



One R&D and New Energies Day

June 4, 2024



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Site Overview

Jérôme Peultier
Director of One R&D



Vallourec Sites in Aulnoye-Aymeries



- Here is an overview of the Aulnoye-Aymeries site, where we have our One R&D operations (in blue and in purple), our forge (in yellow), threading plant (in orange), and Delphy hydrogen storage demonstrator.
- A bit of history: the industrial site began operating at the end of the 19th century and the laboratory was built in 1943.
- In Building A of the research center we have our corrosion activities and our non-destructive testing equipment. Across the road we have our facilities dedicated to connection development.
- On site we also have our production facilities in the Forge and our shop dedicated to additive manufacturing, as well as our hydrogen storage demonstrator.



Welcome

Philippe Guillemot
*Chairman of the Board &
Chief Executive Officer*



Today's Agenda

...

Morning Speaker Series

- | | | |
|---|-------------------------------|--------------------|
| 1 | Technology & New Vallourec | Philippe Guillemot |
| 2 | Vallourec One R&D | Jérôme Peultier |
| 3 | Delphy H ₂ Storage | Vincent Designolle |

Site Visit Part 1

Lunch Speaker Series

- | | | |
|---|--|------------------|
| 4 | The Aulnoye-Aymeries Forge | Emilie Belissent |
| 5 | Wire Arc Additive Manufacturing (WAAM) | Olivier Tartar |

Q&A Session

Site Visit Part 2

Today's Speakers & Attendees

Today's Speakers



PHILIPPE GUILLEMOT
Chairman of the Board
& Chief Executive Officer



JEROME PEULTIER
One R&D Director



VINCENT DESIGNOLLE
Director of Delphy



EMILIE BELISSENT
Aulnoye Forge Plant Director



OLIVIER TARTAR
Head of Additive
Manufacturing

Other Executive Committee Members in Attendance



SASCHA BIBERT
Chief Financial Officer



BERTRAND DE ROTALIER
Senior Vice President
New Energies, Project Line
Pipe and Process



DAMIEN REBOURG
Senior Vice President
Communication and Public
Affairs





Technology & New Vallourec

Philippe Guillemot
*Chairman of the Board &
Chief Executive Officer*



Why Are We Here Today?

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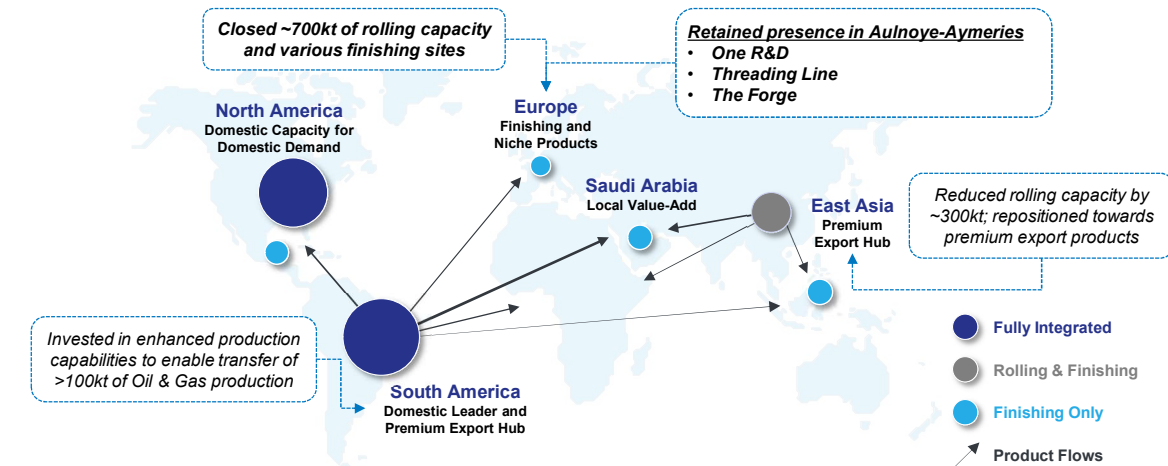
- 1 R&D and technology are at the heart of our competitive advantage and the Value over Volume strategy
- 2 Innovation maintains our leadership role in current markets, and will create a new moat in New Energies
- 3 The Delphy hydrogen storage solution is a differentiated offering with significant demand runway



- To start, why are we here today?
- I frequently tell people that this facility was the first that I visited when I started at Vallourec, and it immediately convinced me that we do not produce a commodity product.
- We hope today's event will leave you with these three conclusions:
 - First, the R&D and technology offering we develop here are at the heart of our competitive advantage and the Value over Volume strategy we have implemented.
 - Second, we believe that our innovative culture is what maintains our leadership role in our current markets, and ultimately will help us create a new competitive moat in New Energies.
 - Third, we are very excited about the Delphy hydrogen storage solution. We believe it is a differentiated offering with significant demand runway ahead.

