting of 12 May 2017, recorded the final completion of three capital increases in the nominal amounts of €6,783,230, €5,517,106 and €1,199,174, or an aggregate nominal amount of €13,499,510, through the respective issue of 3,391,615, 2,758,553 and 599,587 new shares for an aggregate total of 6,749,755 new shares with a par value of €2.00 each at a price per share of €3.77 for the standard plan and €4.00 for the leveraged plan. These transactions had the cumulative effect of increasing share capital from €902,476,010 to €915,975,520.

As at 31 December 2017, the subscribed, fully paid-up share capital amounted to €915,975,520, divided into 457,987,760 shares with a par value of €2.00 each.

Equity dropped by €12.4 million and was €4,169.7 million as at 31 December 2017, compared to €4,182.1 million as of 31 December 2016.

6. Employee share ownership

After application of the adjustments provided for in Articles L. 228-99 and R. 228-91 of the French Commercial Code and pursuant to the rules governing performance share and share option plans. At its meeting on 2 May 2016, the Vallourec Supervisory Board sought to protect the rights of holders of performance shares and share options by ensuring that the capital increase decided on 7 April 2016 did not affect said rights. The information below takes into account the impacts of this decision.

Share subscription plans

CHARACTERISTICS OF THE PLANS

The Vallourec Management Board authorized share subscription plans from 2009 to 2017 for some executive management and corporate officers of the Group.

The characteristics of these plans are as follows (figures for the 2009 plans are restated to reflect the 2:1 stock split on 9 July 2010 and the subsequent doubling of the number of shares):

	2009 Plan	2010 Plan	2011 Plan	2012 Plan	2013 Plan	2014 Plan	2015 Plan	2016 Plan	2017 Plan
Allocation date	01/09/2009	01/09/2010	01/09/2011	31/08/2012	02/09/2013	15/04/2014	15/04/2015	18/05/2016	18/05/2017
Maturity date	01/09/2013	01/09/2014	01/09/2015	01/03/2017	03/03/2018	15/04/2018	15/04/2019	18/05/2020	18/05/2021
Expiration date	01/09/2019	01/09/2020	01/09/2021	30/08/2020	01/09/2021	15/04/2022	15/04/2023	18/05/2024	18/05/2025
Exercise price in euros	31.02	42.72	36.44	22.21	27.70	23.13	13.57	3.90	6.02
Number of options granted	964,107	853,641	1,140,431	883,602	1,003,746	622,261	683,413	537,895	292,500

CHANGE IN NUMBER OF UNEXPIRED OPTIONS

For all of these plans, the change in the number of unexpired options is as follows:

In number of options	2016	2017
Options outstanding as at 1 January	2,860,088	5,002,867
Options exercised	-	-
Options lapsed	-	-
Options canceled [(a)]	(62,852)	(1,282,166)
Impact of the capital increase [(a)] on the plans prior to 2016	1,667,736	-
Options distributed	537,895	292,500
OPTIONS OUTSTANDING AS AT 31 DECEMBER	**5,002,867**	**4,013,201**
Options available for exercise	1,318,249	1,260,022

(a) After application of the adjustments provided for in Articles L. 228-99 and R. 228-91 of the French Commercial Code and pursuant to the rules governing performance share and share option plans. At its meeting on 2 May 2016, the Vallourec Supervisory Board sought to protect the rights of holders of performance shares and share options by ensuring that the capital increase decided on 7 April 2016 did not affect said rights.

The reported figures correspond to the number of options originally allocated with a performance factor of 1 for plans that were vesting, and to the actual number of shares allocated for plans that had matured.

Performance share plans

CHARACTERISTICS OF THE PLANS

The Vallourec Management Board authorized performance share plans from 2012 to 2017 for some employees and corporate officers of the Group.

The characteristics of these plans are as follows:

Performance share plans	2012 Plan	2013 Plan	2014 Plan	2015 Plan	2016 Plan	2017 Plan
Allocation date	30/03/2012	29/03/2013	16/12/2014	15/04/2015	18/05/2016	18/05/2017
Vesting period	2 years (French residents and members of the Management Board) or 4 years (non-French residents)	3 years (French residents and members of the Management Board) or 4 years (non-French residents)	3 years (French residents) or 4 years (non-French residents)	3 years (French residents) or 4 years (non-French residents)	3 years (French residents) or 4 years (non-French residents)	3 years (French residents) or 4 years (non-French residents)
Holding period	2 years (French residents and members of the Management Board) or none (non-French residents)	2 years (French residents and members of the Management Board) or none (non-French residents)	2 years (French residents) or none (non-French residents)	2 years (French residents) or none (non-French residents)	2 years (French residents) or none (non-French residents)	2 years (French residents) or none (non-French residents)
Performance conditions	Yes [(a)]	Yes [(b)]	Yes [(c)]	Yes [(d)]	Yes [(e)]	Yes [(f)]
Theoretical number of shares allocated	286,718	391,200	661,861	388,583	610,001	820,275

(a) *Definitive allocation of shares in 2014 for French residents and members of the Management Board, and in 2016 for non-French residents. For all beneficiaries (excluding Management Board members), it will be based on the ratio of consolidated EBITDA to consolidated revenue achieved by the Group in 2012 and 2013. The actual number is determined by applying a performance factor, calculated for the two years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.25. For members of the Executive Committee, the definitive allocation will be based on the following three criteria assessed for fiscal years 2012 and 2013: revenue growth on a like-for-like basis; the ratio of consolidated EBITDA to consolidated revenue on a like-for-like basis; and the performance of the Vallourec share on the regulated NYSE Euronext Paris stock market against a benchmark panel. The actual number is determined by applying a performance factor, calculated for the two years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.33. The number of shares allocated, as shown in the above table, corresponds to the application of a performance factor of 1.*

(b) *Definitive allocation of shares in 2016 for French residents and members of the Management Board, and in 2017 for non-French residents. For all beneficiaries (excluding Management Board members), it will be based on the ratio of consolidated EBITDA to consolidated revenue achieved by the Group in 2013, 2014 and 2015. The actual number is determined by applying a performance factor, calculated for the two years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.25. For members of the Executive Committee, the definitive allocation will be based on the following three criteria assessed for fiscal years 2013, 2014 and 2015: revenue growth on a like-for-like basis; the ratio of consolidated EBITDA to consolidated revenue on a like-for-like basis; and the performance of the Vallourec share on the regulated NYSE Euronext Paris stock market against a benchmark panel. The actual number is determined by applying a performance factor, calculated for the two years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.33. The number of shares allocated, as shown in the above table, corresponds to the application of a performance factor of 1.*

(c) *Definitive allocation of shares in 2017 for French residents and members of the Management Board, and in 2018 for non-French residents. For all beneficiaries (excluding Management Board members), it will be based on the ratio of consolidated EBITDA to consolidated revenue achieved by the Group in 2014, 2015 and 2016. The actual number is determined by applying a performance factor, calculated for the three years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.25. For members of the Executive Committee, final allocation shall depend on the following four criteria, assessed in 2014, 2015 and 2016: the rate of return on capital employed (ROCE), compared with the ROCE in the budget, consolidated revenue on a like-for-like basis, as compared with the revenue in the budget, the relative stock market performance of the Vallourec share on the regulated NYSE Euronext market in Paris, as compared with a benchmark panel, and the relative EBITDA performance as compared with the same panel as for the previous criterion. The actual number is determined by applying a performance factor, calculated for the two years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.33. The number of shares allocated, as shown in the above table, corresponds to the application of a performance factor of 1.*

(d) *Definitive allocation of shares in 2018 for French residents and members of the Management Board, and in 2019 for non-French residents. For all beneficiaries (excluding Management Board members), it will be based on the ratio of consolidated EBITDA to consolidated revenue achieved by the Group in 2015, 2016 and 2017. The actual number is determined by applying a performance factor, calculated for the three years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.25. For members of the Executive Committee, the final award will depend on the following two criteria, assessed for 2015, 2016 and 2017: the rate of return on capital employed on a consolidated basis (ROCE), compared to the ROCE in the strategic plan, and the Total Shareholder Return (TSR) for 2015, 2016 and 2017. The actual number is determined by applying a performance factor, calculated for the three years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.33. The number of shares allocated, as shown in the above table, corresponds to the application of a performance factor of 1.*

(e) *Definitive allocation of shares in 2019 for French residents and members of the Management Board, and in 2020 for non-French residents. For all beneficiaries (excluding Management Board members), it will be based on the ratio of consolidated EBITDA to consolidated revenue achieved by the Group in 2016, 2017 and 2018. The actual number is determined by applying a performance factor, calculated for the three years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.25. For members of the Executive Committee, the final award will depend on the following two criteria, assessed for 2016, 2017 and 2018: the rate of return on capital employed on a consolidated basis (ROCE), compared to the ROCE in the strategic plan, and the Total Shareholder Return (TSR) for 2016, 2017 and 2018. The actual number is determined by applying a performance factor, calculated for the three years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.33. The number of shares allocated, as shown in the above table, corresponds to the application of a performance factor of 1.*

(f) *For all beneficiaries (excluding members of the Management Board and Executive Committee), this will depend on cost reduction in 2017, 2018 and 2019, in comparison to the planned performance in the Group's medium-term plan for the same period, and on the Group's cumulative Free cash flow (FCF) for 2017, 2018 and 2019. The actual number is determined by applying a performance factor, calculated for the three years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.4. For members of the Management Board and Executive Committee, the definitive allocation will depend on the following two criteria: reducing costs in 2017, 2018 and 2019, in comparison to the Group's planned performance in the medium-term over the same period and the growth of the EBITDA margin between 2017 and 2019 in comparison to a panel of comparable companies. The actual number is determined by applying a performance factor, calculated for the two years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 2.*

International performance share allocation plans for employees	2-4-6 plan (2012)	2-4-6 plan (2013)	2-4-6 plan (2014)
Allocation date	30/03/2012	29/03/2013	15/04/2014
Vesting period	2 years (French residents) or 4 years (non-French residents)	3 years (French residents) or 4 years (non-French residents)	3 years (French residents) or 4 years (non-French residents)
Holding period	2 years (French residents) or none (non-French residents)	2 years (French residents) or none (non-French residents)	2 years (French residents) or none (non-French residents)
Performance conditions	Ratio of EBITDA to revenue (2012 and 2013)	Ratio of EBITDA to revenue (2013, 2014 and 2015)	Ratio of EBITDA to revenue (2014, 2015 and 2016)
Theoretical number of shares allocated	130,116	191,144	208,100

Free share allocation plans (without performance condition)	Value 12 Plan	Value 13 Plan	Value 14 Plan	Value 15 Plan	Value 16 Plan	Value 17 Plan
Allocation date	06/12/2012	10/12/2013	16/12/2014	15/12/2015	14/12/2016	14/12/2017
Vesting period	4.6 years	4.6 years	4.6 years	4.6 years	4.6 years	4.6 years
Theoretical number of shares allocated	7,032	6,445	6,336	2,744	3,344	3,409

CHANGE IN NUMBER OF SHARES

For all of these plans, the change in the number of shares being vested is as follows:

In number of shares	2016	2017
Number of shares being vested as at 1 January	1,455,690	2,199,312
Shares delivered	(252,486)	(160,170)
Shares canceled	(250,602)	(654,358)
Impact of the capital increase [(a)] on the plans prior to 2016	636,709	-
Shares allocated	610,001	823,684
NUMBER OF SHARES BEING VESTED AS AT 31 DECEMBER	**2,199,312**	**2,208,468**

(a) *After application of the adjustments provided for in Articles L. 228-99 and R. 228-91 of the French Commercial Code and pursuant to the rules governing performance share and share option plans. At its meeting on 2 May 2016, the Vallourec Supervisory Board sought to protect the rights of holders of performance shares and share options by ensuring that the capital increase decided on 7 April 2016 did not affect said rights.*

The reported figures correspond to the number of shares originally allocated, with a performance factor of 1 for plans that were vesting, and to the actual number of shares allocated for plans that had matured.

7. Provisions for contingencies and liabilities

The change in provisions for risks, liabilities and expenses is shown below:

	31/12/2016	Allowances	Reversals used	31/12/2017
Provisions for foreign exchange losses	-	10	-	10
Retirement provisions	527	417	(812)	132
Provisions for supplemental pension commitments	1,810	-	(1,810)	-
Provisions for performance share expenses	9,770	3,446	(7,074)	6,142
TOTAL	**12,107**	**3,873**	**(9,696)**	**6,284**
■ Recognized in operating profit	-	3,863	(9,696)	-
■ Recognized in financial profit	-	-	-	-
■ Recognized in exceptional income	-	-	-	-

Disputes are provisioned to the extent of the estimated probable cost at the reporting date of each year, in application of CRC Regulation No. 2000-06 on liabilities.

The balance of the provision for expenses relating to the performance share plans (2013, 2014, 2015, 2016 and 2017 plans) totaled €6.1 million.

Retirement provisions

Total retirement commitments, net of plan assets, totaled €0.3 million as at 31 December 2017, as compared with €0.7 million as at 31 December 2016.

Actuarial losses and past service costs not recognized totaled €0.2 million. The commitments not recognized in the balance sheet correspond to changes in or the non-crystallization of assumptions, the effect of which is amortized over time using the corridor method.

The main changes in relation to the measurements used in the previous year's financial statements concern the base salary used in the calculation of pension benefits and the change in the discount rate.

Provisions for supplemental retirement commitments

Total supplementary pension commitments, net of plan assets, totaled €3.6 million as at 31 December 2017.

Actuarial losses and past service costs not recognized totaled €0.9 million. The commitments not recognized in the balance sheet correspond to changes in or the non-crystallization of assumptions, the effect of which is amortized over time using the corridor method.

Information on interest rate risk

The Group is exposed to interest rate risk on its variable-rate debt.

Vallourec used swaps to hedge its variable-rate borrowing at a fixed interest rate.

Information on foreign exchange risk

As at 31 December 2017, Vallourec was not exposed to exchange rate risk.

D – Notes to the income statement

1. Operating income

Revenue

Revenues of €5.1 million mainly correspond to the Group's reinvoicing of services to its subsidiary Vallourec Tubes for €2.5 million, and of the costs of employee performance share allocation plans to Group subsidiaries.

Operating expenses

Operating expenses of €46.0 million consist mainly of fees, personnel costs, and the impact of free share allocation programs, and commissions, loan issue fees and allocations to provisions.

2. Financial income and expenses concerning affiliated companies

Financial expenses: none.

Financial income: €75.8 million.

3. Financial income/(loss)

Financial income was €5.9 million.

	31/12/2016	31/12/2017
Financial income	53,689	78,306
Interest expenses	(79,158)	(93,305)
Net interest expenses	**(25,469)**	**(14,999)**
Change in provisions	12,098	20,787
Other financial income and expenses	467	128
FINANCIAL INCOME/(LOSS)	**(12,904)**	**5,916**

Changes in provisions concerned impairments of treasury shares and the recovery of the provision for impairment of Nippon Steel Sumitomo equity interests disposed of in 2017. The result of that disposal was presented under exceptional income.

4. Exceptional income/(loss)

Exceptional income/(loss) showed a loss of €31 million, which resulted from transfer loss on treasury shares and the income/(loss) from disposal of equity interests in NSSMC.

E – Other information

1. Composition of average headcount

The Company employed five people as of late 2017, including two corporate officers (members of the Management Board).

2. Taxation

Tax consolidation

Since 1 January 1988, the Company has been a member of a tax group formed under the provisions of Article 223A of the French General Tax Code.

This agreement has been renewed automatically for five-year periods since 1999.

In 2017, the scope of the tax group included: Vallourec, Assurval, Vallourec Fittings, Vallourec Bearing Tubes, Vallourec Université France, Vallourec Umbillicals, Valinox Nucléaire, Vallourec Tubes, Vallourec Drilling Products France, Vallourec Tubes France, Vallourec Oil and Gas France, Vallourec One, Vallourec Services, Val27, Val28 and Val29.

The tax consolidation agreement requires subsidiaries of the tax group to record a tax expense equivalent to the amount they would have borne in the absence of tax consolidation.

The tax savings of €37.7 million resulting from the allocation of losses generated by the subsidiaries was recognized in other liabilities and not in net income.

Any income resulting from tax consolidation recorded by Vallourec corresponds mainly to the allocation to consolidated net income of the losses generated by Vallourec itself and tax loss carryforwards used by Vallourec.

In 2016, the exit of Vallourec Heat Exchanger Tubes and of the Serimax companies generated a tax credit recorded in the income statement for €8.7 million.

The Vallourec tax group reported a loss in 2017 and its tax loss carryforward was €1,331.3 million at the end of 2017.

INCREASE AND DECREASE IN FUTURE TAX LIABILITIES

Nature of temporary differences *In € thousand*	**Amount (base) as at 31/12/2017**
Increase	**-**
Decrease	**1,849**
Provision for retirement commitments	(169)
Provision for employee share ownership arrangements	1,996
Provision for paid leave	22
Provision for Tax on Tourism Vehicles	-

As at 31 December 2017, the amount of tax loss carryforwards specific to the Company stood at €181 million.

Breakdown of income tax between income (loss) from recurring operations and non-recurring income (loss)

In € thousand	**Pre-tax income**	**Tax due**	**Net income**
Recurring	(7,374)	-	(7,374)
Non-recurring	(31,345)	-	(31,345)
SUB-TOTAL	**(38,719)**	**-**	**(38,719)**
Expense specific to Vallourec (tax credit)	-	(337)	(337)
Income relating to tax consolidation	-	-	-
TOTAL VALLOUREC	**(38,719)**	**(337)**	**(39,056)**

3. Compensation of members of administrative and management bodies

Administrative bodies

Attendance fees paid during the year amounted to €0.6 million.

Management bodies

This information is not provided as it is not relevant in relation to the assets and liabilities, financial position and net income of Vallourec.

4. Off-statement of financial position commitments

Off-statement of financial position commitments are as follows:

- retirement benefits: €191 thousand (actuarial loss);
- supplemental retirement allowances: €0.9 million (actuarial loss);
- long-term vehicle leases: €30 thousand.

The Company has not issued any form of collateral against its liabilities.

5. Subsequent events

Since 31 December 2017, no subsequent events have occurred that would call into question the truthfulness and reliability of the financial statements.

6. Subsidiaries and directly-held equity interests of Vallourec as at 31 December 2017

In € thousand Companies	Capital	Other equity before allocation of income (loss)	Percentage of capital held *(%)*	Accounting value of the securities held: Gross	Accounting value of the securities held: Net	Loans and advances granted by the Company and not yet repaid	Total securities and guarantees given by the Company	Sales excluding taxes for the last fiscal year	Income (loss) for the last fiscal year	Dividends received by the Company during the year
A) Subsidiaries and equity interests with a carrying amount in excess of 1% of Vallourec's capital										
I. Subsidiaries (at least 50%-owned)										
French company										
Vallourec Tubes 27, avenue du Gal-Leclerc 92100 Boulogne-Billancourt – France	1,503,948	1,515,819	100%	3,856,429	3,856,429	2,495,708	-	45,399	(542,013)	-
B) Subsidiaries and equity interests with a carrying amount lower than 1% of Vallourec's capital										
I. Subsidiaries (at least 50%-owned)										
a) French companies										
Assurval 27, avenue du Gal-Leclerc 92100 Boulogne-Billancourt – France	10	1	99%	8	8	-	-	559	153	-
II. Equity interests (10%- to 50%-owned)										
a) French companies										
b) Foreign companies										
C) Long-term investments										
a) French companies										
b) Foreign companies										

7. Financial results for the last five years

In euros	2013	2014	2015	2016	2017
CAPITAL					
Share capital	**256,319,200**	**261,195,950**	**271,376,864**	**902,476,010**	**915,975,520**
Number of ordinary shares in issue	128,159,600	130,597,975	135,688,432	451,238,005	457,987,760
Number of preference dividend shares (without voting rights) in issue	-	-	-	-	-
Maximum number of new shares to be issued:					
■ by converting bonds	-	-	-	-	36,284,470
■ by exercise of subscription rights	3,183,279	3,277,041	2,860,088	5,002,867	4,013,201
■ by bond redemption	-	-	-	-	-
Revenue, excluding taxes	10,477,780	7,113,746	3,768,771	5,758,082	5,050,327
Income (loss) before tax, employee profit-sharing, depreciation and amortization, and provisions	238,748,107	158,212,497	86,095,267	(43,370,419)	(70,741,338)
Income tax	(10,840,983)	(7,021,640)	(1,031,743)	(8,838,867)	336,751
Employee profit-sharing for the year	-	-	-	-	-
Income (loss) after tax, employee profit-sharing, depreciation and amortization, and provisions	263,323,882	159,162,352	61,538,102	(17,841,399)	(39,056,082)
Distributed earnings	**103,809,276**	**105,784,360**	**-**	**-**	**-**
EARNINGS PER SHARE					
Income after taxes and employee profit-sharing but before amortization and provisions	1.95	1.27	0.64	(0.08)	(0.16)
Income (loss) after tax, employee profit-sharing, depreciation and amortization, and provisions	2.05	1.22	0.45	(0.04)	(0.09)
Dividend allotted to each existing share	**0.81**	**0.81**	**-**	**-**	**-**
WORKFORCE					
Average number of employees during the fiscal year	7	7	7	7	5
Amount of payroll costs for the year	2,994,504	3,194,083	2,917,511	2,378,067	2,708,256
Payroll-related costs (social security, employee benefits, etc.)	2,718,063	1,905,112	1,251,897	1,969,216	1,138,027

7

Corporate governance

7.1 Composition and operation of the Management and Supervisory Boards

The Ordinary and Extraordinary Shareholders' Meeting held on 14 June 1994 approved the adoption of a dual management structure with a Supervisory Board and a Management Board.

This structure is based on the separation of the management functions, which are the responsibility of the Management Board, from the supervision of that management, which is the responsibility of the Supervisory Board, the representative body of the shareholders:

- the Management Board, which is a collegial body, is responsible for managing the Group using the powers conferred on it by statutory and regulatory provisions and the Group's bylaws; and
- the Supervisory Board is responsible for ongoing management control; it receives the information needed to perform its role.

7.1.1 Composition of the Management and Supervisory Boards

7.1.1.1 Management Bodies

THE MANAGEMENT BOARD

As at 28 February 2018, the Management Board is comprised of the following two members:

M. Philippe CROUZET
Chairman of the Management Board

61 years old

First appointment
1 April 2009

Date on which appointment ceases
15 March 2020

M. Olivier MALLET
Member of the Management Board

61 years old

First appointment
30 September 2008

Date on which appointment ceases
15 March 2020

Mr. Philippe CROUZET

Chairman of the Management Board

Born on 18 October 1956
French nationality

First appointment: 1 April 2009
Most recent renewal: 29 January 2016
Date on which appointment ceases:
15 March 2020

Vallourec shares held: 71,874

Expertise and managerial experience

- Graduate of École Nationale d'Administration
- Counsel (Maître des requêtes) to the Conseil d'État
- Twenty-three years' industrial experience with the Saint-Gobain Group
- Chairman of the Management Board of Vallourec since 1 April 2009

Positions held by Mr. Philippe CROUZET

Positions currently held

- Chairman of the Management Board of Vallourec SA [(a)] * (since 2009)
- Chairman and Director of Vallourec Tubes SAS [(a)] (since 2009)
- Chairman of Vallourec Tubes France SAS [(a)] (since 2017)
- Chairman of Vallourec Oil & Gaz France SAS [(a)] (since 2017)
- Director of Vallourec Services SA [(a)] (since 2017)
- Chairman of the Supervisory Board of Vallourec Deutschland GmbH [(a)] (Germany) (since 2017)
- Director of Vallourec Soluçoes Tubulares do Brasil SA [(a)] (since 2016)
- Director and Chairman of the Nuclear Commitment Monitoring Committee of Électricité de France* (since 2009) and a member of the Audit Committee (since 2015)
- Director of Théâtre de la Ville (Paris) (since 2011)
- Vice-President of Institut de l'entreprise

Positions expired within the last five years

- Director of Vallourec Tubos do Brasil SA [(1) (a)] (Brazil) (until November 2017)
- Director of Théâtre national de l'Opéra-Comique (through March 2017)

Mr. Philippe Crouzet does not receive any compensation as a corporate officer of Vallourec's direct or indirect subsidiaries.

(1) Vallourec Tubos do Brasil Ltda following the change in corporate form which occurred on 20 November 2017.
(a) Offices held in relation to the Group.
** Listed company (for positions currently held).*

Mr. Olivier MALLET

Member of the Management Board

Born on 14 July 1956
French nationality

First appointment: 30 September 2008
Most recent renewal: 29 January 2016
Date on which appointment ceases:
15 March 2020

Vallourec shares held: 30,061

Expertise and managerial experience

- Graduate of École Nationale d'Administration – General Inspector of Finance
- Technical advisor within several cabinet offices, including that of the Prime Minister (1988-1993)
- CFO and member of the Executive Committee with responsibility for finance at Thomson Multimedia (1995-2001)
- CFO and member of the Executive Committee of Pechiney (2001-2004)
- Deputy CFO (2004-2006) then Head of the Mining, Chemistry and Enrichment sector of the Areva Group (2006-2008)
- Member of the Management Board of Vallourec since 30 September 2008, Chief Financial Officer and General Counsel

Positions held by Mr. Olivier MALLET

Positions currently held

- Member of the Management Board of Vallourec SA [(a)] * (since 2008)
- CEO and Director of Vallourec Tubes SAS [(a)] (since 2008)
- Chairman & CEO of Vallourec Tubes SAS [(a)] (since 2008)
- Chairman and Director of Vallourec Holdings Inc. [(a)] (United States) (since 2009)
- Member of the Supervisory Board of Vallourec Deutschland GmbH [(a)] (Germany) (since 2008)
- Director of Vallourec Soluçoes Tubulares do Brasil SA [(a)] (Brazil) (since 2016)
- Chairman and Director of Vallourec Holdings Inc. [(a)] (United States) (since 2009)
- Chairman (since 2009) and Director of Vallourec Holdings Inc. [(a)] (United States) (since 2008)
- Director of Vallourec USA Corporation [(a)] (United States) (since 2008)
- Director of Vallourec Tube-Alloy, LLC [(a)] (United States) (since 2008)
- Chairman (since 2009) and Director of Vallourec Industries Inc. [(a)] (United States) (since 2008)
- Director of Vallourec Drilling Products USA, Inc. [(a)] (United States) (since 2008)
- Member of the Executive Committee of VAM USA LLC [(a)] (United States) (since 2009)
- Member of the Executive Committee of Vallourec Star, LP [(a)] (United States) (since 2008)
- Manager of Vallourec One [(a)] (since 2017)

Positions expired within the last five years

- Director of Vallourec Tubos do Brasil SA [(1)] [(a)] (Brazil) (until November 2017)
- Director of Vallourec Canada Inc. [(a)] (Canada) (until 2017)
- Director of Vallourec Heat Exchanger Tubes SAS [(a)] (until 2016)

Mr. Olivier Mallet does not receive any compensation as a corporate officer of Vallourec's direct or indirect subsidiaries.

(1) Vallourec Tubos do Brasil Ltda following the change in corporate form which occurred on 20 November 2017.

(a) Offices held in relation to the Group.

** Listed company (for positions currently held).*

OFFICE OF MEMBER OF THE MANAGEMENT BOARD ENDED IN 2017

Mr. Jean-Pierre MICHEL

Born on 15 May 1955
French nationality

Date on which appointment ceases:
31 March 2017

Mr. Jean-Pierre Michel resigned from his post as member of the Management Board, effective 31 March 2017 and was not replaced. He retired from the Vallourec Group on 31 December 2017, after having helped properly implement the new structure within the Executive Committee.

Expertise and managerial experience

- Graduate of the École Polytechnique and Institut Français de Gestion
- More than 35 years with the Group (Plant Management, Management Control and Chairman of various Divisions)
- Member of the Management Board (2006-31 March 2017) and CEO (2009-31 March 2017) of Vallourec

Positions held by Mr. Jean-Pierre MICHEL

Positions currently held

- Director of Esso Société Anonyme Française* (since 2014)

Positions expired within the last five years

- Member of the Management Board and CEO of Vallourec SA [a] * (until 31 March 2017)
- CEO and Director of Vallourec Tubes SAS [a] (until 31 March 2017)
- Director of Vallourec Services SA [a] (until 18 May 2017)
- Manager of Vallourec One SARL [a] (until 18 April 2017)
- Director of Vallourec Tubos do Brasil SA [1] [a] (Brazil) (until 20 November 2017)
- Director of Vallourec Soluçoes Tubulares do Brasil SA [a] (until 1 December 2017)
- Director of Vallourec Industries Inc. [a] (United States) (until 1 November 2017)
- Director of Vallourec Holdings, Inc. [a] (United States) (until 1 November 2017)
- Director of VAM USA LLC [a] (United States) (until 1 July 2017)
- Director of Vallourec USA Corporation [a] (United States) (until 1 July 2017)
- Director of Vallourec Drilling Products USA, Inc. [a] (United States) (until 1 July 2017)
- Member of the Executive Committee of Vallourec Star, LP [a] (United States) (until 1 July 2017)
- Chairman of the Supervisory Board of Vallourec Deutschland GmbH [a] (until 18 October 2017)
- Director of Vallourec Oil & Gas UK Ltd [a] (United Kingdom) (until 28 June 2017)
- Director of Vallourec & Sumitomo Tubos do Brasil [a] (Brazil) (until 2016)
- Director of Vallourec Heat Exchanger Tubes SAS [a] (until 2016)
- Director of Vallourec Heat Exchanger Tubes Asia [a] (until 2016)

Mr. Jean-Pierre Michel does not receive any compensation as a corporate officer of Vallourec's direct or indirect subsidiaries.

(1) Vallourec Tubos do Brasil Ltda following the change in corporate form which occurred on 20 November 2017.
(a) Offices held in relation to the Group.
** Listed company (for positions currently held).*

OPERATIONAL MANAGEMENT

Vallourec's long-term strategy centers around three guiding principles:

- a **premium positioning:** Vallourec is constantly expanding its offering of premium products, services and solutions to meet the most complex challenges of its customers and maintain its technological progress in increasingly competitive markets;
- a **local presence:** Vallourec focuses on having a worldwide presence, increasing its contact with growing markets and with its customers;
- **competitiveness:** the Group is always attentive to improving its competitiveness, notably through cost reduction programs.

To implement its strategic guidelines and key decisions, the Management Board relies on an Executive Committee, which has 10 members. The *Executive Committee* examines and drafts proposals to the Management Board regarding all of the actions needed to implement the Group's strategy. It provides daily management for operational and functional activities. It holds meetings once every two weeks, which are chaired by Mr. Philippe Crouzet.

COMPOSITION OF THE EXECUTIVE COMMITTEE AS AT 28 FEBRUARY 2018

MANAGEMENT BOARD

Mr Philippe CROUZET
Chairman of the Management Board

Mr Olivier MALLET
Chief Financial Officer

EXECUTIVE COMMITTEE

Along with Philippe Crouzet and Olivier Mallet

Mr Philippe CARLIER
Director
Technology & Industry

Mr Nicolas de COIGNAC
Director
North America

Mr François CURIE
Director
of Human Resources

Ms Stéphanie FOUGOU
Group's General Counsel and General Secretary

Mr Édouard GUINOTTE
Director
Middle East/Asia

Mr Didier HORNET
Director
Development & Innovation

Mr Alexandre LYRA
Director
South America

Mr Hubert PARIS
Director
Europe/Asia

7.1.1.2 The Supervisory Board

POLICY ON THE COMPOSITION OF THE SUPERVISORY BOARD

The Board policy relating to its composition relies on the following four fundamental objectives:

- selection of competent members;
- a balanced composition, which creates value;
- regard for the corporate interest;
- a number of members that ensures there is a fluid exchange of information and that each member can express himself or herself.

1. Selection of competent members

Aware that first-rate quality must lie in that of its members, the Board makes every effort to add members that have performed managerial duties with a high level of responsibility and/or who have recognized expertise in financial, strategic, industrial or legal areas. Furthermore, when they assume office and throughout their terms, members have the chance to benefit from training sessions on specific aspects of the Group, its businesses, its sector of activity and its organization, if they so desire.

2. Balanced composition, which creates value

Like any business player, the Supervisory Board is committed to the process of creating value. Consequently, beyond the challenges of social performance, it endeavors to ensure the diversity of its members, in terms of age, gender, qualifications and professional experience, which it considers to be a key source of creativity and innovation. The average age on the Board has dropped over the last few years to 56, which the Board members have deemed to be satisfactory. Diverse genders and experiences bring to the Board distinct sensitivities that contribute favorably to good governance, which itself leads to competitive advantages. At this time, the Board is comprised of 13 members, who have varied competencies (financial expertise, experience in general management, organizational transformation, multicultural experience, etc.), gained primarily in an international environment, which is a source of enrichment. The Board will also contain one employee representative and one employee shareholder representative. Furthermore, 42% of these members are female, excluding the employee representative from the analysis in compliance with the law. 38% of the Board members are of foreign nationality (Brazilian, British, Japanese, Dutch and Spanish). Vivienne Cox, who is British, is the Board Chairman. Since the Board is well aware of how enriching a diverse body can be, it intends to maintain/pursue efforts to diversify its membership.

This diversity policy has been taken into account by the Chairman, the Appointments, Compensation and Governance Committee, and by the Board itself in considering its composition, which has led to proposals to renew terms of office and to appoint new members.

3. Regard for the corporate interest

The Board feels that each member is a guardian of the corporate interest and members must accomplish their duties objectively and independently, in order to gain and maintain the trust of all of the shareholders who appointed them.

Consequently, going beyond the qualification of independent member, the Board intends to propose full members to the Shareholders' Meeting who have strong ethics that lead them to act with ongoing concern for the corporate interest and the interests of all shareholders, and specifically, to avoid conflicts of interest. To that end, each member is required to inform the Board of any situation involving a conflict of interest, even a potential one, and to refrain from taking part in discussions or voting on any issue at Board meetings where there may be a conflict of interest, and to leave the Board meeting if a subject is discussed that places the member in such a situation.

When one of the members has a conflict of interest, whether actual or potential, regarding a subject matter to be debated by the Board, the Board ensures, by relying on the Appointments, Compensation and Governance Committee, that the information regarding this subject matter is not communicated to that member.

The internal regulations of the Supervisory Board and the Appointments, Compensation and Governance Committee contain specific provisions designed to prevent the risk of conflicts of interest. Therefore, a member cannot accept another position or appointment, or make a significant investment in any company or business in competition with Vallourec or operating upstream or downstream of it, without the Board's prior approval. As an exception, this rule does not apply to legal entities that are members of the Board, but if they take new positions or similar appointments, each case will be discussed with the Board in order to eliminate any risk of conflicts of interest. Members of the Board and members of the Management Board must inform the Chairman of the Board before accepting a new appointment in other companies. The Chairman of the Board will give an opinion after consulting with the Appointments, Compensation and Governance Committee.

4. A number of members that ensures there is a fluid exchange of information and that each member can express themselves

Although the law allows a Board to contain up to 18 members, the Board wishes to limit its membership in order to ensure there are satisfying and fluid exchanges of information, and to allow each member to express themselves, thereby encouraging each person's action and involvement. To that end, the Chairman of the Board encourages the participation of the members and sees to it that each member can express an opinion.

