Tenaris

Dopeless® connections make immediate impact on Venezuelan offshore debut

The use of Dopeless® technology for the first time in an offshore operation in Venezuela brings operational, economic and environmental benefits to Petrosucre.

Summary

A Caribbean first

In October 2009 while developing the CGP-23 well in the Gulf of Paria, Petrosucre became the first oil & gas operator to run a Dopeless® connection in a Venezuelan offshore field. The Tenaris technology, which was used to case the 9 5/8" intermediate section of the well, helped the company improve operational efficiency, reduce health & safety risks and meet local environmental requirements set out by PDVSA.

Challenges

The search for operational efficiency

Before they can be used in an oil or gas well and every time they are pulled out and readied for reuse, conventional tubular products require intensive manual labor. In particular, tasks involving either the removal or the application of dope are necessary to protect the threads of pin and box connections. However, these are time-demanding jobs that directly conspire against the overall efficiency of the operation.

Moreover, the longer the time it requires to clean up a connection or apply dope on it, the higher the health and safety risks faced by crews handling the pipes and being exposed to slippery surfaces in hazardous areas of the rig.

Meeting a "zero discharge" policy

The Corocoro offshore field is located in the proximity of the Northern portion of the Orinoco Delta, an area rich in marine life and home to traditional fishing communities. Like the rest of the Gulf of Paria, it is an environmentally protected area. In recognition of this, PDVSA has implemented a "zero discharge" program aimed at eliminating the release of all sorts of contaminants generated by oil & gas exploration and production activities.

When applied excessively or inappropriately, the grease used during the process of making up conventional pipe connections can contaminate the environment and the formation being drilled.

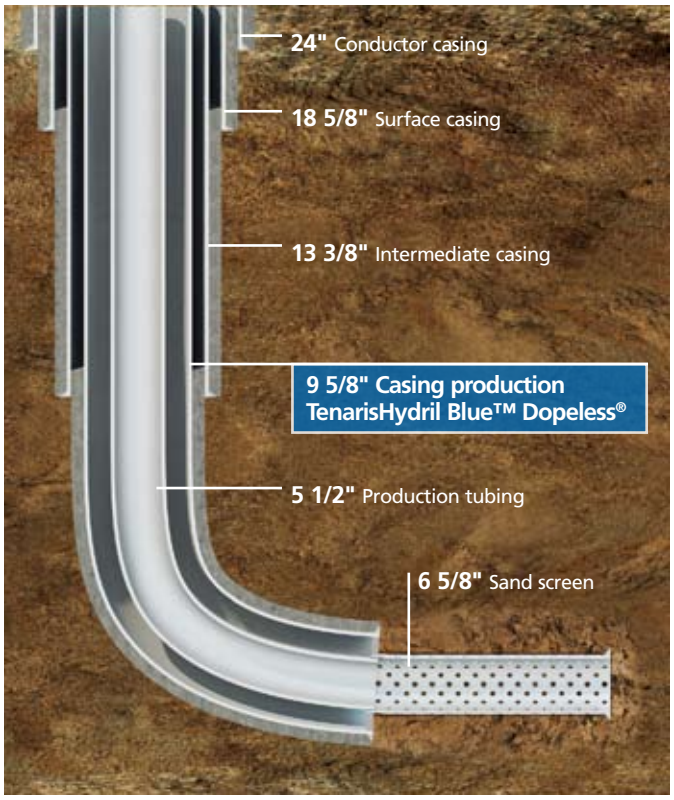
PROJECT PROFILE

Operator
Petrosucre (a joint venture between PDVSA and Eni).

Location
Gulf of Paria, Northeastern Venezuela

Products highlighted
9 5/8" casing with TenarisHydril Blue™ Dopeless®

Services provided
- Onsite training
- Field inspection
- Running assistance
- Accessories supply



▲ CGP-23 well registered a TVD of 6000 ft and a MD of 10250 ft.

Solution

Same connection, different coating

Following a proposal from Tenaris, Petrosucre decided to upgrade 500 of the casing connections that it originally planned to run during its 2009 drilling campaign in Corocoro from 9 5/8" TenarisHydril Blue™ to 9 5/8" TenarisHydril Blue™ Dopeless®.

The difference between the two premium solutions is that Dopeless® connections already come equipped with a specially engineered coating, which is applied at the mill through a controlled industrial process. This results in a dry, durable solution so that the connection doesn't require the use of lubricants, even after multiple make-ups and break-outs.

The operator had the opportunity to evaluate the benefits of Tenaris's dry technology by directly comparing the performance of Dopeless® connections in the CGP-23 well with a standard TSH Blue™ string of the same size run two weeks later in the same section of a nearby similar well (CGP-25).

The value of local knowledge

Petrosucre and Tenaris first started technical conversations about the potential use of Dopeless® connections in 2008. A series of presentations introducing the technology were followed by the evaluation of technical reports from previous experiences, building a long-lasting collaboration between the two companies.

When Petrosucre was eventually ready to begin the pioneering 9 5/8" casing of the CGP-23 well, a Tenaris Field Services team of Venezuelan specialists was immediately dispatched to the offshore platform. Their local know-how and deep understanding of Tenaris products and their applications in the field played an essential role in the development of the operation.

Results

More efficient casing jobs

The 9 5/8" sections of both wells were successfully cased to an approximate true vertical depth of 1,900m (6,233ft), with no rejections. However, while cleaning up standard connections took 25.3 man-hours and required four workers on the CGP-25 well, there was no need for such a task at the CGP-23. As soon as the protectors were removed, the Dopeless® connections were ready to run.

Running dope was only required to connect two accessories featuring Blue™ connections. Being able to easily combine standard Blue™ and Blue™ Dopeless® connections in a same string allowed the operator to confirm the versatility and interoperability of Dopeless® technology.

A total of 182 connections were run in the CGP-23 well. There were ten casing joints that had been prepared but were not needed. But unlike standard connections – which would have required a new application of thread compound – the Dopeless® tubes were ready to be stored in the yard again by simply replacing their protectors.

Torque graphics generated by the rig computer were consistent throughout running. As a consequence, no time was lost to remake any connections. Average running speed was 11 joints/hour, while peaks of up to 15 joints/hour were occasionally achieved. This represented an average time saving of 20% compared to the CGP-25 well.

A technical partnership in the Gulf of Paria

From onsite training activities to the pre-running inspection of Dopeless® connections to running assistance, the services that Tenaris's local specialists provided in close collaboration with operator and local contractors helped ensure a smooth, high-performance running job.

Environmentally friendlier and safer technology

The debut of Dopeless® technology in Venezuelan waters has allowed Petrosucre to move a step closer to the "zero-discharge" environmental objective envisioned by PDVSA.

During the 9 5/8" Dopeless® casing run, the rig was kept virtually free of thread lubricants, which optimized working space and reduced health & safety risks by cutting down the handling of pipe and reducing the time that workers were exposed to slippery surfaces. Both space optimization and the reduction of potential accidents are key considerations in any offshore platform.

Customer satisfaction surveys returned by the operator have confirmed the positive impact that Dopeless® connections have made in the Gulf of Paria. The Tenaris technology is expected to be incorporated in the short term into other wells of the Mariscal Sucre Project led by PDVSA.

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For contact information, please visit our site:
www.tenaris.com