

TenarisHydril MS™ & MS XT/XC™ Connections

Scope

These guidelines apply specifically to the use of TenarisHydril MS™ and MS XT/XC™ connections. This document should be used in conjunction with the TenarisHydril Running Manual, which is the main document applicable to the running of all TenarisHydril Premium Connections.

Tenaris Field Service Representatives can modify these guidelines when circumstances dictate. Implementation will only occur if the representative deems the modification to be non-detrimental to product integrity. All modifications being explained and agreed with the client representative prior to implementation and fully documented in the running report.

References

- TenarisHydril Running Manual.
- Premium Connection Approved Thread Compounds FTD29356.
- Recommended guidelines for the field inspection of TenarisHydril connections, GDL31457.

Equipment, Material & Documents

1. Verify the appropriate thread compound is available.
2. Refer to document FTD29356 for a list of compounds approved by Tenaris.

3. Latest version of the specific Product Data Sheet can be obtained from Tenaris web site. In case this is unavailable, request the data sheet from the local Technical Sales representative or contact-tenarishydril@tenaris.com.

Pre-Running

1. Never move or handle pipe without the correct thread protectors securely in place.
2. Ensure connections are clean and free of all debris and / or contaminants, cleaning methods employed should conform to the recommendations contained within the TenarisHydril Running Manual.
3. Verify all pipe and accessories have genuine TenarisHydril manufactured connections.
4. Visually inspect thread and seal areas prior to running, ensuring no damage is evident.
5. Verify the compatibility of the MSTTM or MS XT/XCTM connection with accessories such as cement heads, safety valves, cross overs, etc.
6. Verify material grade of all accessories ensuring compatibility with main string.

Inspection

1. Inspection criteria for all TenarisHydril connections is as outlined in the Field Service Operative Guideline GDL31457.

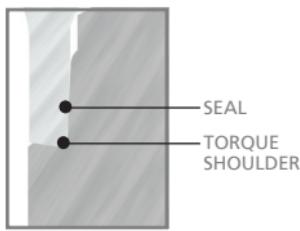
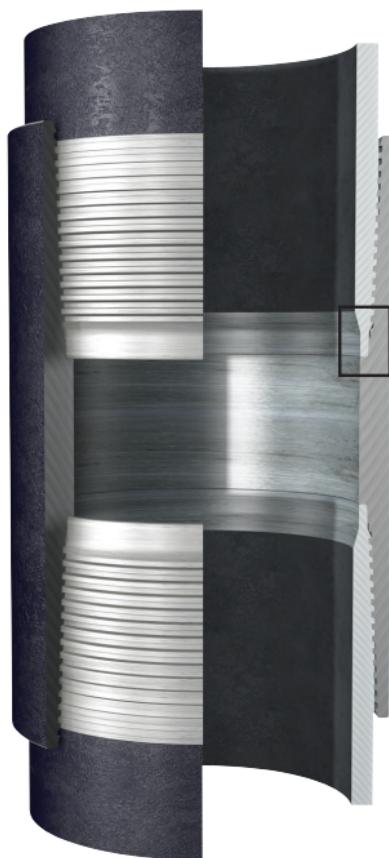
2. Pay particular attention to seal areas.

3. Ensure the pin nose has no tears, gouges or raised metal.

4. Ensure the pin and box torque shoulders have no dents, tears or raised material which could interfere with correct assembly.

MS™ / MS XT/XC™ Configuration

8 TPI 2 3/8" to 2 7/8"
6 TPI 3 1/2" to 4 1/2"
5 TPI 5" to 5 1/2"
4 TPI 6 5/8" to 13 3/8"
3 TPI 14"



Thread Compound Application



- 1.** Apply a thin coating of thread compound on the pin and box connections, fully covering all threads, seals, pin nose and box torque shoulder, the thread form should be fully visible.
- 2.** Use approximately 50% of the quantity applied to the pin when doping the box.
- 3.** For Tenaris approved thread compounds, apply the friction factor indicated in FTD29356.