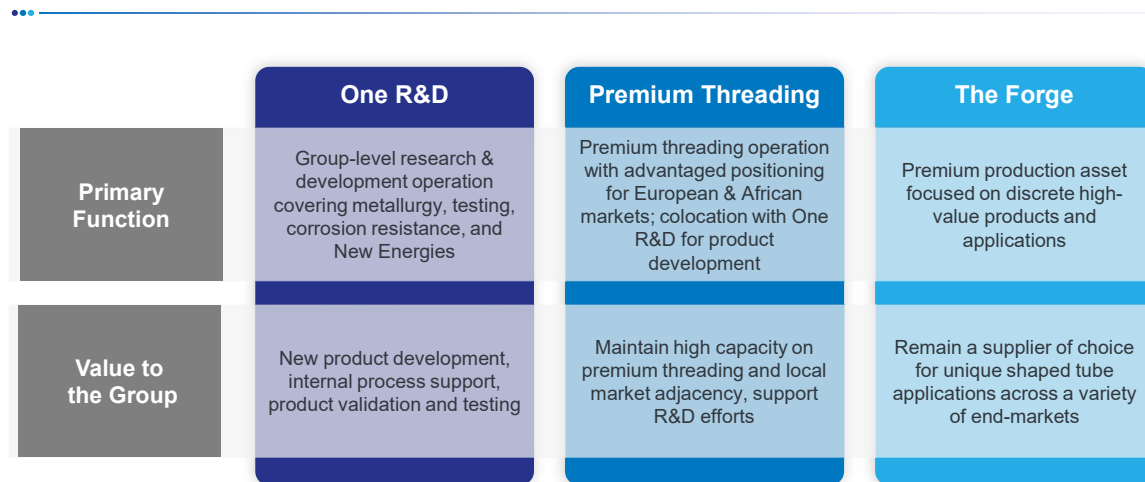
The New Vallourec Plan and Aulnoye-Aymeries

...
Changes resulting from the New Vallourec plan



- You are all familiar with our New Vallourec plan.
- While we shut down the vast majority of our operations in Europe, the Aulnoye Aymeries site, where we are today, remains.
- As Jerome explained, this facility has our One R&D operation, a threading line, the Forge, and now, the Delphy hydrogen demonstrator.
- Let me explain why we chose to retain this presence.

The Value of the Aulnoye-Aymeries Site



- The One R&D organization is the heart of our global research operations, with wide-ranging expertise that Jerome will discuss shortly. This is in my view the core of our competitive advantage.
- Meanwhile, we maintain a premium threading operation which offers the advantage of geographic proximity to some of our key markets, as well as colocation with One R&D for the development of new connection technologies.
- Finally, the Forge is a unique, premium production asset – the only one in Europe – which is well aligned with our Value over Volume strategy.

Technology Unlocks High-Value Markets

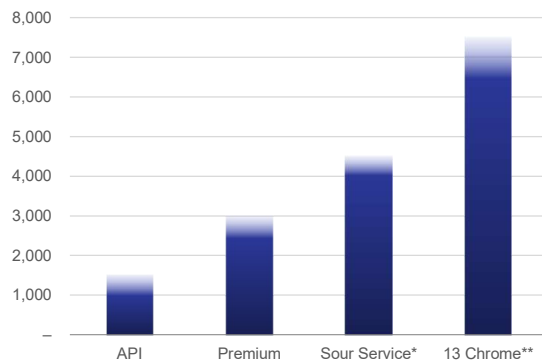
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Gaining Access to Value-Added Markets

- Value over Volume strategy emphasizes participation in markets where we are well-positioned due to:
 - Technology
 - Geography or trade
 - Customer intimacy or service offering
- Technology is not static; it depends on an organizational culture of innovation
 - Customers and regulators demand ever-increasing safety
 - Ongoing customer focus on harder-to-exploit reservoirs like shale, ultra deepwater, and corrosive (sour) reservoirs
 - New challenges faced in New Energies value chain

Advanced Technology Drives Higher Added Value

Market Price (\$ / tonne)



Source: Rystad Energy, Vallourec estimates

* Sour Service refers to O&G environments where hydrogen sulfide (H₂S) is present. H₂S is a poisonous and highly corrosive gas. Special carbon steel grades are needed to resist corrosion cracking in sour service.

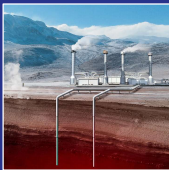

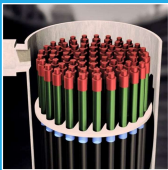
** 13 Chrome refers to martensitic stainless steels containing 13% of chromium. These steels provide resistance to metal-loss corrosion during the life of the wells and enable to avoid costly work-overs.



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- I would also like to remind you why we place such an emphasis on technology.
- If you think back to our message at the Capital Markets Day, we explained how our Value over Volume strategy is focused on participating only in markets where we are well-positioned due to technology, geography, or customer intimacy.
- You can see the technological impact in terms of value on the right. We have talked before about the difference between API and Premium tubes. But in fact, the value-add climbs even higher when you get into advanced metallurgical solutions like those for sour service products for corrosive reservoirs or high-alloy grades like 13 chrome.
- The technological capability to produce tubes with advanced steel grades, advanced connections, and unique solutions are created and reinforced here in Aulnoye Aymeries.
- Technology is not static, though: our ability to deliver strong returns over time depends on an organizational culture of innovation. We will demonstrate how we maintain ours today.

Significant Growth Potential in Our New Energies Business

	Geothermal	Carbon Capture, Utilization and Storage ("CCUS")	Hydrogen
Primary Tubes Application	Casing for geothermal wells, AGS, EGS*	Casing and tubing for CO ₂ wells; transportation line pipe	H ₂ storage systems; transportation line pipe
Key Product Needs	Heat resistance; connection integrity during thermal expansion	Corrosion resistance; excellent toughness at low temperatures	Embrittlement resistance; extremely tight connection tolerance
Vallourec Positioning	Tubes and connections validated and in use in geothermal wells	Tubes and connections validated and in use in CO ₂ injection wells	Tubes and connections validated and in use in H ₂ storage wells
Application			