COMPOSITION OF THE SUPERVISORY BOARD AS AT 28 FEBRUARY 2018

VIVIENNE COX
Chairman of the Supervisory Board

PIERRE PRINGUET
Vice-Chairman and Lead Member of the Supervisory Board

MICKAËL DOLOU
S

MARIA PILAR ALBIAC-MURILLO

ALEXANDRA SCHAAPVELD

HENRI POUPART-LAFARGE

PHILIPPE ALTUZARRA

JOSÉ CARLOS GRUBISICH

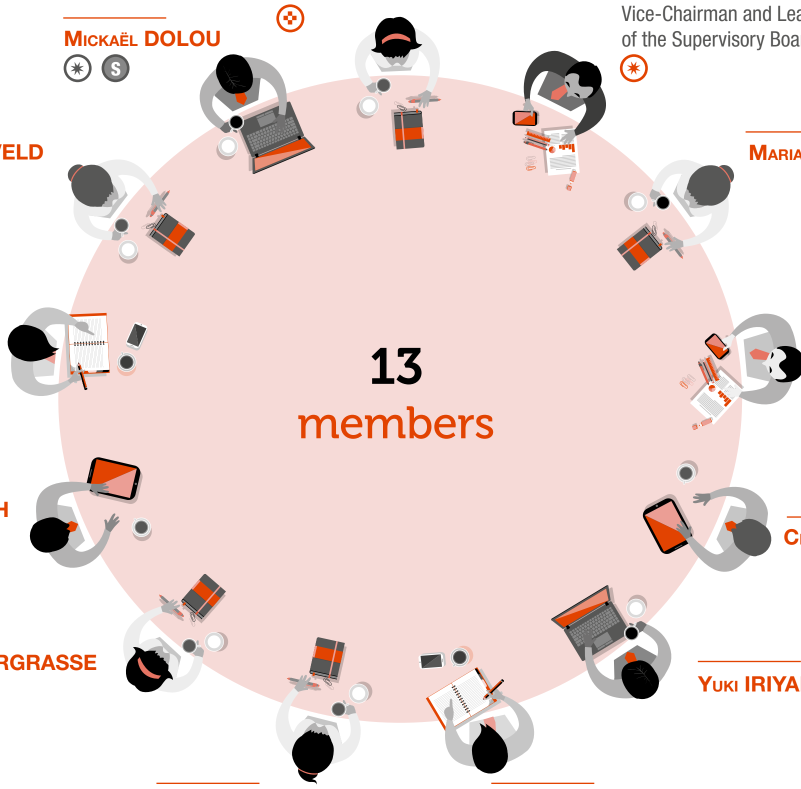
CÉDRIC DE BAILLIENCOURT

PASCALE CHARGRASSE
A

YUKI IRIYAMA

LAURENCE BROSETA

BPIFRANCE PARTICIPATIONS, REPRESENTED BY ALEXANDRE OSSOLA



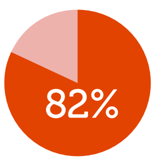
Finance and Audit Committee
Chairman

Appointments, Compensation and Governance Committee
Chairman

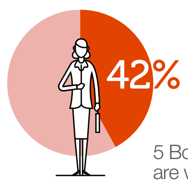
Strategy Committee
Chairman

S Employee representative
A Employee shareholder representative

INDEPENDENCE RATE *



GENDER EQUALITY **



5 Board members are women

DIVERSITY

5 Board members are of foreign nationality and 6 nationalities are represented on the Board

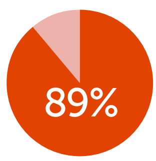
AVERAGE AGE

EMPLOYEE REPRESENTATION

of which 1 is an employee shareholder representative appointed by the Shareholders' Meeting

and 1 is an employee representative appointed by the Group Committee

AVERAGE ATTENDANCE RATE



* *In accordance with the AFEP-MEDEF Code, the employee representative and the employee shareholder representative are excluded from the analysis.*

** *In accordance with the law, the employee representative is excluded from the calculation.*

SUMMARY OF THE COMPOSITION OF THE SUPERVISORY BOARD

	Age	Seniority on the Board *(in number of years)*	Date office expires	Independence	Individual attendance rate	Finance and Audit Committee	Appointments, Compensation and Governance Committee	Strategy Committee
MEMBERS OF THE SUPERVISORY BOARD AS AT 28 FEBRUARY 2018								
Vivienne Cox Chairman	58	8	2018 OSM	◇	100%			●
Pierre Pringuet Vice-Chairman and Lead Member	68	3	2020 OSM	◇	90%		●	
Maria Pilar Albiac-Murillo	64	3	2019 OSM	◇	90%			
Philippe Altuzarra	67	3	2019 OSM	◇	100%			○
Cédric de Bailliencourt	48	4	2018 OSM	◇	80%			
Bpifrance Participations, represented by **Alexandre Ossola**	43	2	2020 OSM		90%	○		○
Laurence Broseta	49	2	2018 OSM	◇	70%		○	
Pascale Chargrasse (1) Ⓐ	57	7	2019 OSM		90%		○	
Mickaël Dolou (1) Ⓢ	42	< 1	2021		100%		○	
José Carlos Grubisich	61	6	2020 OSM	◇	100%			○
Yuki Iriyama	70	1	2021 OSM		100%			
Henri Poupart-Lafarge	48	4	2018 OSM	◇	90%	●		
Alexandra Schaapveld	59	8	2018 OSM	◇	80%		○	
MEMBER OF THE SUPERVISORY BOARD WHOSE TERM OF OFFICE ENDED IN 2017								
Olivier Bazil	71	5	2017	◇	60%	○		○
Number of meetings in 2017					**10**	**5**	**9**	**3**
Average attendance rate in 2017					**89%**	**100%**	**98%**	**100%**

● *Chairman*
○ *Member*
Ⓐ *Board member representing employees*
Ⓢ *Board member representing employee shareholders*
◇ *Independence under the criteria of the AFEP-MEDEF Code as assessed by the Supervisory Board*

(1) *Member of the Supervisory Board representing employees or employee shareholders who have not been taken into account when establishing the independence rate in application of the AFEP-MEDEF Code.*

Ms. Vivienne COX

Chairman of the Supervisory Board
Chairman of the Strategy Committee

Born on 29 May 1959
British nationality

First appointment: 31 May 2010
Renewal: 2014 OSM
Business address:
Vallourec
27, avenue du Général-Leclerc
92100 Boulogne-Billancourt – France

Vallourec shares held: 20,880

Expertise and managerial experience

- Graduate of Oxford University and INSEAD and holding an Honorary Doctorate from the University of Hull
- Twenty eight years' experience with the BP Group
- CEO of BP Gas, Power and Renewables (2004-2009)
- Commissioner of the Airport Commission of the Department of Transport of the British government (since 2012)

Positions held by Ms. Vivienne COX

Positions currently held

- Chairman of the Supervisory Board of Vallourec*
- Director of Pearson Plc* (since 2012), Chairman of the Governance Committee (since 2017), member of the Reputation and Responsibility Committee (since 2017), member of the Audit Committee (since 2012), and Senior Independent Director (since 2013)
- Director of GlaxoSmithKline Plc* (since 2016), member of the Compensation Committee (since 2017) and member of the Social Responsibility Committee (since 2017)
- Director of Stena AB (since 2017)
- Member of the Consulting Board and Chairman of the Compensation Committee of Montrose Associates

Positions expired within the last five years

- Lead Independent Director of the Department for International Development of the British government (until December 2017)
- Member of the Appointments Committee and the Compensation Committee of Pearson Plc* (until 2017)
- Manager B of Stena International SARL (Luxembourg) (until April 2017)
- Director and member of the Sustainable Development Committee, the Compensation Committee and the Appointments Committee of BG Group Plc (until 2016)
- Chairman of the Reputation and Responsibility Committee of Pearson Plc* (until 2016)
- Director of The Climate Group (until 2015)
- Director and member of the Appointments Committee and the Sustainable Development Committee of Rio Tinto Plc (until 2014)
- Member of the Board of Directors and the Appointment and Compensation Committee of INSEAD (until 2013)

* *Listed company (for positions currently held).*

Mr. Pierre PRINGUET

Vice-Chairman and Lead Member of the Supervisory Board
Chairman of the Appointments, Compensation and Governance Committee

Born on 31 January 1950
French nationality

First appointment: 23 February 2015
Renewal: 2016 OSM
Business address:
Pernod Ricard
12, place des États-Unis
75116 Paris – France

Vallourec shares held: 7,914

Expertise and managerial experience

- Graduate of the École Polytechnique and Engineer for the French Mines Inspectorate (Corps des Mines)
- Began career in public service, from 1976 to 1987: In charge of an industry and mining engagement with the prefect of the Lorraine region (1976-1978); Head of financial procedures and social relations with the Managing Director of Industry (1979-1982); Chief Engineer of Mines (1981); Technical Consultant to Michel Rocard, Minister of Land Management and Planning, and later the Minister of Agriculture (1981-1985); Director of Agricultural and Food Industries with the French Ministry of Agriculture (1985-1987)
- Since 1987, in the Pernod Ricard Group: Director of Development of the Pernod Ricard Group (1987-1989); Managing Director of Société pour l'Exportation de Grandes Marques (1989-1996); Chairman & CEO of Pernod Ricard Europe (1997-2000); Deputy CEO of Pernod Ricard (2000-2005); Director of Pernod Ricard (since 2004); COO of Pernod Ricard (2005-2008); Managing Director of Pernod Ricard (2008-2015)

Positions held by Mr. Pierre PRINGUET

Positions currently held

- Vice-Chairman of the Supervisory Board of Vallourec*, Lead Member and Chairman of the Appointments, Compensation and Governance Committee
- Vice-Chairman of the Board of Directors of Pernod Ricard* and member of the Strategy Committee and of the Compensation Committee
- Director and member of the Compensation Committee of Iliad*
- Director of April
- Director of Capgemini* and Chairman of the Compensation Committee and member of the Ethics and Governance Committee
- Chairman of the Association of Mining Engineers (Association Amicale des Ingénieurs des Mines – AAIM)

Positions expired within the last five years

- Chairman of the Association Française des Entreprises Privées (AFEP) (until May 2017)
- Chairman of the Scotch Whisky Association (until December 2017)
- Chairman of AgroParisTech (until 2016)
- CEO of Pernod Ricard (until 2015)
- Chairman of Comité Sully, an association for the promotion of the French agrifood industry (until 2015)

* *Listed company (for positions currently held).*

Ms. Maria Pilar ALBIAC-MURILLO

Member of the Supervisory Board

Born on 21 August 1953
Spanish nationality

First appointment: 28 May 2015
Business address:
Vallourec
27, avenue du Général-Leclerc
92100 Boulogne-Billancourt – France

Vallourec shares held: 3,000

Expertise and managerial experience

- Graduate of the University of Zaragoza (Spain), and the holder of an MBA from Central Michigan University (United States)
- A twenty-six year career at General Motors, sixteen of which were spent in the United States. Fifteen years in Operations, Plant Director in Saginaw, Michigan (1991-1993), Plant Director in Logroño, Spain (1993-1996)
- Chairman and CEO of Saginaw Deutschland GmbH (1996-1999)
- Seven years at Delphi Corporation: Site Manager (Delphi Alabama Operations), Plant Manager, Site Director (Delphi Flint East Operations) and Director of Product Line (Delphi Troy Headquarters)
- Vice-President in charge of operations in Mexico for Remy (2006-2007)
- Eight years at the Airbus* Group: Executive Vice-President of Operations and Head of Transformation at Airbus Defence and Space, and A400M Industrialization (2008-2016)
- Head of Product and Innovation to Market Excellence of Philips Innovations Services (2016-2017)

Positions held by Ms. Maria Pilar ALBIAC-MURILLO

Positions currently held

- Member of the Supervisory Board of Vallourec*

Positions expired within the last five years

- Head of Product and Innovation to Market Excellence of Philips Innovations Services (until November 2017)
- Executive Vice-President of Operations and Head of Transformation at Airbus Defence and Space, and A400M Industrialization (until 2016)
- Director of Banque Populaire Occitane (until 2016)
- COO and Chairman of Cassidian Spain (until 2013)

Mr. Philippe ALTUZARRA

Member of the Supervisory Board
Member of the Strategy Committee

Born on 3 April 1950
French nationality

First appointment: 28 May 2015
Business address:
Vallourec
27, avenue du Général-Leclerc
92100 Boulogne-Billancourt – France

Vallourec shares held: 13,000

Expertise and managerial experience

- Graduate of Sciences Po Bordeaux and of the École Nationale d'Administration
- He began his career at the Ministry of Finance in 1973: Technical advisor at the Office of the Secretary of State for Defense (1973-1975), Economic Attaché at the French Embassy in London (1975-1978), Civil Administrator, French Trade Directorate (1981-1986), Economic Advisor at the French Embassy in Tokyo (1986-1989)
- Member of the Executive Committee, Deputy CFO of the Havas Group (1989-1993)
- Twenty-one years at Goldman Sachs (1993-2014)

Positions held by Mr. Philippe ALTUZARRA

Positions currently held

- Member of the Supervisory Board of Vallourec*
- Director of Altuzarra LLC
- Chairman of the Supervisory Board of La Redoute
- Member of the Nuclear Commitment Financial Expertise Committee of Electricité de France (EDF)*
- Member of the Consulting Board of EDF Invest

Positions expired within the last five years

- Member of the International Board of Goldman Sachs (London) (until 2014)

* *Listed company (for positions currently held).*

Mr. Cédric de BAILLIENCOURT

Member of the Supervisory Board

Born on 10 July 1969
French nationality

First appointment: 25 May 2014
Business address:
Bolloré
Tour Bolloré
31-32, quai de Dion-Bouton
92811 Puteaux Cedex – France

Vallourec shares held: 7,800

Expertise and managerial experience

- Graduate of the Institut d'Études Politiques de Bordeaux, postgraduate degree in Political and Social Communication
- Twenty-two years with the Bolloré Group as Director of Shareholding (since 1996), CEO (since 2002) and Vice-Chairman of Financière de l'Odet, Vice-Chairman of Bolloré (since 2002), and CFO of the Bolloré Group (since 2008)
- Member of the Management Board of Vivendi

Positions held by Mr. Cédric de BAILLIENCOURT

Positions currently held

- Member of the Supervisory Board of Vallourec*
- Member of the Management Board of Vivendi*
- Vice-Chairman-COO of Financière de l'Odet [a]**
- Vice-Chairman of Bolloré [a]**
- Vice-Chairman of the Supervisory Board of Compagnie du Cambodge [a]**
- Chairman of the Boards of Directors of Compagnie des Tramways de Rouen [a]**, Financière Moncey [a]**, Société des Chemins de Fer et Tramways du Var et du Gard [a]** and Société Industrielle et Financière de l'Artois [a]**
- Chairman of Blueboat (formerly Compagnie de Bénodet) [a], Compagnie de Treguennec [a], Compagnie de Guénolé [a], Compagnie de Guilvinec [a], Compagnie de Pleuven [a], Financière V [a], Financière de Beg Meil [a], Financière d'Ouessant [a], Financière du Perguet [a], Financière de Sainte-Marine [a], Financière de Pont-Aven [a], Imperial Mediterranean [a], Compagnie des Glénans [a], Compagnie de Pont l'Abbé [a], Financière de Quimperlé [a], Compagnie de Concarneau [a], Financière de Kerdevot [a] and Compagnie de l'Argol [a]
- Chairman of Redlands Farm Holding [a]
- Chairman of the Board of Directors of Plantations des Terres Rouges [a], PTR Finances [a] and SFA [a]
- Manager of Socarfi [a], Compagnie de Malestroit [a]
- Director of Bolloré [a]**, Bolloré Participations [a], Compagnie des Tramways de Rouen [a]**, Financière V [a], Financière Moncey [a]**, Omnium Bolloré [a], Société Industrielle et Financière de l'Artois [a]**, Financière de l'Odet [a]**, Société des Chemins de Fer et Tramways du Var et du Gard [a]**
- Director of the Musée national de la Marine, African Investment Company [a], Financière du Champ de mars [a], La Forestière Équatoriale [a]**, BB Groupe [a], Plantations des Terres Rouges [a], SFA [a], PTR Finances [a], Sorebol [a], Technifin and Pargefi Helios Iberica Luxembourg [a]
- Member of the Supervisory Board of Sofibol [a]
- Permanent representative of Compagnie du Cambodge on the Supervisory Board of Banque Hottinguer
- Permanent representative of Bolloré on the Board of Directors of Socotab [a]
- Permanent representative of Pargefi Helios Iberica Luxembourg on the Board of Pargefi SA [a]
- Permanent representative of Bolloré Participations on the Board of Nord Sumatra Investissements [a]
- Permanent representative of Bolloré Participations on the Boards of Socfinasia**, Socfinaf**, Socfinde, Terrasia, Socfin**, Induservices SA
- Permanent representative of Compagnie du Cambodge, co-manager of SCI Lambertie [a]**

Positions expired within the last five years

- Chairman of the Management Board of Compagnie du Cambodge [a]** (until September 2017)
- Chairman of the Compagnie de Cournouaille [a]** (until December 2017)
- Chairman of Financière de l'Argoat [a] (until June 2017)
- CEO of Finanicière de l'Odet [a]** (until September 2017)
- Permanent representative of Bolloré on the Board of Directors of Havas [a]** (until February 2017)
- Chairman of Financière de Briec [a] (until 2016)
- Chairman of Financière de Pluguffan [a] (until 2016)
- Chairman of Bluestorage (until 2015)
- Chairman of Financière de Bréhat [a] (until 2014)
- Chairman of Omnium Bolloré (until 2013)
- Chairman of Bluely (formerly Financière de Kerdevot) (until 2013)
- Permanent representative of Bolloré Participations on the Board of Société Bordelaise Africaine (until 2016)
- Permanent representative of Bolloré Participations on the Boards of Immobilière de la Pépinière and Centrages (until 2015)
- Permanent representative of Bolloré Participations on the Board of Agro Products Investments Company (until 2015)
- Permanent representative of SAFA on the Board of SAFA Cameroun (until 2014) [a]
- Permanent representative of Bolloré Participations on the Board of Socfinco (until 2014)
- Permanent representative of Financière V on the Board of Société Anonyme Forestière et Agricole (SAFA) [a] (until 2014)
- Permanent representative of Bolloré on the Supervisory Board of Vallourec (until 2014)
- Permanent representative of Bolloré on the Board of Blue Solutions (formerly BatScap) (until 2013)
- Permanent representative of Bolloré Participations on the Board of Sogescol (until 2012)
- Director of Champ de Mars Investissements, Financière Nord Sumatra (until 2013)
- Director of Cormoran Participations (until 2013)

(a) Position held within the Bolloré Group.
** Listed company (for positions currently held).*
*** Listed company for terms pending (including companies registered in the Free Market and listed abroad).*

bpifrance

Bpifrance Participations

Member of the Supervisory Board
Member of the Finance and Audit Committee
Member of the Strategy Committee

First appointment: 6 April 2016
Business address:
Bpifrance Participations
6-8 boulevard Haussmann
75009 Paris – France

Vallourec shares held: 66,695,708

Bpifrance offers companies continuity of financing at each key step in their development and an offer adapted to regional specificities. As part of the Bpifrance equity investment scheme, Bpifrance Participations invests in Large Enterprises as well as in Middle-Market Companies, in order to support their development in France and internationally. Bpifrance Participations is a minority shareholder involved in governance, as well as a long-term investor capable of adapting to the company's development cycles.

Positions held by Bpifrance Participations

Positions currently held

- Member of the Supervisory Board of Vallourec*
- Director of Aelis Farma
- Director of Antalis International*
- Director of Avril Pôle Végétal
- Director of Biom'up
- Director of Cegedim*
- Director of CGG*
- Director of Compagnie Daher
- Director of Corwave
- Member of the Supervisory Board of Crystal
- Member of the Supervisory Board of De Dietrich
- Director of Ekinops*
- Director of Eos Imaging*
- Director of Eutelsat Communications*
- Director of Farinia
- Member of the Supervisory Board of Financière du Millenium
- Director of G2 Mobility
- Director of Gensight Biologics*
- Member of the Supervisory Board of Groupe Grimaud La Corbière
- Director of H4D
- Director of Horizon Parent Holdings
- Director of Innate Pharma*
- Director of Isorg
- Director of Mader
- Member of the Supervisory Board of Mersen*
- Member of the Supervisory Board of NGE
- Member of the Supervisory Board of Novasep
- Director of NTL Holding
- Director of Orange*
- Director of Parrot*
- Director of Pixium Vision*
- Director of Prodways Group*
- Director of PSA*
- Director of Sequana
- Director of Sigfox
- Director of Snips
- Director of Soitec*
- Director of Technicolor*
- Director of Tinubu Square
- Director of Tokheim Luxco
- Director of Tokheim Luxco 2
- Director of Txcell*
- Member of the Supervisory Board of Valneva
- Member of the Supervisory Board of Vergnet*
- Director of Vexim
- Member of the Supervisory Board of Voluntis
- Member of the Supervisory Board of Younited

Positions expired within the last five years

- Director of Altia Industry (until June 2017)
- Member of the Supervisory Board of FT1 CI (until April 2017)
- Director of Groupe Limagrain (until June 2017)
- Director of Medipole Partenaires (until June 2017)
- Director of Paprec (until December 2017)
- Director of Viadeo* (until June 2017)
- Member of the Supervisory Board of VIT (until October 2017)

* *Listed company (for positions currently held).*

Mr. Alexandre OSSOLA

permanent representative of Bpifrance Participations

Born on 26 September 1974
French nationality

First appointment: 8 November 2016
Business address:
Bpifrance Participations
6-8 boulevard Haussmann
75009 Paris – France

Expertise and managerial experience

- Twenty years experience in capital investment and mergers-acquisitions
- Started his career in London at Wasserstein Perella (1998) then at Crédit Suisse First Boston
- CVC Capital Partners (2000-2011); Director at the Paris office
- Head of capital risk operations at CDC Climat (2011-2013)
- Director of nuclear and rail funds (2013-2015), manager of Fonds d'Avenir Automobile and a member of the Mid & Large Cap Management Committee of Bpifrance Participations (2015-2017), manager of Mid Cap activity of Fonds d'Avenir Automobile and member of the Mid & Large Cap Management Committee of Bpifrance Participations (since 2017)

Positions held by Mr. Alexandre OSSOLA

Positions currently held

- Permanent representative of Bpifrance Participations, Member of the Supervisory Board of Vallourec*
- Director of Operations (COO) and member of the Mid & Large Cap Management Committee for Bpifrance Participations and Manager of Mid Cap activity of BpiFrance and Fonds d'Avenir Automobile, managed by Bpifrance Participations
- Non-voting Board member (censeur) of the Supervisory Board of Peugeot SA*
- Member of the Supervisory Board of Mecaplast SAS
- Member of the Board of Directors of Trèves SAS

Positions expired within the last five years

- Member of the Board of Directors of Climpact (until January 2017)
- Member of the Board of Directors of Mecaplast SAM (until 2016)
- Member of the Board of Directors of HPC (until 2014)

Ms. Laurence BROSETA

Member of the Supervisory Board
Member of the Appointments, Compensation and Governance Committee

Born on 22 September 1968
French nationality

First appointment: 6 April 2016
Business address:
Transdev
Immeuble Crystal
3 allée de Grenelle - CS 20098
92442 Issy-les-Moulineaux Cedex – France

Vallourec shares held: 1,436

Expertise and managerial experience

- Graduate of École Polytechnique, Telecom Paris and Auditor at Institut des Hautes Études de l'Entreprise (IHEE)
- Head of Transport Operations for RATP (1994-1999)
- Lead Engineer for Control & Communication at SYSTRA (joint venture between RATP and SNCF) in London (1999-2001)
- Director of the "Point du Jour" Bus Center (2002-2005)
- Chairman of Bombela, a subsidiary of RATP Dev in Johannesburg, South Africa (2005-2007)
- Director of the International Business Unit and Vice Chairman in charge of international strategy for RATP Dev (2008-2012)
- CEO of Fives Stein (2012-2013)
- CEO France of Transdev (2013-2016), International Director of Transdev (since 2016)

Positions held by Ms. Laurence BROSETA

Positions currently held

- Member of the Supervisory Board of Vallourec*
- International Director and Member of the Executive Committee of Transdev
- Director of subsidiaries of the Transdev Group
- Director of Thalès*

Positions expired within the last five years

- Director and Vice-President of Union des Transports Publics (until 2016)
- Director of Thello (until 2016)

* *Listed company (for positions currently held).*

Ms. Pascale CHARGRASSE

Member of the Supervisory Board representing the employee shareholders
Member of the Appointments, Compensation and Governance Committee

Born on 10 July 1960
French nationality

First appointment: 13 December 2010
Renewal: 2015 OSM
Business address:
Valinox Nucléaire
5, avenue du Maréchal Leclerc
BP 50 – 21501 Montbard – France

Vallourec shares held: 8,327

Expertise and managerial experience

- Graduate of the Orsay Technology Institute with a DUT diploma in Computer Science
- Employee of the Vallourec Group since 1985 and currently Business Development Manager at Valinox Nucléaire, a wholly owned subsidiary of Vallourec
- Member of the Supervisory Board of Vallourec Actions Corporate Mutual Fund (FCPE)
- Union representative on the Group's Works Council

Positions held by Ms. Pascale CHARGRASSE

Positions currently held

- Member of the Supervisory Board of Vallourec*

Positions expired within the last five years

- None

Mr. Mickaël DOLOU

Member of the Supervisory Board representing the employees
Member of the Appointments, Compensation and Governance Committee

Born on 1 November 1975
French nationality

First appointment: 3 October 2017
Business address:
Serimax Holdings - Vallourec Group
346, rue de la Belle Etoile
CS 90023 Roissy en France - France

Vallourec shares held: 303

Expertise and managerial experience

- Holder of an executive MBA from HEC Paris and a Master's in Law (international affairs)
- Eleven years at the Serimax Group: Legal Director, and then Regional Director for the South American region, Director of Contractual Offers and Operations and Director in charge of Marketing, Commercial Development and Contractual Offers

Positions held by Mr. Mickaël DOLOU

Positions currently held

- Member of the Supervisory Board of Vallourec*

Positions expired within the last five years

- None

* *Listed company (for positions currently held).*

Mr. José Carlos GRUBISICH

Member of the Supervisory Board
Member of the Strategy Committee

Born on 19 February 1957
Brazilian nationality

First appointment: 31 May 2012
Renewal: 2016 OSM
Business address:
Olimpia Investimentos e Participaçoes Ltda
Estrada Manoel Rodrigues de Barros - km 6.0
Itatinga - SP - Brazil

Vallourec shares held: 13,000

Expertise and managerial experience

- Graduate of the Advanced Management Program of the Fundaçao Dom Cabral and of INSEAD
- CEO of Rhodia for Brazil and Latin America (1996)
- Chairman & CEO of Rhône-Poulenc Group for Brazil (1997)
- Vice-Chairman and member of the Executive Board of Rhodia Group Worldwide and Chairman of Rhodia Fine Organics Worldwide (1999)
- Chairman & CEO of Brazilian company Braskem S.A. (petrochemicals) (2002)
- Chairman of Eldorado Brasil Celulose S.A. (2002-2017)

Positions held by Mr. José Carlos GRUBISICH

Positions currently held

- Member of the Supervisory Board of Vallourec*
- Director of Halliburton* (since 2013)

Positions expired within the last five years

- Chairman of Eldorado Brasil Celulose S.A. (until December 2017)

Mr. Yuki IRIYAMA

Member of the Supervisory Board

Born on 19 November 1947
Japanese nationality

First appointment: 12 May 2017
Business address:
Kajitani Law Offices
18F Tokyo Sankei Bldg.
1-7-2 Otemachi
Chiyoda-ku Tokyo 1000-0004
Japan

Vallourec shares held: 500

Expertise and managerial experience

- Graduate of the University of Tokyo (Faculty of Law, 1970) and of the College of Europe (Bruges) in Belgium (Advanced European Study in Law, 1977)
- Forty-five years at Nippon Steel & Sumitomo Metal Corporation, assuming the following operational and managerial positions: Member of the Legal Department (1970-1990), Manager of the Electronics & Information Business Division (1990-1993), General Manager of the Semi-conductor Business Division (1993-1998), General Manager of Overseas Business Development Division (1999-2002), Director, Member of the Board (2002-2006), Managing Executive Officer (2006-2009), and Executive Advisor (2009-2015)
- Attorney-at-law in Japan since March 2015 and currently Of Counsel at the Kajitani Law Offices in Tokyo

Positions held by Mr. Yuki IRIYAMA

Positions currently held

- Member of the Supervisory Board of Vallourec*

Positions expired within the last five years

- None

* *Listed company (for positions currently held).*

Mr. Henri POUPART-LAFARGE

Member of the Supervisory Board
Chairman of the Finance and Audit Committee

Born on 10 April 1969
French nationality

First appointment: 28 May 2014
Business address:
Alstom
48, rue Albert Dhalenne
93482 Saint-Ouen Cedex – France

Vallourec shares held: 8,229

Expertise and managerial experience

- Graduate of the École Polytechnique (1988), the École Nationale des Ponts et Chaussées and the Massachussetts Institute of Technology
- Deputy in the Treasury Department of the Ministry of Economy and Finance, and later a Technical Adviser in the office of the Minister of Economy and Finance (1994-1997)
- Since 1998, in the Alstom Group*: Head of Investor Relations (1998-1999), Head of Management Control (1999-2000), Senior Vice-President in charge of Finance for the Transmission and Distribution sector (2000-2004), Group CFO (2004-2010), President of the Alstom Grid sector (2010-2011), Group Executive Vice-Chairman and Chairman of the Transportation sector and Chairman and Chief Executive Officer of Alstom (since 2016)

Positions held by Mr. Henri POUPART-LAFARGE

Positions currently held

- Member of the Supervisory Board of Vallourec*
- Chairman and CEO and Director of Alstom*
- Director of Transmashholding (TMH)

Positions expired within the last five years

- None

Ms. Alexandra SCHAAPVELD

Member of the Supervisory Board
Member of the Finance and Audit Committee
Member of the Appointments, Compensation and Governance Committee

Born on 5 September 1958
Dutch nationality

First appointment: 31 May 2010
Renewal: 2014 OSM
Business address:
Jacob Obrechtstraat 67
1071 KJ Amsterdam – Netherlands

Vallourec shares held: 12,272

Expertise and managerial experience

- Graduate of the University of Oxford in Policy, Philosophy and Economics, and the holder of a Master's Degree in Developmental Economics from Erasmus University in Rotterdam
- Twenty five years' experience with the ABN AMRO Group (Netherlands): Head of Sector expertise for the ABN AMRO Group (2001-2004), Director of Investment Banking Division of the ABN AMRO Group (2004-2007)
- Director for Western Europe of Investment Banking at Royal Bank of Scotland Group (2007-2008)

Positions held by Ms. Alexandra SCHAAPVELD

Positions currently held

- Member of the Supervisory Board of Vallourec*
- Director of Société Générale*
- Member of the Supervisory Board of Bumi Armada Berhad* (Malaysia)
- Member of the Supervisory Board of FMO (Netherlands)

Positions expired within the last five years

- Member of the Supervisory Board of Holland Casino (until 2016)

* *Listed company (for positions currently held).*

OFFICES OF MEMBERS OF THE SUPERVISORY BOARD WHICH ENDED IN 2017

Mr. Olivier BAZIL

Born on 22 September 1946
French nationality

Expertise and managerial experience

- Graduate of École des Hautes Études Commerciales (HEC) and Harvard Business School
- Assistant to the Secretary General, responsible for financial information and development of the growth strategy for the Legrand Group (1973), CFO of Legrand (1979), Deputy CEO and Vice-Chairman of the Board of Directors of Legrand (1994), COO of Legrand (from 2000 to 2011)

Positions held by Mr. Olivier BAZIL

Positions currently held

- Director of Legrand*
- Member of the Supervisory Board of Michelin*
- Director of Château Palmer

Positions expired within the last five years

- Member of the Supervisory Board of Vallourec* (until May 2017)
- Director of Firmenich International (until 2016)

* *Listed company (for positions currently held).*

HONORARY CHAIRMEN

Mr. Jean-Paul PARAYRE

Honorary Chairman of Vallourec since 31 May 2013

French nationality

Expertise and managerial experience

- Graduate of École Polytechnique
- Chairman of the Management Board of PSA Peugeot-Citroën (1977-1984)
- COO then Chairman of the Management Board of Dumez (1984-1990)
- Vice-President and CEO of Lyonnaise des Eaux Dumez (1990-1992)
- Vice-President and CEO of Bolloré (1994-1999)
- Chairman and CEO of Saga (1996-1999)
- Chairman of the Supervisory Board of Vallourec (2000-2013)

Mr. Arnaud LEENHARDT

Honorary Chairman of Vallourec since 15 June 2000

French nationality

Expertise and managerial experience

- Graduate of École Polytechnique
- Fourty three years with the Vallourec Group, mainly in Plant and General Management
- Chairman and CEO of Vallourec (1981-1994)
- Chairman of the Supervisory Board of Vallourec (1994-2000)
- Non-voting Board member (censeur) of the Supervisory Board of Vallourec (2006-2010)

7.1.2 Operation of the Management and Supervisory Boards

7.1.2.1 Operation of the Management Board

The Management Board has, with regard to third parties, the broadest powers to act under all circumstances in the name of the Company, within the limit of the corporate purpose, and subject to the powers expressly provided by law to the Supervisory Board and Shareholders' Meetings, and those which require the prior authorization of the Supervisory Board, in application of the bylaws and, where applicable, internal regulations.

In conformity with the provisions in the bylaws (Article 9 thereof), the Management Board is comprised of a minimum of two and a maximum of five members who are appointed and, as the case may be, reappointed by the Supervisory Board. As at 28 February 2018, the Management Board had three members serving four-year terms. (See paragraph 7.1.1.1 above).

The members of the Management Board may be dismissed by the Supervisory Board or the Shareholders' Meeting.

The Management Board has adopted internal regulations which consist of an internal document intended to organize its functioning and relations with the Supervisory Board. It is not valid against third parties.

The Management Board is in charge of the Company's management and of running its activities. It must, in compliance with the law, bylaws and internal regulations, obtain prior authorization from the Supervisory Board in certain cases (see paragraph 7.1.2.2 below). It meets once a week.

7.1.2.2 Operation of the Supervisory Board

The Supervisory Board is the Company's control body, management and administration being performed by the Management Board. The Supervisory Board ensures that the strategy applied by the Management Board is suited to the guidelines it has approved.

To that end, the role of the Supervisory Board is twofold:

- to provide ongoing control of the Company's management through the Management Board, by performing the checks and controls it deems appropriate;
- to provide periodic control of the Company's management: once per quarter for the activities report which the Management Board presents to it, and within three months of the close of each fiscal year, at the time of the Management Board's presentation of the annual financial statements, consolidated financial statements and management report intended for the Shareholders' Meeting, as well as during the presentation of the interim financial statements.

In addition to the legal obligations of prior authorizations (sureties, securities and guarantees, the Supervisory Board gives its authorization prior to the Management Board carrying out the following actions:

- completing any capital increases in cash or by capitalization of reserves authorized by a Shareholders' Meeting;
- completing any other issue of transferable securities that could later give access to the capital, authorized by a Shareholders' Meeting;
- proceeding with a buyback by the Company of its own shares;
- granting to executive management and/or Group employees options to subscribe for or purchase the Company's shares, granting shares free of charge or any other benefits of a similar nature under the terms of authorizations granted by the Shareholders' Meeting; and
- establishing any projected merger or partial transfer of assets, entering into or refusing any industrial or commercial agreement with other companies that could affect the Company's future and, more generally, completing any major transaction (such as external operations for the acquisition or disposal of significant investments in organic growth or internal restructuring operations) (i) that could materially alter the business scope or financial structure of the Group or the type of risks it incurs or (ii) which falls outside of the Group's declared strategy.

Where applicable, the prior authorization of the Supervisory Board is required for both Vallourec and the companies it controls under the terms of Article L.233-16 of the French Commercial Code (*Code de commerce*) (consolidation scope).

The Supervisory Board determines the composition of the Management Board, appoints its members and may remove them from office. It may likewise propose to the Shareholders' Meeting that their duties be terminated. Once a year, the Supervisory Board evaluates the performance of the Management Board and leads a discussion as to its future.

The Supervisory Board sets the compensation of members of the Management Board as well as the number of share subscription or share purchase options and/or performance shares they are allocated, or any other benefit of a similar nature.

It determines the terms and conditions for receiving attendance fees, and their distribution among the Board members. It likewise determines the compensation of the Chairman and, where applicable, the Vice-Chairman, and the resources allocated to them for performing their duties.

The Chairman of the Supervisory Board sets the agenda for each Supervisory Board meeting, upon consulting with the Chairman of the Management Board.

Once per quarter, the Management Board presents a report to the Supervisory Board which describes as completely as possible the progress of the Group's affairs, as well as any useful information about its financial position, cash flow, commitments and liquidity.

The Management Board consults the Supervisory Board about the dividend to be proposed to the Shareholders' Meeting. At the end of the year, it submits the budget, forecast capital expenditure program and financing plan for the following year together with the strategy plan.

At its meetings, the Supervisory Board can ask the Management Board to supplement its information on particular matters with a presentation at the next meeting.

In the performance of its duties, the Supervisory Board is regularly informed, by the Management Board, through its Chairman, of any significant event concerning the Group's performance. It ensures that the latter keeps it informed of all matters that it deems useful and

* *Listed company (for positions currently held).*

necessary in the exercise of its supervisory role. In order to ensure the process operates correctly, the Chairman of the Supervisory Board, at the initiative of any member of the Board, gathers this information. The specific information required by each of the Committees of the Supervisory Board for the performance of its duties is gathered by the Chairman of each Committee in collaboration with the Management Board.

In addition to the above provisions, information is provided to the Supervisory Board on an ongoing basis through a frequent, regular dialogue between the Chairman of the Supervisory Board and the Chairman of the Management Board.

As an exception to the above, if any member of the Supervisory Board finds himself or herself in a conflict of interest situation, even a potential one, concerning a subject to be debated by the Board, the Chairman of the Supervisory Board ensures, with the support of the Appointments, Compensation and Governance Committee, that information concerning this subject is not communicated to the member in question, without prejudice to the latter's obligations, as described below.

