

HIGHEST PROVEN FAST & RELIABLE PERFORMANCE RUNNING

EXTENSIVE OFFER

# VERSATILE AND EASY TO USE, SETTING THE STANDARD

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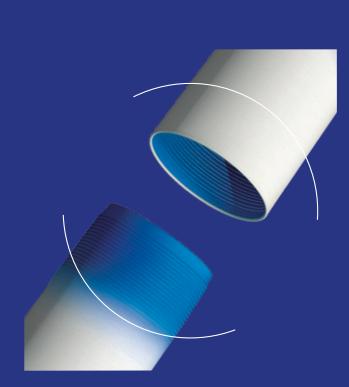
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API RP5C5 2017 CAL IV

AVAILABLE WITH **CLEANWELL®** 





## THE PERFECT DUO – VAM® 21 & CLEANWELL® TECHNOLOGY

CLEANWELL® is a non-polluting coating applied in the mill to threaded connections replacing both storage and running compounds. Delivered "rig-ready", means reduced handling operations, both in the yard and on the rig. It ensures rapid and safe running in challenging operations, provides excellent sealability and improved protection against galling and corrosion. The result: lower operating costs.



#### ENVIRONMENTALLY FRIENDLY

No storage or running compound means zero discharge to the environment and no risk of plugging the well bore. Non-sticky, no cleaning is required, reducing water consumption and contamination.



#### IMPROVED OPERATIONAL PERFORMANCE

 On the yard, CLEANWELL<sup>®</sup> requires no specific maintenance during storage for up to 3 years. Corrosion resistant, it can withstand all weather conditions; it remains clean and easy to inspect.

• On the rig, CLEANWELL<sup>®</sup> improves running operations, increasing the number of joints run per hour by up to 30%.



#### SAFER

- Reduced handling operations means fewer people on board the rig. Applied in the mill, CLEANWELL<sup>®</sup> requires no additional handling operations. It offers a cleaner and safer operating environment and reduces risk of accident.



"Using VAM<sup>®</sup> 21 with CLEANWELL<sup>®</sup> we had faster running and no rejects. We don't want to use anything else!"

🛑 AKER BP, North Sea.

"Running CRA pipes with CLEANWELL<sup>®</sup> was fantastic compared to standard running compounds with not a single reject."

🛑 PETROBEL, Egypt.

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### HIGH PERFORMANCE, ENHANCED RESISTANCE, TESTED, PROVEN & TRUSTED.

The latest generation of premium connections, VAM<sup>®</sup> 21 has the highest proven technical performance with outstanding sealability and extreme compression resistance. Validated by the severest testing protocols and widely adopted by Oil & Gas operators, VAM<sup>®</sup> 21 ensures fast and reliable running in the field, whatever the application, even the most critical.

#### PROVEN PERFORMANCE

- As strong as the pipe body with 100% compression resistance
- Extensively tested as per API RP 5C5: 2017 CAL IV
- Sealability validated up to 240°C (464°F)
- VAM<sup>®</sup> 21 HT offers High Torque performance
- Performance validated on High Collapse grades
- Bending validated up to 42°/100 ft

- Tested as per TWCCEP protocol for Thermal Wells up to 350°C (662°F)
- Fatigue test data available

#### APPLICATIONS

- Offshore and Onshore
- Deepwater (including Risers)
- HP/HT wells
- Salt domes (High Collapse)
- Shale (High Torque)
- Geothermal
- Drilling with Casing

#### PRODUCT RANGE

- OD: 3 1/2" to 16" Standard, alternative and special drifts
- Grades: Carbon steel grades (API 5CT), Sour Service, High Collapse, Corrosion Resistant Alloys (API 5CRA), 13CR, Super 13CR, Duplex, Super Duplex and Nickel-base Alloys
- YS: From 80 ksi to 140 ksi





#### HIGHEST PROVEN PERFORMANCE

Test results prove that VAM<sup>®</sup> 21 offers the highest performance in terms of compression, torque, collapse and high temperature resistance.



#### FAST & RELIABLE RUNNING

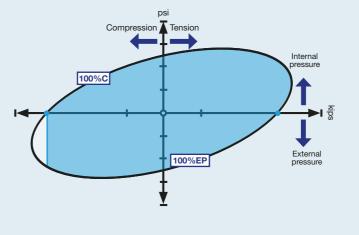
Easy stabbing and alignment even with rough handling, means clear and repeatable make-up charts, fewer rejects, faster running and peace of mind.

#### EXTENSIVE OFFER

Large range of sizes and grades for casing, liners and tubing.

A STATISTICS CONTRACTOR

#### VAM<sup>®</sup> 21 - MAXIMUM LOAD SERVICE ENVELOPE FOR API RP 5C5: 2017 CAL IV PERFORMANCE





#### TRUSTED BY OPERATORS AROUND THE WORLD

Onshore and offshore, in conventional and unconventional wells, VAM<sup>®</sup> 21 is the most versatile, reliable and easy to use connection. Setting the standard – for HP/HT wells from the North Sea to South East Asia, for deepwater wells in the Gulf of Mexico, the west coast of Africa and the presalt wells of Brazil, for shale operations in North America to conventional fields in the Middle East – VAM<sup>®</sup> 21 is supported by a worldwide network of VAM<sup>®</sup> Licensees.

This is why national and international oil companies around the world have confidence in VAM<sup>®</sup> 21.



## VALLOUREC ADDED VALUE SERVICES



#### • WELL DESIGN SOLUTIONS

To optimize your well design.



#### • TECHNICAL SUPPORT

To help you select the right connections and materials.

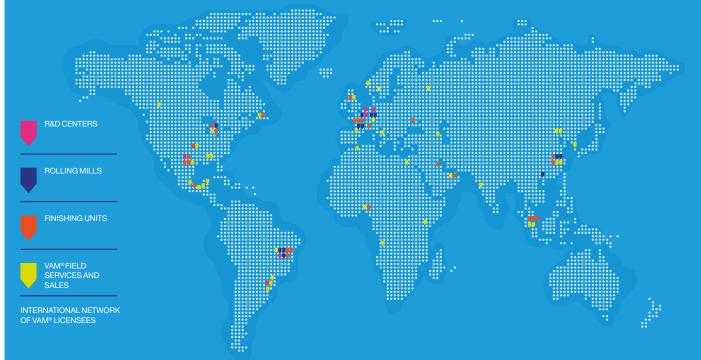


#### • VAM<sup>®</sup> LICENSEE NETWORK

International network to support VAM<sup>®</sup> connections.



#### YOUR PARTNER, SETTING THE PACE FOR INNOVATION AND PERFORMANCE EVOLUTION



## NEED MORE INFORMATION?

Information is available online on solutions.vallourec.com or by scanning the following QR code.





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