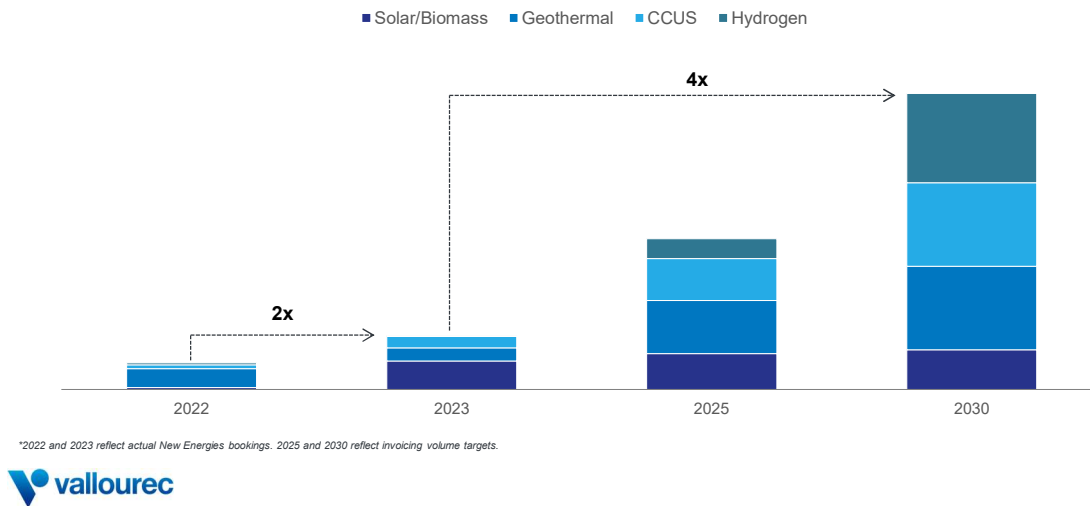
*AGS = Advanced Geothermal System; EGS = Enhanced Geothermal System

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- We are also here today to discuss our position in New Energies and update you on some of the topics we discussed at the Capital Markets Day.
- As you know, we have significant ambitions in the geothermal, CCUS, and hydrogen arenas.
- In geothermal, we solve for the extreme heat resistance required to create casing for geothermal wells and Advanced and Enhanced Geothermal systems.
- In the CCUS value chain, we offer products for both sequestration wells and carbon transport pipelines, where our products must withstand significant corrosion and low temperatures.
- Finally, in hydrogen, we must solve the dual challenges of steel embrittlement and the high leakage risk due to hydrogen's extremely small molecular size. Our Delphy storage solution is well-placed to solve these problems.
- You can see we are already present in all of these markets, with our products validated and in use across all applications.

The Path to Delivering 10-15% of Group EBITDA from New Energies

...
New Energies Historical Booking Volumes and Invoicing Volume Targets*



- We have significant ambitions for our New Energies business, and we reiterate our target for this to comprise 10-15% of Group EBITDA by 2030.
- Our bookings doubled in 2023, and we expect hydrogen, CCUS and geothermal will drive the 4x growth we are targeting by 2030.
- You can see how the near-term is driven mostly by growth in geothermal and CCUS, while the long-term is driven by CCUS and hydrogen.

The slide features a large blue circle and a blue chevron shape on the left side. On the right, a circular inset shows a worker in a yellow safety vest and orange helmet working inside a large metal pipe. A blue circle with the number '2' is positioned above the worker.

Vallourec One R&D

Jérôme Peultier
Director of One R&D



A Leading Research and Development Franchise

- Central Steering with Local Expertise
 - France: heart of Vallourec's global R&D operation with wide-ranging research expertise
 - United States: VAM connections for US shale and Gulf of Mexico
 - Brazil: research into forestry and charcoal production as well as oil & gas products for pre-salt reservoirs
- Expanding Our Core Business
 - Newest generation VAM® connections
 - New steel grades for demanding applications
 - Accessories
- Developing New Revenue Streams
 - Services
 - Additive Manufacturing (3D printing)
 - New Energies



~280 research professionals

Centers in France,
United States and Brazil



>4,000 global active patents

Largest patent portfolio in
OCTG industry



~€34 million annual spend

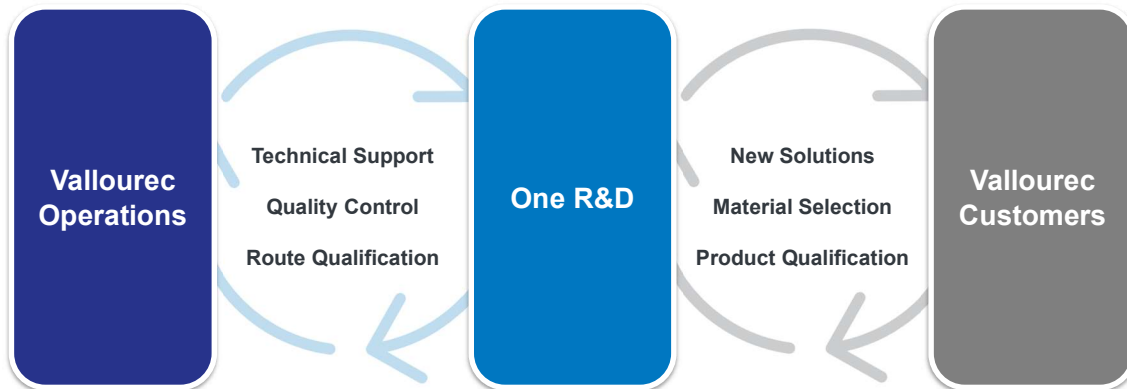
>1.6x more per dollar of
revenue vs. closest peer



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- Let's start with an overview of our R&D operation.
- We have a world-class R&D franchise that puts our technological capabilities at the forefront of the tubular industry:
 - We have about 280 research professionals across the world - largely located here in France, which is the heart of our global R&D operation.
 - In the US and Brazil, we have regionally-focused research on topics such as shale connections in the US or forestry and charcoal production for our eucalyptus plantations in Brazil.
 - We have over 4,000 global patents, which gives us the largest portfolio in the OCTG industry.
 - In 2023, we spent about 34 million euros on R&D, or about 60% more per dollar of revenue than our closest peer. We plan to grow this budget in 2024 to continue to build our technological advantages.
- Our R&D operations have a few functions, including expanding our core business and developing new revenue streams but also supporting our own operations.