The Vallourec Supervisory Board has adopted, and regularly updates its internal regulations, which are designed to formalize its operating and organizational rules, and work methods. These regulations are strictly internal and are not intended to and do not replace the Company bylaws or the laws and regulations governing commercial companies. They may be amended or added to at any time as a result of a decision made by the Supervisory Board. They have been regularly revised to ensure that their terms are consistent with the new statutory and regulatory provisions.

The Supervisory Board elects a Chairman and Vice-Chairman from among its members, for a maximum term corresponding to their term of office as a Supervisory Board member. The Chairman and Vice-Chairman may be reelected or removed, at any time, by the Supervisory Board. They are in particular responsible for convening the Board and directing its deliberations, it being specified that the powers of the Vice-Chairman are exercised if the Chairman is absent or at the Chairman's request, and under the same conditions. The Vice-Chairman alerts the Chairman to observations regarding compliance with the ethics obligations established by the Board's internal regulations.

The Supervisory Board may appoint from among its members (including the Vice-Chairman), a Lead Member for a term not to exceed that of his position as a member of the Supervisory Board. The person may be reappointed, and his/her duties as a Lead Member may be revoked at any time by the Supervisory Board. The Lead Member acts in a precautionary manner to raise awareness about conflicts of interest among the members of the Supervisory Board, and draws said Board's attention to any conflict of interest situation that has been identified, even a potential one. The member likewise is responsible for ensuring compliance with the internal regulations, and for making sure that the members of the Supervisory Board are able to perform their task under optimum conditions, and are provided with a high level of upstream information at the Supervisory Board meetings. The Lead Member assists the Chairman of the Supervisory Board, at the latter's request, in responding to shareholders' requests, and makes himself or herself available to meet with them and note their comments and suggestions, when requested and with the consent of the Supervisory Board Chairman. The member makes an annual report to the Supervisory Board on the performance of his/her assignment, in a formal assessment of the operation of the Supervisory Board.

Under the terms of its ethics obligations, each member of the Supervisory Board is required:

- before accepting office, to acknowledge the general and specific obligations for which he/she is responsible, and in particular the legal or regulatory texts, the recommendations of the AFEP-MEDEF Code and any supplements the Board may have added, along with the Board's internal operating rules;
- to participate, unless specifically prevented, in Board meetings and, where applicable, the meetings of the Committees to which he/she belongs, as well as in the Shareholders' Meetings;
- to request information. To that end, he/she must request, within the appropriate time frames, the information required for him/her to actively participate in the subjects on the Board's agenda and, if applicable, the agenda of the Committee(s) to which he/she belongs;
- to comply with the legal and regulatory obligations arising from his/her position and, in particular, to comply with the law and the recommendations of the AFEP-MEDEF Code relating to the plurality of offices;
- to behave as a representative of all the shareholders and act in the Company's interest at all times;
- to inform the Supervisory Board of any conflict of interest situation, even a potential one, and to refrain from voting on any issue examined by the Board that would result in a conflict of interest;
- to personally be a shareholder of the Company throughout the entire term of their office, under the conditions set by the bylaws and internal regulations of the Board, with a minimum of 500 Vallourec shares [(1)];
- with regard to the confidential information obtained in the course of his/her duties, to consider himself/herself as a person who exercises directorship responsibilities and has access to privileged information and, as such, in particular, to respect the provisions laid down by the Company concerning the periods during which persons with access to privileged information may not buy, sell or take positions in the Company's shares or in any other financial instrument linked to the Vallourec share (options, warrants, etc.), i.e. the thirty (30) calendar days preceding the releases of annual and semiannual results, and fifteen (15) calendar days preceding first quarter and third quarter results, as well as the day of publication and the following day, without prejudice to the current statutory and regulatory provisions on "insider trading";
- to consider himself/herself bound by true professional privilege with regard to all non-public information, regardless of the material (written or verbal) that is collected within the context of his/her duties, during a meeting of the Board or of a Committee (in particular the files of the Board and Committees, discussions, debates and deliberations of the Board and Committees), or between two meetings (ongoing information), and to take all useful measures to preserve confidentiality, in particular by refraining from communicating this information to a third party when it has not been made public;
- to disclose, under the conditions established by statutory and regulatory provisions, to the French securities regulator (*Autorité des Marchés Financiers*) and the Company, the transactions carried out with the financial instruments issued by the Company;
- to comply with the "Code of best practice on securities transactions in Vallourec shares and on the insider trading operation"; and
- to comply with the ethical rules of Article 19 of the AFEP-MEDEF Corporate Governance Code of November 2016.

(1) Starting on the day of their appointment, members of the Supervisory Board must hold at least 50 Vallourec shares. The 450 additional shares must be acquired by 31 December of the year following the year they take office, in order to allow them to use their attendance fees to acquire them. These provisions do not apply to members representing employees (whether or not they are shareholders).

Once a year, an item on the Supervisory Board's agenda is dedicated to the formal assessment of the operation of the Supervisory Board; the corresponding findings for fiscal year 2017 are presented in Section 7.1.2.5 of this Chapter.

When first appointed, the members of the Supervisory Board receive a guide containing all the documents concerning the Group's governance (the bylaws, the internal regulations, the AFEP-MEDEF Corporate Governance Code, the Code of Best Practices, etc.) and the Group's activities. At the request of members, visits are arranged to plants in France and abroad.

The members also have the opportunity, if they so wish, to learn about specific aspects concerning the Group, its businesses, sector of activity and organization. At the request of members, the Group may also organize internal and external training sessions specific to their role as a member of the Supervisory Board. Internal training is provided by the Group's Legal Director based on the Group's corporate and stock exchange documentation and any particular questions raised by the member before the training meeting. It is supplemented by external training provided by an independent organization specializing in training for Company Directors.

The members of the Supervisory Board are able to meet with the primary senior executives of the Group, including without members of the Management Board being present. In the latter case, said members must have been informed first. In order to ensure the process operates correctly, requests by any member for a meeting with the primary senior executives of the Group are made to the Chairman of the Supervisory Board.

7.1.2.3 Independent members and members associated with the Company

The annual review of the independence of members of the Supervisory Board was conducted by the Supervisory Board on 20 February 2018, at the recommendation of the Appointments, Compensation and Governance Committee. The Supervisory Board considered all of the criteria of the AFEP-MEDEF Code, which was revised in November 2016, to evaluate the independence of its members, namely:

- not being an employee or executive corporate officer of the Company, nor an employee, executive corporate officer or Director of a company consolidated with it, and not having been in such a position for the preceding five years;
- not being an executive corporate officer in a company in which the Company directly or indirectly holds a directorship or in which an employee, appointed as such, or an executive corporate officer of the Company (currently or who was in such a position less than five years ago) holds a directorship;
- not being a customer, supplier, investment banker, lending banker (or being directly or indirectly linked to these people):
  - of the Company or its Group, or
  - for which the Company or its Group represents a significant portion of activity;
- not having a close family connection with a corporate officer;
- not having been Statutory Auditors of the Company during the last five years;
- not being a member of the Company's Board for more than 12 years, noting that Independent Director status is lost after twelve years;
- a non-executive corporate officer cannot be considered independent if they receive variable compensation in cash, shares, or any other compensation related to the Company's or the Group's performance;
- the members representing major shareholders of the Company or of the parent company can be considered independent from the moment these shareholders do not have control over the Company. However, beyond a threshold of 10% of capital or of voting rights, the Board, on the report of the Appointments, Compensation and Governance Committee, systematically questions qualification as an independent member, taking into account the composition of the Company's capital and the existence of potential conflicts of interest.

The Supervisory Board noted that Bpifrance Participations, which held 14.56% of the Company's capital and 15.58% of its theoretical voting rights as at 31 December 2017, is not an independent member of the Supervisory Board.

The Supervisory Board also considered that Yuki Iriyama, appointed by the Shareholders' Meeting of 12 May 2017, at the proposal of NSSMC, a strategic partner and major shareholder who, as at 31 December 2017, held 14.78% of the capital and 14.84% of the theoretical voting rights of the Company, in accordance with the terms of a shareholders' agreement, is not an independent member of the Supervisory Board, despite specific measures to prevent access to competitive information and the fact that Yuki Iriyama sits on said board in a personal capacity.

The Supervisory Board has debated whether or not to assess the relationship maintained by Board members with Vallourec or its Group, along with the potential conflicts of interest this could generate, as being significant. Within this framework it has conducted a more specific in-depth examination of the following members, upon which it issued the findings below:

- Ms. Pascale Chargrasse, who represents employee shareholders on Vallourec's Supervisory Board, has been an employee of the Group since 1985 and should thus be considered a non-independent member in application of the criteria of the AFEP-MEDEF Code. The Supervisory Board nevertheless noted that the AFEP-MEDEF Code excluded employee shareholders from the analysis of independent members, and thus did not recognize Ms. Pascale Chargrasse when determining the proportion of independent members;
- Mr. Mickaël Dolou, who represents employees on Vallourec's Supervisory Board, has been an employee of the Vallourec Group since 2006 and should thus be considered a non-independent member in application of the criteria of the AFEP-MEDEF Code. The Supervisory Board nevertheless noted that the AFEP-MEDEF Code excluded the member representing employees from the analysis of independent members, and thus did not recognize Mr. Mickaël Dolou when determining the proportion of independent members;
- Ms. Alexandra Schaapveld is Director of Société Générale, a banking institution of the Vallourec Group. The Supervisory Board noted that this business relationship predates the appointment of Alexandra Schaapveld as Director of Société Générale and as a member of Vallourec's Supervisory Board; as a non-executive and independent Director of Société Générale, Ms. Alexandra Schaapveld does not participate in any way in the organization of the business relationship between Vallourec and Société Générale, nor does she personally benefit from it, and the bank overdrafts of Société Générale for the

Vallourec Group in 2017 were insignificant both in their amount (less than 0.1% of the Group's gross debt) and from the perspective of the other outside financing of the Vallourec Group. These elements, both in terms of quality and quantity, allowed the Supervisory Board to confirm Alexandra Schaapveld's independence;

- Ms. Vivienne Cox is Chairman of the Supervisory Board. The balance of dual corporate governance in which the Supervisory Board has a role, and which is essentially based on controlling the action of the Management Board, and governed by a principle of non-interference in management, in principle avoids all risk of a conflict of interest, unless one of the other criteria for evaluating independence applies. In its recommendation of 11 December 2014, the French securities regulator (*Autorité des Marchés Financiers*), nevertheless wanted to transpose to Chairmen of Supervisory Boards the requirements for Chairmen of Boards of Directors in terms of independence and, to that end, asked that the independence of a Chairman of a Supervisory Board be justified in detail. In this context, the Supervisory Board confirmed Vivienne Cox's independence for the following reasons:
  - Ms. Vivienne Cox joined Vallourec's Supervisory Board in 2010, after having spent her entire career outside of the Group,
  - Ms. Vivienne Cox was never an employee of Vallourec, nor an executive corporate officer of the Group,
  - the companies in which Ms. Vivienne Cox holds a position as a corporate officer have no business relationships with the Vallourec Group, and
  - Ms. Vivienne Cox collects fixed compensation, excluding any variable compensation in cash, shares, or any other compensation related to the Company's or the Group's performance, which could impact the objectivity of her judgment.

The business relationships maintained between (i) the companies (excluding the Group) in which the other members of the Supervisory Board hold offices, on the one hand, and (ii) the Group, on the other, were reviewed but deemed insignificant both in quantitative terms with regard to their amount, which was less than 0.50% of the Group's revenue, and in qualitative terms assesses with particular regard to the continuity, importance, and the organization of the relationship.

Based on these findings, it appears, as at 31 December 2017, that all Board members, with the exception of Bpifrance Participations and Mr. Yuki Iriyama, must be considered to have no interest vis-à-vis the Company and that consequently, the proportion of independent members of the Supervisory Board stands at 81.82%.

In compliance with the recommendations of the French securities regulator (*Autorité des Marchés Financiers*), the table below presents the position of each of the members of the Supervisory Board, as at 31 December 2017, with regard to the criteria of independence examined by the Supervisory Board and its Appointments, Compensation and Governance Committee:

	Not having been an employee or executive corporate officer during the five preceding years	Not having cross-directorships	Not having significant business relationships	Not having a close family connection with a corporate officer	Not having been Statutory Auditor of the Company during the last 5 years	Not having been a member of the Supervisory Board for more than 12 years	Not representing a shareholder with more than 10% of share capital	No candidature presented by a shareholder with more than 10% of share capital, in application of an agreement	Qualification used by the Board
Vivienne Cox	Y	Y	Y	Y	Y	Y	Y	Y	Independent
Pierre Pringuet	Y	Y	Y	Y	Y	Y	Y	Y	Independent
Maria Pilar Albiac-Murillo	Y	Y	Y	Y	Y	Y	Y	Y	Independent
Philippe Altuzarra	Y	Y	Y	Y	Y	Y	Y	Y	Independent
Cédric de Bailliencourt	Y	Y	Y	Y	Y	Y	Y	Y	Independent
Bpifrance Participations, represented by Alexandre Ossola	Y	Y	Y	Y	Y	Y	N	Y	Not independent
Laurence Broseta	Y	Y	Y	Y	Y	Y	Y	Y	Independent
Pascale Chargrasse	N	Y	Y	Y	Y	Y	Y	Y	Not independent
Mickaël Dolou	N	Y	Y	Y	Y	Y	Y	Y	Not independent
José-Carlos Grubisich	Y	Y	Y	Y	Y	Y	Y	Y	Independent
Henri Poupart-Lafarge	Y	Y	Y	Y	Y	Y	Y	Y	Independent
Yuki Iriyama	Y	Y	Y	Y	Y	Y	Y	N	Not independent
Alexandra Schaapveld	Y	Y	Y	Y	Y	Y	Y	Y	Independent

Y: means that the independence criterion has been met.

N: means that the independence criterion has not been met.

7.1.2.4 Conditions for preparation and organization of work of the Supervisory Board

In order to best ensure that Board members are able to attend meetings, the schedule of meetings for the year is prepared approximately one year in advance.

The actual attendance rate of members at Supervisory Board meetings, calculated as a ratio of the number of members present to the total number of members, was 89% for all of the meetings held in 2017.

The members of the Management Board were present at all of the meetings. The Supervisory Board nevertheless makes sure that a portion of its meetings are held without the Management Board being present, in particular for items on the agenda that directly concern them.

Each meeting is confirmed on average one week in advance by sending a notice of meeting, which is enclosed with the agenda, the draft minutes from the previous meeting on which the Supervisory Board members are asked to share any comments, including before the meeting, as well as a file containing, except in certain cases, all of the supporting documents relating to the subjects recorded in the Supervisory Board's agenda. For meetings at which the quarterly results are reviewed, these papers also contain the Management Board's quarterly report to the Supervisory Board on the Company's performance. Where necessary, the Supervisory Board relies on preliminary work carried out by the Committees.

Meetings are chaired by the Supervisory Board Chairman, who ensures, in particular, that each member expresses his/her opinion on important matters. Any conflicts of interest are handled in conformity with the principles indicated in paragraph 7.1.5 of this Registration Document.

The Company's Statutory Auditors attended the Supervisory Board meetings at which the annual and interim financial statements were reviewed.

7.1.2.5 Activity of the Supervisory Board in 2017

In 2017, the Board met ten times. The average length of its meetings was approximately four hours and thirty minutes.

As regards the conducting of business, the work of the Supervisory Board primarily concerned:

- an examination of the annual, semiannual and quarterly financial statements, and of the budget;
- an examination of quarterly business reviews of the Management Board;
- safety developments at the industrial sites;
- the new organization of the Group, which was established in early 2017, structured around four Regions and two central Departments, the Development and Innovation (D&I) Department and the Technology & Industry (T&I) Department;
- monitoring of strategic projects, in particular the Transformation Plan;
- developments in markets and competition;
- the monitoring of pending projects and negotiations, in particular the plan to transfer Vallourec's Drilling Products activity to National Oilwell Varco (NOV), an American oil services group;
- risk mapping;
- the policy on financing and bond issues, including Bonds Convertible into New Shares and/or Exchangeable for Existing Shares;
- the Group's internal control and audit policy;
- the Group's guidelines on Corporate Social Responsibility; and
- the challenges and opportunities of Digital.

By extending the new structure of the Group, and in accordance with the areas of improvement identified during the 2016 Supervisory Board evaluation, the exposure of members of the Executive Committee to the Supervisory Board increased when regional and topic-specific concerns arose. The Supervisory Board thus heard Directors of the Middle East/Asia and Europe Regions present challenges and the strategy of the regions under their responsibility, reviewed the engagements of the Technology & Industry Department and examined the sales forces under the responsibility of the Development & Innovation Department.

Regarding the Governance plan, the Supervisory Board examined the following subjects in particular:

- the composition of the Management Board, within the context of Mr. Jean-Pierre Michel's retirement;
- the Management Board succession plan, particularly in case of an unforeseeable vacancy;
- the compensation policy for corporate officers;
- the compensation of members of the Management Board for 2016 and 2017, as well as the report on compensation for the purpose of implementing the Say on Pay mechanism;
- Vallourec's policy on enabling the personnel to share in the Group's net profits (the Value 17 international employee share ownership plan, the performance share allocation plan and share subscription options for managers (including members of the Executive Committee);
- the policy on the composition of the Supervisory Board;
- the employee representative's appointment to the Board;
- the composition of the Supervisory Board and its Committees;
- the establishment of specific measures to prevent Mr. Yuki Iriyama's from accessing sensitive competitor information, in accordance with the terms of the shareholders' agreement entered into with NSSMC on 1 February 2016;
- the independence of the Board members;
- compliance of Group governance with the recommendations of the AFEP-MEDEF Code;
- the Group's Human Resources strategy, including the policy on professional and wage equality, as well as the change in culture being deployed within the Group.

DUTIES AND ACTIVITIES OF THE CHAIRMAN OF THE SUPERVISORY BOARD

In addition to his legal duties, the Chairman is notably tasked with the following:

- speaking with members of the Management Board and Executive Committee about certain significant and strategic events for the Company, in particular when preparing for meetings of the Strategy Committee, which she chairs, and more generally when preparing for meetings of the Supervisory Board;
- participating in certain Board Committees;
- ensuring the Supervisory Board is balanced, by participating in the process of selecting new members and considering renewal of offices that are expiring;
- ensuring proper integration of new members within the Supervisory Board;
- ensuring proper completion of the annual operating evaluation of the Supervisory Board and individually relaying comments regarding each member's effective contribution to the work of the Board to the members concerned;
- ensuring implementation of the areas for improvement identified as part of the annual operating evaluation of the Supervisory Board.

In 2017, the Chairman's activity was specifically devoted to the following points:

- interviews with the Management Board on the definition and implementation of the new Group structure;
- interviews with the Management Board on the implementation of the Transformation Plan;
- preparation with the teams concerned of the Strategy Committee sessions dedicated to digital, CSR, duties and challenges of the new Technology & Industry Department (T&I,) the Group's innovation policy, and the outlook for Vallourec's "Drilling Products" activity;
- participation, as a guest, at all meetings of the Finance and Audit Committee;
- participation in the process of selecting new members of the Supervisory Board and interviews with the new members as part of their integration process;
- interviews with Supervisory Board members whose term is expiring about their contributions;
- interviews relating to the Management Board succession plan, particularly in case of an unforeseeable vacancy;
- monitoring of an action plan to implement the areas for improvement identified as part of the annual operating evaluation of the Supervisory Board;
- involvement in the social initiatives of the Company: on 29 June 2017, Vivienne Cox participated in a meeting organized by the Women@ Vallourec network, which served to reiterate the importance of diversity and the value added by male-female equality to the Group's performance and attractiveness. More than 200 people followed this meeting live in Boulogne, as well as remotely by video or phone.

EVALUATION OF THE SUPERVISORY BOARD

Since 2008, the Supervisory Board has completed a formalized evaluation of its operations. For 2017, this evaluation was managed by the Board Secretary, under the supervision of the Appointments, Compensation and Governance Committee, based on a questionnaire containing seven governance topics, and containing questions relating to the actual contribution of each member to the Board's work. The Chairman individually relays the result of each evaluation to each Board member concerned.

The summary of the Supervisory Board members' responses, which was communicated to the Board members and discussed during the 20 February 2018 meeting, indicates high member satisfaction with the Supervisory Board's operation, both in terms of the composition of the Board (age, nationality, diversity of skills, cultures and experiences), the actual contribution of the members, and the pertinence of proposals to renew a mandate, quality, transparency and ease of discussions within the Board and with the Management Board. The Board members shared their satisfaction about the topics addressed and examined at the meeting, reflecting the current realities, challenges and major issues of the Company. The Board was also satisfied with the consideration for areas of improvement identified during the previous self-evaluation, notably exposure of members of the Executive Committee to the Supervisory Board. For the future, the following areas of improvement were recommended in particular:

- pursuing diversification of profiles and expertise within the Supervisory Board; and
- a more balanced distribution of the time devoted to presentations and of the time devoted to exchanges between the members during meetings of the Supervisory Board.

7.1.2.6 Committees set up within the Supervisory Board

The Supervisory Board is assisted by three specialized Committees:

- the Finance and Audit Committee;
- the Appointments, Compensation and Governance Committee; and
- the Strategy Committee.

The Supervisory Board appoints the members of each of the Committees, establishes their powers and determines their compensation. The role of these Committees is to provide advice and to prepare the necessary information for the Board's deliberations. They issue proposals, make recommendations and provide advice in their areas of expertise. For each meeting, a preparatory set of papers is sent out several days in advance. At the meeting, each presentation is made, where applicable, in the presence of one or more members of the Management Board, by the specialist senior executive for the issue concerned and followed by discussion. A report of the meetings is prepared for the members of the Supervisory Board.

To fulfill their role, the Committees may conduct, or arrange to have conducted, any analysis, using external experts if required. They may invite any external persons of their choice to their meetings.

The term of office of the members of each of the Committees is the same as their term of office as members of the Supervisory Board, unless the composition of the Committee is changed earlier. Subject to this condition, the term of office of a Committee member may be renewed at the same time as the term of office of a member of the Supervisory Board.

A Committee's composition may be changed at any time by decision of the Supervisory Board.

FINANCE AND AUDIT COMMITTEE

Composition

The Finance and Audit Committee is comprised of a minimum of three members and a maximum of five members, who are chosen from among the members of the Supervisory Board and have specific expertise in finance, accounting or statutory auditing. As at 28 February 2018, it consisted of three members: Mr. Henri Poupart-Lafarge (Chairman), Bpifrance Participations, represented by Mr. Alexandre Ossola and Ms. Alexandra Schaapveld, all independent with the exception of Bpifrance Participations, or a 66.67% proportion of independent members within the Finance and Audit Committee. The Chairman of the Board and the Lead Member are also invited to the Finance and Audit Committee meetings.

All the members have particular knowledge of finance or accounting, or statutory auditing, and have the necessary expertise, experience and qualifications to successfully perform their tasks within the Finance and Audit Committee. The Chairman, Mr. Henri Poupart-Lafarge, spent over twenty years in the Alstom Group, notably in finance and management control (for a description of the expertise and experience of members of the Finance and Audit Committee: see above, Section 7.1.1.2 "The Supervisory Board"). When they are first appointed, the members are sent detailed information on the Group's specific accounting, financial and operating processes.

Powers

The role of the Finance and Audit Committee is to prepare the necessary information for the Supervisory Board's deliberations, which concern tracking issues in relation to the preparation and control of accounting and financial data, in compliance with Article L.823-19 of the French Commercial Code (*Code de commerce*). To this end, it issues opinions, proposals and recommendations in its area of expertise. It acts under the authority of the Supervisory Board, for which it must not be substituted, and regularly informs it of its tasks, the results of the task of certifying the financial statements, how this task contributed to the integrity of the financial information, along with the role it played in this process. It provides immediate notice of any difficulty encountered while performing its tasks.

Within this context, the Finance and Audit Committee tracks:

- the process of preparation of financial information.

  As needed, it makes recommendations to guarantee the integrity of the process of preparing the financial information.

  In this respect, the Committee is presented with:

  - the retrospective and forward-looking financial data each quarter,
  - risk exposure and significant contingent liabilities and commitments of the Group, and
  - at its request, accounting matters that may have a significant impact on the preparation of the financial statements.

  Draft external financial communications are presented to the Committee for its opinion;

- the effectiveness of the internal control and risk management systems, as well as of the internal audit system, as concerns the procedures relating to the preparation and processing of the accounting and financial information, without compromising its independence.

  In this respect, each year the Committee is presented with:

  - the internal audit plan,
  - the assignment reports and main findings of the audits,
  - a summary of the actions taken in the area of risk management, and
  - a summary of the Statutory Auditors' performance of their duties, in particular the statutory audit of the Company and consolidated financial statements.

  To that end, the Statutory Auditors present the results of their audit at each half-year, emphasizing, where applicable, the audit adjustments and significant weaknesses in internal control that were identified during the work, and the accounting options used.

  The Committee gives the Supervisory Board its opinion as to the relevance and consistency of the accounting methods used to prepare the statutory and consolidated financial statements;

- compliance with the conditions for independence of the Statutory Auditors and the rules relating to the cap on their audit fees for services other than certification of the financial statements.

  In this regard, the Committee manages the procedure for selecting the Statutory Auditors, submits a recommendation to the Supervisory Board on the Statutory Auditors proposed for appointment by the Shareholders' Meeting, receives the Statutory Auditors' statement of independence and receives an annual summary of all the services provided to the Vallourec Group by the Statutory Auditors and their networks.

The Committee is in charge of approving the Statutory Auditors' provision of services other than the certification of financial statements, which are not prohibited services, upon analyzing the risks to the Statutory Auditors' independence and the safeguards applied by the latter to mitigate these risks.

In addition to the above duties, the Supervisory Board or its Chairman may decide to refer any issue requiring the Board's prior approval to the Finance and Audit Committee.

Also, the Supervisory Board or its Chairman may request it to examine a specific matter in order to determine the financial implications.

More generally, the Finance and Audit Committee reviews the various elements of the Group's financial strategy.

Operation

The Finance and Audit Committee meets at least four times a year to review the interim and annual financial statements before they are presented to the Supervisory Board. Subject to this condition, it defines the frequency of its meetings by agreement with the Chairman of the Supervisory Board. In 2017, the Finance and Audit Committee met five times, with an effective attendance rate of 100%. Its usual representative is the member of the Management Board in charge of Finance and, where applicable, employees designated by said member. It likewise meets with the people in charge of finance and accounting, cash and cash equivalents, internal audits, risk management and internal control, as well as with the Statutory Auditors, including, if the Committee so desires, without the members of the Management Board being present. In the latter case, said members must have been informed first. On 8 November 2017, the Finance and Audit Committee met with the Statutory Auditors; the members of the Management Board were not present.

The Finance and Audit Committee may also invite the Chairman of the Management Board to participate in its work, and, in exercising its powers, may contact the primary senior executives, after informing the Chairman of the Management Board, and reporting to the Supervisory Board accordingly.

A complete file containing all supporting documents relating to the subjects recorded in the agenda is sent to each of the Committee members several days prior to the meeting date. For meetings which relate to the presentation of the financial results, this file also includes the corresponding financial statements. The Board meetings devoted to reviewing the annual, semiannual and quarterly results are generally held within a sufficient period of time before the meetings of the Supervisory Board ruling on that subject.

Each year, the Committee evaluates its activities and reports on them to the Supervisory Board.

The Committee may request outside technical studies on issues falling within its competence, after having so informed the Chairman of the Supervisory Board or the Board itself, and is responsible for reporting on them to the Board. In the event that outside consulting services are used, the Committee must ensure that the advice in question is independent, objective and competent.

The Finance and Audit Committee has internal regulations aimed at specifying the role, composition and operating rules of the Committee. These regulations are strictly internal and are not intended to and do not replace the Company bylaws or the laws and regulations governing commercial companies. After the amendment of the statutory auditing of the financial statements took effect in 2016, the internal regulations of the Finance and Audit Committee were updated by the Supervisory Board on 8 November 2016.

Activities of the Finance and Audit Committee in 2017

In 2017, the Committee also examined and formed opinions on the following issues:

- the Group's financial communication projects;
- the quarterly cash and cash equivalents position and the medium and long-term financing plan;
- change in working capital requirements;
- the dividend policy and the proposal to not pay a dividend for fiscal year 2016;
- review of the 2017 assumptions;
- the budget for 2018;
- changes in accounting principles and the accounting policies used for preparing the year-end 2017 financial statements, including a review of the Group's impairment testing methods;
- the internal and external audit plans and their results;
- the organization of risk management and internal control within the Group;
- risk mapping;
- the Report of the Chairman of the Supervisory Board on internal control and risk management;
- the Value 17 employee share ownership offer;
- adaptation of performance management to the Group's new structure;
- selection of the Statutory Auditors;
- the Group's ethics and compliance policy;
- sensitivity to the foreign exchange risk and the policy for hedging transactions;
- the Group's tax practices;
- implementation of the reform on the legal audit of accounts within the Group, presenting the new audit report and the supplementary report to the Audit Committee; and
- implementation within the Group of Law No. 2016-1691 of 9 December 2016 relating to transparency, the fight against corruption and the modernization of the economy, known as the "Sapin II Law".

The Statutory Auditors attended all meetings of the Finance and Audit Committee for fiscal year 2017. They presented a report on the work completed as part of their mandate, emphasizing key points from the legal audit results and the accounting options used.

APPOINTMENTS, COMPENSATION AND GOVERNANCE COMMITTEE

Composition

The Appointments, Compensation and Governance Committee is comprised of a minimum of three members and a maximum of five members. As at 28 February 2018, it consisted of five members: Mr. Pierre Pringuet (Chairman), Ms. Laurence Broseta, Ms. Pascale Chargrasse (representing employee shareholders), Ms. Alexandra Schaapveld and Mr. Mickaël Dolou (representing employees). They are all independent [(1)].

The Chairman of the Management Board is associated with the work concerning appointments and governance, except in cases that concern his personal situation.

Powers

The role of the Appointments, Compensation and Governance Committee is to prepare information for the Supervisory Boards' deliberations, which concern tracking issues relating to the appointment and compensation of corporate officers, and to the governance of the Group. To this end, it issues opinions, proposals and recommendations in its area of expertise. It acts under the authority of the Supervisory Board, to which it reports, and for which it must not be substituted, and informs it of any difficulty encountered while performing its tasks.

The duties of the Appointments, Compensation and Governance Committee are as follows:

Appointments

- Preparing the procedure used to select members of the Supervisory Board and Management Board and determining the criteria to be used.
- Drawing up proposals for appointments and re-appointment.
- Regularly reviewing the composition of the Management Board and establishing a succession plan for members of the Management Board, in order to be able to propose succession solutions to the Board, in particular in the event of an unexpected vacancy.
- Regularly reviewing the composition of the Board and its Committees and making recommendations on changes to its composition when this appears appropriate.

The Committee's proposals for the offices of members of the Board are guided by the interests of the Company and all of its shareholders. They particularly take into account the desired balance of the Board's composition, as concerns the composition and evolution of the Company's shareholders, as well as the diversity of its areas of expertise, gender, and nationalities. The Committee ensures that its proposals to the Board reflect the necessary independence and objectivity.

The Committee completes its research on potential candidates before taking any action with them.

Compensation

- Proposals concerning the amounts and allocation of attendance fees paid to Supervisory Board members, as well as the compensation of members of the Committees.
- Proposals concerning the compensation of the Chairman of the Board.
- Compensation of members of the Management Board: the Committee is responsible for recommending to the Board the structure and level of the compensation paid to each member of the Management Board (fixed portion, variable portion and benefits in kind).
- Performance shares and share subscription or share purchase options for members of the Management Board.
- Policy for allocating performance shares and share purchase or subscription options to managers and executives and/or staff of the Group.

As regards members of the Executive Committee, the Committee is informed of their appointment, the compensation policy and succession plan concerning them.

Governance

- Reviewing the operation of the management bodies, particularly as regards changes in French regulations concerning the governance of listed companies and in light of the recommendations of the AFEP-MEDEF Corporate Governance Code and, where applicable, making proposals to the Board on updating the Company's corporate governance rules.
- Preparing the annual assessment of the Supervisory Board and recommendations resulting from such assessment.
- Reviewing and following up on any situation involving a conflict of interest between a Board member and the Company, which could lead the Board to request an express commitment from the member in such a situation.
- Reviewing requests from Supervisory Board members concerning the assumption of new offices or duties outside the Company.
- Reviewing the independence of Board members with regard to specific criteria which have been made public.

Operation

The Appointments, Compensation and Governance Committee meets at least twice a year. Subject to this condition, it defines the frequency of its meetings by agreement with the Chairman of the Supervisory Board. The Committee met nine times in 2017 with an effective attendance rate of 98%.

Each year, the Committee proceeds to evaluate its own activities and report on them to the Supervisory Board.

The Committee may likewise, in exercising its powers, contact the primary senior executives, after having informed the Chairman of the Management Board, and is responsible for reporting to the Supervisory Board accordingly.

The Committee may request outside technical studies on issues falling within its competence. In the event that outside consulting services are

(1) In accordance with the recommendations of the AFEP-MEDEF Code, Ms. Pascale Chargrasse, who represents employee shareholders, and Mr. Mickaël Dolou, who represents employees, are not calculated in the analysis.

used, the Committee ensures that the advice in question is independent, objective and competent.

The Appointments, Compensation and Governance Committee has internal regulations aimed at specifying the role, composition and operating rules of the Committee. These regulations are strictly internal and are not intended to and do not replace the Company bylaws or the laws and regulations governing commercial companies.

Activities of the Appointments, Compensation and Governance Committee in 2017

In 2017, the Committee also examined and formed opinions on the following issues:

- Management Board member compensation for 2016, 2017 and 2018, as well as the report on 2016 compensation in view of implementing the Say on Pay mechanism;
- the overall budgets and the number of performance shares and share subscription options allocated to employees and each member of the Management Board, and the requirement for such members to retain a portion of the shares resulting from the exercise of options and of the performance shares allocated;
- the Management Board succession plan, particularly in case of an unforeseeable vacancy;
- Vallourec's policy on enabling the personnel to share in the Group's net profits (the Value 17 international employee share ownership plan, the performance share allocation plan and share subscription options for managers (including members of the Executive Committee);
- the policy on compensation of the main senior executives who are not corporate officers;
- the Group's Human Resources strategy;
- policy on the composition of the Supervisory Board;
- annual evaluation of the Supervisory Board and Committees;
- compliance of Group governance with the recommendations of the AFEP-MEDEF Code;
- composition of the Supervisory Board and its Committees, in particular the appointment of a Lead Member;
- the independence of the Board members;
- regulatory changes affecting governance; and
- the annual report of the French securities regulator (*Autorité des Marchés Financiers*) regarding business governance and executive management compensation, and the annual report of the Higher Committee on Corporate Governance.

STRATEGY COMMITTEE

Composition

The Strategy Committee is comprised of a minimum of three members and a maximum of five members. As at 28 February 2018, it consisted of four members: Ms. Vivienne Cox (Chairman) and Messrs. Philippe Altuzarra, José Carlos Grubisich and Bpifrance Participations, represented by Mr. Alexandre Ossola, all independent with the exception of Bpifrance Participations, i.e. a proportion of independent members within the Strategy Committee of 75%.

Powers

The Strategy Committee is responsible for preparing the Supervisory Board's deliberations with regard to the Group's strategic directions and long-term future. To this end, it issues opinions, proposals and recommendations in its areas of expertise. It acts under the authority of the Supervisory Board, to which it reports, and for which it must not be substituted, and informs it of any difficulty encountered while performing its tasks.

In the course of its duties, the Strategy Committee reviews:

- each year, the Group strategy plan presented by the Management Board and any changes as well as the assumptions on which it is based;
- any projected merger or partial transfer of assets, any industrial or commercial agreement with other companies that could affect the Company's future and, more generally, any major transaction (such as external acquisition or disposal operations, significant capital expenditure in organic growth or internal restructuring operations) that could materially alter the business scope or financial structure of the Group or the type of risks it incurs. Within this context, the Committee reviews:

  (i) capital expenditure transactions when they exceed €50 million,

  (ii) acquisition or disposal transactions when they exceed €50 million, and

  (iii) following their implementation, the conditions for implementing and achieving objectives for the transactions that have been authorized by the Supervisory Board.

The Committee may carry out any other duties, regular or occasional, assigned to it by the Supervisory Board in its area of competence. It may suggest that the Supervisory Board refer to it on any particular point which it considers to be necessary or relevant.

Operation

The Committee met three times in 2017 with an effective attendance rate of 100%.

Its usual representative is the member of the Management Board that is in charge of Operations, along with, where applicable, the employees designated by said member.

Each year, the Committee prepares a summary of its activities and reports on them to the Supervisory Board.

