

## Wedge 461<sup>™</sup> connection | 4½" to 75%"

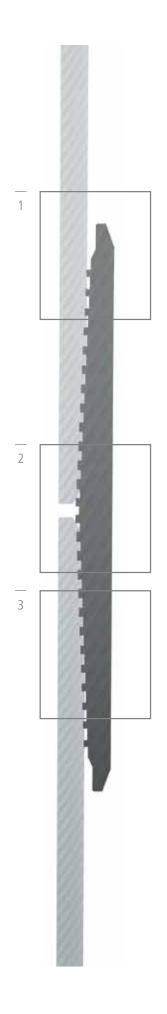
The TenarisHydril Wedge connection with extreme torque performance for longer laterals.



TenarisHydril Wedge 461™ represents a further evolution of the original Wedge technology, providing the exceptional over-torque performance needed in production strings typically used in horizontal wells for shale applications. The connection's torque capacity is achieved thanks to the renowned robustness of the Wedge thread design combined with a pin-to-pin backup mechanism.

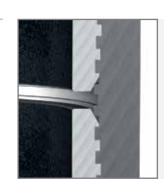
Maximizing the value for oil and gas operators, TenarisHydril Wedge 461™ reduces running times thanks to lower threads per inch of the profile and a rugged thread design that significantly decreases rejects and remake up's.

Connection make up is easy enough to avoid the need for a torque-turn chart. With a reliable development based on detailed design program, Wedge 461™ has been evaluated and validated through FEA and full-scale testing including Tenaris Protocol for Multi-Fractured Horizontal Wells (MFHW).





- Easy make up: no need of make up torque vs turns chart.
- Make up indicator: a 24" x 1" colored locator stripe on pin allows visual confirmation of appropriate make up, even at operating torque.



 Pins provide extra torque capacity when subjected to incremented torque resulting in pin-to-pin contact.



- Exceptional torque capability and compression efficiency developed through the simultaneous engagement.
   of opposing flanks of the dovetail thread.
- Unrivaled running reliability and robustness given by the Wedge thread.

## **FEATURES**

- Low TPI thread profile and deep stabbing for speed of installation, with 15 sec/joint spinning time.
- Robustness of Wedge profile minimizes rejects / re-makeups.
- Hoop stresses on coupling are strongly reduced compared to BTC-profile connections.
- TenarisHydril Wedge thread design provides maximum over torque capacity to manage longer laterals.
- Pin-to-pin backup mechanism grants additional torque capability to handle rotation
- 100% tension and compression ratings.
- Evaluated following Tenaris MFHW
   Testing Protocol, simulating installation,
   hydraulic fracturing and production
   loads in alignment with API TR 5SF.
- 20° standard bevel.

## **APPLICATIONS**

- Shales
- Casing while drilling
- Rotating while cementing
- Production casing and liners

For further information please visit: www.tenaris.com