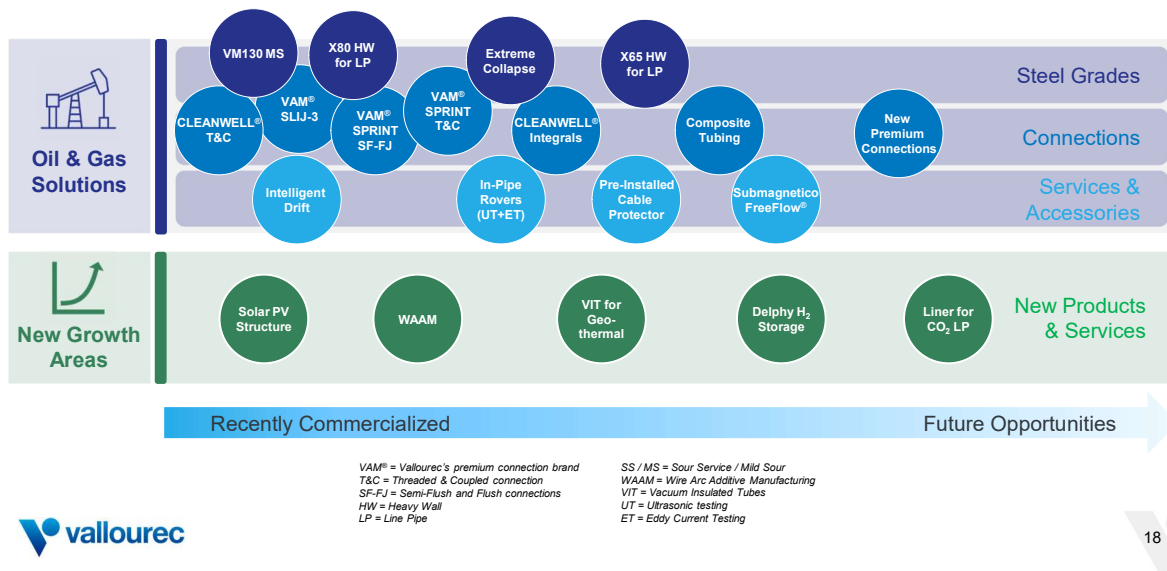
One R&D Supports Our Operations and Our Market Position



- Let me expand on this last comment a bit here.
- One R&D has a two-fold purpose within Vallourec: to create value for both our internal operations and for our customers.
- Internally, R&D provides extensive support to our manufacturing operations.
 - Keep in mind that we produce a very wide range of products, and so sometimes our mills need to evaluate how to approach a new production problem, or to investigate how to better manage their production process. This type of expertise is not something many of our competitors can claim.
 - In addition, one of the key customer demands is consistent quality of products: our R&D operations provide testing and quality control that ensures customers get what they need.
 - Finally, R&D conducts route qualification i.e. we help the industrialization teams to validate new manufacturing routes, from steel to pipe making.
- Externally, R&D helps our customers in a variety of ways:
 - Often customers present us with a problem, like ideal well designs and reservoir conditions, but we provide meaningful support in helping them think through what materials and products will ultimately create the optimal solution.
 - Also, we provide the testing and certification that standard-setting bodies and our customers demand to qualify products for use in complex applications.
 - Finally, R&D provides our customers with new solutions for them to push the

boundaries of what is possible.

Delivering New Solutions and Opening New Markets



- Let's talk about some tangible examples of these new solutions.
- You can see here the pipeline of recent products we have brought or will bring to market, which reflect a mix of replacement of old products, incremental products for existing markets, and market-opening innovations.
- At the top, you can see that technology in the oil & gas business remains dynamic, with constant innovation on new steel grades, our suite of VAM connections, and various service and accessory offerings.
 - We are consistently introducing new steel grades to improve performance in a variety of well conditions, like sour wells (those with H₂S) or high-pressure reservoirs.
 - Meanwhile, you can see a few examples of the connection technologies we have continued to introduce, like our high-torque SPRINT serie connections for shale, or our SLIJ-3 connections that have been a key enabler of the 20k psi projects in the Gulf of Mexico.
 - We also continue to roll out service and accessory offerings. These are a set of high margin solutions for specific customer problems.
- Meanwhile, we have also oriented R&D towards new markets over the past few years, with a particular – but not exclusive – focus on New Energies.
 - You can see we have innovated for the solar, geothermal, hydrogen storage, and carbon sequestration markets, all of which will help drive the growth Philippe

referred to in his section.

Our Expertise in Aulnoye-Aymeries

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Corrosion Chemistry



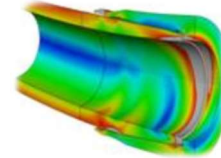
Threaded Connections



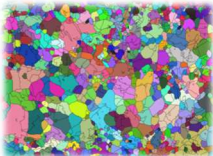
Full-Scale Testing



Simulation & Data Science



Material Science



Surface Treatments



Non-Destructive Testing



Additive Manufacturing



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- You will get the opportunity to see some of the people and facilities where we develop these solutions today.
- Here in Aulnoye Aymeries, we have a significant array of expertise across a variety of fields.
- We have strong expertise in metallurgy, corrosion resistance, mechanical performance and surface treatment that support a robust development process for pipes and connections.
- We develop tools and methodologies to support the manufacturing processes dedicated to core and new business (such as additive manufacturing).