The Committee may invite the Chairman of the Management Board to participate in its work, and, in exercising its powers, may contact the primary senior executives, after informing the Chairman of the Management Board, and accordingly is responsible for reporting to the Supervisory Board.

The Committee may request outside technical studies on issues falling within its competence, after having so informed the Chairman of the Supervisory Board or the Board itself, and is responsible for reporting on them to the Board. In the event that outside consulting services are used, the Committee must ensure that the advice in question is independent, objective and competent.

The Strategy Committee has internal regulations aimed at specifying the role, composition and operating rules of the Committee. These regulations are strictly internal and are not intended to and do not replace the Company bylaws or the laws and regulations governing commercial companies.

7.1.3 Declarations concerning the members of the Management and Supervisory Boards

To the Company's knowledge:

- no member of the Management Board or Supervisory Board has been convicted of fraud during the past five years;
- no member of the Management Board or Supervisory Board has been involved, during the past five years, with a bankruptcy, receivership or liquidation as a member of an administrative, management or supervisory body;
- no member of the Management Board or Supervisory Board has been charged, during the past five years, with an offense or been the subject of disciplinary action on the part of the statutory or regulatory authorities (including designated professional bodies);
- no member of the Management Board or Supervisory Board has been prevented, during the past five years, by a court from acting as a member of an administrative, management or supervisory body of an issuer, or from being involved in managing or running the business of an issuer; and
- no member of the Management Board or Supervisory Board has a current or potential conflict of interest between his duties to Vallourec and his private interests and/or other duties.

7.1.4 Regulated agreements

Loans and guarantees

No loans or guarantees have been granted by the Company or by a Group company to any member of the Management Board or Supervisory Board.

Service agreements providing for the granting of benefits

To the Company's knowledge, there is no service agreement between any member of the Management Board or Supervisory Board and the Company providing for the granting of benefits.

7.1.5 Management of conflicts of interest

To prevent any risk of a conflict of interest between a member of the Supervisory Board and the Management Board or any of the Group's companies, the Appointments, Compensation and Governance Committee constantly monitors the independence of members with regard to the AFEP-MEDEF Corporate Governance Code criteria; the Supervisory Board includes this as an item on its agenda at least once a year.

Each member is required to inform the Board of any situation of a conflict of interest, even a potential one, and to refrain from taking part in discussions or voting on any issue at Board meetings when he/she may be in a conflict of interest situation, and to leave the Board meeting if a subject exposing the member to such a situation is discussed.

The Lead Member acts in a precautionary manner to raise awareness about conflicts of interest among the members of the Supervisory Board, and draws said Board's attention to any conflict of interest situation that has been identified, even a potential one.

When one of the members has a conflict of interest, whether actual or potential, regarding a subject matter to be debated by the Board, the Board ensures, by relying on the Appointments, Compensation and Governance Committee, that the information regarding this subject matter is not communicated to that member. Since 2012, a member has not been able to accept another position or appointment, or make a significant investment in any company or business in competition with Vallourec or that operates upstream or downstream of Vallourec, without the Board's prior consent. As an exception, this rule does not apply to legal entities that are members of the Board, but if they take new positions or similar appointments, each case will be discussed with the Board in order to eliminate any risk of conflicts of interest. Members of the Board, Non-voting Board members (*Censeurs*) and members of the Management Board must inform the Chairman of the Board before accepting a new appointment in other companies. The Chairman of the Board will give an opinion after consulting with the Appointments, Compensation and Governance Committee.

The information presented in this section is taken from the Internal Regulations of the Supervisory Board, which are available on the Company's website (http://www.vallourec.com).

7.1.6 Declaration on Corporate Governance

The Supervisory Board decided in 2008 to adopt the AFEP-MEDEF Corporate Governance Code, as amended for application to limited-liability companies managed by a Supervisory Board and a Management Board. Vallourec complies with all of the recommendations prescribed in the Code under the conditions set out in the summary table.

Compliance with the recommendations of the AFEP-MEDEF Code

The following table summarizes the recommendations of the AFEP-MEDEF Code that Vallourec has chosen not to apply and the circumstantial explanations for this.

Recommendations of the AFEP-MEDEF Code (November 2016)	Application by Vallourec
Paragraph 10.3 of the AFEP-MEDEF Code recommends "holding a meeting each year without the executive corporate officers in attendance".	The Supervisory Board has chosen to set aside a time for discussions without the executive corporate members in attendance at the end of each of its meetings, instead of a full meeting each year.
Paragraph 22 of the AFEP-MEDEF Code recommends that the Board "shall determine a minimum number of shares that the executive corporate officers must hold in registered form until the end of their terms. This Decision shall be reviewed at least each time their office is renewed. (...) As long as that number has not been reached, the executive corporate officers shall devote a portion of their exercised options or vested shares to that end, as determined by the Board".	Given the significant number of Vallourec shares already held by Management Board members, and the binding obligations to hold shares received from both the exercise of options and the vesting of performance shares, Vallourec believes that it is not desirable to compel the members of the Management Board to purchase additional shares with their own funds and to build a securities portfolio almost exclusively composed of Vallourec shares.
Paragraph 24.6.2 of the AFEP-MEDEF Code recommends that the supplementary defined-benefit pension schemes of corporate officers satisfy the condition that, "the beneficiary be a corporate officer or employee of the Company at the time of claiming their retirement rights under the rules in force," as well as other rules not applicable to schemes closed to new beneficiaries which can no longer be changed.	The supplementary defined-benefit pension scheme of the members of the Management Board has been closed to new beneficiaries and future rights since the end of 2015 and cannot be changed. The beneficiaries may only benefit from "crystallized" vested rights upon liquidation of their social security pension.
Paragraph 20.1. of the AFEP-MEDEF Code recommends that the method for compensating Board Members "[take into] account, according to the terms that [the Board] defines, the actual participation of the [members] on the Board and in the Committees, and that it thus [contain] a preponderant variable portion".	Since 1 January 2014, the structure of the Supervisory Board Chairman's compensation no longer contains a variable portion taking any variations linked to attendance into account. All of the elements of her compensation which applied up to year-end 2013 (attendance fees and fixed annual compensation) were aggregated, resulting in just one single fixed annual compensation. The Supervisory Board considers that this method of compensation is reasonable and consistent to the extent that the Supervisory Board Chairman performs duties and procedures which go well beyond merely attending the Supervisory Board and Committee meetings. It should nevertheless be emphasized, for all practical purposes, that in 2017 the Supervisory Board Chairman was present at all meetings of the Supervisory Board, the Strategy Committee, as well as at several of the Finance and Audit Committee meetings (even though, as at 28 May 2014, she was no longer a member of this Committee).

In view of the above, Vallourec believes that it complies with the Corporate Governance Regulations currently in force in France.

7.2 Compensation and benefits of all kinds

Details are provided below of the compensation and benefits awarded to Vallourec's corporate officers by the Company and companies controlled by the Company within the meaning of Article L. 233-16 of the French Commercial Code *(Code de commerce),* in accordance with the presentation defined by the AFEP-MEDEF Corporate Governance Code, and the most recent recommendations of the French securities regulator *(Autorité des Marchés Financiers).* They should be read in light of the compensation policy for corporate officers (see below, paragraph 7.2.1 of this chapter).

7.2.1 Compensation policy for corporate officers

This report was drafted in application of Article L. 225-82-2 of the French Commercial Code, in view of the vote of shareholders at the Shareholders' Meeting on 25 May 2018, on the principles and criteria for the determination, distribution and allocation of the fixed, variable, and special components of the total compensation and the benefits attributable to the Chairman and to members of the Management Board, and to the Chairman and members of the Supervisory Board for fiscal year 2018 for their service.

The compensation and benefits policy for the Chairman and members of the Management Board and the Chairman and members of the Supervisory Board is determined by the Supervisory Board, at the proposal of its Appointments, Compensation and Governance Committee (the "CNRG"), to have such compensation seen as fair and balanced by both shareholders and employees.

Vallourec operates worldwide on the seamless tube production market, a sector that requires specific expertise developed by only a limited number of talented people. Having people who have high potential and the capacity to face ambitious challenges is essential for ensuring the Group's profitability and for generating value. The compensation and benefits policy aims to attain this objective by allowing the Group to attract and retain the most talented people, whose contributions help create more value for shareholders.

7.2.1.1 Governance regarding the compensation and benefits policy for the Chairman and members of the Management Board and the Chairman and members of the Supervisory Board

The compensation and benefits policy for the Chairman and members of the Management Board and Chairman and members of the Supervisory Board is reviewed each year. It is determined by the Supervisory Board, at the proposal of the CNRG. The definition of this policy takes into account the work accomplished, the net profits obtained and the responsibility assumed, and relies on analyses of the market context, which are in particular based on compensation and benefits surveys conducted by outside consultants.

7.2.1.1.1 THE COMPOSITION AND ROLE OF THE APPOINTMENTS, COMPENSATION AND GOVERNANCE COMMITTEE IN TERMS OF THE COMPENSATION AND BENEFITS FOR THE CHAIRMAN AND MEMBERS OF THE MANAGEMENT BOARD AND CHAIRMAN AND MEMBERS OF THE SUPERVISORY BOARD

As at 31 December 2017, the CNRG consisted of four members, three of whom are independent, one who represents employees, and one who represents employee shareholders. The Committee has no executive corporate officers from the Vallourec Group, and is chaired by an independent member. Its members are:

- Mr. Pierre Pringuet, Chairman, independent member, Vice-Chairman of the Supervisory Board and Lead Member;
- Ms. Laurence Broseta, independent member;
- Ms. Pascale Chargrasse, representative of employee shareholders;
- Mr. Mickaël Dolou, employee representative; and
- Ms. Alexandra Schaapveld, independent member.

In terms of compensation and benefits for the Chairman and the members of the Management Board, the CNRG:

- prepares the annual evaluation of the Chairman and the members of the Management Board;
- proposes to the Supervisory Board the principles of the compensation and benefits policy for the Chairman and members of Management Board, and in particular the criteria for determining its structure and the level of this compensation (fixed and variable annual portion, and medium and long-term instruments), including benefits in kind, and insurance or retirement benefits;
- proposes to the Board the number of performance shares and share subscription or purchase options allocated to the Chairman and to each member of the Management Board;
- drafts proposals for the Board regarding the mechanisms that are linked to the termination of Management Board's Chairman and members duties.

In terms of the compensation and benefits for members of the Supervisory Board, the CNRG:

- proposes to the Supervisory Board the principles and criteria of the compensation and benefits policy for members of the Supervisory Board, including the breakdown between the fixed portion and the portion based on attendance fees, and the structure of the compensation of the Chairman and Vice-Chairman of the Supervisory Board.

In order to ensure consistency between the compensation and benefits paid to the Chairman and members of the Management Board and those prevailing within the Group, the CNRG examines the policy for allocating performance shares and share purchase or subscription options to managers and executives and/or employees of the Group, and is informed of the compensation policy for members of the Executive Committee and, more generally, of the compensation policy for the Group.

The 2017 Registration Document contains a description of the CNRG's activity over the course of the last fiscal year.

In order to prepare its work on compensation, the CNRG may request outside studies, and in particular compensation surveys, so that it can assess market conditions. It selects and manages the consultants concerned, in order to ensure they are competent, and monitors their independence and objectivity. The fees for these consultants are paid out of the Supervisory Board's budget, which is reviewed annually by the Board. The CNRG itself determines the composition of the reference panels.

The CNRG likewise meets with the heads of the functional departments, in particular the Human Resources Department and the Legal Department, with which it organizes inter-departmental meetings to ensure that its work is consistent with the Group's social and governance policies.

In preparing its work, the CNRG invites experts in governance and engineering in the area of managerial compensation and benefits to share their know-how and experience at dedicated work meetings, which are also attended by the functional department heads.

Ahead of the actual meetings of the CNRG, the Chairman of the CNRG has discussions with the requested consultants and other members of the CNRG, and holds several work meetings with internal staff supervisors in order to ensure that all of the issues examined by the CNRG are documented in an exhaustive and pertinent manner.

The CNRG also enlists the expertise of the Finance and Audit Committee to determine and assess the pertinence of the quantitative financial criteria for variable monetary compensation and medium- and long-term incentive instruments allocated to the Chairman and to members of the Management Board.

The CNRG reports verbally on its work during the Supervisory Board's meetings. A written report of each meeting of the Committee is established by the secretary of the Committee, under the authority of the Chairman of the Committee, and is sent to Committee members. It is included in the Board meeting files after the meeting during which the report is drafted.

7.2.1.1.2 THE ROLE OF THE SUPERVISORY BOARD IN TERMS OF THE COMPENSATION AND BENEFITS FOR THE CHAIRMAN AND MEMBERS OF THE MANAGEMENT BOARD AND THE CHAIRMAN AND MEMBERS OF THE SUPERVISORY BOARD

Compensation and benefits for the Chairman and members of the Management Board

The Supervisory Board, upon the CNRG's recommendations, establishes all components of the short and long-term compensation and benefits for the Chairman and members of the Management Board (fixed portion, variable portion, equity instruments – performance shares and stock options), as well as benefits in kind, and insurance or pension benefits, along with specific departure schemes.

When a report of the CNRG's work on the Management Board Chairman and members compensation and benefits is presented, the Supervisory Board deliberates on the compensation of the Chairman and members of the Management Board when said members are not present.

All potential or acquired elements of compensation and benefits for the Chairman and members of the Management Board are made public after the Board meeting at which they were decided, by adding them to Vallourec's website.

Compensation and benefits for the Chairman and members of the Supervisory Board

The Supervisory Board, upon the CNRG's recommendations, establishes all components of the compensation and benefits for members of the Supervisory Board. It distributes the attendance fees between its members based on the annual budget authorized by the Ordinary Shareholders' Meeting, and determines the compensation awarded to the Chairman and Vice-Chairman of the Supervisory Board.

When a report of the CNRG's work on the compensation awarded to the Chairman and Vice-Chairman of the Supervisory Board is presented, the Supervisory Board deliberates when said officers are not present.

7.2.1.2 Supervisory Board policy on the compensation and benefits for the Chairman and members of the Management Board

7.2.1.2.1 GENERAL PRINCIPLES OF THE BOARD POLICY ON THE COMPENSATION AND BENEFITS FOR THE CHAIRMAN AND MEMBERS OF THE MANAGEMENT BOARD

The Supervisory Board conducts an overall assessment of the elements of compensation and benefits for the Chairman and members of the Management Board and its decisions are governed by the following principles:

- **recognition of short, medium and long-term performance:** the compensation and benefits structure for the Chairman and members of the Management Board contains a variable monetary portion which is based on performance for the fiscal year ended (short-term performance) and equity instruments which reflect performance over a three-year term regarding performance shares, and a four-year term, regarding stock options (long-term performance); the performance criteria used correspond to the Company's financial and operational objectives;
- **a balance between fixed, short-term variable and medium and long-term variable compensation and benefits:** the CNRG ensures a balance between the three components of the compensation and benefits (fixed portion, annual variable portion and medium- and long-term incentive equity instruments);
- **competitiveness:** the Supervisory Board ensures that compensation is tailored to the market in which Vallourec operates. To that end, the CNRG analyzes the data of a panel of listed companies which are comparable with regard to revenue, staff, international establishment and market capitalization. Within this context, the desired target compensation and benefits for the Chairman and members of the Management Board would be close to the top quartile of the sample;
- **consistent compensation and benefits among all members of the Management Board:** the compensation and benefits of the Chairman and members of the Management Board are set according to their responsibilities within the Group, complying with a ratio of reasonable proportion, in order to encourage the collegial commitment of the Management Board as a whole towards the Group;
- **consistency with the prevailing structure of employee compensation and benefits within the Group:** a significant portion of the Group's managers benefit from a compensation and benefits structure which, like that of the Chairman and members of the Management Board, contains a fixed portion and a variable portion, along with long-term incentive equity instruments.

7.2.1.2.2 STATUS OF THE CHAIRMAN AND MEMBERS OF THE MANAGEMENT BOARD

The Chairman of the Management Board does not have an employment contract.

Members of the Management Board may hold employment contracts for which performance has been suspended during their term of office on the Management Board.

7.2.1.2.3 COMPONENTS OF THE COMPENSATION AND BENEFITS OF THE CHAIRMAN AND MEMBERS OF THE MANAGEMENT BOARD

7.2.1.2.3.1 Weight of the components of the compensation and benefits of the Chairman and members of the Management Board

The primary components of the compensation and benefits of the Chairman and members of the Management Board, along with their purposes, are defined as follows:

Component		Purposes
Fixed portion		Role and responsibility
Variable portion		Linked to short-term performance by the achievement of annual objectives
Medium- and long-term incentive equity instruments	Performance shares	Linked to medium-term performance and alignment with shareholders' interests
	Stock options	Linked to long-term performance and alignment with shareholders' interests

The Supervisory Board ensures balance of the compensation and benefits between the three components (fixed portion, annual variable portion and medium- and long-term incentive equity instruments). The weighting for each of these components is one-third, provided that the amount of the variable portion is integrated in the target and the medium- and long-term incentive equity instruments are valued at their carrying amount for a target achievement.

7.2.1.2.3.2 Fixed portion of the Chairman and members of the Management Board

The fixed portion is reviewed every year based on the responsibility assumed by the Chairman and each member of the Management Board and on Vallourec's business sector, which is cyclical by nature.

To that end, the CNRG relies on compensation surveys conducted by outside consultants. It sets up the panel and makes adjustments as necessary according to revenues, market capitalization and sector of business of the companies on the panel, in order to ensure complete comparability and thus a high correlation between the fixed portion and the Group's size.

In addition, since the variable portion is based on the fixed portion, the Supervisory Board devotes particular attention to ensuring that the fixed portion is reasonable in application of the principles described in point 2.1 above.

The Supervisory Board also ensures that changes in the fixed portion for the Chairman and members of the Management Board appear moderate as compared to the overall wage increases of French employees over the same period.

For example, the 2018 fixed portion for Mr. Philippe Crouzet, Chairman of the Management Board, amounting to €798,000 and the fixed portion for Mr. Olivier Mallet, amounting to €420,000, have remained unchanged since 2014.

7.2.1.2.3.3 Variable portion of the Chairman and members of the Management Board

The variable portion aims to associate the Chairman and the members of the Management Board with the short-term performance of the Group. Its structure is reviewed and determined every year by the Supervisory Board, upon recommendations from the CNRG.

Determined on an annual basis, it corresponds to a percentage of the fixed portion and contains minimum thresholds, below which no payment is made; target levels when the objectives set by the Supervisory Board are met, and maximum levels when target objectives have been exceeded.

With regard to the 2018 fiscal year, the variable portion of the Chairman of the Management Board may vary from 0 to 100% of his target fixed portion and reach 135% of this same fixed portion in the event that maximum objectives were attained. For the members of the Management Board, the variable portions may vary from 0 to 75% of their target fixed portions and attain 100% in the event that maximum objectives were achieved.

The variable portions are subordinate to achievement of several precise and previously established objectives of a quantifiable or qualitative nature, for which the minimum, target and maximum thresholds are set by the Supervisory Board, upon recommendation from the CNRG. The quantifiable criteria are predominant.

The objectives taken into account to determine the variable portion are set each year based on the key operating and financial indicators of the Group, which are in line with the nature of its activities, strategy, values, and the challenges it faces.

For 2018, the Supervisory Board decided to determine the variable portions of the Chairman and members of the Management Board using the same fundamental components that were used for the Group in 2017, adding the criterion of Quality into operating performance, which is of major interest to the Group:

	Chairman of the Management Board (target variable portion: 100% of fixed portion)	Members of the Management Board (excluding the Chairman) (target variable portion: 75% of fixed portion)
1. Financial performance Competitiveness plan, EBITDA, PRI [(a)]	Weighting: 60%	Weighting: 45%
2. Operational performance Following the deployment of the Transformation and Quality Plan	Weighting: 25%	Weighting: 18.75%
3. CSR Safety, Environment	Weighting: 15%	Weighting: 11.25%

(a) Payables Receivables Inventories, control of working capital requirements.

The attainment of the financial performance objectives will be measured at the budget exchange rate.

Pursuant to Article L. 225-82-2 of the French Commercial Code, the payment of the elements of variable compensation to the Chairman and to the members of the Management Board is subject to approval by the Ordinary Shareholders' Meeting of the elements of compensation of the individual concerned under the terms provided for in Article L. 225-100 of the French Commercial Code.

7.2.1.2.3.4 Long-term incentive equity instruments of the Chairman and members of the Management Board

7.2.1.2.3.4.1 Performance shares and options

In an industrial group for which capital expenditure projects might have a distant time frame for achieving profitability, medium- and long-term incentive equity instruments seem particularly appropriate. Consequently, the Group has used a dynamic policy for many years for employees to share the Company's results, by establishing performance share and stock subscription or purchase options allocation plans. The Supervisory Board believes that the combination of these two tools, which align the interests of beneficiaries with those of the shareholders, is important insofar as the performance shares are connected to medium-term performance, while options are linked to long-term performance.

In accordance with the twenty-sixth and twenty-seventh resolutions that were adopted by the Ordinary and Extraordinary Shareholders' Meeting held on 12 May 2017, the Supervisory Board authorized the renewal in 2018:

- for the twelfth consecutive year, a performance share allocation plan, subject to continued service and performance conditions, for the benefit of the Chairman and members of the Management Board, members of the Executive Committee and managers;
- for the twelfth consecutive year, a stock subscription or purchase options allocation plan, subject to continuous service and performance conditions, for the benefit of members of the Management Board and the Executive Committee.

For the Chairman and the members of the Management Board, as well as for members of the Executive Committee, the distribution between the two instruments is approximately three fourths performance shares and one quarter share purchase or subscription options. For managers, the Board, at the recommendation of the CNRG and in conformity with market practices, decided not to allot options starting in 2017, but to instead increase the number of performance shares. Overall, the portion to be allotted to members of the Management Board may not exceed 15% of the total performance shares and 50% of the total share purchase or subscription options.

To determine the number of performance shares and stock options allocated to the Chairman and members of the Management Board, the CNRG measures the fair value of these instruments and then sets an allocation volume that ensures a balance of the compensation and benefits between the three elements (fixed, variable and long-term incentive instruments). In recent years, adverse changes in the fair value of these instruments, however, has not made it possible to ensure this balance. On the recommendation of the CNRG, the Board decided that for the allocation of performance shares and stock options to the Management Board it would gradually return to a value that represents approximately one third of the total of the three target components of compensation and benefits (fixed portion, variable portion and long-term incentive instruments). As such, the Board, based on the CNRG's proposal, decided that for 2017 the volume of performance shares and stock options allocated to the Management Board would represent a target of 22% of the total of those three components of compensation and benefits for target performance. For 2018, in accordance with the gradual application of this policy, the Board, at the CNRG's proposal, set the volume for allocating performance shares and options to the Management Board at 25% of all three components of compensation and benefits for target performance.

The number of performance shares and options definitively allocated to beneficiaries following the performance assessment period will be calculated by applying a factor which measures the performance for each of the criteria to the number of performance shares and options initially allocated for target performance. The Board, wishing to simultaneously maintain very demanding criteria (notably demonstrated by the very low effective allocation rates of the past few years – see paragraph 7.4.2.3.4.4 of the Supervisory Board Report on the 2017 compensation of corporate officers) and encourage outperformance, which is likely to increase value to the benefit of shareholders, set the outperformance factor at 2. This allocation factor will vary from 0 to 2 under the following conditions. It is noted that even in the case of maximum outperformance, the share of long-term incentive equity instruments in the overall compensation of members of the Management Board shall remain below the first quartile of the reference panel used by the Company.

Performance shares

In accordance with the twenty-seventh resolution adopted by the Ordinary and Extraordinary Shareholders' Meeting of 12 May 2017, performance shares allocated to the Chairman and members of the Management Board in 2018 will be subject to performance conditions assessed over three years and measured on the basis of the following two quantitative criteria in line with the objectives of the Transformation Plan aimed at improving the Group's competitiveness:

- an internal absolute criterion: reduction of costs in 2018, 2019 and 2020 compared to the planned performance in the Group's medium-term plan for the same period (weighting 50%);

- an external relative criterion: growth of the EBITDA margin between 2018 and 2020 compared to a panel of comparable companies comprised as follows: Hunting Plc, United States Steel Corp, Nippon Steel & Sumitomo Metal Corp., Tubacex SA, Tenaris SA, Voestalpine AG, Seah Steel Corp, Tubos Reunidos SA, TimkenSteel Corp, Salzgitter AG, ArcelorMittal SA, TMK and NOV (weighting 50%);

The number of performance shares definitively allocated to the Chairman and members of the Management Board following the performance assessment period shall be calculated by applying a factor which measures the performance for each of the criteria to the number of performance shares initially allocated. This allocation factor will vary from 0 to 2 under the following conditions:

- absolute internal criterion based on cost reduction (F1): factor 1 would correspond to achieving the medium-term plan objectives during the performance vesting period (the "F1 Planned Performance"). It would be 0 if the performance achieved was 2 or more points less than the F1 Planned Performance, and 2 if the performance achieved was 2 or more points greater than the F1 Planned Performance. A linear progression will be applied between limits ;
- external relative criterion based on the growth of the EBITDA margin (F2): factor 1 would correspond to growth of the EBITDA margin that is equal to the median growth of the gross margin of the panel (the Panel Performance"). It would be 0 if the performance achieved was 2 or more points less than the Panel Performance, and 2 if the performance achieved was 2 or more points greater than the Panel Performance. A linear progression will be applied between limits.

Stock subscription or purchase options plans

In accordance with the twenty-sixth resolution adopted by the Ordinary and Extraordinary Shareholders' Meeting of 12 May 2017, stock subscription or purchase options allocated to the Chairman and members of the Management Board in 2018 will be subject to performance conditions assessed over four years and measured on the basis of two quantitative criteria as follows:

- an internal absolute criterion: aggregate net cash flow for the Group in 2018, 2019, 2020 and 2021 compared to the planned performance in the Group's medium-term plan for the same period (weighting 50%);
- an external relative criterion: Total Shareholder Return (TSR) for 2018, 2019, 2020 and 2021 compared to a panel of comparable companies comprised as follows: Hunting Plc, United States Steel Corp, Nippon Steel & Sumitomo Metal Corp., Tubacex SA, Tenaris SA, Voestalpine AG, Seah Steel Corp, Tubos Reunidos SA, TimkenSteel Corp, Salzgitter AG, ArcelorMittal SA, TMK and NOV (weighting 50%).

The number of options that were definitively granted to the Chairman and members of the Management Board following the vesting period shall be calculated by applying a factor which measures the performance for each of the criteria to the number of options initially granted. This factor will vary from 0 to 2 under the following conditions:

- absolute internal criterion based on the aggregate free cash flow of the Group (F1): factor 1 would correspond to achieving the medium-term plan objectives during the performance vesting period (the "F1 Planned Performance"). It would be zero if the performance achieved was less than 70% of the F1 Planned Performance, and 2 if the performance achieved was greater or equal to 120% of the F1 Planned Performance. A linear progression will be applied between limits;
- external relative criterion based on the Total Shareholder Return (TSR) (F2): factor 1 would correspond to performance between the 5th and 6th decile of the panel of comparable companies. It would be zero if the performance achieved was less than the 4th decile of the panel; it would be 0.8 if the performance achieved was ranked in the 5th decile of the panel and 2 if the performance achieved was greater than the 8th decile of the panel. A linear progression will be applied between limits.

The confidential nature of the first absolute criteria on performance shares and stock subscription or purchase options does not allow their target content to be disclosed. However, at the end of the performance assessment period, Vallourec will communicate the minimum, target and maximum thresholds to be achieved and the linear progression applied between them.

Within the set of performance objectives for performance shares and stock options, the relative criteria represent 50%.

The Supervisory Board considers that the performance criteria that apply to stock subscription or purchase options and performance shares allocated to the Chairman and members of the Management Board are correlated to the medium and long-term evolution of the Group's overall performance and results.

The Chairman and members of the Management Board are required to retain until the end of their terms of office (i) one quarter of the performance shares allocated to them under the terms of a plan and (ii) the equivalent in Vallourec shares of one quarter of the gross capital gain realized on the date of sale of the shares resulting from the options exercised. They moreover agree not to use hedging instruments in connection with the exercise of options, selling shares resulting from the exercise of options, or selling performance shares.

As recommended by the AFEP-MEDEF Code revised in November 2016, the Supervisory Board may, when allocating stock subscription or purchase options and performance shares, provide for a stipulation authorizing it to determine whether or not to maintain all or part of the long-term compensation plans that are not yet vested, options not yet exercised, or performance shares not yet vested at the time of the beneficiary's departure. Performance conditions would in any event be applied for the entire performance assessment period prescribed by each plan.

7.2.1.2.3.5 Benefits in kind of the Chairman and members of the Management Board

In terms of benefits in kind, the Chairman and members of the Management Board benefit, as do the majority of the Group's senior executives, from a Company car.

7.2.1.2.3.6 Attendance fees of the Chairman and members of the Management Board

Management Board members do not collect any compensation or attendance fees for the corporate offices they hold in direct or indirect subsidiaries of the Vallourec Group.

7.2.1.2.3.7 Supplementary pension scheme of the Chairman and members of the Management Board

In accordance with market practices and to retain the Group's senior executives, the Chairman and members of the Management Board are offered a comprehensive supplementary retirement plan to enable them to save for retirement, while preserving the economic interests of the Company via defined performance conditions.

This new system was set up in 2016 to replace the defined-benefit supplementary pension scheme previously in effect. This new scheme will ensure each of its beneficiaries, individually, a net annuity level equal to that of the previous plan, while allowing the Company to achieve savings of around 22%.

This plan, subject to the regulated agreements procedure of Articles L.225-86 *et seq*. and Article L.225-90-1 of the French Commercial Code, was approved by the Shareholders' Meeting of 6 April 2016 (sixth, eighth and ninth resolutions).

The new supplementary pension scheme introduced in 2016 includes the following three components:

Closing of the defined benefit scheme (Article 39 of the French General Tax Code)

The Chairman and members of the Management Board benefit, along with 22 other senior executives meeting the eligibility requirements, from the defined benefit scheme under the terms and conditions set by the closing regulation, under which no new potential rights will be created with respect to the closed scheme and beneficiaries may only benefit from "crystallized" vested rights upon liquidation of their social security pension.

Mandatory group defined-contribution scheme (Article 83 of the French General Tax Code)

The Chairman and members of the Management Board benefit from a new, collective and mandatory defined-contribution retirement scheme open to all employees who meet the eligibility requirements [(1)]. The contribution to this scheme would be set at 12% of the compensation exceeding between four and eight times the Social Security cap. The scheme can only be liquidated upon liquidation of the social security pension.

The Company's financial obligation is strictly limited in terms of amount and time since it can close the scheme at any time.

Individual scheme subject to performance criteria (Article 82 of the French General Tax Code)

The Chairman and members of the Management Board, along with other senior executives meeting the eligibility requirements [(2)], benefit from a new, individual defined-contribution pension scheme to which the Company contributes and for which, in the spirit of the Macron Law, the Supervisory Board decided to establish performance criteria.

With respect to these performance conditions, the Board has decided to determine the effective contribution rate based on the annual bonus rate: the maximum contribution will be payable for the year in the case of an annual bonus calculated at 50% of the target; no contribution will be paid if the calculated annual bonus equals zero; the contribution will vary on a straight-line basis between limits ranging from 0 to 50%.

In order to finance the contribution, the Company's share is equal to a percentage of the gross compensation less employee contributions and the income tax generated by this contribution. The scheme can only be liquidated upon liquidation of the social security pension.

The Company may terminate this scheme at any time in such a way that it does not represent a deferred obligation.

These schemes exist to improve the replacement revenue of beneficiaries and grant no specific advantage to the Chairman and members of the Management Board compared with eligible executive officers employed by the Group.

The determination of the overall compensation of the Chairman and members of the Management Board took into account the benefits under this supplementary pension scheme.

The Group's supplementary pension scheme has a replacement rate which remains clearly below market practice, regardless of the reference panel used.

7.2.1.2.3.8 Mechanisms linked to termination of the duties of the Chairman and members of the Management Board

The principles of mechanisms linked to the termination of duties of the Chairman and members of the Management Board have remained the same since 2013. These mechanisms were approved by the Shareholders' Meeting of 6 April 2016 (fourth and seventh resolutions).

7.2.1.2.3.8.1 Mechanism linked to the termination of the duties of Chairman of the Management Board

Monetary termination benefit for the Chairman of the Management Board

In accordance with AMF recommendations and the AFEP-MEDEF Code before it was revised in November 2016, the monetary termination benefit for the Chairman of the Management Board will only be due in the event of dismissal. No compensation will be due if it is possible for the Chairman of the Management Board to invoke his retirement rights within a short period of time.

The monetary termination benefit amount is limited to twice the average gross fixed and variable annual compensation payable in respect of the two fiscal years preceding the date of departure (hereinafter the "Maximum Benefit"). The aggregate compensation due under the no competition clause and the termination benefit – if one is due – may not under any circumstances exceed the Maximum Benefit.

The benefit shall be calculated using the fixed monetary compensation payable in respect of the financial period preceding the departure date, plus the target variable monetary remuneration determined for the same period (the "Reference Compensation") and may not under any circumstances exceed the Maximum Benefit.

Its amount will depend on the achievement of performance conditions set out in paragraph 7.2.1.2.3.8.3 below.

Non-compete obligation applicable to the Chairman of the Management Board

Considering his steel industry expertise, the Supervisory Board has sought to enable the Group to safeguard its know-how and activities by imposing a conditional non-compete obligation on the Chairman of the Management Board should he leave the Group.

At its entire discretion, the Supervisory Board may decide to prohibit the Chairman of the Management Board, at the time of his departure, and for a period of 18 months following the termination of his duties as Chairman of the Vallourec Management Board, for whatever reason, from working in whatever manner with a company or a group of companies in the steel industry, with no territoriality restrictions.

(1) *Eligible employees are Vallourec employees and, subject to the completion of legal procedures, Vallourec Tubes employees. Eligible employees have annual compensation exceeding four times the Social Security cap (in 2017: 4 x €39,228), i.e., potentially 50 senior executives of the Group, including the Management Board members.*

(2) *Eligible employees are Vallourec and Vallourec Tubes employees who have at least three years' seniority in the Group and whose compensation exceeds eight times the Social Security cap, i.e. potentially eight senior executives, including the Management Board members.*

Should this obligation be implemented by the Board, it would result in a payment to the Chairman of the Management Board of non-compete compensation equal to 12 months of gross fixed and variable monetary compensation, which is calculated based on the average of the gross fixed and variable annual monetary compensation that has been paid during the two fiscal years preceding the date of departure.

This sum would be paid in equal monthly advances during the entire period in which the non-compete clause is applicable.

The accumulation of the compensation paid under the non-compete clause and a termination benefit, should such benefit be paid, may not under any circumstances exceed twice the average gross fixed and variable annual monetary compensation payable in respect of the two financial periods preceding the Chairman of the Management Board's departure date.

This mechanism was approved by the Shareholders' Meeting of 30 May 2013, in its twenty-fourth resolution.

7.2.1.2.3.8.2 Mechanisms linked to termination of the duties of members of the Management Board

The Supervisory Board takes into account all the benefits which may be claimed by each Management Board member in the event of dismissal, in order to decide whether or not to grant a monetary termination benefit in the event of dismissal. To this end the Board examines:

(i) the contractual severance pay, where applicable, provided for in the employment contract and likely to be due in the event of termination of said contract;

(ii) seniority in the Vallourec Group and the amount of severance pay to which the Management Board member concerned would be entitled under the applicable collective bargaining agreement in the event of termination of the employment contract for any reason other than serious misconduct.

In the case of an absence of contractual severance pay and limited seniority resulting in low severance pay, the Management Board member concerned may be eligible for a monetary termination benefit in the event of dismissal.

The termination benefit amount is limited to twice the average gross fixed and variable annual compensation payable in respect of the two fiscal years preceding the date of departure (hereinafter the "Maximum Benefit") and will not be payable should the Management Board member have the opportunity to claim his or her retirement rights in the near future.

The benefit shall be calculated using the fixed monetary compensation payable in respect of the financial period preceding the departure date, plus the target variable monetary remuneration determined for the same period (the "Reference Compensation") and may not under any circumstances exceed the Maximum Benefit.

The aggregate compensation due under the Collective Bargaining Agreement and the termination benefit – if one is due – may not under any circumstances exceed the Maximum Benefit.

Its amount will depend on the achievement of performance conditions set out in paragraph 7.2.1.2.3.8.3 below.

7.2.1.2.3.8.3 Performance criteria for the monetary termination benefit for the Chairman and the members of the Management Board

The amount of the termination benefit will depend on the achievement of three performance criteria assessed in the last three financial periods preceding the departure date (the "Reference Period").