Thread Lock Application

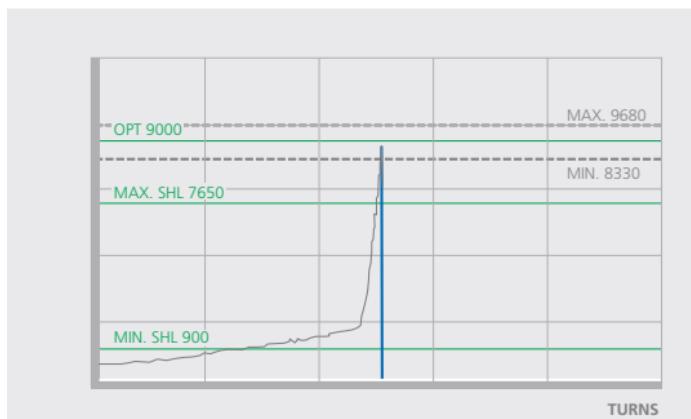


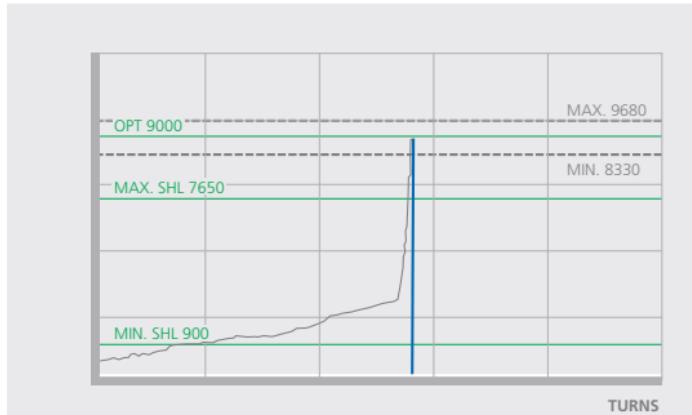
Connections must be clean and dry when applying thread lock.

1. Apply a thin coating of thread lock on 50% of the pin threads furthest from the pipe body.
2. Do not apply thread lock on the seal or torque shoulder.
3. Apply thread compound to the box seal and torque shoulder.
4. Apply the thread lock manufacturers indicated friction factor.

Torque Application

1. The use of computer make up analysis equipment is strongly recommended when assembling MS™ and MS XT/XC™ connections.
2. Shoulder points for MS™ and MS XT/XC™ connections can be found in the product data sheets.
3. Reference torque should initially be set at 5% of optimum.
4. The dump valve should be set at optimum, verify correct operation on the pipe body prior to first make up.
5. Set the computer turns to 2 initially then adjust as necessary to attain good graph depiction.
6. Refer to the TenarisHydril Running Manual make up acceptance section for further explanation.
7. The computer make up profile for MS™ and MS XT/XC™ connections should be similar to the ones below.





8. MSTM and MS XT/XCTM connections of the same OD different weight are fully interchangeable.
9. MSTM is fully interchangeable with MS XT/XCTM. There will be a step at the interface of the shoulders.
10. If MSTM and MS XT/XC are being mixed apply the MSTM torque values.
11. If different weight or grade of connections are to be mixed apply the lower of the indicated make up torques.
12. MSTM and MS XT/XCTM are not interchangeable with MS28TM or MS28 XT/XCTM connections.
13. Special clearance couplings require an adjustment to regular coupling torque, this should be available as an option when downloading the latest data sheet.
14. If the special clearance data sheet is unavailable adjust regular coupling torques as below:

- Apply minimum regular coupling make up torque as special clearance optimum make up torque.
- Apply 92.5% of minimum regular coupling make up torque as Special Clearance minimum make up torque.

- Apply 107.5% of minimum make up regular coupling torque as Special Clearance maximum make up torque.

EXAMPLE

- Regular coupling minimum torque = 10,000 ft.lb
- Special clearance maximum torque = 10,750 ft.lb
- Special clearance optimum torque = 10,000 ft.lb
- Special clearance minimum torque = 9,250 ft.lb

Running

1. The use of a stabbing guide is strongly recommended.
2. The use of a weight compensator is strongly recommended for chrome, large OD or heavy pipe.
3. To avoid cross threading stab pipe in a smooth controlled fashion ensuring the pipe is vertical when doing so, continue to support and stabilise the pipe throughout the stabbing and make up operation.
4. Upon commencement of initial rotation use low RPM (5 RPM or below) in order to ensure the pipe has not cross threaded during stabbing.
5. If cross threading is evident, immediately reverse rotate the pipe, break out, clean and inspect both connections.
6. Maximum spin in speed should not exceed 15 RPM.
7. Apply power tong at low RPM (do not exceed 5 RPM) for final make up.
8. Walk chrome pipe all the way in to hand tight, then apply tong only for final make up.

Pulling

- 1.** Automatic stabbing system or stabber is highly recommended to maintain the pipe in a vertical position.
- 2.** The use of a stabbing guide is recommended to assist in centralising the pin to prevent hang up.
- 3.** A weight compensator is strongly recommended for chrome, large OD and heavy pipe.
- 4.** Apply the back up tong jaw on the lower part, over the mill end of the coupling.
- 5.** Apply power tong in low RPM (3-5 RPM) to break the connection, ensuring the pipe is stabilised during the break and spin out process.
- 6.** Do not exceed 15 RPM during spin out.
- 7.** Walk chrome pipe all the way out after initial break out.
- 8.** Visual inspection is recommended to classify the thread condition. Any rejected connections should be clearly marked and segregated for further investigation.
- 9.** Apply clean, dry thread protectors after applying storage compound on clean, dry connections.
- 10.** Storage / thread compound should always be applied to connections post job, even rejects.

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