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Delphy H₂ Storage

Vincent Designolle

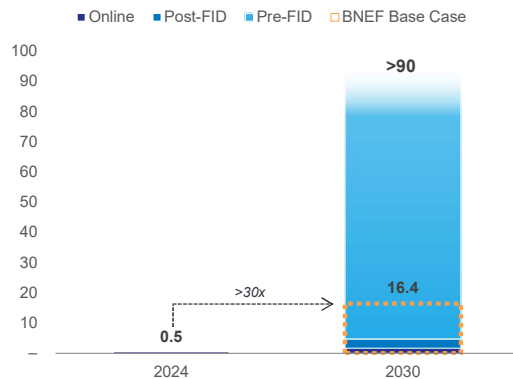
Director of Delphy



Low-Carbon H₂ Development to Drive Significant Storage Needs

Over 30x market growth with potential for more

Mt of Low-Carbon Hydrogen Production from Announced Projects



Source: BNEF Hydrogen Supply Outlook 2024, IEA



Producers and users must solve many challenges

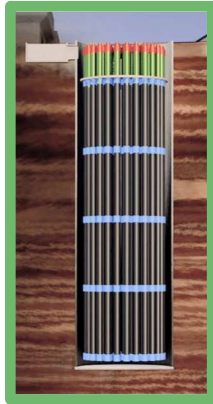
- Intermittent electricity supply from wind and solar generation
- Cost of production and handling
- Safety in handling and storage
- Limited space for inclusion in existing facilities
- Challenging permitting and development

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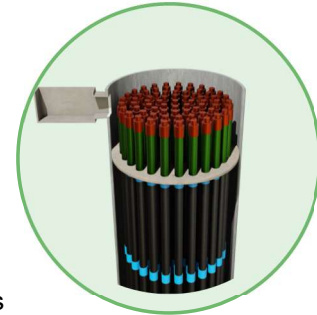
- As you all are aware, there is a global interest in developing low-carbon hydrogen infrastructure to reduce global emissions. Hydrogen has enormous potential as an energy carrier for hard-to-decarbonize industries.
- On the left, you can see the extreme growth that is possible in this arena, from half a million tonnes of low-carbon hydrogen production globally according to BNEF, up to 90 if you consider all IEA database of announced projects that could start up through 2030.
- While many of these may not move forward, you can see BNEF's base case still implies over 30x growth in the market through 2030.
- But realizing this huge potential will require the hydrogen industry to solve many challenges:
 - In particular, the shift towards "green" hydrogen, produced by electrolysis, implies a need to manage intermittency in the production, because offtakers will require continuity and security of supply. For instance, green ammonia or e-fuel production will be more efficient if operated at steady rate, and storage is needed to ensure this consistent supply.
 - Costs are an obvious focus in the value chain and storage can unlock value, helping to size the investment and/or optimize electricity mix.
 - All this means handling and storing large amounts of hydrogen, which comes with safety challenges – as we know, hydrogen is a challenging gas to contain and comes with hazards, so that strong focus on safety is needed.

- With this challenge comes the integration in site lay-out and issues like footprint available, set-back distances and permitting.

Delphy: Vallourec's Vertical Storage Solution



- ▶ **Compressed hydrogen stored in pipe assemblies**
Leveraging Vallourec's core products and expertise
- ▶ Vertical subsurface designs up to **100 meters / 330 ft deep**
- ▶ Wide capacity range
1 to 100 metric tonnes of H₂
- ▶ Available at high pressures
up to 500 bar / 7,500 psi
200-350 bar expected optimum for most projects



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- At Vallourec, we pride ourselves on solving complex problems like these, and this is how we came up with our Delphy vertical storage system. Delphy is a major project in One R&D portfolio, as Jérôme was presenting.
- We introduced this to you at our Capital Markets Day last year, but to review, the system involves storing compressed hydrogen up to 500 bars, in vertical pipe assemblies up to 100 meters underground.
- The use of our premium OCTG tubes and connections means that the solution is scalable (by simply adding more tubes) and capable of managing very high pressures, like we do for the oil and gas industry every day.

Vertical Storage is a Superior Solution at Intermediate Scale

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Competition has higher costs or other drawbacks

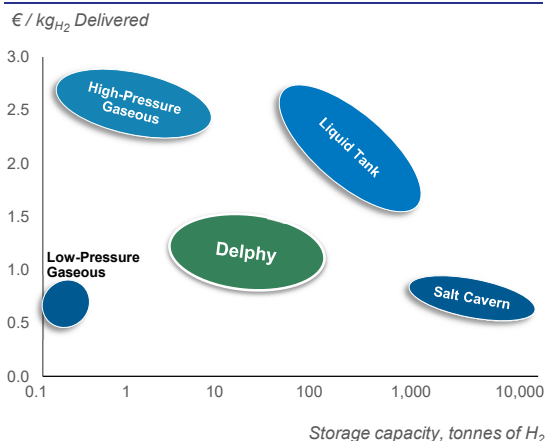
Solution	Capex	Opex	Other Factors
Low-pressure gaseous	Intermediate cost	Lower cost	Not scalable
High-pressure gaseous	Higher cost	Higher cost	Higher safety risk Not scalable
Liquid tank	Lower cost	Higher cost	Rapid boil-off High energy cost
Salt cavern	Lower cost	Lower cost	Multi-year project Large scale only
Delphy	Intermediate cost	Lower cost	Safe, modular and scalable

■ Lower cost
 ■ Intermediate cost
 + Higher cost

Sources: Vallourec / IAC Partners, 2023
Note: Solution cost is a per kg_{H₂} delivered, model includes capex & opex for the H₂ treatment plant & storage but does not include H₂ production cost