The achievement of each performance criterion shall be combined with a rating range from a floor of 0 point to a ceiling of 30 points.

- The first "F1" performance criterion shall be assessed on the EBITDA rate, expressed as a percentage of revenues for each financial period within the Reference Period. F1 shall vary on a straight-line basis between 30 points for a maximum determined by the Supervisory Board, upon the approval of the Appointments, Compensation and Governance Committee, with reference to the EBITDA rates achieved in the last three fiscal years closed, and at least equal to the average of these rates; and 0 point for a minimum at most equal to the maximum less 6 EBITDA points.
- The second performance criterion "F2" shall be assessed by comparing the EBITDA for each of the fiscal years in the Reference Period with the EBITDA forecast in the budget for those fiscal years, as established by the Management Board and approved by the Supervisory Board. F2 shall vary on a straight-line basis between 0 for an EBITDA that is 25% lower than the budgeted EBITDA, and 30 points for an EBITDA that is 12.5% higher than the budgeted EBITDA. The budgetary objective is set each year by the Supervisory Board, further to the opinion of the Appointments, Compensation and Governance Committee, upon review of the budget presented by the Management Board, and examined in advance by the Finance and Audit Committee.
- The third "F3" performance condition shall be based on the percentage of the variable portion of the monetary compensation payable in respect of each financial period of the Reference Period compared to the target variable portion of the period in question. F3 shall vary on a straight-line basis between 0 and 30 points (and limited to 30 points) according to the percentage of the variable portion paid compared to the target variable portion. The maximum of 30 points is reached for a computed variable portion equal to 100% of the target and the minimum of 0 point for a computed variable portion equal to 0% of the target.

In the event that the total of F1, F2 and F3 (hereinafter the "PF") is on average less than 40 during the Reference Period, no payment shall be due. For an average PF that is equal to 40 or 50, the payment shall be equal to 15 or 18 months' salary respectively (1/12th of the Reference Compensation), up to the Maximum Payment. The payment shall reach its maximum, i.e. 24 months, up to the Maximum Payment, for an average PF that is equal or greater than 80 on average. It shall vary on a straight-line basis between each of the 40, 50 and 80 thresholds.

If the PF for the last financial period of the Reference Period is equal to 0, no payment shall be due.

Vallourec communicates annually on the PF achievement rate for the previous year.

7.2.1.2.3.9 Special compensation of the Chairman and members of the Management Board

As recommended in the AFEP-MEDEF Code revised in November 2016, the Supervisory Board may, on the recommendation of the CNRG, award special compensation to the Chairman and/or the members of the Management Board if very specific circumstances so justify (for example, due to their importance to the Group, the involvement they require and the difficulties they present). Its decision must be substantiated. The amount of this special compensation may not under any circumstance exceed the amount of the fixed annual monetary portion of the interested party.

Pursuant to Article L.225-82-2 of the French Commercial Code, the payment of the elements of special compensation to the Chairman and to the members of the Management Board is subject to approval by the Ordinary Shareholders' Meeting of the elements of compensation of the individual concerned under the terms provided for in Article L.225-100 of the French Commercial Code.

7.2.1.2.3.10 Signing bonus of the Chairman and members of the Management Board

As recommended in the AFEP-MEDEF Code revised in November 2016, the Supervisory Board may, on the recommendation of the CNRG, award a new Chairman or a new member of the Management Board coming from an outside company a signing bonus in order to offset the loss of benefits previously enjoyed by the executive. Such compensation must be explained and made public at the time it is decided.

7.2.1.3 The policy of the Supervisory Board in terms of the compensation and benefits for the Chairman and members of the Supervisory Board

7.2.1.3.1 GENERAL PRINCIPLES OF THE BOARD POLICY ON THE COMPENSATION AND BENEFITS FOR THE CHAIRMAN AND MEMBERS OF THE SUPERVISORY BOARD

Members of the Supervisory Board

Members of the Supervisory Board only receive attendance fees for the performance of their duties.

These fees are distributed by the Supervisory Board among its members, on the proposal of the CNRG, from the annual budget for attendance fees authorized by the Ordinary Shareholders' Meeting. The amount of this budget must be adapted to the level of responsibilities undertaken by the members of the Board and the amount of time they must spend on their duties.

Members of the Supervisory Board receive a portion of their attendance fees as a fixed amount and another portion based on their attendance at Board meetings and meetings of committees of which they are members.

Chairman, Vice-Chairman, and Lead Member of the Supervisory Board

Only the Chairman of the Supervisory Board receives a fixed annual compensation. This is justified by the degree of involvement in the Group's affairs of the Board Chairman as she performs duties and procedures which far surpass merely attending Board and Committee meetings.

The Lead Member, who is also the Vice-Chairman, receives an additional fixed annual amount of attendance fees for his or her duties as lead member and participation in Group Committees in this capacity.

The Chairman of the Supervisory Board, along with the other members, is not allocated any options, performance shares or termination payments of any kind.

Members of the Supervisory Board are required to personally be a shareholder of the Company throughout the entire term of their office, under the conditions set by the bylaws and internal regulations of the Board, for a minimum of 500 Vallourec shares [1].

7.2.1.3.2 COMPONENTS OF COMPENSATION AND BENEFITS OF THE CHAIRMAN AND MEMBERS OF THE SUPERVISORY BOARD

Participation at the meetings of the Supervisory Board

The total amount for attendance fees that the Supervisory Board is authorized to divide among its members in 2018 is recorded under the annual budget for attendance fees of €650,000 authorized by the Ordinary Shareholders' Meeting of 28 May 2014 (thirteenth resolution).

As recommended by the AFEP-MEDEF Code revised in November 2016, which requires that the fraction of attendance fees based on actual attendance be predominant in relation to the fixed portion, the fixed portion amounts to one-third of attendance fees and the variable portion based on actual attendance represents two-thirds.

The Lead Member, who is also the Vice-Chairman, receives, from the overall annual budget of €650,000, an additional fixed annual amount of attendance fees for his or her duties as Lead Member and participation in Group Committees in this capacity.

Participation in Committee meetings

The members and Chairman of each of the Committees receive, as part of the aforementioned €650,000 annual budget, additional attendance fees based on their actual attendance at meetings of these Committees.

Compensation of the Chairman

The Chairman of the Board receives a fixed annual compensation that has not changed since it was set in 2014.

(1) Starting on the day of their appointment, members of the Supervisory Board must hold at least 50 Vallourec shares. The 450 additional shares must be acquired by 31 December of the year following the year they take office, in order to allow them to use their attendance fees to acquire them. These provisions do not apply to the member representing employee shareholders and to the member representing the employees.

7.2.2 Compensation and benefits awarded to corporate officers

7.2.2.1 Compensation of members of the Management Board

The following tables show the compensation paid to members of the Management Board as it was comprised as at 31 December 2017.

A) SUMMARY OF COMPENSATION AND OPTIONS AND PERFORMANCE SHARES ALLOCATED TO EACH MEMBER OF THE MANAGEMENT BOARD (ACCORDING TO THE FORMAT OF TABLE 1 RECOMMENDED BY THE AFEP-MEDEF CODE AND THE FRENCH SECURITIES REGULATOR *(AUTORITÉ DES MARCHÉS FINANCIERS)*)

The following table summarizes the compensation due and the valuation of the share subscription options and performance shares allocated for fiscal years 2016 and 2017.

In €	Fiscal year 2016	Fiscal year 2017
Philippe Crouzet, Chairman of the Management Board		
Compensation due for the fiscal year (see Part B) of paragraph 7.2.2.1 herein)	1,609,143	1,715,957
Valuation of multi-year variable compensation allocated	-	-
Valuation of options allocated during the year (see Part C) of paragraph 7.2.2.1 herein) (a)	15,976	107,350
Valuation of performance shares allocated during the year (see Part E) of paragraph 7.2.2.1 herein) (b)	60,378	321,860
TOTAL	**1,685,497**	**2,145,167**
Jean-Pierre Michel, Chief Operating Officer until 31 March 2017		
Compensation due for the fiscal year (see Part B) of paragraph 7.2.2.1 herein)	744,870	197,306
Valuation of multi-year variable compensation allocated	-	-
Valuation of options allocated during the year (see Part C) of paragraph 7.2.2.1 herein) (a)	7,504	-
Valuation of performance shares allocated during the year (see Part E) of paragraph 7.2.2.1 herein) (b)	28,413	-
TOTAL	**780,787**	**197,306**
Olivier Mallet, Chief Financial Officer		
Compensation due for the fiscal year (see Part B) of paragraph 7.2.2.1 herein)	765,474	806,870
Valuation of multi-year variable compensation allocated	-	-
Valuation of options allocated during the year (see Part C) of paragraph 7.2.2.1 herein) (a)	7,504	50,285
Valuation of performance shares allocated during the year (see Part E) of paragraph 7.2.2.1 herein) (b)	28,413	152,460
TOTAL	**801,391**	**1,009,615**

(a) *All share subscription options allocated to members of the Management Board in 2016 and 2017 are contingent upon performance conditions. Their valuation, which is shown in the table, is theoretical and results from the application of the binomial model used for the consolidated financial statements. The actual valuation is zero if the share price is equal to or less than €6.02.*

(b) *All the performance shares allocated to members of the Management Board in 2016 and 2017 were subject to performance conditions. The valuation of the performance shares shown in the table is theoretical and results from the application of the binomial model used for the consolidated financial statements.*

B) SUMMARY OF COMPENSATION FOR EACH MEMBER OF THE MANAGEMENT BOARD (ACCORDING TO THE FORMAT OF TABLE 2 RECOMMENDED BY THE AFEP-MEDEF CODE AND THE FRENCH SECURITIES REGULATOR)

	Fiscal year 2016		Fiscal year 2017	
In €	Amounts due for the fiscal year	Amounts paid for the fiscal year	Amounts due for the fiscal year	Amounts paid for the fiscal year
Philippe Crouzet, Chairman of the Management Board				
Fixed compensation	798,000	798,000	798,000	798,000
Annual variable compensation	679,257	0 (b)	786,084	679,257
Multi-annual variable compensation	-	-	-	-
Article 82 payment in cash (c)	127,500	-	127,500	127,500
Extraordinary compensation	-	-	-	-
Attendance fees	-	-	-	-
Benefits in kind (a)	4,386	4,386	4,373	4,373
TOTAL	**1,609,143**	**802,386**	**1,715,957**	**1,609,130**
Jean-Pierre Michel, Chief Operating Officer until 31 March 2017				
Fixed compensation	450,000	450,000	112,500	112,500
Annual variable compensation	285,615	232,239	82,492	285,615
Multi-annual variable compensation	-	-	-	-
Article 82 payment in cash (c)	4,000	-	1,000	4,000
Extraordinary compensation	-	-	-	-
Attendance fees	-	-	-	-
Benefits in kind (a)	5,255	5,255	1,314	1,314
TOTAL	**744,870**	**687,494**	**197,306**	**403,429**
Olivier Mallet, Chief Financial Officer				
Fixed compensation	420,000	420,000	420,000	420,000
Annual variable compensation	266,574	245,107	307,970	266,574
Multi-annual variable compensation	-	-	-	-
Article 82 payment in cash (c)	73,500	-	73,500	73,500
Extraordinary compensation	-	-	-	-
Attendance fees	-	-	-	-
Benefits in kind (a)	5,400	5,400	5,400	5,400
TOTAL	**765,474**	**670,507**	**806,870**	**765,474**

(a) The benefit in kind measured corresponds to the use of a Company car.

(b) The Supervisory Board meeting on 17 February 2016 duly noted the waiver by Mr. Philippe Crouzet of his portion of variable compensation for 2015, i.e. an amount of €661,778, after the approval of the financial statements for the 2015 fiscal year.

(c) Amount paid in cash under the supplementary individual defined-contribution retirement plan (Article 82). 50% of the amounts are paid in the form of a contribution and 50% in cash, as explained in Section 7.2.3.2 and Section 7.4.2.3.7.

The principles and criteria for determining the variable monetary compensation of members of the Management Board as well as a breakdown of the benefits in kind are presented for fiscal year 2017 in the Supervisory Board report on the compensation policy for corporate officers (see Section 2.1 to Chapter 7 of the 2016 Registration Document) and, for fiscal year 2016 in the Supervisory Board Report on 2016 Management Board compensation (Appendix 2 to Chapter 7 of the 2016 Registration Document).

C) SHARE PURCHASE OR SUBSCRIPTION OPTIONS ALLOCATED DURING FISCAL YEAR 2017 TO EACH MEMBER OF THE MANAGEMENT BOARD BY VALLOUREC AND EACH GROUP COMPANY (ACCORDING TO THE FORMAT OF TABLE 4 RECOMMENDED BY THE AFEP-MEDEF CODE AND THE FRENCH SECURITIES REGULATOR)

Name of executive corporate officer	Plan number and date	Type of options	Valuation of options according to the method used for the consolidated financial statements	Number of options allocated during the fiscal year [(a)]	Exercise price	Exercise period
Philippe Crouzet	2017 Plan 18/05/2017	Share subscription options	€107,350	95,000 *i.e. 0.021% of the share capital* [(b)]	€6.02	From 18/05/2021 to 18/05/2025 (inclusive)
Olivier Mallet	2017 Plan 18/05/2017	Share subscription options	€50,285	44,500 *i.e. 0.015% of the share capital* [(b)]	€6.02	From 18/05/2021 to 18/05/2025 (inclusive)
TOTAL			**€157,635**	**139,500** ***i.e. 0.03% of the share capital*** [(b)]		

(a) The number corresponds to the factor 1, which is equivalent to the performance target. It may be increased by applying a performance factor of 2 if the performance target is exceeded.

(b) Based on share capital as at 31 December 2017, comprised of 457,987,760 shares.

The share subscription options allocated to members of the Management Board in 2017 are subject to performance conditions assessed over four years and measured based on the following two quantitative criteria:

- an internal criterion: aggregate net cash flow for the Group in 2017, 2018, 2019 and 2020 compared to the planned performance in the Group's medium-term plan for the same period (weighting 50%);
- an external criterion: Total Shareholder Return (TSR) for 2017, 2018, 2019 and 2020 compared to a panel of comparable companies (weighting 50%).

The panel of comparable companies shall be comprised of the following companies from the "Oil & Gas," "Energy" and "Steel" sectors: Hunting Plc, United States Steel Corp, Nippon Steel & Sumitomo Metal Corp., Tubacex SA, Tenaris SA, Voestalpine AG, Seah Steel Corp, Tubos Reunidos SA, TimkenSteel Corp, Salzgitter AG, ArcelorMittal SA, TMK and NOV.

The number of options definitively allocated to members of the Management Board after the performance assessment period is calculated by applying a factor which measures performance for each of the criteria to the number of options initially allocated. This factor will vary from 0 to 2. The number of options allocated will be nil below a level of performance, which corresponds to the minimum threshold; it will be 1 if the performance target was attained. If all objectives are achieved at their maximum, a factor of 2 shall be applied to the target allocation.

At the end of the performance assessment period, Vallourec will communicate the minimum and maximum thresholds to be achieved and the linear progression applied between them.

D) SHARE SUBSCRIPTION OR SHARE PURCHASE OPTIONS EXERCISED DURING 2017 BY EACH MEMBER OF THE MANAGEMENT BOARD

No members of the Management Board exercised share subscription or purchase options in 2017 under the share subscription option or purchase plans created in previous years.

E) PERFORMANCE SHARES ALLOCATED DURING FISCAL YEAR 2017 TO EACH MEMBER OF THE MANAGEMENT BOARD BY VALLOUREC AND EACH GROUP COMPANY (ACCORDING TO THE FORMAT OF TABLE 6 RECOMMENDED BY THE AFEP-MEDEF CODE AND THE FRENCH SECURITIES REGULATOR)

Name of executive corporate officer	Plan number and date	Number of target shares allocated during the fiscal year [(a)]	Valuation of shares according to the method used for the consolidated financial statements	Vesting date	Availability date	Performance conditions
Philippe Crouzet	2017 Plan 18/05/2017	66,500 i.e. 0.015% of the share capital [(b)]	€321,860	18/05/2020	18/05/2022	Yes
Olivier Mallet	2017 Plan 18/05/2017	31,500 i.e. 0.007% of the share capital [(b)]	€152,460	18/05/2020	15/04/2022	Yes
TOTAL		**98,000** ***i.e. 0.021% of the share capital*** [(b)]	**€474,320**			

(a) The number corresponds to the factor 1, which is equivalent to the performance target. It may be increased by applying a performance factor of 2 if the performance target is exceeded.

(b) Based on share capital as at 31 December 2017, comprised of 457,987,760 shares.

The performance shares allocated to members of the Management Board in 2017 are subject to performance conditions assessed over three years and measured based on the following two quantitative criteria:

- an internal criterion: reduction of costs in 2017, 2018 and 2019 compared to the planned performance in the Group's medium-term plan for the same period (weighting 50%);
- an external criterion: growth of the EBITDA margin between 2017 and 2019 compared to a panel of comparable companies (weighting 50%).

The panel of comparable companies shall be comprised of the following companies from the "Oil & Gas," "Energy" and "Steel" sectors: Hunting Plc, United States Steel Corp, Nippon Steel & Sumitomo Metal Corp., Tubacex SA, Tenaris SA, Voestalpine AG, Seah Steel Corp, Tubos Reunidos SA, TimkenSteel Corp, Salzgitter AG, ArcelorMittal SA, TMK and NOV.

The number of performance shares definitively allocated to members of the Management Board after the performance assessment period is calculated by applying a factor which measures performance for each of the criteria to the number of options initially allocated. This factor will vary from 0 to 2. The number of options allocated will be nil below a level of performance, which corresponds to the minimum threshold; it will be 1 if the performance target was attained. If all objectives are achieved at their maximum, a factor of 2 shall be applied to the target allocation.

At the end of the performance assessment period, Vallourec will communicate the minimum and maximum thresholds to be achieved and the linear progression applied between them.

F) PERFORMANCE SHARES THAT BECAME AVAILABLE DURING FISCAL YEAR 2017 FOR EACH MEMBER OF THE MANAGEMENT BOARD (ACCORDING TO THE FORMAT OF TABLE 7 RECOMMENDED BY THE AFEP-MEDEF CODE AND THE FRENCH SECURITIES REGULATOR)

Starting in 2013, the performance share plans shifted over to a 3+2 mechanism (previously 2+2). Consequently, the next performance shares shall become available in 2018.

Performance shares vested during fiscal year 2017 for each member of the Management Board

Name of executive corporate officer	Plan number and date	Number of shares allocated on 15/04/2014 (a) (b)	Number of shares vested on 15/04/2017	Percentage of shares vested on 15/04/2017
Philippe Crouzet	2014 Plan 15/04/2014	24,484	3,110	12.7%
Jean-Pierre Michel	2014 Plan 15/04/2014	11,522	1,464	12.7%
Olivier Mallet	2014 Plan 15/04/2014	11,522	1,464	12.7%
TOTAL	**-**	**47,528**	**6,038**	**12.7%**

(a) The number corresponds to the factor 1, which is equivalent to the performance target. It may be increased by applying a performance factor of 1.33 if the performance target is exceeded.

(b) Adjustment following the 2016 capital increase by application of a factor of 1.6.

G) HISTORY OF SHARE SUBSCRIPTION OR SHARE PURCHASE OPTIONS ALLOCATED (ACCORDING TO THE FORMAT OF TABLE 8 RECOMMENDED BY THE AFEP-MEDEF CODE AND THE FRENCH SECURITIES REGULATOR)

The history of the share subscription or share purchase options allocated appears in Section 7.3.1.1 of this Chapter.

H) HISTORY OF PERFORMANCE SHARE ALLOCATIONS (ACCORDING TO THE FORMAT OF TABLE 9 RECOMMENDED BY THE AFEP-MEDEF CODE AND THE FRENCH SECURITIES REGULATOR)

The history of the performance shares allocated appears in Section 7.3.1.2 of this Chapter.

I) SHARE SUBSCRIPTION OR PURCHASE OPTIONS ALLOCATED TO THE TOP TEN EMPLOYEES WHO ARE NOT CORPORATE OFFICERS AND OPTIONS EXERCISED BY THEM (ACCORDING TO THE FORMAT OF TABLE 9 RECOMMENDED BY THE AFEP-MEDEF CODE AND THE FRENCH SECURITIES REGULATOR)

	Total number of options granted/shares subscribed or purchased	Weighted average exercise price *(in €)*	Share subscription or share purchase option plans
Options allocated during the year to the 10 Group employees to whom the largest number of options was allocated	153,000	6.02	Plan of 18 May 2017
Options exercised during the year by the 10 Group employees who purchased or subscribed for the largest number of options	-	-	-

The definitive allocation of subscription options issued under the plan put in place on 18 May 2017 is subject to conditions of performance and continuous service.

J) SUMMARY OF DEPARTURE MECHANISMS AND STATUS OF MEMBERS OF THE MANAGEMENT BOARD (ACCORDING TO THE FORMAT OF TABLE 10 RECOMMENDED BY THE AFEP-MEDEF CODE AND TABLE 11 RECOMMENDED BY THE FRENCH SECURITIES REGULATOR)

	Employment contract		Supplementary retirement plan [e]		Payments or benefits due or likely to become due in respect of termination of office or change of position [f]		Compensation for a non-compete clause [g]	
	Yes	No	Yes	No	Yes	No	Yes	No
PHILIPPE CROUZET Chairman of the Management Board *Date of first appointment: 1 April 2009* [a] *Date of appointment as Chairman of the Management Board: 1 April 2009* [a] *Date renewed: 15 March 2016* [a] *Date on which appointment ceases: 15 March 2020* [a]		X	X		X		X	
JEAN-PIERRE MICHEL Member of the Management Board *Date of first appointment: 7 March 2006* [b] *Date renewed: 15 March 2016* [b] *Date on which appointment ceases: 31 March 2017* [b]	X [d]		X			X		X
OLIVIER MALLET Member of the Management Board *Date of first appointment: 30 September 2008* [c] *Date renewed: 15 March 2016* [c] *Date on which appointment ceases: 15 March 2020* [c]	X [d]		X		X			X

(a) At its meeting on 25 February 2009, the Supervisory Board appointed Mr. Philippe Crouzet as Chairman of the Management Board as from 1 April 2009, thereby succeeding Mr. Pierre Verluca for the remainder of Mr. Verluca's term of office, i.e. until 15 March 2012. On 22 February 2012, the Supervisory Board renewed his appointment as Chairman of the Management Board, effective from 15 March 2012 until 15 March 2016. On 29 January 2016, the Supervisory Board renewed Mr. Philippe Crouzet's appointment as Chairman of the Management Board, effective from 15 March 2016 until 15 March 2020.

(b) At its meeting on 7 March 2006, the Supervisory Board appointed Mr. Jean-Pierre Michel as a member of the Management Board as from 1 April 2006. At its meeting on 3 June 2008, it renewed his appointment as a member of the Management Board with effect from 4 June 2008, at the close of the Ordinary and Extraordinary Shareholders' Meeting of 4 June 2008, until 15 March 2012, and at its meeting on 25 February 2009, appointed him as Chief Operating Officer with immediate effect. On 22 February 2012, the Supervisory Board renewed his appointment as member of the Management Board and Chief Operating Officer, with effect from 15 March 2012 until 15 March 2016. On 29 January 2016, the Supervisory Board renewed his appointment as member of the Management Board and Chief Operating Officer, with effect from 15 March 2016 until 15 March 2020. The Supervisory Board of 17 January 2017 noted the resignation of Mr. Jean-Pierre Michel from his duties as member of the Management Board and Chief Executive Officer with effect from 31 March 2017, and decided not to seek a replacement. Since 1 April 2017, the Management Board has comprised two members, Philippe Crouzet, Chairman of the Board, and Olivier Mallet, member of the Board.

(c) On 29 September 2008, the Supervisory Board appointed Mr. Olivier Mallet as member of the Management Board, with effect from 30 September 2008 until 15 March 2012. On 22 February 2012, the Supervisory Board renewed his appointment as member of the Management Board, effective from 15 March 2012 until 15 March 2016. On 29 January 2016, the Supervisory Board renewed his appointment as member of the Management Board, effective from 15 March 2016 until 15 March 2020.

(d) The employment contract is suspended throughout the Management Board member's term on the Management Board.

(e) For a description of the supplementary retirement plan, see 7.2.3.2. below.

(f) For a description of the payments or benefits that are due or that may be due as a result of a termination or change of office, see 7.2.1.2.3.8 above.

(g) For a description of the compensation for a non-compete clause, see 7.2.1.2.3.8.1 above.

7.2.2.2 Attendance fees and other compensation received by the members of the Supervisory Board and Committees in 2017

PARTICIPATION AT THE MEETINGS OF THE SUPERVISORY BOARD

The total amount for attendance fees that the Supervisory Board divided among its members in 2017 is recorded under the annual budget for attendance fees of €650,000 authorized by the Ordinary Shareholders' Meeting of 28 May 2014 (thirteenth resolution).

The amount of attendance fees of €33,000 per year and per member, in effect since 2010, will remain unchanged. However, in order to take into account the new recommendation of the AFEP-MEDEF Code, in its November 2015 revision, which requires that the portion of the attendance fees based on actual attendance exceed the fixed portion, the Supervisory Board, at its meeting on 7 November 2013, following the recommendation of the Appointments, Compensation and Governance Committee, decided as from 1 January 2014, to set the fixed portion at €12,000 (i.e. one-third of the attendance fees) and the variable portion based on actual attendance at €21,000 (i.e. two-thirds of the attendance fees).

The structure of the Board Chairman's compensation was simplified: all components of her annual compensation that applied through the end of 2013 (attendance fees and fixed annual compensation) were aggregated, resulting in an annual fixed compensation of €320,000. This approach, which had the effect that potential variations linked to attendance were no longer taken into account, is justified by the degree of involvement in the Group's affairs of the Board Chairman as she performs duties and procedures which far surpass merely attending Board and Committee meetings.

Within the context of a review of its internal operation, the Supervisory Board of 7 November 2013 also decided to extend the role of its

Vice-Chairman. This person is thus now in charge of convening the Supervisory Board and directing its discussions if the Chairman is absent, as well as upon the Chairman's request. He is also responsible for informing the Chairman of observations regarding compliance with the ethical obligations of the Board members. Following the proposal of the Appointments, Compensation and Governance Committee, the Supervisory Board Meeting of 15 December 2015 decided to allocate to the Lead Member, who also performs the duties of Vice-Chairman, an additional fixed annual amount of attendance fees of €40,000 for his duties as Lead Member, and his participation in this role at the Committee meetings.

The Chairman of the Supervisory Board, along with the other members, is not allocated any options, non-recurring compensation, performance shares or termination payments of any kind.

PARTICIPATION IN COMMITTEE MEETINGS

In 2017, the members of the Committees received, as part of the aforementioned €650,000 annual budget, additional attendance fees based on their actual attendance at meetings of these Committees, at the rate of €2,500 per meeting. The Chairman additionally collected an annual fixed portion of €12,500 pertaining to the Finance and Audit Committee, and €6,250 pertaining to the Appointments, Compensation and Governance Committee.

Attendance fees and other compensation received by the members and Non-voting Board member of the Supervisory Board (according to the format of Table 3 recommended by the AFEP-MEDEF Code and the French securities regulator)

Members of the Supervisory Board *In €*		Amounts due and paid in 2016	Amounts due and paid in 2017
Ms.	Vivienne Cox	320,000	320,000
Mr.	Pierre Pringuet	87,688	99,650
Mr.	Maria Pilar Albiac-Murillo	33,000	30,900
Mr.	Philippe Altuzarra	40,500	40,500
Mr.	Cédric de Bailliencourt	33,000	28,800
Mr.	Olivier Bazil	68,417	17,800
	Bpifrance Participations, represented by Mr. Alexandre Ossola	32,125	50,900
Ms.	Laurence Broseta	22,125	46,700
Ms.	Pascale Chargrasse [(a)]	48,000	53,400
Mr.	Mickaël Dolou (member since 03/10/2017) [(b)]	N/A	9,700
Mr.	José Carlos Grubisich	40,500	40,500
Mr.	Yuki Iriyama (member since 12/05/2017)	N/A	18,500
Mr.	Henri Poupart-Lafarge	52,583	55,900
Ms.	Alexandra Schaapveld	65,500	61,300
TOTAL		**843,438**	**874,550**

(a) These amounts are in addition to the fixed and variable compensation received by Ms. Pascale Chargrasse under her employment contract with the Group.

(b) This amount is in addition to the fixed and variable compensation received in 2017 by Mr. Mickaël Dolou under his employment contract with the Group.

7.2.3 Compensation and retirement commitments of the Group's main executives

7.2.3.1 Compensation of the Group's main senior executives

The total amount of all direct and indirect compensation paid in 2017 by the Group's French and foreign companies to all of the Group's main senior executives (i.e. the members of the Executive Committee as composed in 2017, excluding the members of the Management Board) amounted to €4,409 thousand. Variable compensation represented 31% of this total.

The share subscription options and performance shares allocated during the fiscal year to the members of the Executive Committee are valued according to the method used for the consolidated financial statements, at €746 thousand.

7.2.3.2 Retirement commitments

At the recommendation of the Appointments, Compensation and Governance Committee, the Supervisory Board Meeting of 17 February 2016 authorized the establishment of a new supplementary retirement plan, to replace the supplementary mandatory Group retirement plan with defined benefits, which it authorized closing to new benefits. In accordance with Articles L.225-86 et seq. and Article L.225-90-1 of the French Commercial Code *(Code de commerce)*, this new plan was approved by the Shareholders' Meeting of 6 April 2016.

As a result, the retirement commitments and other life annuities for corporate officers comprise, in addition to the ARRCO and AGIRC mandatory supplementary plans, a defined benefit scheme (closed), a mandatory group defined contribution scheme, and an individual defined contribution scheme for which the main characteristics are provided below.

- Main characteristics of the defined benefit retirement scheme:
  - This scheme related to Article L.137-11 of the French Social Security Code and was approved by the Shareholders' Meetings of 1 June 2006 and 4 June 2009.
  - The scheme was closed to new beneficiaries and all new rights on 31 December 2015.
  - The scheme includes 22 executive managers or corporate officers, it being stated that the rights to the defined benefits retirement are random. The seniority condition was three years at the closing of the scheme on 31 December 2015.
  - The annuity may not exceed 20% of the average basic compensation for the last three years and is limited to four times the annual social security ceiling. The reference compensation is the average compensation for the last three years (excluding the variable portion) as at 31 December 2015.
  - The regime is financed by contributions paid to an insurance body and is subject to a company contribution as stated in Article L.137-11 of the French Social Security Code at the rate of 24%. Financing of the scheme by Vallourec cannot be made on an individual basis.
  - The estimated amount of the annual annuity that will be paid to Management Board members for this scheme during settlement of French Social Security retirement rights, calculated as at 31 December 2017, is indicated below for each member of the Management Board:

Members of the Management Board	Estimated amount of the annual annuity as at 31 December 2017
Philippe Crouzet	€106,019
Jean-Pierre Michel	€86,805
Olivier Mallet	€52,950

- Main characteristics of the defined contribution mandatory group retirement scheme:
  - This scheme related to Article L.242-1 of the French Social Security Code and relating to Article 83 of the French General Tax Code and was approved by the Shareholders' Meeting of 6 April 2016.
  - This scheme is mandatory for all Vallourec Tubes and Vallourec employees and corporate officers who meet the eligibility requirements, i.e. whose gross annual compensation exceeds four times the annual social security ceiling. There is no seniority requirement. The scheme includes around fifty managers or corporate officers.
  - Vallourec's commitment is limited to payment to the insurance body of a contribution of 12% of the fixed and variable compensation that falls between five and eight times the Social Security ceiling (Tranche C). In 2017, the contribution paid for Mr. Philippe Crouzet and Mr. Olivier Mallet was €18,829.44. For Mr. Jean-Pierre Michel, the contribution paid for the period of his term of office, from 1 January to 31 March 2017, was €4,707.36. The contribution is partially subject to social security costs.
  - Vallourec's financial commitment is strictly limited in terms of amount and time since it can close the scheme at any time.
  - The estimated amount of the annuity that will be paid to Management Board members for this scheme during settlement of French Social Security retirement rights, calculated as at 31 December 2017, is indicated below for each member of the Management Board:

Members of the Management Board	Estimated amount of the annual annuity as at 31 December 2017 [(a)]
Philippe Crouzet	€1,559
Jean-Pierre Michel	€853
Olivier Mallet	€1,559

(a) On the basis of retirement at 62 years of age and with a post-retirement life expectancy of 20 years.

- The main characteristics of the optional individual retirement scheme are the following:
  - This mechanism, related to Article 82 of the French General Tax Code, was approved by the Shareholders' Meeting of 6 April 2016.
  - The scheme is individual and discretionary. In addition, the beneficiaries must have a three-year seniority within the Group and a gross annual compensation that exceeds eight times the annual Social Security ceiling. The scheme includes around ten senior executives or corporate officers.
  - Vallourec's commitment is limited to payment of an annual amount for retirement comprising 50% contributions made to an insurance body and 50% cash, taking into account the tax characteristics of the scheme, imposing taxation at entry.
  - In the spirit of the Macron law, the payment made under this scheme for Management Board members is subject to a performance condition: the maximum contribution is due for a year in the case of an annual bonus being awarded, calculated at 50% of the target of the bonus and no contribution is paid for an annual bonus calculated at zero. The contribution varies linearly between 0%-50%.
  - Vallourec's financial commitment is strictly limited in terms of amount and time since it can close the scheme at any time.
  - According to the applicable performance criteria and after deducting contributions, employee contributions and the relative income tax, the estimated amount of the annuity that will be paid to Management Board members for this scheme during settlement of French Social Security retirement rights, calculated as at 31 December 2017, is indicated below for each member of the Management Board:

Members of the Management Board	Estimated amount of the annual annuity as at 31 December 2017 [(a)]
Philippe Crouzet	€12,750
Jean-Pierre Michel (as corporate officer)	€250
Olivier Mallet	€7,350

(a) On the basis of retirement at 62 years of age and with a post-retirement life expectancy of 20 years.

7.3 Executive management interests and employee profit sharing

At its meeting of 13 May 2009, the Supervisory Board approved a policy for strengthening employees' involvement in the Group's results as presented by the Management Board.

In 2017, this policy was determined during the Supervisory Board meetings of 21 February (Value 17 employee share ownership plan and the performance share and share subscription option plans for managers). The Supervisory Board also determined, at its meeting on 21 February 2017, the principles of compensation for Management Board members, in the form of share subscription options and performance shares.

This information was made public in accordance with the AFEP-MEDEF Corporate Governance Code through the information provided on the Company's website on 23 February 2017 (www.vallourec.com).

Vallourec aims to supplement the compensation paid to its employees with various plans designed to involve them in sharing in the Group's performance over the long-term and build a significant level of employee share ownership, in line with Vallourec's development goals. The policy will gradually be extended to all categories of Group staff worldwide, subject to and in accordance with local legislation and regulations and budgetary constraints (for example, those relating to the relationship between the number of staff in a country and the cost of implementing the policy).

In 2017 the Group renewed:

- for the tenth consecutive year (see Section 7.3.3 "Employee share ownership" below), an employee share ownership plan, called Value 17, for the benefit of employees and those with similar rights at most Group companies in Germany, Brazil, Canada, China, United Arab Emirates, the United States, France, Malaysia, Mexico, the United Kingdom and Singapore.

Vallourec's second aim is to achieve closer convergence between the interests of Vallourec's management and those of its shareholders over the long term through the annual allocation of options and/or performance shares subject to the achievement of performance targets over several fiscal years.

These allocations have been gradually extended to a growing number of Group managers, according to a scope and volume which has been defined based on a Hay chart established at the global level. They are contingent upon:

- continuing employment within the Company; and
- the fulfillment of objective and predefined performance requirements.

Beneficiaries are encouraged, through these allocations, to make greater efforts to improve net profit and help the Group achieve its targets.

7.3.1 Options and performance shares

The Supervisory Board sets the maximum number of share subscription or share purchase options and performance shares, and their grant conditions to the members of the Management Board.

The Supervisory Board also approves the maximum number of beneficiaries and the maximum number of share subscription or share purchase options and performance shares that the Management Board proposes to allocate to Group employees under the terms of a plan.

The Management Board is responsible for determining the conditions for implementing any grants of share subscription or share purchase options and performance shares, including the identification of beneficiaries of such plans and, in the case of share subscription or share purchase options, the reference price. It is also responsible for ensuring the proper implementation of each plan and reports to the Supervisory Board, in the context of its control function.

The number of performance shares and options mentioned in Sections 7.3.1.1 and 7.3.1.2 below correspond to a factor of 1, equivalent to the performance target. Some figures have been adjusted, where necessary, to take account of the capital increase with maintenance of the Shareholders' preferential subscription rights on 3 May 2016.

