TenarisHydril offers outstanding premium connection design and technology worldwide. With a comprehensive range of high performance products backed by an extensive global field service network and licensed threading shops, we develop solutions to meet the needs of ever more demanding E&P environments.

TenarisHydril premium connections are supplied and supported by Tenaris, the leading manufacturer and supplier of steel tubes and integrated tubular services to the world’s energy industry.

For further information please visit our website at www.tenaris.com.
Dopeless® Technology

Dopeless® technology is a dry, multifunctional coating applied to TenarisHydril premium connections on dedicated production lines at Tenaris’s mills worldwide.

Dopeless® coating is applied in a fully automatic process that ensures consistent quality. TenarisHydril premium connections coated with this solution increase operational efficiency, improve safety at the rig and minimize operations’ impact on the environment.

By simplifying pipe handling and cleaning operations, the Dopeless® solution provides important operational benefits. For example, the technology reduces make-up problems, increasing the reliability of the installation and cutting running times. It also provides HSE benefits.

**DOPELESS® EXPANSION**

Tenaris is currently expanding, Dopeless® production capacity to satisfy growing demand and maintain its position as the leader in the provision of dope-free technology. Our Dopeless® production lines are located in Argentina, Mexico, Indonesia, Italy, Romania and the United States.

**A HISTORY OF FIRSTS**

**2003**

First offshore running of TenarisHydril Blue® Dopeless® connections for ConocoPhillips’ Ekofisk project in Norway.

**2004**

Debut of Dopeless® technology on TenarisHydril Blue® in Venezuela at Total’s Jusepin field.

Statoil opts to use TenarisHydril Blue® with Dopeless® technology for Snøhvit project, signifying the first entire field to use dope-free connections.

First installation of a Dopeless® high chromium alloy. A 13 Cr tubular string was installed at ConocoPhillips Ekofisk.

**2005**

The Snøhvit well becomes first 100% Dopeless® well ever installed. A 25 Cr Dopeless® string is also run for the first time.
The benefits of Dopeless® technology have been proven in many different applications and environments. Since its introduction on TenarisHydril Blue® connections in the North Sea in 2003, over six million feet of Dopeless® premium connections have been used in more than 20 countries. Tenaris provides running support for all Dopeless® operations through its integrated global network of field services, repair and technical support teams.
Dopeless® technology is available on TenarisHydral premium connections in a wide range of casing and tubing dimensional ranges, carbon steel (both API and proprietary), 13 Cr and Corrosion Resistant Alloys (CRAs).

Developed and tested in accordance with ISO 13679 standards, TenarisHydral premium connections with Dopeless® technology offer consistent performance superior plus make and break capacity. If several make and breaks are necessary, Dopeless® technology performs reliably, resisting galling tendency.

Running time comparison between Dopeless® connections and standard connections.

Dopeless® technology makes operations in the field safer and more efficient.
Dopeless® technology’s unique engineered coating protects the integrity of the connection’s metal surface, which helps to ensure:

- Resistance to any potential galling, including when high chrome, CRA materials are used.
- Corrosion protection even during prolonged exposure
- Superior torque stabilization

Dopeless® technology is available on the following TenarisHydril premium connections:

**BLUE® SERIES**
- Blue® 3 1/2" - 13 5/8"
- Blue® Thermal Liner 3 1/2" - 10 3/4"
- Blue® Near Flush 5" - 13 5/8"

**WEDGE SERIES 500™**
- Wedge 563™ 2 3/8" - 16"
- Wedge 523™ 7" - 16"
- Wedge 521™ 4" - 18 5/8"
- Wedge 513™ 4 1/2" - 16"
- Wedge 511™ 2 1/16" - 18 5/8"
- Wedge 533™ 2 3/8" - 7 5/8"

**WEDGE SERIES 600™**
- Wedge 625™ 4 1/2" - 7"

**LEGACY SERIES**
- ER™ 7" - 24 1/2"
Improved Operational Performance

The Dopeless® solution arrives rig-ready, saving time and money while reducing risk.

While standard E&P operations require the manual application of dope in with a brush, TenarisHydri premium connections with Dopeless® technology arrive rig-ready. The Dopeless® solution ensures a more stable make-up process, reducing the time required for the installation of the string and increasing the reliability of its behavior.

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**DOPELESS® BENEFITS**

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**PREPARATION & RUNNING**

- **Standard Connections**
  - **Start/Step 1** Remove thread protectors
  - **Step 2** Clean and dry thread protectors
  - **Step 3** Clean and dry connections
  - **Step 4** Measure – Drift – Inspect Connections
  - **Step 5** Apply thread compound
  - **Step 6** Re-apply thread protectors
  - **Finish/Step 7** Waste management and disposal

- **Dopeless® Connections**
  - **Start/Step 1** Remove thread protectors
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Improved operational performance through Dopeless® connections.

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**Increased Efficiency**

- Less pipe handling
- Less inspection and cleaning in offshore operations.
- Easier management of rig returns
- Avoids reapplication of lubricant in make and breaks

**Reliability**

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- Standard connections
- Reliability
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Improved well productivity

Dopeless® technology prevents formation damage, improves downhole operations and reduces mud contamination.

Dopeless® connections have the exact amount of lubricant and require no further thread compound, preventing lubricants from invading and plugging a porous formation, which reduces permeability and blocks flow paths.

Dopeless® technology simplifies downhole operations, e.g. wireline, tractor tools and coiled tubing applications. This solution takes away the possibility of any contamination with thread compounds in the tubing/liner. This also reduces the risk of sand screen clogging problems.

Dopeless® technology provides distinct advantages to a variety of extreme onshore and offshore environments.

**Offshore**  
Dopeless® technology enhances operational reliability and efficiency. The cleaner rig floor provides a safer workplace.

**Arctic**  
Dopeless® technology protects the connection’s mechanical integrity and performance even under severe arctic temperatures. Complications associated with dope compounds that freeze are eliminated due to the dry, non-stick Dopeless® coating.

**Desert**  
The non-stick Dopeless® coating prevents connection contamination from sand, dust and other particles, which can potentially hinder connection make-up and performance.

**Shales**  
In addition to reducing the environmental footprint, Dopeless® technology offers efficient drilling, including reduced running time and costs.

**Jungle**  
Contaminant-free Dopeless® products arrive rig ready for environmentally sensitive areas.
Health, Safety and Environmental Benefits

With Dopeless® technology, operators provide safer and cleaner workplaces for the rig crew and can be assured of compliance in environmentally sensitive areas.

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