Delphy is a superior-cost solution in its target range



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- You saw this cost study in our Capital Markets Day as well.
- Let me unpack it for you to demonstrate why we believe Delphy is a superior solution for intermediate-scale storage.
- The first set of solutions we compete with are low-pressure and high-pressure gaseous storage solutions, both of which are for small scale applications. Both are existing on the market, with the price difference coming largely from more or less compression. But in both cases, they will face limits to scale up beyond one or a few tons, due to space required and safety challenges.
- When you look for larger scale solutions, you can think of liquefied hydrogen, but this comes with very high costs (35% of the energy content is used in liquefaction, not to mention there is boil-off of a few percentage points per day). So unless the ultimate use of the hydrogen will be in a liquid state, there is little reason to liquefy it for the sake of storage.
- The use of salt cavern storage is indeed practical, and cost effective, for very large-scale solutions, and we are actually involved in some of these projects. However, these are extremely large-scale, multi-year projects that are only relevant once proper transport infrastructure is developed. This will not be everywhere, and certainly not right away. This will call for onsite storage solutions, next to point of production and/or point of use.
- Accordingly, we think Delphy wins on cost, safety, and scalability for our customers

Strong Commercial Momentum for Delphy

...

Seeing a robust sales pipeline

2	MOUs announced so far: • H2V (green hydrogen) • NEXTCHEM (green ammonia & H ₂)
~50	Unique project opportunities
>€2B	Margin-accretive potential revenue opportunity
2025	Target for first deployment

Customers are expressing significant interest

"This technology is well placed to solve medium-term buffer storage and is critical to our Green Hydrogen transition and reaching net zero."

"This is exactly what we need for our ammonia production project. We've been looking for a solution like this."

"When looking at our e-SAF projects, we were concerned that no storage solution would exist at the needed scale, but now we see it with Delphy."

"We believe this design is a great fit for our H₂ assets. We see great demand in the future for this system and would like to be the first company in [our region] to utilize Delphy."

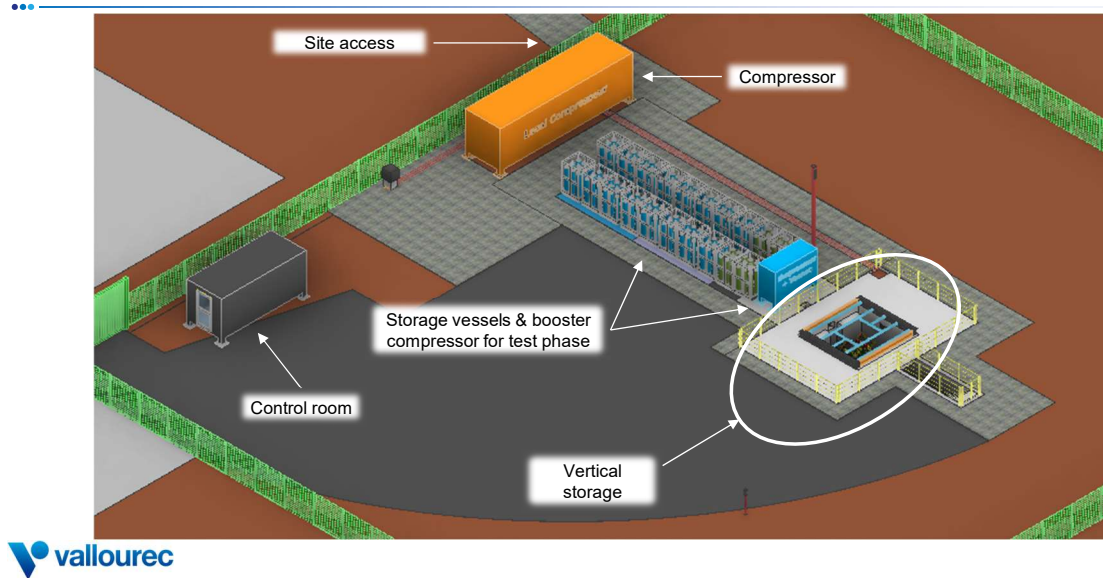
"Having a large hydrogen storage capacity is a differentiator for our projects: it allows us to produce hydrogen when the green electricity is available and sell green hydrogen at a later time, at a premium."



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- You will recall we only completed our demonstrator in late 2023, but we are already seeing significant commercial momentum in our marketing efforts.
- We have announced 2 MOUs with one green hydrogen developer, H2V, and technology company NEXTCHEM, a Maire Tecnimont affiliate, that is very active in green ammonia.
- Right now we are in discussions with the developers of approximately 50 unique hydrogen projects for which Delphy could be an ideal solution, and these projects could lead to over 2 billion euros in revenue for Vallourec.
- Given the advantages of our solution, we expect the margins for Delphy will be accretive to the Group average.
- We are continuing our testing and certification process, and expect the first commercial deployment in 2025.
- On the right, we picked some customer quotes for you, but we easily could have shown you more. We are seeing a lot of excitement from a wide list of customers, including technical gas companies, energy and utility companies, hydrogen project developers, major engineering and EPC companies. They are praising the merits of Delphy, and the fact that we actually built a system already gives them confidence in the future.

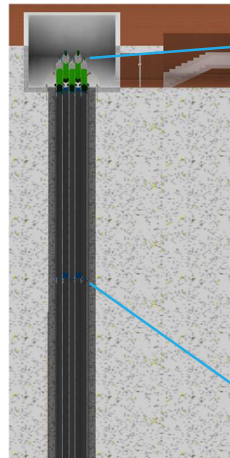
What You Will See On the Surface Today...



