Tenaris supplied TenarisHydril Blue® Dopeless® connections for Corrosion Resistant Alloys (CRAs) pipes. In addition, the operator decided to run some of the tubular products in triples to improve running times. To assist the oil and gas company in this challenging operation, Tenaris field service experts were present on site.

As a result, Dopeless® connections ensured increased efficiency, cost savings, improved running times and HSE benefits in the deepwater field.

### Challenges

**Looking for efficient, reliable solutions**

The project is located at water depths of up to 1,500 meters. The second phase involved a TVD of about 3,000 meters and maximum MD of 3,500 meters. The operator was looking for technologies capable of promoting efficiency and reliability.

To reduce running times, the oil and gas company decided to run some of the tubular products in triples. The operator was aware that this operation saves time but increases the risk of tubular damage. This risk is higher when Corrosion Resistant Alloys (CRAs) are involved, since this is a very sensitive material that can be damaged during transportation, handling and installation. Therefore, the company wanted to take all the measures required to minimize risks.

### PROJECT PROFILE

<table>
<thead>
<tr>
<th>Location</th>
<th>Angola</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rig Type</td>
<td>6th Generation Deepwater Drillship</td>
</tr>
<tr>
<td>Type of well</td>
<td>Deep water (1,500 meters)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Products Highlighted</th>
</tr>
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<tbody>
<tr>
<td>TenarisHydril Blue® connections</td>
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<tr>
<td>Dopeless® technology</td>
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<table>
<thead>
<tr>
<th>Services Provided</th>
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<tr>
<td>Field services</td>
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The project is located in the deepwaters of Angola.
Solutions

Dopeless® benefits
The oil and gas company decided to run 5 1/2" 17ppf SAF 2507 80ksi and 9 5/8" 53.5ppf SAF 2507 80ksi TenarisHydril Blue® connections with Dopeless® technology.

Dopeless® technology is a dry multifunctional coating that makes thread storage and running compounds obsolete. This dope-free solution is applied in a fully automatic process at Tenaris mills worldwide. The process guarantees that the exact amount of lubricant is applied to each connection and distributed throughout its surface.

Dopeless® technology significantly reduces running times and nearly eliminates re-makes and rejects, increasing the reliability of the running. In addition, this solution is a certified zero discharge technology that reduces the environmental impact of the operation.

Dopeless® technology is the perfect match for CRA materials since the coating substantially reduces its galling risk.

Services that promote efficiency and reduce risks
Tenaris field service specialists were present at the rig site to ensure right practices were followed and products were properly installed and used. The experts advise regarding the appropriate use of Tenaris products and the application of the corresponding operational practices during installation.

Results

Outstanding performance
Since their implementation, TenarisHydril Blue® Dopeless® connections have been run successfully in the challenging offshore field. A detailed study was carried out to quantify the benefits, showing that compared to standard connections Dopeless® products installed in singles showed an increased efficiency of 52% in the running time. The decision of running CRAs with Dopeless® connections in triples made the operation 62.5% faster and efficient. Up to date, zero Dopeless® connections were rejected during the operation.

Thanks to Dopeless® technology the oil and gas company managed to save 50 hours of rig time, which implied total savings of 2.3 million USD.

The oil and gas company especially welcomed the environmental benefits provided by the Dopeless® technology. The operator saved about 4,650 liters of water and waste, no dope was discharged to the environment and the thread protectors were used without being contaminated.

With standard connections, thread compounds are applied manually with a brush. Dopeless® technology renders thread compounds superfluous so it considerably simplifies pipe handling operations. Thanks to this benefit the oil and gas company was able to reduce several hours of manpower and therefore lowered the risk of accidents. Dopeless® solution also minimizes sand screen clogging and prevents formation damage, caused when excess dope invades and plugs a porous formation.

The operator trusted on the reliability of the tubing installed with the assistance of Tenaris field service specialists, so the operator decided not to perform pressure tests on the tubing. This decision saved 48 additional hours of rig time and about 2 million USD per well.

Thanks to these series of technical choices, the oil and gas company managed to reduce several million dollars from the investment originally expected for this challenging offshore operation.

For contact information, please visit our site:

www.tenaris.com