Members of the Management Board are required to retain until the end of their terms of office (i) one quarter of the performance shares allocated to them under the terms of a plan and (ii) the equivalent in Vallourec shares of one quarter of the gross capital gain realized on the date of sale of the shares resulting from the options exercised. They formally agree not to hedge their risks on either options or shares resulting from the exercise of options, or on performance shares.

Furthermore, with regard to the confidential information obtained in the course of their duties, the members of the Management Board are required to comply with the provisions established by the Supervisory Board concerning the periods during which members in possession of insider knowledge may not buy, sell or take positions in the Company's shares or in any other financial instrument linked to Vallourec shares (options, warrants, etc.), i.e. the thirty (30) calendar days preceding the publications of the annual and semi-annual results and fifteen (15) calendar days preceding the publications of the first quarter and third quarter results as well as the day of publication and the following day, without prejudice to the current statutory and regulatory provisions on "insider trading".

7.3.1.1 Share subscription and/or purchase options

	2010 Plan	2011 Plan	2012 Plan
Date of Shareholders' Meeting	4 June 2009	4 June 2009	31 May 2012
Grant date by the Management Board	1 September 2010	1 September 2011	31 August 2012
Number of beneficiaries when plan implemented	349	743	387
Total number of shares that can be subscribed, including those that can be subscribed by:	517,865	684,521	883,602
■ Philippe Crouzet	27,149 i.e. 0.006% of the share capital (b)	21,992 i.e. 0.005% of the share capital (b)	0
■ Jean-Pierre Michel	12,340 i.e. 0.003% of the share capital (b)	9,997 i.e. 0.002% of the share capital (b)	0
■ Olivier Mallet	9,873 i.e. 0.002% of the share capital (b)	7,997 i.e. 0.002% of the share capital (b)	0
Percentage of the share capital that may potentially be allocated to members of the Management Board (a) (b)	0.01%	0.009%	0%
Total number of options allocated to the 10 Group employees who are not corporate officers and to whom the largest number of options was allocated	42,706	29,072	89,631
Total potential dilution of the plan at the allocation date (b)	0.08%	0.08%	0.20%
Date from which options may be exercised	1 September 2014	1 September 2015	1 April 2017
Expiration date of exercise period	1 September 2020	1 September 2021	31 August 2020
Exercise price (c)	€42.72	€36.44	€22.21
Performance conditions	Yes (d)	Yes (e)	Yes (f)
Number of shares subscribed	None (plan expired)	None (plan expired)	None (plan expired)
Total number of options canceled or expired since the grant date	173,181	336,467	863,905
Options remaining as at 31 December 2017	344,684	348,054	19,697
Total potential dilution of plan as at 31 December 2017 (b)	0.08%	0.08%	0.00%

(a) Based on the composition of the Management Board as at 31 December 2017.

(b) Based on the 457,987,760 shares comprising the share capital as at 31 December 2017.

(c) Average price of the Vallourec share over the 20 trading days preceding the allocation date, without discount. Changes were made to the exercise prices to take account of the adjustments linked to the capital increase in May 2016.

(d) Performance condition: Target ratio of the Group's consolidated EBITDA to consolidated revenue for the 2010, 2011, 2012 and 2013 fiscal years.

(e) Performance condition: Target ratio of the Group's consolidated EBITDA to consolidated revenue for the 2011, 2012, 2013 and 2014 fiscal years.

(f) The definitive allocation of the subscription options issued under the plan put in place on 31 August 2012 is entirely subject to conditions of performance and continuous service. For allocations to employees (other than members of the Operational Committee), performance is assessed over fiscal years 2013, 2014, 2015 and 2016 and is dependent on achieving a target ratio of the Group's EBITDA to consolidated revenue. As concerns allocations to members of the Operational Committee, performance is assessed over fiscal years 2013, 2014, 2015 and 2016, and measured based on the following four quantitative criteria: the estimated rate of return on capital employed on a consolidated basis, the growth of consolidated sales and revenue on a like-for-like basis, as well as the relative stock market performance of Vallourec shares, and the relative performance of consolidated EBITDA measured against a group of comparable companies, comprising Tenaris and TMK.

(g) The definitive allocation of subscription options issued under the plan put in place on 2 September 2013 is subject to conditions of performance and continuous service. For allocations to employees (other than members of the Operational Committee), performance is assessed over fiscal years 2014, 2015, 2016 and 2017 and is dependent on achieving a target ratio of the Group's EBITDA to consolidated revenue. As concerns allocations to members of the Operational Committee, performance is assessed over fiscal years 2014, 2015, 2016 and 2017, and measured based on the following four quantitative criteria: the estimated rate of return on capital employed on a consolidated basis, the growth of consolidated sales and revenue on a like-for-like basis, as well as the relative stock market performance of Vallourec shares, and the relative performance of consolidated EBITDA measured against a group of comparable companies, comprising Tenaris and TMK.

(h) The definitive allocation of subscription options issued under the plan put in place on 15 April 2014 is subject to conditions of performance and continuous service. For allocations to employees (other than members of the Executive Committee), performance is assessed over fiscal years 2014, 2015, 2016 and 2017 and is dependent on achieving a target ratio of the Group's EBITDA to consolidated revenue. As concerns allocations to members of the Executive Committee, performance is assessed over fiscal years 2014, 2015, 2016 and 2017, and is measured based on the following four quantitative criteria: the estimated rate of return on capital employed on a consolidated basis, the growth of consolidated sales and revenue on a like-for-like basis, as well as the relative stock market performance of Vallourec shares, and the relative performance of consolidated EBITDA measured against a group of comparable companies, comprising Tenaris and TMK.

2013 Plan	2014 Plan	2015 Plan	2016 Plan	2017 Plan
31 May 2012	31 May 2012	28 May 2014	28 May 2014	12 May 2017
2 September 2013	15 April 2014	15 April 2015	28 May 2016	18 May 2017
406	399	486	445	11
1,003,746	622,261	683,413	537,895	292,500
54,981 i.e. 0.012% of the share capital (b)	30,152 i.e. 0.007% of the share capital (b)	- (i)	30,145 (l) i.e. 0.007% of the share capital (b)	95,000 i.e. 0.021% of the share capital (b)
24,991 i.e. 0.006% of the share capital (b)	14,159 i.e. 0.003% of the share capital (b)	14,159 (j) i.e. 0.003% of the share capital (b)	14,159 (j) i.e. 0.003% of the share capital (b)	-
19,993 i.e. 0.004% of the share capital (b)	14,159 i.e. 0.003% of the share capital (b)	14,159 (j) i.e. 0.003% of the share capital (b)	14,159 (j) i.e. 0.003% of the share capital (b)	44,500 i.e. 0.015% of the share capital (b)
0.02%	0.01%	0.01%	0.013%	0.031%
77,577	74,470	53,812	49,134	153,000
0.22%	0.14%	0.15%	0.12%	0.06%
3 March 2018	15 April 2018	15 April 2019	18 May 2020	18 May 2021
1 September 2021	15 April 2022	15 April 2023	18 May 2024	18 May 2025
€27.70	€23.13	€13.57	€3.90	€6.02
Yes (g)	Yes (h)	Yes (k)	Yes (m)	Yes (n)
-	-	-	-	-
163,857	151,669	117,097	15,165	0
839,889	531,744	566,316	522,730	292,500
0.18%	0.12%	0.12%	0.11%	0.06%

(i) The Supervisory Board meeting of 17 February 2016 formally recorded Mr. Philippe Crouzet's waiver of the share subscription options allocated in 2015, after this year's financial statements were approved. Consequently, the valuation of the share subscription options allocated in 2015 (i.e. €97,740). is nil in this table.

(j) As from the 2015 plans, the maximum factor has been 1.33, i.e. a maximum of 18,831 options.

(k) For allocations to employees (other than members of the Executive Committee), performance is assessed over fiscal years 2015, 2016, 2017 and 2018 and is dependent on achieving a target ratio of the Group's EBITDA to consolidated revenue. As concerns grants to members of the Executive Committee, performance is assessed over four years and measured based on the following two quantitative criteria: the consolidated EBITDA for 2015, 2016, 2017 and 2018, and the growth in the EBITDA margin between 2015 and 2018 (based on a comparison between the growth of Vallourec's gross margin and the average growth in gross margin of a group of comparable companies). This group comprises the following: NSSMC, Halliburton, NOV, Schlumberger, Technip, Baker Hughes, TMK, Tenaris, Alstom, Areva, U.S. Steel, Thyssen Krupp, Arcelor Mittal and Salzgitter AG).

(l) i.e. a maximum of 40,092 options on the basis of the maximum factor of 1.33.

(m) As concerns grants to employees (excluding members of the Executive Committee), performance is assessed for the 2016, 2017, 2018 and 2019 fiscal years, and is dependent on achieving a target ratio of the Group's EBITDA to the budget. As concerns grants to members of the Executive Committee, performance is assessed over four years and measured based on the following two quantitative criteria: the consolidated EBITDA for 2016, 2017, 2018 and 2019, and the growth in the EBITDA margin between 2016 and 2019 (based on a comparison between the growth of Vallourec's gross margin and the average growth in gross margin of a group of comparable companies. This group comprises the following: NSSMC, Halliburton, NOV, Schlumberger, Technip, Baker Hughes, TMK, Tenaris, Alstom, Areva, U.S. Steel, Thyssen Krupp, Arcelor Mittal and Salzgitter AG).

(n) As concerns allocations to members of the Executive Committee, performance is assessed over four years and measured based on the following two quantitative criteria: the Free Cash Flow (FCF) for 2017, 2018, 2019 and 2020, and the change in Vallourec's TSR between 2017 and 2020 (comparison of Vallourec's TSR with that of the panel of competitors. This group comprises the following: Hunting Plc, United States Steel Corp, Nippon Steel & Sumitomo Metal Corp., Tubacex SA, Tenaris SA, Voestalpine AG, Seah Steel Corp, Tubos Reunidos SA, TimkenSteel Corp, Salzgitter AG, ArcelorMittal SA, TMK and NOV).

After applying the adjustment terms provided for in Articles L.228-99 and R.228-91 of the French Commercial Code and in conformity with the regulations of the share subscription options and performance share plans, Vallourec's Supervisory Board, at its meeting on 2 May 2016, wished to preserve the rights of holders of performance shares and share subscription options, by ensuring that the capital increase determined on 7 April 2016 would be neutral for them. The figures opposite have been updated.

The value of the option plans is included in Notes 19 and 21 to the consolidated financial statements, which are found in Section 6.1 of this Registration Document.

7.3.1.2 Performance share and free share allocation plans

PERFORMANCE SHARE PLANS

Date of Shareholders' Meeting
Grant date by the Management Board
Number of beneficiaries when plan implemented
Total number of shares that can be acquired, including those able to be acquired by (a):
■ Philippe Crouzet
■ Jean-Pierre Michel
■ Olivier Mallet
Percentage of the share capital that may potentially be allocated to members of the Management Board (b) (c)
Total number of performance shares allocated to the ten employees who are not corporate officers and to whom the largest number of shares was allocated
Total potential dilution of the plan at grant date (b)
Performance conditions
Vesting period end-date
Total number of performance shares canceled or expired since the grant date
Performance shares remaining as at 31 December 2017
Total potential dilution of plan as at 31 December 2017 (b)

(a) *Based on a factor of 1.*

(b) *Based on the composition of the Management Board as at 31 December 2017.*

(c) *Based on the 457,987,760 shares comprising the share capital as at 31 December 2017.*

(d) *Performance conditions: for allocations to employees, performance is assessed over fiscal years 2014, 2015 and 2016 and is dependent on achieving a target ratio of the Group's consolidated EBITDA to consolidated revenue. The actual number is determined by applying a performance factor, calculated for the three years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.25. For allocations to members of the Management Board and the Executive Committee, performance is assessed over financial years 2014, 2015 and 2016, and measured based on the following four quantitative criteria: the expected rate of return on capital employed on a consolidated basis, the growth of consolidated sales and revenue on a like-for-like basis, and according to the exchange rate when the Budget was prepared, as well as the stock market performance of Vallourec shares, and the relative performance of consolidated EBITDA measured against a group of comparable companies comprising Tenaris and TMK. Based on a maximum factor of 1.33.*

(e) *For all beneficiaries (excluding Management Board and Executive Committee members), it will be based on the ratio of consolidated EBITDA to consolidated revenue achieved by the Group in 2015, 2016 and 2017. The actual number is determined by applying a performance factor, calculated for the three years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.25. For members of the Management Board and Executive Committee, the final award will depend on the following two criteria, assessed for 2015, 2016 and 2017: the rate of return on capital employed on a consolidated basis (ROCE), compared to the ROCE in the budget, and the Total Shareholder Return (TSR) for 2015, 2016 and 2017. The actual number is determined by applying a performance factor, calculated for the two years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.33.*

(f) *The Supervisory Board meeting on 17 February 2016 duly noted the waiver by Mr. Philippe Crouzet of the performance shares allocated during the 2015 fiscal year after the financial statements for that year were approved. Consequently, the valuation of the performance shares allocated in 2015 (which would have otherwise been €292,199) is nil in this table.*

2014 Plan	2015 Plan	2016 Plan	2017 Plan
31 May 2012	28 May 2014	28 May 2014	12 May 2017
15 April 2014	15 April 2015	18 May 2016	18 May 2017
1,758	497	537	553
661,861	388,593	610,001	820,275
24,484 [i] i.e. 0.005% of the share capital	- [f]	22,036 [i] i.e. 0.005% of the share capital	66,500 i.e. 0.015% of the share capital
11,522 [i] i.e. 0.003% of the share capital	10,370 [i] i.e. 0.002% of the share capital	10,370 [i] i.e. 0.002% of the share capital	- - -
11,522 [i] i.e. 0.003% of the share capital	10,370 [i] i.e. 0.002% of the share capital	10,370 [i] i.e. 0.002% of the share capital	31,500 i.e. 0.007% of the share capital
0.01%	0.004%	0.009%	0.021%
46,424	33,888	43,599	124,400
None	None	None	None
Yes [d]	Yes [e]	Yes [g]	Yes [h]
14 April 2017 or 2018	15 April 2018 or 2019	18 May 2019 or 2020	18 May 2020 or 2021
345,417	52,015	15,715	2,900
316,444	336,578	594,286	817,375
None	None	None	None

(g) For all beneficiaries (excluding Management Board and Executive Committee members), it will be based on the ratio of consolidated EBITDA to consolidated revenue achieved by the Group in 2016, 2017 and 2018. The actual number is determined by applying a performance factor, calculated for the three years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.25. For members of the Management Board and Executive Committee, the final award will depend on the following two criteria, assessed for 2016, 2017 and 2018: the rate of return on capital employed on a consolidated basis (ROCE), compared to the ROCE in the budget, and the Total Shareholder Return (TSR) for 2016, 2017 and 2018. The actual number is determined by applying a performance factor, calculated for the two years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.33.

(h) For all beneficiaries (excluding members of the Management Board and Executive Committee), this will depend on cost reduction in 2017, 2018 and 2019, in comparison to the planned performance in the Group's medium-term plan for the same period, and on the Group's cumulative Free cash flow (FCF) for 2017, 2018 and 2019. The actual number is determined by applying a performance factor, calculated for the three years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 1.4. For members of the Management Board and Executive Committee, the definitive allocation will depend on the following two criteria: reducing costs in 2017, 2018 and 2019, in comparison to the Group's planned performance in the medium-term plan over the same period and the growth of the EBITDA margin between 2017 and 2019 in comparison to a panel of comparable companies. The actual number is determined by applying a performance factor, calculated for the two years concerned, to the theoretical number of shares allocated. This factor may range from 0 to 2.

(i) Number of shares adjusted following the 2016 capital increase (ratio of 1.6 new shares for each existing share).

After applying the adjustment terms provided for in Articles L.228-99 and R.228-91 of the French Commercial Code and in conformity with the regulations of the share subscription options and performance share plans, Vallourec's Supervisory Board, at its meeting on 2 May 2016, wished to preserve the rights of holders of performance shares and share subscription options, by ensuring that the capital increase determined on 7 April 2016 would be neutral for them. The figures opposite have been updated.

INTERNATIONAL PERFORMANCE SHARE PLANS FOR EMPLOYEES

	2-4-6 plan (2013)	2-4-6 plan (2014)
Date of Shareholders' Meeting	31 May 2012	31 May 2012
Grant date by the Management Board	29 March 2013	15 April 2014
Number of beneficiaries when plan implemented	21,744	21,677
Maximum total number of performance shares	191,144	208,100
of which maximum total number of performance shares allocated to members of the Management Board (as composed when plan implemented)	0	0
Number of executive corporate officers concerned	0	0
Maximum total number of performance shares allocated to the ten employees who are not corporate officers and to whom the largest number of shares was allocated	100	100
Potential dilution	None	None
Performance condition	*Ratio of consolidated EBITDA to consolidated revenue (2013, 2014 and 2015)*	*Ratio of consolidated EBITDA to consolidated revenue (2014, 2015 and 2016)*
Vesting period	3 to 4 years	3 to 4 years
Holding period	0 to 2 year(s)	0 to 2 year(s)
Total number of performance shares canceled or expired since the allocation date	N/A	83,750
Performance shares as at 31 December 2017	None (plan expiring on 28 March 2017)	124,350

FREE SHARE ALLOCATION PLANS

Free share allocation plans (without performance conditions) have been implemented only under the terms of the "Value" employee share ownership offers (see Section 7.3.3 "Employee share ownership" below), offered every year since 2008, and for the sole benefit of employees and those with similar rights who are non-French residents for tax purposes of certain Group companies, instead of the employer matching contribution granted to other employees and those with similar rights of the Vallourec Group's French companies.

	"Value 12" Plan	"Value 13" Plan	"Value 14" Plan	"Value 15" Plan	"Value 16" Plan	"Value 17" Plan
Date of Shareholders' Meeting	31/05/2012	30/05/2013	28/05/2014	28/05/2015	06/04/2016	12/05/2017
Grant date by the Management Board	06/12/2012	10/12/2013	16/12/2014	15/12/2015	14/12/2016	14/12/2017
Number of beneficiaries when plan implemented	737	732	768	348	255	265
Total number of free shares	7,032	6,445	6,336	2,744	3,344	3,409
of which total number of shares allocated free of charge to members of the Management Board (when plan implemented)	0	0	0	0	0	0
Number of executive management members concerned	0	0	0	0	0	0
Total number of shares allocated free of charge to the ten employees who are not corporate officers and to whom the largest number of shares was allocated	100	100	100	100	100	150
Potential dilution	None	None	None	None	None	None
Performance conditions	None	None	None	None	None	None
Vesting period	4.6 years	4.6 years	4.6 years	4.6 years	4.6 years	4.6 years
Holding period	0	0	0	0	0	0
Number of shares allocated free of charge, canceled since their allocation	N/A	1,695	1,148	0	0	0
Free shares as at 31 December 2017	Plan expired	4,750	5,188	2,744	3,344	3,409

The valuation of performance share and free share allocation plans appears in Notes 19 and 21 to the consolidated financial statements in Section 6.1 of this Registration Document.

7.3.2 Profit sharing, incentive and savings schemes

Profit sharing and incentive schemes

Most Group companies have put in place profit sharing and incentive plans that involve the employees in the Company's performance, based on the current income/revenue ratio.

The amounts paid under these plans during the last five fiscal years are as follows:

In € million	2013	2014	2015	2016	2017
	9.14	18.9	21.43	18.72	21.67

Company savings plan

The Group formed a Company savings plan (*plan d'épargne d'entreprise* – PEE) in France in 1989, to help employees build up capital over the medium and long term. Since 2005, these arrangements have been supplemented by the implementation, by agreement, of a collective retirement savings plan (*plan d'épargne retraite collectif* – PERCO).

Employees' voluntary payments are topped up by the Company in accordance with a scale updated each year in relation to the Group's net profit.

The amounts paid by way of employer matching contribution over the last five fiscal years were as follows:

	2013		2014		2015		2016		2017	
In € million	PEE	PERCO	PEE	PERCO	PEE	PERCO	PEE	PERCO	PEE	PERCO
	4.1 [(a)]	0.6 [(a)]	4.5 [(b)]	0.8 [(b)]	3.7 [(c)]	0.9 [(c)]	3.6 [(d)]	0.6 [(d)]	1.2 [(e)]	0.2 [(e)]

(a) Including €1,923,536.19 for the Value 13 operation.

(b) Including €1,560,675.87 for the Value 14 operation.

(c) Including €728,133.70 for the Value 15 operation.

(d) Including €244,632.55 for the Value 16 operation.

(e) Including €234,043.88 gross for the Value 17 operation.

7.3.3 Employee share ownership

7.3.3.1 International employee share ownership plans

Every year since 2008, the Group has offered an international employee share ownership plan in its main countries of operation, called "Value," followed by the last two figures of the year of its roll-out (for a description of the plans from 2008 to 2013, see Section 6.3.3 "Employee share ownership" in the 2011 Registration Document and Section 7.3.3 "Employee share ownership" in the 2012, 2013, 2014, 2015 and 2016 Registration Documents).

In 2017, the Value 17 plan was offered in eleven countries (Brazil, Canada, China, France, Germany, Mexico, the United Arab Emirates, the United Kingdom, United States, Malaysia and Singapore) and resulted in a capital increase on 14 December 2017, for a gross total of €27 million through the issue of 6,749,755 new shares at a subscription price per share of €3.77 for the standard plan and €4 for the leveraged plan, in accordance with the authorizations granted to the Management Board by the Shareholders' Meeting of 12 May 2017 by virtue of its twenty-second, twenty-third and twenty-fourth resolutions. Nearly 10,000 employees in the eleven countries concerned, i.e. 52% of eligible employees, chose to subscribe to the Group's share offering.

In place of the employer matching contribution granted to employees and those with similar rights of the Group's French companies and those companies with registered offices in Brazil, Germany, Mexico, the United Arab Emirates and the United Kingdom and participating in the Value 17 plan, the Management Board at the same time implemented, under the terms of the Value 17 offering, a free share allocation plan for new or existing shares, involving a maximum of 3,409 shares, i.e. 0.0007% of share capital on that date, for the benefit of employees who are non-French residents for tax purposes of Vallourec Group companies with registered offices located in Canada, the United States (excluding employees of VAM USA LLC), Malaysia and Singapore, who took part in a +SAR share offering under the Value 17 plan.

The 10 international employee share ownership plans offered since 2008 have proved highly successful given their average subscription rate of 63.2% and raised employee share ownership from 0.16% at 31 December 2007, to 4.19% at 31 December 2017. Through their significant subscription Vallourec believes its employees have demonstrated their loyalty to the Group, as well as their confidence in Vallourec's strategy and future. Against this backdrop, the Supervisory Board welcomed Ms. Pascale Chargrasse as a member of the Supervisory Board representing employee shareholders on 13 December 2010. Ms. Pascale Chargrasse's office was renewed for a four-year term by the Shareholders' Meeting on 28 May 2015.

These plans have enabled the Group to achieve the three objectives it had set for each of these operations:

- to involve as many employees as possible in the Group's performance;
- to strengthen "Group spirit", the cornerstone of its culture; and
- to develop a long-term relationship with employees that will help Vallourec to maintain a stable shareholder base.

Details of the terms and conditions of the Value 12, Value 13, Value 14, Value 15, Value 16 and Value 17 plans are provided in Note 19 to the consolidated financial statements in Section 6.1 of this Registration Document.

7.3.3.2 International performance share allocation plans for employees

Between 2009 and 2014, the Group provided an annual international performance share allocation plan each year for all employees (excluding members of the Management Board) in the majority of Group entities.

Called the 1-2-3 Plan at its launch in 2009, then the 2-4-6 Plan starting in 2010 and through 2014, to take account of the two-for-one Vallourec stock split in July 2010, these plans enabled each of the employees within the allocation scope to receive zero, two, four or six Vallourec shares depending on the Group's performance (for a summary of the international performance share allocation plans rolled out from 2010 through 2014, see Section 7.3.1.2 "Performance share allocation plans" above).

7.4 Supervisory Board Report on 2017 compensation for corporate officers

This report was established in application of Articles L.225-82-2 and L.225-100 of the French Commercial Code with a view towards the vote of shareholders, gathered at the Shareholders' Meeting of 25 May 2018, on the fixed, variable and special components comprising the total compensation and benefits paid or allocated for the fiscal year ended 31 December 2017 to Mr. Philippe Crouzet, Chairman of the Management Board, Messrs. Jean-Pierre Michel and Olivier Mallet, members of the Management Board, and Ms. Vivienne Cox, Chairman of the Supervisory Board.

The compensation and benefits of members of the Management Board and the Chairman of the Supervisory Board are determined by the Supervisory Board, at the proposal of its Appointments, Compensation and Governance Committee (the "CNRG"), with the aim of having such compensation seen as fair and balanced by both shareholders and employees.

7.4.1 Governance regarding the compensation and benefits policy for corporate officers

The compensation of members of the Management Board and the Chairman of the Supervisory Board is reviewed each year in accordance with the policy on compensation and benefits applicable to corporate officers. This policy, and the corresponding governance, are presented in the corporate governance report established in application of Article L.225-68 of the French Commercial Code, in conformity with Article L.225-82-2 of said Code.

7.4.2 Compensation of members of the Management Board

7.4.2.1 GENERAL PRINCIPLES

The compensation of the Management Board members presented below corresponds to all of the fixed, variable and special elements comprising the total compensation and benefits paid or allocated for 2017.

7.4.2.2 STATUS OF MEMBERS OF THE MANAGEMENT BOARD

The Management Board is comprised of two members as at 1 January 2018:

- Mr. Philippe Crouzet, Chairman of the Management Board, who does not have an employment contract;
- Mr. Olivier Mallet, who holds an employment contract for which performance was suspended during his term as a member of the Management Board.

Moreover, Mr. Philippe Crouzet and Mr. Olivier Mallet respectively hold 71,874 and 30,061 Vallourec shares.

Mr. Jean-Pierre Michel resigned from his post as member of the Management Board, effective 31 March 2017. He has not been replaced.

7.4.2.3 COMPONENTS OF MANAGEMENT BOARD MEMBERS' COMPENSATION AND BENEFITS

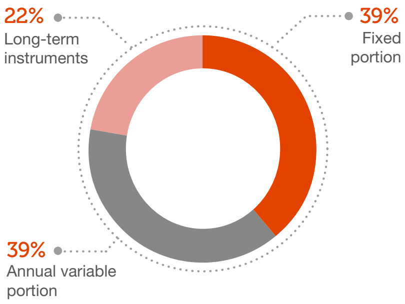
7.4.2.3.1 Respective weight of the components of Management Board members' compensation

In accordance with the compensation policy, the weighting for each of these three components of compensation and benefits (fixed portion, annual variable portion and long-term instruments) is one third, provided that the amount of the variable portion is integrated in the target and the medium and long-term incentive equity instruments are valued at their carrying amount for target achievement. In recent years, adverse changes in the fair value of these instruments, however, has not made it possible to ensure this balance.

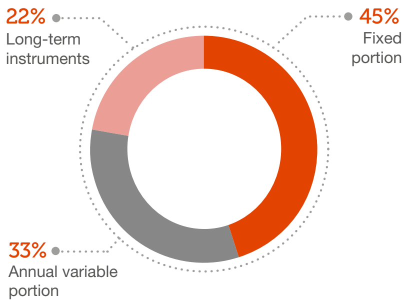
In 2017, the CNRG decided to gradually return to a value for the allocation of performance shares and stock options to the Management Board representing one third of the total of the three components of compensation and benefits (fixed, variable and long-term incentive instruments for a performance on-target).

As such, the Board, based on the CNRG's proposal, decided that for 2017 the volume of performance shares and stock options allocated to the Management Board would represent a target of approximately 22% of the total of those three components based on the estimated IFRS value at the allocation date. At the target, the respective weight of each of these elements was as follows:

Philippe Crouzet



Olivier Mallet



7.4.2.3.2 Fixed portion

In accordance with the compensation policy, the Supervisory Board, having noted at the beginning of 2017 that:

- the responsibilities of the Management Board had not changed; and
- an examination of the compensation surveys did not uncover any significant imbalance compared to the first quartile of the comparison sample.

Consequently, it decided not to change the fixed portion of the three Management Board members in 2017.

Therefore:

- **the fixed portion for Mr. Philippe Crouzet,** which was brought to €798,000 in 2014, remains unchanged;
- **the fixed portion for Mr. Jean-Pierre Michel,** which was brought to €450,000 in 2012, remains unchanged (*pro rata* of his attendance);
- **the fixed portion for Mr. Olivier Mallet,** which was brought to €420,000 in 2014, remains unchanged.

With regard to the general salary increases of French employees between 2010 and 2017, the changes in the fixed portions for members of the Management Board over the same period seem moderate, as the table below attests.

Change in the fixed compensation of French employees of the Group and members of the Management Board for the period 2010-2017 for the full year

Members of the Management Board	2010	2011	2012	2013	2014	2015	2016	2017	Total change
Philippe Crouzet	€760,000	€760,000	€760,000	€760,000	€798,000	€798,000	€798,000	€798,000 i.e. 0%	+5% over the period
Jean-Pierre Michel, (until 31 March 2017)	€430,000	€430,000	€450,000	€450,000	€450,000	€450,000	€450,000	€450,000 i.e. 0%	+4.65% over the period
Olivier Mallet	€375,000	€375,000	€400,000	€400,000	€420,000	€420,000	€420,000	€420,000 i.e. 0%	+12% over the period
Total salary increase budget for the Group's employees (2010 to 2017 budgets)									+15.5% over the period

7.4.2.3.3 Variable portion

The variable portion of compensation corresponds to a percentage of the fixed portion and provides for minimum thresholds, below which no payment is made, target levels when the objectives set by the Supervisory Board are met, and maximum levels when target objectives have been exceeded.

For 2017, the variable portions of the Management Board members changed in terms of their structure, as stated hereafter, while the target and maximum levels remained unchanged. Accordingly, in 2017 Mr. Philippe Crouzet's variable portion could vary from 0 to 100% of his target fixed portion and reach 135% of this same fixed portion in the event that maximum objectives were attained. For Mr. Jean-Pierre Michel and Mr. Olivier Mallet, the 2017 variable portions could vary from 0 to 75% of their target fixed portions and attain 100% in the event that maximum objectives were achieved. In summary, the elements of monetary compensation of the members of the Management Board were as follows:

	Philippe Crouzet Chairman of the Management Board	**Jean-Pierre Michel Member of the Management Board (Until 31 March 2017)**	**Olivier Mallet Member of the Management Board**
Fixed portion *In €*	798,000	450,000	420,000
Target variable portion *As a % of fixed portion*	100%	75%	75%
Maximum variable portion *As a % of fixed portion*	135%	100%	100%

The 2017 variable portions were contingent on the achievement of several precise and previously established objectives of a quantifiable or qualitative nature, for which the minimum, target and maximum thresholds were set by the Supervisory Board, after an in-depth examination by the CNRG.

In 2017, Vallourec evolved in a climate that was still difficult, being marked by:

- the implementation of a significant restructuring of the Group's activities in order to better adapt to a changing environment;
- a slower recovery in oil prices than predicted;
- systematic cost reduction and refocusing on core business activities.

Against this backdrop, the Supervisory Board had decided to structure the objectives of the Management Board around three fundamental priorities in order to reestablish the Company's economic equilibrium in the short-term:

- three objectives linked to the Group's financial performance:
  - EBITDA,
  - cost reduction as part of the competitiveness plan,
  - PRI ("Payables Receivables Inventories") as part of the control of working capital requirements;
- one objective linked to operational performance:
  - roll-out of the new structure;
- three objectives linked to CSR issues:
  - TRIR injury rate without lost time per million hours worked,
  - LTIR injury rate with lost time per million hours worked,
  - the Group share of industrial waste subject to a physical or heat rehabilitation, excluding any landfill waste (in %).

In 2017, quantifiable objectives (financial and safety) represented 75% of the target variable portion of Mr. Philippe Crouzet, Mr. Jean-Pierre Michel and Mr. Olivier Mallet:

- the share of financial performance objectives was 60% of the target variable portion (compared to 70% in 2016), an adjustment which was due to the importance of the success of the Group's new structure;
- the portion of financial performance objectives was raised to 15% of the target variable portion (compared to 10% in 2016).

In view of the results achieved, the variable portions of each Management Board member for the 2017 fiscal year were set as follows:

2017 variable portion	Members of the Management Board Philippe Crouzet	 Jean-Pierre Michel	 Olivier Mallet
Structure and level of the variable portion *(expressed as a percentage of the fixed portion)*	Variable portion: 100% if the objectives set by the Board are achieved (target), and 135% maximum for exceptional performance	Variable portion: 75% if the objectives set by the Board are achieved (target), and 100% maximum for exceptional performance	Variable portion: 75% if the objectives set by the Board are achieved (target), and 100% maximum for exceptional performance
FINANCIAL PERFORMANCE OBJECTIVES	Weight in target variable portion: 60%	Weight in target variable portion: 45%	Weight in target variable portion: 45%
EBITDA	This criterion varied from 0 to 20% if the target was attained and could be established as 27% as a maximum	This criterion varied from 0 to 15% if the target was attained and could be established as 20% as a maximum	This criterion varied from 0 to 15% if the target was attained and could be established as 20% as a maximum
The rate of achievement for this indicator is	27%	20%	20%
Competitiveness/Cost reduction plan	This criterion varied from 0 to 20% if the target was attained and could be established as 27% as a maximum	This criterion varied from 0 to 15% if the target was attained and could be established as 20% as a maximum	This criterion varied from 0 to 15% if the target was attained and could be established as 20% as a maximum
The rate of achievement for this indicator is	21.5%	16.1%	16.1%
“PRI” performance plan	This criterion varied from 0 to 20% if the target was attained and could be established as 27% as a maximum	This criterion varied from 0 to 15% if the target was attained and could be established as 20% as a maximum	This criterion varied from 0 to 15% if the target was attained and could be established as 20% as a maximum
The rate of achievement for this indicator is	27%	20%	20%
TOTAL CALCULATED IN € OF FINANCIAL PERFORMANCE OBJECTIVES	**€602,544**	**€63,086**	**€235,520**
OPERATIONAL PERFORMANCE OBJECTIVES	Weight in target variable portion: 25%	Weight in target variable portion: 18.75%	Weight in target variable portion: 18.75%
Roll-out of the new structure	This criterion varied from 0 to 25% if the target was attained and could be established as 33.75% as a maximum	This criterion varied from 0 to 18.75% if the target was attained and could be established as 25% as a maximum	This criterion varied from 0 to 18.75% if the target was attained and could be established as 25% as a maximum
The rate of achievement for this indicator is	20%	15%	15%
TOTAL CALCULATED IN € OF OPERATIONAL PERFORMANCE OBJECTIVES	**€159,600**	**€16,875**	**€63,000**
CSR OBJECTIVES	Weight in target variable portion: 15%	Weight in target variable portion: 11.25%	Weight in target variable portion: 11.25%
Safety (TRIR)/(LTIR) [(a)]	These criteria varied from 0 to 10% from the target, and could be established as 13.5% as a maximum	These criteria varied from 0 to 7.5% from the target, and could be established as 10% as a maximum	These criteria varied from 0 to 7.5% from the target, and could be established as 10% as a maximum
The rate of achievement for these indicators is	0%	0%	0%
Group share of industrial waste reclaimed	These criteria varied from 0 to 5% from the target, and could be established as 6.75% as a maximum	These criteria varied from 0 to 3.75% from the target, and could be established at a maximum of 5%	These criteria varied from 0 to 3.75% from the target, and could be established at a maximum of 5%
The rate of achievement for these indicators is	3%	2.25%	2.25%
TOTAL CALCULATED IN € OF CSR PERFORMANCE OBJECTIVES	**€23,940**	**€2,531**	**€9,450**
Percentage of the variable portion in relation to the target variable portion	**98.5%**	**97.8%**	**97.8%**
Variable portion as a percentage of the fixed portion of compensation	**98.5%**	**73.3%**	**73.3%**
VARIABLE PORTION CALCULATED IN €	**786,084**	**82,492**	**307,970**

(a) *The safety objective is measured based on the results of the Lost Time Injury Rate (LTIR) and Total Recordable Injury Rate (TRIR), which measure, respectively, the number of accidents, with work stoppage, per million hours worked, and the injury rate per million hours worked.*

The monetary variable portion of Management Board members must reflect the performance of the Management Board in relation to the objectives that were set in terms of financial, operational and CSR performance.