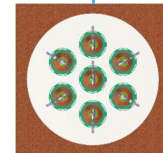
- The Delphy solution itself is what you see here. Most of it is below ground, through the stairway shown here. We like to say that *“what is to see is that there is not much to see.”*
- Next to the storage area, you have racks of cylinders, with the hydrogen and nitrogen that we are using for the tests, and in between there is generally a booster compressor to feed the storage and adjust pressure levels.
- The booster and safety instruments use compressed air from the compressor (the orange box on the drawing), and we have a control room nearby.
- Please remember that this demo site is part of our technology qualification program, developed with support and challenge of DNV. We are using it to test all features and fully validate the solution in the coming months.

...And What is Below Ground

...



7 strings of
H₂-resistant alloy



VAM-21
H₂-tight connections



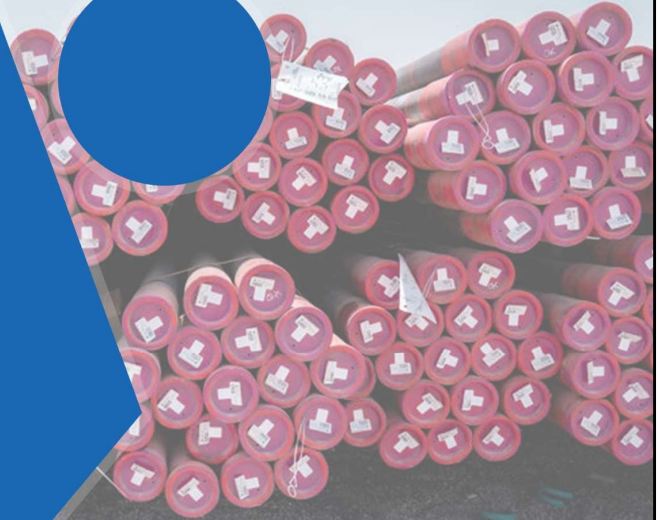
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- And here is the view of the upper part of the storage, below ground level. The bulk of the storage goes down below, about 20 meters deep.
- On this picture, you can see the special accessories we designed to seal the system, i.e. support plate and support plugs, bearing the weight of the system, top cap, sealing each vessel, etc. And the storage vessels are then connected to piping and instrumentation, for inlet/outlet and all safety control.
- I would like to highlight that the Delphy technologies plays very much on unique strengths and expertise domains of Vallourec's, including:
 - Metallurgy (to have the right materials to resist corrosion, and in this case hydrogen embrittlement).
 - Tight connections (we proved our premium connection VAM21 tight to hydrogen, which is unique in our industry).
 - And finally, simulation tools and non-destructive testing, which are key elements to design and maintain this solution.



Safety Briefing

Jérôme Peultier
Director of One R&D



Safety Rules

...

Moving on site:
stay with the group



Forklifts have priority

In all buildings and on the
hydrogen storage field



In the corrosion lab



Gas risk



Stay with the group
Supervisors have a gas
detector

Personal Protective Equipment (PPE)



4

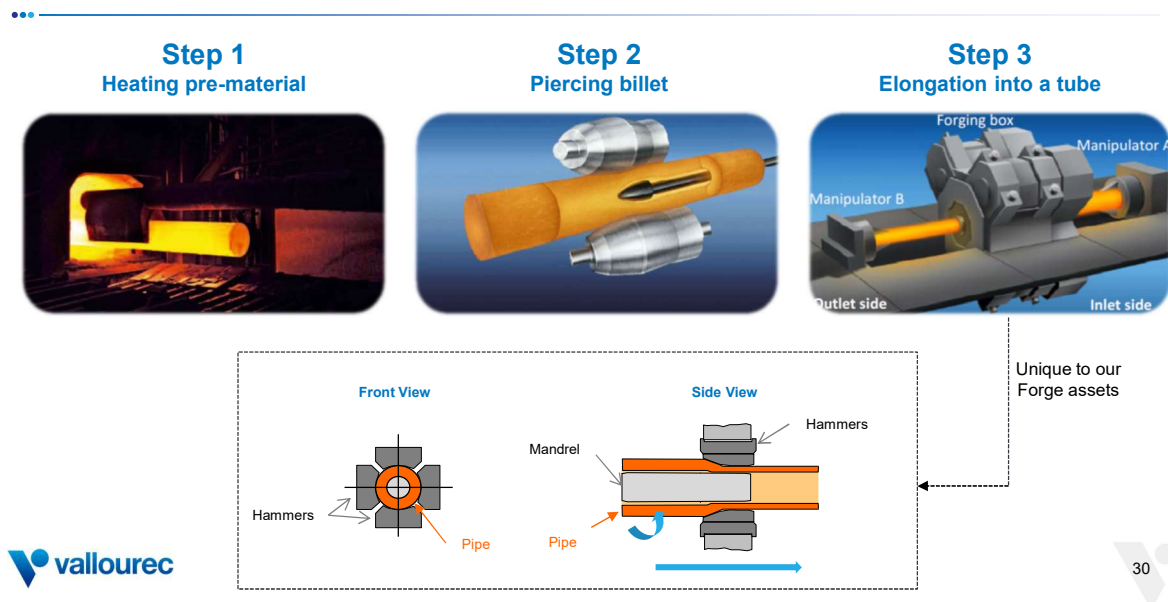
The Aulnoye Forge

Emilie Belissent

Aulnoye Forge Plant Director



Unique Production Process Compared to Other Rolling Mills



- The Forge is a unique asset within our portfolio.
- You will recall that overall, the process of making an OCTG tube involves steelmaking, rolling, heat treatment and threading.
- Here in the Forge, we externally source steel, and thus the process begins from a round, or billet.
- Let's look at the process flow on the top:
 - First, we put the billets into a furnace, which raises the steel's temperature to 1,300 degrees. This makes it pliable enough to be reshaped into a tube.
 - From here, the billet is pierced and rolled by parallel rollers (think of rolling dough between your hands). The billet is transformed into a hollow tube.
 - Now is where this production process gets unique. From here, the tube is pulled through the forging box, where it is shaped by hammers and the mandrel. You can see this on the bottom here.
 - Whereas in our rolling mills in Brazil or the US, the goal would be to create a uniformly-shaped tube, in the forge we can customize the interior and exterior shape of the tubes.
- Not pictured here, but following this step, the tube is put through the heat treatment, or quenching and tempering process, where we alter the structure of the steel and impart its mechanical characteristics.