- The Supervisory Board would like to emphasize that the financial results obtained are significantly greater than the objectives, in a context in which the Group's revenue increased 15% from last year, excluding the exchange rate and change in scope, and 26% overall.
  - For the first time since 2014, the Group's EBITDA has become slightly positive, at +€2 million.
  - The cost reduction plan targets were exceeded. Indeed, the Board has noted that performance targets were surpassed this year again with a cost reduction of €164 million, after €150 million in 2016, leading to savings of €315 million over two years, as compared with the €400 million five-year target announced in early 2016.
  - Likewise, the performance in relation to working capital requirements was remarkable: it was reduced, even though revenue has risen considerably.
- In terms of operating performance, the Supervisory Board emphasizes that the new structure has been successfully established and that, in terms of adaptation, the operational transformation plan has begun to bear its fruits. In particular, the first commercial successes relying on new production channels were recorded, which will continue to be rolled out.
- As concerns CSR objectives, safety targets were not achieved, while environmental goals were. Despite the success of the plan to prevent the most serious safety risks (there were no fatal accidents in 2017, for the third consecutive year) the threshold TRIR targets (accidents without lost time,) and LTIR (accidents with lost time) were not achieved. The waste reprocessing objective was achieved. The Group continues to consider safety and respect for the environment to be fundamental issues.

Pursuant to Article L.225-82-2 of the French Commercial Code, payment of the variable compensation to the Chairman and members of the Management Board is subject to approval by the Ordinary Shareholders' Meeting of 25 May 2018 of the compensation components of the individual concerned under the terms provided for in Article L.225-100 of the French Commercial Code.

7.4.2.3.4 Long-term incentive equity instruments

7.4.2.3.4.1 Performance shares and options granted in 2017

In 2017, the Supervisory Board thus authorized the renewal of:

- for the eleventh consecutive year, a plan to allocate, subject to continuous service and performance conditions, a target number of 820,275 performance shares, to benefit 553 managers and executives and the two members of the Management Board, under the twenty-seventh resolution approved by the Ordinary and Extraordinary Shareholders' Meeting of 12 May 2017;
- for the eleventh consecutive year, a plan to allocate, subject to continuous service and performance conditions, a target number of 292,500 share subscription options, to benefit nine managers, members of the Executive Committee, and the two members of the Management Board, under the twenty-sixth resolution approved by the Ordinary and Extraordinary Shareholders' Meeting of 12 May 2017.

The Supervisory Board, in conformity with its compensation policy and market practices, decided that for the allocation of performance shares and stock options to the Management Board it would gradually return to a target performance value that represents approximately one third of the total of the three components of compensation and benefits (fixed portion, variable portion and long-term incentive instruments). For 2017, the Supervisory Board set this allocation value at 22% of the total of the three components of compensation and benefits, which led it to increase the number of performance shares and options allocated.

The number of performance shares allocated by the Supervisory Board in 2017 was 66,500 for Mr. Philippe Crouzet and 31,500 for Mr. Olivier Mallet for target performance (corresponding to a factor of 1, as described below).

The number of options allocated by the Supervisory Board in 2017 was 95,000 for Mr. Philippe Crouzet and 44,500 for Mr. Olivier Mallet for target performance (corresponding to a factor of 1, as described below).

Overall, representing 0.24% of share capital as at 31 December 2017, the portion granted to members of the Management Board was set at 21.3% of the total allocations, and 0.05% of share capital.

The **performance shares** granted to members of the Management Board in 2017 are subject to performance conditions assessed over three years and measured based on the following two quantifiable criteria:

- an internal criterion: reduction of costs in 2017, 2018 and 2019 compared to the planned performance in the Group's medium-term plan for the same period (50% weighting);
- an external criterion: growth of the EBITDA margin between 2017 and 2019 compared to a panel of comparable companies (50% weighting).

The panel of comparable companies shall be comprised of the following companies from the "Oil & Gas," "Engergy" and "Steel" sectors: Hunting Plc, United States Steel Corp, Nippon Steel & Sumitomo Metal Corp., Tubacex SA, Tenaris SA, Voestalpine AG, Seah Steel Corp, Tubos Reunidos SA, TimkenSteel Corp, Salzgitter AG, ArcelorMittal SA, TMK and NOV.

The number of performance shares definitively allocated to the Management Board following the performance assessment period shall be calculated by applying a factor which measures the performance for each of the criteria to the number of performance shares initially allocated. This allocation factor will vary from 0 to 2 under the following conditions:

- absolute internal criterion based on cost reduction (F1): factor 1 would correspond to achieving the medium-term plan objectives during the performance vesting period (the "F1 Planned Performance"). It would be 0 if the performance achieved was 2 or more points less than the F1 Planned Performance, and 2 if the performance achieved was 2 or more points greater than the F1 Planned Performance. A linear progression will be applied between limits;
- external relative criterion based on the growth of the EBITDA margin (F2): factor 1 would correspond to growth of the EBITDA margin that is equal to the median growth of the gross margin of the panel (the Panel Performance"). It would be 0 if the performance achieved was 2 or more points less than the Performance Panel, and 2 if the performance achieved was 2 or more points greater than the Performance Panel. A linear progression will be applied between limits.

The **stock subscription options** allocated to members of the Management Board in 2017 are subject to performance conditions assessed over four years and measured based on the following two quantifiable criteria:

- an internal criterion: aggregate net cash flow for the Group in 2017, 2018, 2019 and 2020 compared to the planned performance in the Group's medium-term plan for the same period (weighting 50%);

- an external criterion: Total Shareholder Return (TSR) for 2017, 2018, 2019 and 2020 compared to a panel of comparable companies (weighting 50%).

The panel of comparable companies shall be comprised of the following companies from the "Oil & Gas," "Engergy" and "Steel" sectors: Hunting Plc, United States Steel Corp, Nippon Steel & Sumitomo Metal Corp., Tubacex SA, Tenaris SA, Voestalpine AG, Seah Steel Corp, Tubos Reunidos SA, TimkenSteel Corp, Salzgitter AG, ArcelorMittal SA, TMK and NOV.

The number of options that was definitively granted to the Management Board following the vesting period shall be calculated by applying a factor which measures the performance for each of the criteria to the number of options initially granted. This factor will vary from 0 to 2 under the following conditions:

- absolute internal criterion based on the aggregate free cash flow of the Group (F1): factor 1 would correspond to achieving the medium-term plan objectives during the performance vesting period (the "F1 Planned Performance"). It would be zero if the performance achieved was less than 70% of the F1 Planned Performance, and 2 if the performance achieved was greater or equal to 120% of the F1 Planned Performance. A linear progression will be applied between limits;
- external relative criterion based on the Total Shareholder Return (TSR) (F2): factor 1 would correspond to performance between the 5th and 6th decile of the panel of comparable companies. It would be zero if the performance achieved was less than the 4th decile of the panel; it would be 0.8 if the performance achieved was ranked in the 5th decile of the panel and 2 if the performance achieved was greater than the 8th decile of the panel. A linear progression will be applied between limits.

The confidentiality of information relating to both internal criteria prevents the disclosure of the targets and the minimum and maximum thresholds. But these values, between which a linear progression will have been applied, will be communicated following the performance assessment period.

Within the set of performance objectives for performance shares and options, the external criteria represent 50%.

At the end of the performance assessment period, Vallourec will communicate the minimum and maximum thresholds to be achieved and the linear progression applied between them.

7.4.2.3.4.2 Performance shares vested in 2017

The performance assessment period for the performance share allocation plan, which began on 15 April 2014, ended on 15 April 2017. The shares allocated under this plan, under the nineteenth resolution approved by the Ordinary and Extraordinary Shareholders' Meeting of 31 May 2012, were subject to the following performance conditions:

- the estimated rate of return on capital employed on a consolidated basis (ROCE) for 2014, 2015 and 2016, compared with the ROCE recorded in the budget for 2014, 2015 and 2016 (40% weighting); The result for this criterion was 0;
- the consolidated revenue at constant exchange rates and scope for 2014, 2015 and 2016, compared with the revenue recorded in the budget for 2014, 2015 and 2016 (30% weighting). The result for this criterion was achieved at 42.3%, granting allocation of 12.7% of the allotted shares;
- the relative performance of the Vallourec share between 2014 and 2016, compared to a reference panel. If the performance was below 10% of the panel's the factor was 0 and if it was equal to the panel's, the factor was 1. This criterion has a weighting of 15%. The result for this criterion was 0;
- the relative performance of Vallourec's EBITDA between 2014 and 2016, compared to a reference group. If the performance was below 20% of the panel's the factor was 0 and if it was equal to the panel's, the factor was 1. This criterion has a weighting of 15%. The result for this criterion was 0;

After applying these strict conditions, the number of shares that were vested by each of the members of the Management Board was established as follows:

2014 performance share plan Members of the Management Board	Philippe Crouzet	Jean-Pierre Michel	Olivier Mallet	Total
Number of shares allocated on 15 April 2014 [(a)]	24,484	11,522	11,522	47,528
Number of shares vested on 15 April 2017 after performance conditions applied	3,110	1,464	1,464	6,038
Percentage of shares vested on 15 April 2017 compared to the number of shares allocated on 15 April 2014	12.7%	12.7%	12.7%	12.7%

(a) Adjustment following the capital increase by applying a factor of 1.6.

Members of the Management Board are required to retain until the end of their terms of office (i) one quarter of the performance shares allocated to them under the terms of a plan and (ii) the equivalent in Vallourec shares of one quarter of the gross capital gain realized on the date of sale of the shares resulting from the options exercised. They moreover agree not to use hedging instruments in connection with the exercise of options, selling shares resulting from the exercise of options, or selling performance shares.

7.4.2.3.4.3 Subscription options definitively acquired in 2017

No options were definitively acquired by the Management Board in 2017 because they were not allocated stock options in 2012.

7.4.2.3.4.4 History of past acquisitions of the Management Board

Performance shares

Allocation date	2010	2011	2012	2013 [a]	2014	2015	2016
Vesting date	2012	2013	2014	2016	2017	2018	2019
Number of shares allotted to the Management Board	17,000	17,068	17,068	17,068	47,528 [b]	20,736 [b] [c]	42,776
Number and % of shares definitively acquired, compared to the number of shares allotted	**15,640 (i.e. 92%)**	**3,208 (i.e. 18.8%)**	**2,787 (i.e. 16.2%)**	**3,432 (i.e. 20.1%)**	**6,038 (i.e. 12.7%)**	**Not available**	**Not available**

(a) As of 2013, performance share plans are 3+2 (three years of vesting + two years of holding) instead of 2+2.

(b) Adjustment following the capital increase by applying a factor of 1.6.

(c) The Supervisory Board meeting on 17 February 2016 duly noted Mr. Philippe Crouzet's waiver of the performance shares allocated during the 2015 fiscal year after the approval of the financial statements for that year. Consequently, the valuation of the performance shares allocated in 2015 (which would have otherwise been €292,199) is nil in this table.

Share subscription option

Allocation year	2010	2011	2012	2013	2014	2015	2016
Maximum number of options allocated to the Management Board	99,962 [a]	99,962 [a]	0	99,962 [a]	58,469 [a]	28,312 [a]	58,457
Number and % of options compared to the maximum number of options allocated	**49,362 (a) (i.e. 49.3%)**	**39,986 (a) (i.e. 40%)**	**0**	**Not available**	**Not available**	**Not available**	**Not available**
Exercise price	€42.72	€36.44	-	€27.71	€23.13	€13.57	€3.90

(a) Adjustment following the 2016 capital increase by applying a factor of 1.67.

7.4.2.3.5 Benefits in kind

In 2017, the Management Board members had use of a Company car. The value of this benefit in kind was unchanged compared to 2016.

7.4.2.3.6 Attendance fees

Management Board members did not collect any compensation or attendance fees in 2017 for the corporate offices they held in direct or indirect subsidiaries of the Vallourec Group.

7.4.2.3.7 Supplementary retirement plan

The retirement scheme for corporate officers comprises a defined-benefit plan (closed), a collective and mandatory defined contribution plan, and an individual defined-contribution plan.

Closed defined-benefit scheme (Article 39 of the French General Tax Code)

Given that the scheme was closed to all new rights as of 31 December 2015 and the compensation used as a basis for calculating the rights was set to the reference compensation at 31 December 2015, the potential rights opened individually for each of the three members of the Management Board as at 31 December 2017 are identical to the rights as at 31 December 2016 and are as follows:

Members of the Management Board	Reference compensation as at 31 December 2016	Annual potential rights for 2017 [a]	Total annual potential rights as at 31 December 2017 [b]	Limit on potential rights	Length of service conditions
Philippe Crouzet	€798,000	0%	13.50%	20%	36 months
Olivier Mallet	€420,000	0%	12.81%	20%	36 months
Jean-Pierre Michel	€450,000	19.29%	19.29%	20%	36 months

(a) As a percentage of the reference compensation (basic pay excluding variable portion).

(b) Limited to 20% of the average basic compensation for the last three years, excluding the variable portion and limited to 4 annual Social Security caps.

The Group's supplementary pension scheme has a replacement rate which remains clearly below market practice, regardless of the reference panel used.

In 2017, Mr. Jean-Pierre Michel waived his corporate office and invoked his retirement rights. To that end, when his social security retirement pension is liquidated, he may benefit from an annuity of 19.29% of his fixed compensation as at 31 December 2015, i.e. €86,805.

Mandatory group defined-contribution scheme (Article 83 of the French General Tax Code)

The contribution paid or allocated for 2017 for Mr. Philippe Crouzet and Mr. Olivier Mallet was: €18,829.44.

For Mr. Jean-Pierre Michel, this amount for the period of his term of office from 1 January to 31 March 2017 was €4,707.36. This amount is in addition to €12,357.12 for 2016.

Individual, defined-contribution scheme subject to performance criteria (Article 82 of the French General Tax Code)

The Supervisory Board has confirmed that the performance condition applicable to payment of the Management Board's contribution to the individual retirement plan for 2017 was fulfilled. The maximum contribution is due, in light of the achievement of at least 50% of the annual bonus calculated for 2017. *Note: Vallourec's commitment is limited to payment of an annual amount for retirement comprising 50% contributions made to an insurance body and 50% cash, taking into account the tax characteristics of the scheme, imposing taxation at entry*.

Members of the Management Board	Total amount paid or allocated for 2017	Amount of contributions paid or allocated	Amount paid or allocated in cash
Philippe Crouzet	€255,000	€127,500	€127,500
Jean-Pierre Michel	€2,000	€1,000	€1,000
Olivier Mallet	€147,000	€73,500	€73,500

7.4.2.3.8 Mechanisms linked to termination of the duties of members of the Management Board

In 2017, the mechanisms linked to the termination of duties of the three members of the Management Board remained the same as in 2016.

7.4.2.3.8.1 Mechanism linked to the termination of the duties of Mr. Philippe Crouzet, Chairman of the Management Board

Under the mechanism approved by the Shareholders' Meeting of 6 April 2016, Mr. Philippe Crouzet's termination package for 2017 included a termination benefit and non-compete compensation.

- No termination benefit was paid in 2017.
- No non-compete compensation was paid in 2017.

7.4.2.3.8.2 Mechanisms linked to the termination of duties of Mr. Jean-Pierre Michel and Mr. Olivier Mallet, members of the Management Board

In 2017, Mr. Olivier Mallet was eligible for severance pay under the terms of his employment contract of €93,000.

Mr. Jean-Pierre Michel's employment contract with Vallourec Tubes, which was suspended during the term of his office, resumed its effectiveness as of 1 April 2017 and until 31 December 2017, the date he retired. On that date, based on his seniority within the Group (39 years), Mr. Jean-Pierre Michel received, in application of the Collective Agreement, as for any employee subject to that agreement, a retirement benefit of five months' compensation, i.e. €312,030.

Under the mechanism approved by the Shareholders' Meeting of 6 April 2016, Mr. Olivier Mallet was eligible in 2016 for a termination benefit. No termination benefit was paid in 2017.

7.4.2.3.8.3 Performance criteria for the termination benefit of Mr. Philippe Crouzet, Chairman of the Management Board, and Mr. Olivier Mallet, member of the Management Board

Termination package of Mr. Philippe Crouzet

Under the mechanism approved by the Shareholders' Meeting of 6 April 2016, after application of the performance conditions assessed for the three preceding fiscal years, the performance factor (PF) calculated for fiscal years 2015, 2016 and 2017 would be 25, 26 and 90, respectively.

Termination package of Mr. Olivier Mallet

Under the mechanism approved by the Shareholders' Meeting of 6 April 2017, after application of the performance conditions assessed for the three preceding fiscal years, the performance factor (PF) calculated for fiscal years 2015, 2016 and 2017 would be 23, 25 and 90, respectively.

7.4.2.3.9 Special compensation

No special compensation was paid to Mr. Philippe Crouzet (Chairman of the Management Board) or to Mr. Jean-Pierre Michel and Mr. Olivier Mallet (members of the Management Board).

7.4.2.3.10 Signing bonus

No signing bonus was paid to Mr. Philippe Crouzet (Chairman of the Management Board) or to Mr. Jean-Pierre Michel and Mr. Olivier Mallet (members of the Management Board).

7.4.2.3.11 Deferred or multi-annual variable compensation

No deferred or multi-annual variable compensation was paid to Mr. Philippe Crouzet (Chairman of the Management Board) or to Mr. Jean-Pierre Michel and Mr. Olivier Mallet (members of the Management Board).

7.4.3 Compensation of the Chairman of the Supervisory Board

Only the Chairman of the Supervisory Board receives a fixed annual compensation, in the form of attendance fees. This is justified by the degree of involvement in the Group's affairs of the Board Chairman as she performs duties and procedures which far surpass merely attending Board and Committee meetings. The tasks and activities of the Chairman of the Supervisory Board are described in paragraph 7.1.2.5 of this chapter.

The amount of this fixed annual compensation has not changed since it was set in 2014 and in 2017 amounted to €320,000.

7.4.4 Summary of the compensation paid or allocated for the fiscal year ended 31 December 2017 to each of the three Management Board members and to the Chairman of the Supervisory Board

7.4.4.1 COMPENSATION PAID OR ALLOCATED FOR THE FISCAL YEAR ENDED 31 DECEMBER 2017 TO MR. PHILIPPE CROUZET

Components of the compensation paid or allocated for the fiscal year ended 31 December 2017	Amount or value submitted for vote	Presentation
Fixed compensation	€798,000	Unchanged since 2014
Annual variable compensation	€786,084	See paragraph 7.4.2.3.3 of this report for a description of the annual variable compensation.
Deferred or multi-annual variable compensation	N/A	There is no deferred or multi-annual variable compensation.
Extraordinary compensation	N/A	There is no extraordinary compensation.
Long-term incentive equity instruments	Options = €107,350	95,000 options allocated for target performance, or 0.021% of the share capital as at 31 December 2017. This allocation was authorized by the Supervisory Board meeting of 21 February 2017, and is included within the twenty-sixth resolution approved by the Ordinary and Extraordinary Shareholders' Meeting of 12 May 2017. See paragraph 7.4.2.3.4 of this report for a description of the conditions for these options.
	Shares = €321,860	66,500 performance shares granted for target performance, or 0.015% of the share capital as at 31 December 2017. This allocation was authorized by the Supervisory Board meeting of 21 February 2017, and is included within the twenty-seventh resolution approved by the Ordinary and Extraordinary Shareholders' Meeting of 12 May 2017. See Section 7.4.2.3.4 of this report for a description of the terms of these performance shares.
Attendance fees	N/A	Mr. Philippe Crouzet does not receive attendance fees for corporate offices held within the Vallourec Group.
Valuation of all benefits	€4,373	Car

Components of compensation paid or awarded during the fiscal year ended that are or were voted on by the Shareholders' Meeting under the related party agreements and commitments procedure	Amount or value submitted for vote	Presentation
Termination payment	€0	See paragraph 7.4.2.3.8.1 of this report for a description of the termination payment scheme.
Right to exercise options or receive performance shares allocated prior to departure maintained	€0	See paragraph 7.4.2.3.8.1 of this report for a description of the conditions under which this authority could be exercised.
Non-compete compensation	€0	See paragraph 7.4.2.3.8.1 of this report for a description of the non-compete compensation scheme.
Supplementary retirement plan	€146,329	See paragraph 7.4.2.3.7 of this report for a description of the supplementary retirement plan.

7.4.4.2 COMPENSATION PAID OR ALLOCATED FOR THE FISCAL YEAR ENDED 31 DECEMBER 2017 TO MR. JEAN-PIERRE MICHEL

Components of the compensation paid or allocated for the fiscal year ended 31 December 2017 [(a)]	Amount or value submitted for vote	Presentation
Fixed compensation	€112,500	Unchanged since 2012. *Pro rata* of attendance. End of term on 31 March 2017
Annual variable compensation	€82,492	See paragraph 7.4.2.3.3 of this report for a description of the annual variable compensation. *Pro rata* amount of corporate office term interrupted on 31 March 2017
Deferred or multi-annual variable compensation	N/A	There is no deferred or multi-annual variable compensation.
Extraordinary compensation	N/A	There is no extraordinary compensation.
Long-term incentive equity instruments	Options = N/A	No options allocated
	Shares = N/A	No shares allocated
Attendance fees	N/A	Mr. Jean-Pierre Michel does not receive attendance fees for corporate offices held within the Vallourec Group.
Valuation of all benefits	€1,314	Car

(a) *For the period of Mr. Jean-Pierre Michel's term of office, i.e. from 1 January to 31 March 2017.*

Components of compensation paid or awarded during the fiscal year ended that are or were voted on by the Shareholders' Meeting under the related party agreements and commitments procedure [(a)]	Amount or value submitted for vote	Presentation
Termination payment	N/A	There is no termination payment. See paragraph 7.4.2.3.8.2. of this report for a description of the mechanism that is linked to Mr. Jean-Pierre Michel's termination of service.
Non-compete compensation	N/A	There is no non-compete compensation.
Supplementary retirement plan	€5,707	See paragraph 7.4.2.3.7 of this report for a description of the supplementary retirement plan.

(a) *For the period of Mr. Jean-Pierre Michel's term of office, i.e. from 1 January to 31 March 2017.*

7.4.4.3 COMPENSATION PAID OR ALLOCATED FOR THE FISCAL YEAR ENDED 31 DECEMBER 2017 TO MR. OLIVIER MALLET

Components of the compensation paid or allocated for the fiscal year ended 31 December 2017	Amount or value submitted for vote	Presentation
Fixed compensation	€420,000	Unchanged since 2014
Annual variable compensation	€307,970	See paragraph 7.4.2.3.3 of this report for a description of the annual variable compensation.
Deferred or multi-annual variable compensation	N/A	There is no deferred or multi-annual variable compensation.
Extraordinary compensation	N/A	There is no extraordinary compensation.
Long-term incentive equity instruments	Options = €50,285	44,500 options allocated for target performance, or 0.015% of the share capital as at 31 December 2017. This allocation was authorized by the Supervisory Board meeting of 21 February 2017, and is included within the twenty-sixth resolution approved by the Ordinary and Extraordinary Shareholders' Meeting of 12 May 2017. See paragraph 7.4.2.3.4 of this report for a description of the conditions for these options.
	Shares = €152,460	31,500 performance shares granted for target performance, or 0.007% of the share capital as at 31 December 2017. This allocation was authorized by the Supervisory Board meeting of 21 February 2017, and is included within the twenty-seventh resolution approved by the Ordinary and Extraordinary Shareholders' Meeting of 12 May 2017. See Section 7.4.2.3.4 of this report for a description of the terms of these performance shares.
Attendance fees	N/A	Mr. Olivier Mallet does not receive attendance fees for corporate offices held within the Vallourec Group.
Valuation of all benefits	€5,400	Car

Components of compensation paid or awarded during the fiscal year ended that are or were voted on by the Shareholders' Meeting under the related party agreements and commitments procedure	Amount or value submitted for vote	Presentation
Termination payment	€0	See paragraph 7.4.2.3.8.2 of this report for a description of the termination payment scheme.
Non-compete compensation	N/A	There is no non-compete compensation.
Supplementary retirement plan	€92,329	See paragraph 7.4.2.3.7 of this report for a description of the supplementary retirement plan.

7.4.4.4 COMPENSATION DUE OR ALLOCATED FOR THE FISCAL YEAR ENDED 31 DECEMBER 2017 TO MS VIVIENNE COX

Components of the compensation due or allocated for the fiscal year ended 31 December 2017	Amount or value submittedfor vote	Presentation
Fixed compensation	N/A	The fixed compensation is paid in the form of attendance fees (see below)
Annual variable compensation	N/A	There is no annual variable compensation
Deferred or multi-annual variable compensation	N/A	There is no deferred or multi-annual variable compensation
Extraordinary compensation	N/A	There is no extraordinary compensation
Long-term incentive equity instruments	N/A	There are no long-term incentive equity instruments
Attendance fees	€320,000	Amount unchanged since 2014
Valuation of all benefits	N/A	There are no benefits of any kind

Components of compensation paid or awarded during the fiscal year ended that are or were voted on by the Shareholders' Meeting under the related party agreements and commitments procedure	Amount or value submitted for vote	Presentation
Termination payment	N/A	There is no termination payment
Non-compete compensation	N/A	There is no non-compete compensation
Supplementary retirement plan	N/A	There is no supplementary retirement plan

7.5 Individual statements of executive managers

No individual statement relating to the operations involving Vallourec instruments carried out by the people mentioned in Article L. 621-18-2 of the French Monetary and Financial Code has been brought to our attention, nor declared by the executive managers during the 2017 fiscal year.

7.6 Valid delegations

Authorizations to issue shares and securities providing access to the Company's capital valid as at 31 December 2017 are described in paragraph 2.2.3.1 of this Registration Document.

7.7 Shareholders' participation in the Company's Shareholders' Meetings

Every shareholder is entitled to participate in the Company's Shareholders' Meetings in accordance with applicable statutory and regulatory provisions and regardless of the number of shares held. Article 12 of the bylaws concerning Shareholders' Meetings does not provide any specific conditions for attending and participating, although a double voting right is allocated to all registered shares held by the same owner for at least four years.

Since Vallourec places great importance on listening to its shareholders, it endeavors, whenever it can, to improve shareholder participation at its Shareholders' Meetings by making shareholders aware of the meetings in advance, by publishing information over and above that required by law in specialist publications and by sending a letter to all shareholders.

The attendance register at the Ordinary and Extraordinary Shareholders' Meeting on 12 May 2017 shows that 4,811 shareholders were present, represented or voted by post, owning a combined total of 282,163,891 shares with voting rights out of 448,570,076, i.e. 62.9% of shares with voting rights, and 289,347,951 voting rights out of 459,544,890 voting rights, i.e. 62.96% of voting rights.

7.8 Information on factors likely to have an impact in the event of a public takeover bid or a public exchange offer

The factors that are likely to have an impact in the event of a takeover bid are set forth below.

7.8.1 Structure of share capital and direct or indirect shareholdings declared in accordance with Articles L.233-7 and L.233-12 of the French Commercial Code

A table showing the structure of Vallourec's share capital and direct or indirect shareholdings in the capital declared in accordance with Articles L.233-7 and L.233-12 of the French Commercial Code *(Code de commerce)* is presented in Section 2.3 of this Registration Document.

7.8.2 Statutory restrictions on the exercise of voting rights

Article 8 paragraph 5 of the Company bylaws lays down an obligation of disclosure on any person who comes to hold or to cease to hold a number of bearer shares of the Company equal to or greater than three (3), four (4), six (6), seven (7), eight (8), nine (9) or twelve and a half (12.5) percent of the total number of shares comprising share capital (see Section 2.1.9 of this Registration Document).

In the event of failure to comply with this obligation of disclosure, and at the request of one or more shareholders holding at least 5% of the Company's shares, the voting rights attached to the shares exceeding the fraction that should have been declared cannot be exercised or delegated by the shareholder who failed to meet the obligation, for all Shareholders' Meetings held for a period of two years following the date of the proper disclosure notification.

7.8.3 Holders of any security containing special rights of control

Article 12, paragraph 4 of the bylaws provides for fully paid-up shares that have been duly registered in the name of the same shareholder for four (4) years to have double the voting rights conferred on other shares. Apart from this condition, there are no other securities that have special rights of control.

7.8.4 Control mechanisms within an employee share ownership system

In accordance with Article L.214-40 of the French Monetary and Financial Code *(Code monétaire et financier),* the Supervisory Boards of the Vallourec Actions, Value France Germany UK and Value Brazil Mexico UAE company mutual funds (FCPEs) decide whether to contribute Company securities to a public offering to purchase or exchange these shares.

7.8.5 Agreements between shareholders of which the Company is aware that could lead to restrictions on the transfer of shares and the exercise of voting rights

Subject to the agreement not constituting a concerted action entered into with NSSMC on 1 February 2016 and the shareholders' agreement not constituting a concerted action entered into with Bpifrance Participations on 1 February 2016 (see Section 2.3.3 of this Registration Document), there is to the Company's knowledge no agreement between shareholders that could lead to restrictions on the transfer of shares and exercising of voting rights of the Company.

7.8.6 Rules applicable to the appointment and replacement of the members of the Company's Management Board

No provision in the bylaws, or agreement concluded between the Company and a third party, contains an obligation or particular rule regarding the appointment and/or the replacement of members of the Management Board of the Company that is likely to have an impact in the event of a takeover bid.

7.8.7 Powers of the Management Board in the event of a takeover bid

Since 2009, the Shareholders' Meetings called to decide on conferring authority on the Management Board to purchase shares of the Company have expressly ruled out the possibility of share buybacks during takeover bids for the Company. The Shareholders' Meeting of 25 May 2018 will be asked to renew this prohibition on buying back shares during a public offer of the Company's shares.

The Shareholders' Meeting of 12 May 2017 suspended the Management Board's ability to use the resolutions to increase the Company's share capital (with the exception of capital increases reserved for employees or allocations of medium/long-term incentive instruments (performance shares and options)) during a public offer of shares of the Company, except with the prior authorization of the Shareholders' Meeting.

The Management Board is not authorized by the Shareholders' Meeting to issue share subscription warrants during a takeover period on shares of the Company, as stipulated in Article L. 233-32-II of the French Commercial Code *(Code de commerce).* No draft resolution in this regard is due to be put to the Shareholders' Meeting on 25 May 2018.

7.8.8 Agreements made by the Company that would be amended or terminated in the event of a change in control of the Company

Some agreements made by the Company contain a change of control clause. The most significant ones, which could have an impact in the event of a takeover bid include: certain industrial agreements with Nippon Steel & Sumitomo Metal Corporation (NSSMC) and Sumitomo Corporation (see Section 5.1.13.1 of this Registration Document); the shareholders' agreement not constituting a concerted action entered into with NSSMC on 1 February 2016, and the shareholders' agreement not constituting a concerted action entered into with Bpifrance Participations on 1 February 2016 (see Sections 2.3.3 of this Registration Document); the multi-currency revolving credit line of €1.1 billion expiring in February 2019 (extended to 2021), entered into on 12 February 2014; the revolving credit line of €400 million expiring in July 2019 (extended to 2020), entered into on 21 September 2015; the revolving credit line of €450 million expiring in February 2020, entered into on 2 May 2016; and the bond issues of August 2012, September 2014, September 2017 and October 2017 (see Section 2.2.6 "Non-equity instruments" of this Registration Document).

7.8.9 Agreements providing for payments to members of the Management Board or employees, if they resign or are dismissed for no real or serious cause, or if their employment is terminated due to a takeover bid

The mechanisms linked to the termination of corporate offices and/or, where applicable, the employment contracts of Mr. Philippe Crouzet, Chairman of the Management Board, and Mr. Olivier Mallet, member of the Management Board, are described in the compensation policy for corporate officers appearing in Section 7.2.1 of this Registration Document and in the Supervisory Board's Report on the 2017 compensation of the members of the Management Board, which appears in the Appendix 1 to Chapter 7 of this Registration Document.

7.9 Supervisory Board observations on the management report of the Management Board and the financial statements

The Supervisory Board has reviewed the management report of the Management Board and the 2017 Company and consolidated financial statements, along with the various documents attached thereto. It has no particular observations to make on these documents.

The Supervisory Board supports the Management Board's proposal to not pay a dividend for fiscal year 2017.

8

Additional information

8.1 Statutory Auditors' reports for fiscal year 2017

8.1.1 Statutory Auditors' report on the financial statements

For the year ended 31 December 2017

This is a translation into English of the statutory auditors' report on the financial statements of the Company issued in French and it is provided solely for the convenience of English speaking users.

This statutory auditors' report includes information required by European regulation and French law, such as information about the appointment of the statutory auditors or verification of the management report and other documents provided to shareholders.

This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

To the Shareholders,

Opinion

In compliance with the engagement entrusted to us by your Annual General Shareholders' Meeting, we have audited the accompanying financial statements of Vallourec S.A. (hereafter, "the Company") for the year ended 31 December 2017.

In our opinion, the financial statements give a true and fair view of the assets and liabilities and of the financial position of the Company as at 31 December 2017 and of the results of its operations for the year then ended in accordance with French accounting principles.

The audit opinion expressed above is consistent with our report to the Financial and Audit Committee.

Basis for Opinion

Audit Framework

We conducted our audit in accordance with professional standards applicable in France. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our responsibilities under those standards are further described in the "Statutory Auditors' Responsibilities for the Audit of the Financial Statements" section of our report.

Independence

We conducted our audit engagement in compliance with independence rules applicable to us, for the period from 1 January 2017 to the date of our report and specifically we did not provide any prohibited non-audit services referred to in Article 5 (1) of Regulation (EU) N° 537/2014 or in the French Code of Ethics *(Code de déontologie)* for statutory auditors.

Observation

We draw attention to Note 6.2.3-A to the financial statements which sets out the change in accounting method relating to the first-time application, as of 1 January 2017, of French Accounting Standards Board (ANC) Regulation N° 2015-05 of 2 July 2015, on financial futures and hedging transactions. Our opinion is not modified in respect of this matter.

Justification of Assessments - Key Audit Matters

In accordance with the requirements of Articles L.823-9 and R.823-7 of the French Commercial Code *(Code de commerce)* relating to the justification of our assessments, we inform you of the key audit matters relating to risks of material misstatement that, in our professional judgment, were of most significance in our audit of the financial statements of the current period, as well as how we addressed those risks.

These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on specific items of the financial statements.

Measurement of equity interests – Notes 6.2.3-B, 6.2.3-C.1 and 6.2.3-E.6 to the financial statements

Key Audit Matter	Audit Approach
Equity interests on the balance sheet amounted to €3,856.4 million at 31 December 2017, representing one of the most significant items of the balance sheet. They correspond to the shares of Vallourec Tubes, a sub-holding company of the Vallourec Group. They are recognised at their acquisition cost, excluding associated expenses. As described in the Note "Associates" to the financial statements, the value in use is determined using various criteria such as Vallourec Tubes' consolidated net worth, its profitability, the Company share price and the Group's growth outlook. The growth outlook is determined on the basis of cash flow and operating forecasts established by Management. We considered the measurement of equity interests to be a key audit matter, given the potentially significant impact of impairment losses and the high degree of estimation and judgment required by Management to measure value in use.	We have assessed the reasonableness of estimates of value in use of Vallourec Tubes' equity interests, based on information provided to us. Our work mainly entailed verifying that the estimates made by Management were based on appropriately reasoned method and figures. Our work consisted in: ■ obtaining the Vallourec Group's cash flow and operating cash flow forecasts prepared by the Company, and assessing their consistency with the forecast data from the latest strategic plans, prepared under the supervision of Executive Management and approved by the Supervisory Board; ■ verifying, with the support of our valuation experts, the consistency of assumptions relating to capital expenditure in the Company's business sector, exchange rates, the perpetual growth rate and the discount rate used for preparing the financial statements and at the reporting date; ■ verifying that the enterprise value resulting from forecast cash flows had been adjusted for net debt of the Vallourec Group.

Verification of the Management Report and of the Other Documents Provided to Shareholders

We have also performed, in accordance with professional standards applicable in France, the specific verifications required by French law.

Information included in the Management Report and Other Documents Provided to shareholders with respect to the financial position and the financial statements

We have no matters to report as to the fair presentation and the consistency with the financial statements of the information given in the Management Report of the Management Board and in the other documents provided to Shareholders with respect to the financial position and the financial statements.

Corporate governance report

We hereby attest that the information required by Articles L.225-37-3 and L.225-37-4 of the French Commercial Code *(Code de commerce)* has been disclosed in the Supervisory Board's report on corporate governance.

Concerning the information given in accordance with the requirements of Article L.225-37-3 of the French Commercial Code *(Code de commerce)* relating to remunerations and benefits received by the directors and any other commitments made in their favour, we have verified its consistency with the financial statements, or with the underlying information used to prepare these financial statements and, where applicable, with the information obtained by your company from controlling and controlled companies. Based on this work, we attest the accuracy and fair presentation of this information.

Information on matters likely to have an effect on a public tender or exchange offer is provided in accordance with Article L.225-37-5 of the French Commercial Code *(Code de commerce)*. We have verified the consistency of the information with the documents from which it is derived, which were provided to us. Based on our work, we have no matters to report on the information.