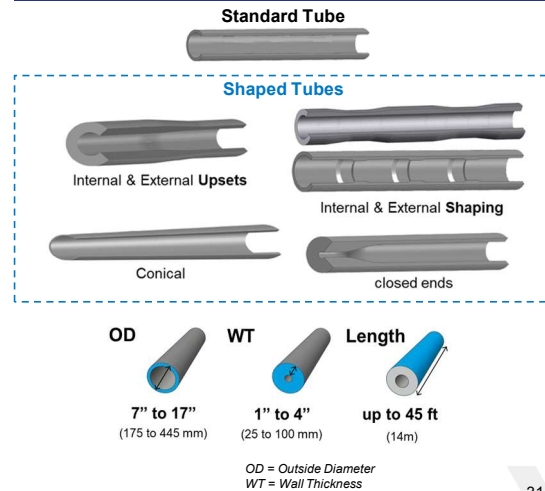
What We Produce at The Forge: Shaped Tubes

Premium Products for Advanced Applications

- Specialization in shaped pipes to avoid extra operations after production
 - Removes need for subsequent manufacturing operations that a standard tube would require
 - Typical avoided costs: machining, welding, swaging, upsetting, pressing, and deforming
 - Available in small lot sizes
- Diversified end markets
 - Oil & Gas (~50% of sales)
 - Risers
 - Landing strings
 - Couplings
 - Construction and industry (~50% of sales)
 - Cranes
 - Construction machinery
 - Power generation



Extensive Customization Available



- Why would we need to create such unique products? The answer is because our customers will often need specific parts for specific applications like railway shafts, hydraulic cylinders, and shaped pipes for mines.
- You can see a few of the potential shapes we can create on the right.
- By creating the desired shape in the initial production step, we save our customers the time-consuming and wasteful additional manufacturing they would have to transform a standard tube into a more-functional tube for their desired applications.
- As such, we can charge a strong premium for these tubes – at the Forge, our ASP is aligned with the Tubes average you saw in 2023, with some products selling up to \$5,000-\$6,000 per tonne
- The Forge has many applications, and here we are a bit more diversified than the overall Tubes business:
 - We sell about half of our products into the Oil & Gas market, where we make risers for offshore applications, landing strings and couplings.
 - Meanwhile, our products also have a variety of uses in the construction and industry markets, including cranes, machinery, and power generation applications.
- This offering is well aligned with our Value over Volume strategy – here in the forge we have a strong competitive differentiation and are able to price for the value we provide to customers.

The graphic features a large, stylized 'V' shape composed of blue geometric elements. A blue circle with a white number '5' is positioned within the upper right part of the 'V'. The background is a photograph of industrial machinery, specifically a large, corrugated metal pipe or nozzle, with a pink component visible in the foreground. The overall design is modern and industrial.

Wire Arc Additive Manufacturing

Olivier Tartar

Head of Additive Manufacturing



Our Wire Arc Additive Manufacturing (WAAM) Solution

...

A Unique Application of 3D-Printing Technology

- Flexible 3D printing for large metal components:
 - Freedom to re-design, add functionalities, print wide range of materials
 - "Digital warehouse": On-demand printing helps reduce inventories and cut down lead time
 - Deliver near-net-shape products reducing CO₂ footprint
- Vallourec's strong expertise valued by customers for complex metallurgy and non-destructive testing (NDT) for critical components
- How does it work?
 - Robotic arm + arc-welding torch = layer by layer printing
 - Post-processing and inspection to ensure component integrity (mechanical performance, dimensional, material soundness, etc.)
 - Data collection enables comprehensive digital twin



Recent Customer Applications

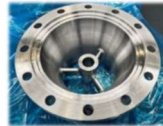
Well Control Device



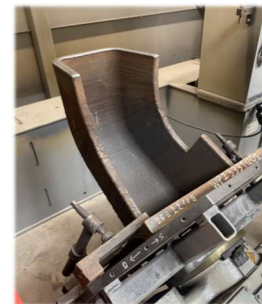
Subsea Pipeline Anchor



Valve Body



Ship Hull Part



Refinery Repair Clamps



33

- 3D Printing is fairly common today, anyone can buy and use a polymer printer.
- However, when it comes to steel and more critical components, printing obviously gets a bit more complex.
- Vallourec has been developing solutions based on WAAM – Wire Arc Additive Manufacturing – for the last 5 years.
- WAAM allows printing almost any material with complex geometries or will allow adding functions onto an existing substrate such as a pipe. WAAM is also able to print large components, up to 3 tons and over 3 meters.
- The objective of our solution is to secure a shorter and secured supply-chain, achieving the ultimate goal of having on-demand printing taken from a digital inventory, which will allow reduced inventories and improve total cost of ownership.
- Customers from various industries – Oil & Gas, Energy, Maritime, etc – are actively considering WAAM to replace casting and forgings for small to medium quantities, as supply is and will be more and more challenging with conventional routes.
- Our customers are looking for an industrial partner that has ability to master this challenging technology. They usually do not want to do it themselves.
- Vallourec was therefore a legitimate option for many customers due to our strong expertise in complex materials, welding and non-destructive examination.

Q&A Session