Other information

In accordance with French law, we have verified that the required information concerning the purchase of investments and controlling interests and the identity of the shareholders and holders of the voting rights has been properly disclosed in the management report.

Report on Other Legal and Regulatory Requirements

Appointment of the Statutory Auditors

We were appointed statutory auditors of Vallourec S.A. by the Annual General Shareholders' Meeting held on 1 June 2006 for both audit firms.

As at 31 December 2017, KPMG S.A. were in their 12th year of their total uninterrupted engagement and Deloitte & Associés were in their 16th year of their total uninterrupted engagement, given the succession of mandates between legal entities of the Deloitte network.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with French accounting principles and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless it is expected to liquidate the Company or to cease operations.

The Financial and Audit Committee is responsible for monitoring the financial reporting process and the effectiveness of internal control and risks management systems and where applicable, its internal audit, regarding the accounting and financial reporting procedures.

The financial statements were approved by the Management Board.

Statutory Auditors' Responsibilities for the Audit of the Financial Statements

Objectives and audit approach

Our role is to issue a report on the financial statements. Our objective is to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with professional standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As specified in Article L.823-10-1 of the French Commercial Code *(Code de commerce)*, our statutory audit does not include assurance on the viability of the Company or the quality of management of the affairs of the Company.

As part of an audit conducted in accordance with professional standards applicable in France, the statutory auditor exercises professional judgment throughout the audit and furthermore:

- Identifies and assesses the risks of material misstatement of the financial statements, whether due to fraud or error, designs and performs audit procedures responsive to those risks, and obtains audit evidence considered to be sufficient and appropriate to provide a basis for his opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtains an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control.
- Evaluates the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management in the financial statements.
- Assesses the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. This assessment is based on the audit evidence obtained up to the date of his audit report. However, future events or conditions may cause the Company to cease to continue as a going concern. If the statutory auditor concludes that a material uncertainty exists, there is a requirement to draw attention in the audit report to the related disclosures in the financial statements or, if such disclosures are not provided or inadequate, to modify the opinion expressed therein.
- Evaluates the overall presentation of the financial statements and assesses whether these statements represent the underlying transactions and events in a manner that achieves fair presentation.

Report to the Audit Committee

We submit a report to the Financial and Audit Committee which includes in particular a description of the scope of the audit and the audit program implemented, as well as the results of our audit. We also report, if any, significant deficiencies in internal control regarding the accounting and financial reporting procedures that we have identified.

Our report to the Financial and Audit Committee includes the risks of material misstatement that, in our professional judgment, were of most significance in the audit of the financial statements of the current period and which are therefore key audit matters. We describe these matters in this audit report.

We also provide the Financial and Audit Committee with the declaration provided for in Article 6 of Regulation (EU) N° 537/2014, confirming our independence within the meaning of the rules applicable in France such as they are set out, in particular, by Articles L.822-10 to L.822-14 of the French Commercial Code (Code de commerce) and in the French Code of Ethics (Code de déontologie) for statutory auditors. Where appropriate, we discuss with the Financial and Audit Committee the risks that may reasonably be thought to bear on our independence, and the related safeguards.

Neuilly-sur-Seine et Paris-La Défense, le 16 March 2018

The statutory auditors,

Deloitte & Associés
Christophe Patrier

KPMG Audit
Département de KPMG S.A.
Catherine Porta

8.1.2 Statutory Auditors' report on the consolidated financial statements

For the year ended 31 December 2017

This is a translation into English of the statutory auditors' report on the financial statements of the Company issued in French and it is provided solely for the convenience of English speaking users.

This statutory auditors' report includes information required by European regulation and French law, such as information about the appointment of the statutory auditors or verification of the management report and other documents provided to shareholders.

This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

To the Shareholders,

Opinion

In compliance with the engagement entrusted to us by your Shareholders' Meeting, we have audited the accompanying consolidated financial statements of Vallourec S.A. (hereinafter, "the Company") for the year ended 31 December 2017.

In our opinion, the consolidated financial statements give a true and fair view of the assets and liabilities and of the financial position of the Group as at 31 December 2017 and of the results of its operations for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union.

The audit opinion expressed above is consistent with our report to the Financial and Audit Committee.

Basis for Opinion

Audit Framework

We conducted our audit in accordance with professional standards applicable in France. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our responsibilities under those standards are further described in the Statutory Auditors' Responsibilities for the Audit of the Consolidated Financial Statements section of our report.

Independence

We conducted our audit engagement in compliance with independence rules applicable to us, for the period from 1 January 2017 to the date of our report and specifically we did not provide any prohibited non-audit services referred to in Article 5 (1) of Regulation (EU) N° 537/2014 or in the French Code of Ethics *(Code de déontologie)* for statutory auditors.

Justification of Assessments - Key Audit Matters

In accordance with the requirements of Articles L.823-9 and R.823-7 of the French Commercial Code *(Code de commerce)* relating to the justification of our assessments, we inform you of the key audit matters relating to risks of material misstatement that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period, as well as how we addressed those risks.

These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on specific items of the consolidated financial statements.

Valuation of goodwill, intangible assets and property, plant and equipment – Notes A2.7 to A2.9, C.1, C2.1, C2.3 and C29 of the consolidated financial statements

Key Audit Matter	Audit Approach
As at 31 December 2017, the carrying amount of goodwill, intangible assets and property, plant and equipment was €348 million, €89 million and €2,977 million respectively, representing 50% of the consolidated balance sheet total. As described in Note C2.3 of the consolidated financial statements, since 2014, the Group has faced a deteriorated economic environment, with a drop in exploration and production investment by oil operators, increased volatility in the price of raw materials and energy, and an extremely competitive international environment. In response to the continued decline in oil and gas prices since the end of 2014, oil and gas companies have reduced capital expenditure in exploration, production and development of oil and natural gas reserves. This has had a significant impact on demand and on the price of pipes. Reduced demand, combined with lower prices resulting from competitive pressure from incumbent gas operators and the arrival of new competitors, exacerbated by deflationary pressure from customers, has significantly affected the Group's profitability, and has been analyzed as a general indication of impairment, requiring impairment testing. As at 31 December 2017, the Group performed impairment tests on all cash generating units (CGUs) in order to monitor impairment on property, plant and equipment previously recorded and ensure that the carrying amount of assets allocated to each CGU was not higher than their recoverable value. Impairment testing methods and assumptions are described in note C2.3 of the consolidated financial statements. We believe that the determination of the recoverable value of the assets allocated to these CGUs is a key audit matter, given the materiality of these assets on the consolidated financial statements of the Group, and also given the fact that the determination of recoverable value requires Management to make judgments and use estimates to forecast the discounted future cash flows used in the tests. It should be noted that the CGU "Vallourec Europe" receives particular attention because of past achievements, expected growth and the sensitivity of exchange rate assumptions.	During our work, we gained an understanding of (i) the process for preparing and approving the assumptions, estimates and forecast data used by Management to perform impairment tests, (ii) the procedures for reviewing the results of these tests by the governance entities, and we (iii) assessed the appropriateness of the financial model used to determine the recoverable value of the CGUs tested. With the help of our valuation experts, based on benchmarks and sectorial macroeconomic data analyses, we assessed the various assumptions on which cash flow forecasts are established, including (i) assumptions of capital expenditure in exploration, production and the development of oil and natural gas reserves and related oil and gas prices, and (ii) the exchange rates, growth rates and discount rates used. The consistency of cash forecasts with past performance, market outlook, and forecast data presented to the Company's Supervisory Board was also analysed. Last, we performed our own sensitivity analyses and verified the appropriateness of the information presented in note C2.3 of the consolidated financial statements on those performed by the Company.

Verification of the Information Pertaining to the Group Presented in the Management Report

As required by law, in accordance with professional standards applicable in France we have also verified the information pertaining to the Group presented in the management report of the Management Board.

We have no matters to report as to its fair presentation and its consistency with the consolidated financial statements.

Report on Other Legal and Regulatory Requirements

Appointment of the Statutory Auditors

We were appointed as statutory auditors of Vallourec S.A. by the annual general meeting held on 1 June 2006 for both audit firms.

As at 31 December 2017, KPMG S.A. was in the 12th year of an uninterrupted engagement and Deloitte & Associés in the 16th year of an uninterrupted engagement given the succession of mandates between legal entities of the Deloitte network.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with International Financial Reporting Standards as adopted by the European Union, and for such internal control as Management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, Management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless it is expected to liquidate the Company or to cease operations.

The Financial and Audit Committee is responsible for monitoring the financial reporting process and the effectiveness of internal control and risk management systems and where applicable, its internal audit, regarding the accounting and financial reporting procedures.

The consolidated financial statements have been approved by the Management Board.

Statutory Auditors' Responsibilities for the Audit of the Consolidated Financial Statements

Objectives and audit approach

Our role is to issue a report on the consolidated financial statements. Our objective is to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with professional standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As specified in Article L.823-10-1 of the French Commercial Code *(Code de commerce)*, our statutory audit does not include assurance on the viability of the Company or the quality of management of the affairs of the Company.

As part of an audit conducted in accordance with professional standards applicable in France, the statutory auditor exercises professional judgment throughout the audit and furthermore:

- Identifies and assesses the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, designs and performs audit procedures responsive to those risks, and obtains audit evidence considered to be sufficient and appropriate to provide a basis for the audit opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtains an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control.
- Evaluates the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by Management in the consolidated financial statements.
- Assesses the appropriateness of Management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. This assessment is based on the audit evidence obtained up to the date of his audit report. However, future events or conditions may cause the Company to cease to continue as a going concern. If the statutory auditor concludes that a material uncertainty exists, there is a requirement to draw attention in the audit report to the related disclosures in the consolidated financial statements or, if such disclosures are not provided or inadequate, to modify the opinion expressed therein.
- Evaluates the overall presentation of the consolidated financial statements and assesses whether these statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtains sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. The statutory auditor is responsible for the direction, supervision and performance of the audit of the consolidated financial statements and for the opinion on these consolidated financial statements.

Report to the Financial and Audit Committee

We submit a report to the Financial and Audit Committee which includes a description of the scope of the audit and the audit programme implemented, as well as the results of our audit. We also report, if any, significant deficiencies in internal control regarding the accounting and financial reporting procedures that we have identified.

Our report to the Financial and Audit Committee includes the risks of material misstatement that, in our professional judgment, were of most significance in the audit of the consolidated financial statements of the current period and which are therefore key audit matters that we are required to describe in this audit report.

We also provide the Financial and Audit Committee with the declaration provided for in Article 6 of Regulation (EU) N° 537/2014, confirming our independence within the meaning of the rules applicable in France such as they are set in particular by Articles L.822-10 to L.822-14 of the French Commercial Code *(Code de commerce)* and in the French Code of Ethics *(Code de déontologie)* for statutory auditors. Where appropriate, we discuss with the Financial and Audit Committee the risks that may reasonably be thought to bear on our independence, and the related safeguards.

Neuilly-sur-Seine and Paris-La Défense, on 16 March 2018

The Statutory Auditors,

Deloitte & Associés Christophe Patrier	**KPMG Audit** Département de KPMG S.A. Catherine Porta

8.1.3 Statutory Auditors' report on regulated agreements and commitments

Annual General Meeting held to approve the financial statements for the year ended December 31, 2017

This is a free translation into English of the Statutory Auditors' special report on regulated agreements and commitments with third parties that is issued in the French language and is provided solely for the convenience of English speaking readers. This report on regulated agreements and commitments should be read in conjunction, and construed in accordance with, French law and professional auditing standards applicable in France. It should be understood that the agreements reported on are only those provided by the French Commercial Code and that the report does not apply to those related party transactions described in IAS 24 or other equivalent accounting standards.

To the Shareholders,,

In our capacity as Statutory Auditors of your Company, we hereby present to you our report on the regulated agreements and commitments.

The terms of our engagement require us to communicate to you, based on information provided to us, the principal terms and conditions of those agreements and commitments brought to our attention or which we may have discovered during the course of our audit, and the reasons justifying that these commitments and agreements are in the company's interest, without expressing an opinion on their usefulness and appropriateness or identifying such other agreements and commitments, if any. It is your responsibility, pursuant to article R.225-58 of the French Commercial Code *(Code de Commerce)*, to assess the interest involved in respect of the conclusion of these agreements and commitments for the purpose of approving them.

Our role is also to provide you with the information stipulated in article R.225-58 of the French Commercial Code relating to the implementation during the past year of agreements and commitments previously approved by the Shareholders' Meeting, if any.

We conducted the procedures we deemed necessary in accordance with the professional guidelines of the French National Institute of Statutory Auditors *(Compagnie Nationale des Commissaires aux Comptes)* relating to this engagement. These procedures consisted in agreeing the information provided to us with the relevant source documents.

AGREEMENTS AND COMMITMENTS SUBMITTED TO THE APPROVAL OF THE SHAREHOLDERS' MEETING

Agreements and commitments authorised during the past year

We hereby inform you that we have not been advised of any agreement or commitment authorised during the year to be submitted for the approval of the Shareholders' Meeting pursuant to article L.225-86 of the French Commercial Code..

AGREEMENTS AND COMMITMENTS PREVIOUSLY APPROVED BY THE SHAREHOLDERS' MEETING

Agreements and commitments approved during previous years

a) with continuing effect during the year

Pursuant to article R.225-57 of the French Commercial Code, we have been advised of the performance, during the year, of the following agreements and commitments, already approved by the Shareholders' Meeting.

Execution of the defined benefits pension scheme benefiting Mr. Jean-Pierre Michel

The Supervisory Board of September 14, 2005 authorised the implementation of a supplementary pension for senior executives, noting that members of the Management Board were likely to benefit from these pension benefits; this scheme was included in an amendment authorized by the Supervisory Board on May 7, 2008.

The Supervisory Board of February 17, 2016 authorised the members of the Management Board to benefit from, as is the case for 35 other senior executives satisfying the eligibility conditions, the defined contribution pension scheme under the conditions set forth in a lock-in regulation, pursuant to which no potential new benefits may be created under the closed scheme and the beneficiaries may only benefit from past "crystallised" benefits if they obtain the liquidation of the Social Security pension. This decision was approved by the Shareholders meeting of Avril 6, 2016.

Mr. Jean-Pierre Michel waived his corporate office since March 31, 2017 and invoked his retirement rights. To that end, when his social security retirement pension is liquidated, he would benefit from an annuity of 19.29% of his fixed compensation as at 31 December 2015, i.e. €86,805.

Additional pension scheme for Mr. Philippe Crouzet (Chairman of the Management Board) and Messrs. Jean-Pierre Michel and Olivier Mallet (members of the Management Board)

On February 17, 2016, the Supervisory Board examined the terms and conditions governing the termination of duties of Messrs. Philippe Crouzet, Jean-Pierre Michel and Olivier Mallet, members of the Vallourec Management Board, following the renewal of their mandates.

Upon recommendation of the Appointments, Remuneration and Governance Committee, the Supervisory Board authorised the closing of the additional defined benefit pension scheme in force and the set-up of a new scheme that would introduce retirement savings while preserving your Company's economic interests via the definition of performance conditions.

The Supervisory Board has thus authorised the Management Board to institute a general additional pension scheme comprising the following two components and, for Messrs. Philippe Crouzet, Jean-Pierre Michel and Olivier Mallet:

Mandatory group defined contribution scheme

The Supervisory Board authorised the members of the Management Board to benefit from a new mandatory group defined contribution scheme which would benefit all employees satisfying the eligibility conditions.

The contribution to this scheme would be set at 12% of the remuneration exceeding between 5 and 8 times the social security ceiling. The scheme can only be liquidated upon liquidation of the social security pension.

The amounts of contributions paid by the Company in respect of 2017 amounted to €18,829.44 for Mr. Philippe Crouzet, €18,829.44 for Mr. Olivier Mallet and €4,707.36 for Mr. Jean-Pierre Michel being specified that your Company no longer contributes to his benefit since he waived his corporate office since March 31, 2017 and invoked his retirement rights.

Your Company's financial obligation is strictly limited in terms of amount and time since it can close the scheme at any time.

Individual scheme subject to performance criteria

The Supervisory Board authorised the members of the Management Board, satisfying the eligibility conditions, to benefit from, a new individual defined contribution pension scheme to which the Company would make a contribution and for which, in keeping with the spirit of the Macron law, the Supervisory Board decided to set performance conditions.

With respect to these performance conditions, the Board has decided to determine the effective contribution rate based on the annual bonus rate: the maximum contribution would be payable for the year in the case of an annual bonus calculated at 50% of the target; no contribution would be paid if the calculated annual bonus equalled zero; the contribution would vary on a straight-line basis between limits ranging from 0 to 50%.

In order to finance the contribution, your Company's share would be equal to a percentage of the gross remuneration less employee contributions and the income tax generated by this contribution. The scheme can only be liquidated upon liquidation of the social security pension.

Your Company may terminate this scheme at any time in such a way that it does not represent a deferred obligation.

The amounts of contributions paid by the Company in respect of 2017 amounted to €255,000 for Mr. Philippe Crouzet, €147,000 for Mr. Olivier Mallet and €2,000 for Mr. Jean-Pierre Michel being specified that your Company no longer contributes to his benefit since he waived his corporate office since March 31, 2017 and invoked his retirement rights.

These commitments have been approved by the Shareholders' Meeting of April 6, 2016.

b) which were not performed during the year

Furthermore, we have been advised of the continuation of the following agreements, already approved by the Shareholders' Meeting, and which were not performed during the year.

Crystallisation of the defined contribution pension scheme benefiting Messrs. Philippe Crouzet and Olivier Mallet

The Supervisory Board of September 14, 2005 authorised the implementation of a supplementary pension for senior executives, noting that members of the Management Board were likely to benefit from these pension benefits; this scheme was included in an amendment authorized by the Supervisory Board on May 7, 2008.

The Supervisory Board of February 17, 2016 authorised the members of the Management Board to benefit from, as is the case for 35 other senior executives satisfying the eligibility conditions, the defined contribution pension scheme under the conditions set forth in a lock-in regulation, pursuant to which no potential new benefits may be created under the closed scheme and the beneficiaries may only benefit from past "crystallised" benefits if they obtain the liquidation of the Social Security pension. This decision has been approved by the Shareholders' Meeting of April 6, 2016.

Commitments made in favour of Messrs. Philippe Crouzet and Olivier Mallet

As previously indicated, after having examined the measures related to the termination of duties of Messrs. Philippe Crouzet and Olivier Mallet, the Supervisory Board at its meeting of February 17, 2016, decided to extend the principles of (i) monetary termination benefit for the end of a term of office and the non-compete obligation applicable to Mr. Philippe Crouzet, and (ii) the monetary termination benefit for the end of the term of office to Mr. Olivier Mallet. This extension has been approved by the Shareholders' Meeting of April 6, 2016.

Monetary termination benefit for the end of term of office of Mr. Philippe Crouzet

In accordance with the recommendations of the AMF and the AFEP-MEDEF code, the monetary termination benefit shall only be payable in the event of a departure following a change in control or strategy. In addition, no benefit shall be payable should Mr. Philippe Crouzet have the opportunity to claim his retirement rights in the near future.

The termination benefit amount shall be limited to twice the average gross fixed and variable annual monetary remuneration payable in respect of the two financial periods preceding the date of departure (hereinafter the "Maximum Benefit").

The benefit shall be calculated using the fixed monetary remuneration payable in respect of the financial period preceding the departure date, plus the target variable monetary remuneration determined for the same period (the "Reference Remuneration") and may not under any circumstances exceed the Maximum Benefit.

Its amount shall depend on the achievement of three performance criteria assessed in the last three financial periods preceding the departure date (the "Reference Period"). The achievement of each performance criterion shall be combined with a rating range from a floor of 0 points to a ceiling of 30 points.

- The first "C1" performance criterion shall be assessed on the EBITDA rate, expressed as a percentage of revenues for each financial period within the Reference Period. C1 shall vary on a straight-line basis between 30 points for a maximum determined by the Supervisory Board, upon the approval of the Appointments, Compensation and Governance Committee, with reference to the EBITDA rates achieved in the last three financial periods closed, and at least equal to the average of these rates; and 0 points for a minimum at most equal to the maximum less 6 EBITDA points.

- The second "C2" performance criterion shall be assessed by comparing EBITDA for each financial period within the Reference Period and the EBITDA set forth in the budget for the same financial periods, prepared by the Management Board and approved by the Supervisory Board. C2 shall vary on a straight-line basis between 0 should the EBITDA reported be less than 25% of the budgeted EBITDA, and 30 points should the EBITDA reported exceed 12.5% of budgeted EBITDA. Budget targets are set each year by the Supervisory Board, pursuant to the opinion of the Appointments, Compensation & Governance Committee, after examining the budget presented by the Management Board and examined previously by the Finance and Audit Committee.
- The third "C3" performance condition shall be based on the percentage of the variable portion of the monetary remuneration payable in respect of each financial period of the Reference Period compared to the target variable portion of the period in question. C3 shall vary on a straight-line basis between 0 and 30 points (and limited to 30 points) according to the percentage of the variable portion paid compared to the target variable portion.

In the event that the total of C1, C2 and C3 (hereinafter the "PC") is on average less than 40 during the Reference Period, no payment shall be due. For an average PC that is equal to 40 or 50, the payment shall be equal to 15 or 18 months' salary respectively (1/12th of the Reference Compensation), up to the Maximum Payment. The payment shall reach its maximum, i.e. 24 months, up to the Maximum Payment, for an average PC that is equal or greater than 80 on average. It shall vary on a straight-line basis between each of the 40, 50 and 80 thresholds.

If the PC for the last financial period of the Reference Period is equal to 0, no payment shall be due.

Each year the Company will provide retrospectively the PC achievement rates for each financial period within the Reference Period. With respect to financial periods 2015, 2016 and 2017, the PCs for Mr. Philippe Crouzet, would be set at 25, 26 and 90, respectively.

Non-compete obligation applicable to Mr. Philippe Crouzet

Considering the steel industry expertise that Mr. Philippe Crouzet has acquired since assuming his duties on April 2, 2009, the Supervisory Board has sought to enable the Group to safeguard its know-how and activities by imposing a conditional non-compete obligation on Mr. Philippe Crouzet should he leave the Group.

At its entire discretion, the Supervisory Board may decide to prohibit Mr. Philippe Crouzet, at the time of his departure, and for a period of 18 months following the termination of his duties as Chairman of the Vallourec Management Board, for whatever reason, from working in whatever manner with a company or a group of companies in the steel industry, with no territoriality restrictions.

This obligation, if implemented by the Board, would give rise to the payment to Mr. Philippe Crouzet of non-compete compensation equal to 12 months of gross fixed and variable monetary remuneration, calculated using the average annual gross fixed and variable remuneration paid in the two financial periods preceding the departure date.

This sum would be paid in equal monthly advances during the entire period in which the non-compete clause is applicable.

The accumulation of the compensation paid under the non-compete clause and a termination benefit, should such benefit be paid, may not under any circumstances exceed twice the average gross fixed and variable annual monetary remuneration payable in respect of the two financial periods preceding Mr. Philippe Crouzet's departure date.

Monetary termination benefit for the end of term of office of Mr. Olivier Mallet

The Supervisory Board decided to grant Mr. Olivier Mallet a monetary termination benefit should he be removed from office as member of the Vallourec Management Board, provided that he waives any specific compensation payable in the event of a termination of his employment contract with Vallourec Tubes, which has been suspended during his term of office as a Management Board member.

The termination benefit amount shall be limited to twice the average gross fixed and variable annual monetary remuneration payable in respect of the two financial periods preceding the date of departure (hereinafter the "Maximum Benefit") and shall not be payable should Mr. Olivier Mallet have the opportunity to claim his retirement rights in the near future.

The benefit shall be calculated using the fixed monetary remuneration payable in respect of the financial period preceding the departure date, plus the target variable monetary remuneration determined for the same period (the "Reference Remuneration") and may not under any circumstances exceed the Maximum Benefit.

The accumulation of a benefit payable under the National Collective Bargaining Agreement for Executives in the steel industry, and the monetary termination benefit, should such benefit be paid, may not under any circumstances exceed the Maximum Benefit.

This benefit is subject to the same performance conditions as those previously described for the monetary termination benefit of Mr. Philippe Crouzet, it being specified that, as with the latter, the PC achievement rate for each financial period of the Reference Period shall be communicated retrospectively for each year by your Company. For the 2015, 2016 and 2017 financial periods, the PC for Mr. Olivier Mallet would be set at 23, 25 and 90 respectively.

Neuilly-sur-Seine and Paris-La Défense, March, 16 2018

The Statutory Auditors,

Deloitte & Associés
Christophe Patrier

KPMG Audit
Département de KPMG S.A.
Catherine Porta

8.2 Concordance tables and information incorporated by reference

8.2.1 Concordance table comparing the Registration Document and Appendix I to EC Regulation No. 809/2004 of 29 April 2004

Appendix I to the European Regulation			Registration Document Chapters/Sections	Pages
1.	**Persons responsible**			
	1.1	Names of persons responsible	1.1	6
	1.2	Declaration of persons responsible	1.2	6
2.	**Statutory Auditors**			
	2.1	Name and address of the Statutory Auditors	1.3	7
	2.2	Information on the resignation of Statutory Auditors	N/A	N/A
3.	**Selected financial information**			
	3.1	Historical financial information	Profile/3.7/3.9/3.10/6.1/6.2	2/58/70/71/158/230
	3.2	Interim financial information	N/A	N/A
4.	**Risk factors**		**5**	**133**
5.	**Information about the issuer**			
	5.1	History and development of the issuer	3.1	30
	5.1.1	Legal and commercial name	2.1.1	10
	5.1.2	Place of registration and registration number of the issuer	2.1.2	10
	5.1.3	Date of incorporation and length of life of the issuer	2.1.3	10
	5.1.4	Domicile and legal form of the issuer, the legislation under which the issuer operates, country of incorporation, address and telephone number of its registered office	2.1.1/2.1.2	10/10
	5.1.5	Important events in the development of the issuers' business	3.4/3.5	49/58
	5.2	Investments	3.7.2.3	65
	5.2.1	Principle investments made	3.7.2.3	66
	5.2.2	Principle investments in progress	3.7.2.3	66
	5.2.3	Principle future investments	3.7.2.3	66
6.	**Business overview**			
	6.1	Principal activities	3.2/3.3/3.7	32/45/58
	6.1.1	Nature of the issuer's operations and its principal activities	3.5/3.7	54/58
	6.1.2	New products	3.3	45
	6.2	Principal markets	3.2.2/3.10	35/71
	6.3	Exceptional factors	3.1/3.3.1.3/3.5/3.7.1/3.8	30/46/54/58/68
	6.4	Dependency with regard to patents, licenses, contracts and manufacturing processes	3.2.2/3.3	35/45
	6.5	Group's competitive position	3.2.3	36
7.	**Organizational Structure**			
	7.1	Brief description of the Group	3.2.6	39
	7.2	List of significant subsidiaries	3.2.6/6.1.B	39/175
8.	**Property, plant and equipment**			
	8.1	Main property, plant and equipment	3.10.1/6.1 (Notes 21 and 22)	71/181/221
	8.2	Environmental issues that may affect the Group's utilization of the tangible fixed assets	3.10.2/4.5	71/102

Appendix I to the European Regulation		Registration Document Chapters/Sections	Pages
18.	**Major shareholders**		
18.1	Identification of major shareholders (holding more than 5% of capital)	2.3.1	20
18.2	Existence of different voting rights	2.1.8/2.3.1	11/20
18.3	Ownership or control of the issuer	2.3.1/2.3.2	20/22
18.4	Arrangements, the operation of which, may result in a change of control	N/A	N/A
19.	**Related party transactions**	**6.1 (Note 21)**	**221**
20.	**Financial information concerning the issuer's assets and liabilities, financial position and profits and losses**		
20.1	Historical annual financial information	6	157
20.2	Pro forma financial information	N/A	N/A
20.3	Financial statements	6	157
20.4	Auditing of historical annual financial information		
20.4.1	Statements that the historical financial information has been audited	8.1.1/8.1.2	316/319
20.4.2	Indications of other information audited by the auditors	4 (Appendix 1)/8.1.3	120/320
20.4.3	Indication of the source of data and statement that the data is unaudited where financial data in the Registration Document is not extracted from the issuer's audited financial statements	N/A	N/A
20.5	Age of latest financial information	6	157
20.6	Interim and other financial information	N/A	N/A
20.6.1	Half-year or quarterly financial information	N/A	N/A
20.6.2	Interim or other financial information	N/A	N/A
20.7	Dividend policy	2.5	25
20.7.1	Amount of dividends	2.5	25
20.8	Legal and arbitration proceedings	5.1.13/6.1 (Note 17)	143/209
20.9	Significant change in the Group's financial or trading position	3.1/6.1 (Note 33)	30/229
21.	**Additional information**		
21.1	Share capital	2.2.2	12
21.1.1	Amount of issued capital	2.2.2/2.2.5	12/17
21.1.2	Shares not representing capital	2.2.6	18
21.1.3	Shares in the issuer held by or on behalf of the issuer itself or by subsidiaries of the issuer	2.2.4/2.3.1	15/20
21.1.4	Amount of convertible securities, exchangeable securities or securities with warrants	3.9	70
21.1.5	Information about and terms of any acquisition rights and/or obligations over authorized but unissued capital or an undertaking to increase the capital	2.2.3/3.9	13/70
21.1.6	Information about the capital of any member of the Group which is under option or agreed conditionally or unconditionally to be put under option	2.3.1	20
21.1.7	History of share capital	2.2.5	17
21.2	Memorandum and Articles of Association	N/A	N/A
21.2.1	Description of the issuer's objects and purposes	2.1.4	10
21.2.2	Provisions of the issuer's articles of association, statutes, charter or bylaws with respect to the members of the administrative, management and supervisory bodies	7.1.2	266
21.2.3	Rights, preferences and restrictions attaching to each class of shares	2.2.1/7.8	12/312
21.2.4	Actions necessary to change the rights of holders of the shares	2.2.1	12
21.2.5	Conditions governing the manner in which Annual General Meetings and Extraordinary General Meetings are called	2.1.8	11

Appendix I to the European Regulation		Registration Document Chapters/Sections	Pages
	21.2.6 Provisions contained in the issuer's articles of association, statutes, charter or bylaws that would have an effect of delaying, deferring or preventing a change in control	7.8	312
	21.2.7 Provisions contained in the articles of association, statutes, charter or bylaws governing the ownership threshold above which any shareholder ownership must be disclosed	2.1.9	11
	21.2.8 Conditions imposed by the memorandum and articles of association statutes, charter or bylaw governing changes in the capital, where such conditions are more stringent than is required by law	2.2.1	12
22.	**Material contracts (review)**	**3.3.1/5.1.14/6.1 (Note16)/6.1 (Note 33)**	**45/144/206/229**
23.	**Third party information and statement by experts and declarations of any interest**		
	23.1 Statement or report attributed to a person as an expert	N/A	N/A
	23.2 Information from a third party	N/A	N/A
24.	**Documents on display**	**2.1.5/2.6**	**10/26**
25.	**Information on holdings**	**6.1.7.B/6.2.E.6**	**175/244**

8.2.2 Concordance table between Vallourec's Registration Document and the annual financial report

Annual financial report		Registration Document Chapters/Sections	Pages
1.	Parent company financial statements	6.2	230
2.	Group consolidated financial statements	6.1	158
3.	Statutory Auditors' report on the parent company financial statements	8.1.1	316
4.	Statutory Auditors' report on the consolidated financial statements	8.1.2	319
5.	Management report including at least the information referred to in Articles L.225-100, L.225-100-2, L.225-100-3 and L.225-211 paragraph 2 of the French Commercial Code (*Code de commerce*)	8.2.3	329
6.	Statement by the person responsible for the annual financial report	1.2	6
7.	Statutory Auditors' fees (Article 222-8 of the AMF's General Regulations)	6.1 (Note 27)	224
8.	Supervisory Board Report on compensation in 2017 for corporate officers	7.4	300

8.2.3 Concordance table between the Registration Document and the Management Board report

This Registration Document includes all elements from the Board's management report as required by law and the regulations. The table below identifies the sections and pages of this Registration Document constituting the management report.

		Registration Document	
Management report		Chapters/Sections	Pages
1.	Activities and business development of the Group – Progress and challenges	3.2/3.4	32/49
2.	Results of the Group – Financial position and performance indicators	3.7	58
3.	Changes to the presentation of the annual financial statements or the valuation methods applied in prior years	6.2.3	231
4.	Material events between the reporting date and the date the report was prepared	3.5	54
5.	Foreseeable developments and the Company's outlook	3.8	68
6.	Payment periods for suppliers and customers	3.9	70
7.	Amount of dividends paid during the past three years	2.5	25
8.	Vallourec results table for the last five financial years	6.2.3 E.7	245
9.	Description of the principal risks and uncertainties the Group faces – Exposure to interest rate, credit, liquidity and cash risks – Internal control and risk management procedure	5.1.14/5.2	144/148
10.	Use of financial instruments by the Group, where it is relevant for the assessment of its assets, liabilities, financial position and income or loss	2.2.6/5.1.14	18/144
11.	Significant equity stakes in companies headquartered in France	N/A	N/A
12.	Injunctions or monetary penalties for anti-competitive practices	N/A	N/A
13.	Research and development activities	3.3	45
14.	Oversight plan		
15.	Corporate social responsibility	4	73
16.	Composition of share capital	2.3.1	20
17.	Employee share ownership	2.3.1/7.3.3	20/299
18.	Share repurchases	2.2.4	15
19.	Share transfers made to regularize cross-shareholdings or takeovers of such companies	N/A	N/A
20.	Summary of valid authorizations for capital increases and use made of these authorizations during fiscal year 2017	2.2.3	13
21.	Adjustments of the rights of holders of transferable securities giving access to capital or options	N/A	N/A

8.2.4 Concordance table between the Registration Document and the Supervisory Board's corporate governance report

This Registration Document includes all elements from the Supervisory Board's corporate governance report as required by law and the regulations. The table below identifies the sections and pages of this Registration Document constituting the corporate governance report.

Corporate governance report		Registration Document Chapters/Sections	Registration Document Pages
1.	Composition of the Management and Supervisory Boards	7.1.1	248
2.	Mandates and functions of corporate officers	7.1.1.1	248
3.	Diversity policy applied to members of the Supervisory Board	7.1.1.2	252
4.	Conditions for preparation and organization of the Board's work	7.1.2.2	266
5.	Declaration on corporate governance – Compliance with the AFEP-MEDEF Code	7.1.6	277
6.	The compensation policy for corporate officers	7.2.1	278
7.	Compensation of corporate officers	7.2.2	286
8.	Allocation of stock options	7.3.1	293
9.	Allocation of shares free of charge or performance shares	7.3.1	293
10.	Employee share ownership	7.3.3	299
11.	Supervisory Board Report on compensation in 2017 for corporate officers	7.4	300
12.	Securities transactions made by executives	7.5	311
13.	Valid delegations regarding capital increases	7.6	311
14.	Shareholders' participation in the Company's Shareholders' Meetings	7.7	311
15.	Measures having an impact in the event of a takeover bid	7.8	312
16.	Supervisory Board observations on the management report of the Management Board and the financial statements	7.9	313

8.2.5 Information included by reference

In accordance with Article 28 of European Commission (EC) Regulation No. 809/2004 of 29 April 2004, this Registration Document incorporates the following information by reference:

- the parent company and consolidated financial statements for the year ended 31 December 2016, the Statutory Auditors' reports thereon, and the management report, presented respectively in Section 6.2 (pages 224-238), Section 6.1 (pages 148-223), Sections 8.1.1 to 8.1.4 (pages 318-324) and Section 8.4.3 (page 331) of the 2016 Registration Document filed with the French securities regulator *(Autorité des Marchés Financiers)* on 21 March 2017 under No. D.17-0191; and
- the parent company and consolidated financial statements for the year ended 31 December 2015, the Statutory Auditors' reports thereon, and the management report, presented respectively in Section 6.2 (pages 216-228), Section 6.1 (pages 140-215), Sections 9.1.1 to 9.1.4 (pages 306-312) and Section 9.4.3 (page 319) of the 2015 Registration Document filed with the French securities regulator on 17 March 2016 under No. D.16-0141.

8.3 Other periodic information required under the General Regulations of the French securities regulator *(Autorité des Marchés Financiers)*

The Registration Document includes some of the periodic information required under the terms of the AMF's General Regulations. The following table provides details of the pages of this Registration Document on which this information appears.

	Registration Document	
	Sections	**Pages**
Supervisory Board Report on compensation in 2017 for corporate officers	7.4	300
Statutory Auditors' fees (Article 222-8 of the AMF's General Regulations)	6.1 (Note 27)	224
Description of the share buyback program (Article 241-2 of the AMF's General Regulations)	2.2.4	15

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A French limited company (société anonyme)
with Management and Supervisory Boards and issued capital of €915,975,520