

# 23. TenarisHydril Blue® Heavy Wall Connection

## Scope

These guidelines apply specifically to the use of TenarisHydril Blue® Heavy Wall 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.

## References

- TenarisHydril Running Manual.
- Premium Connection Approved Thread Compounds TSH-MD-00.0002.
- Recommended guidelines for the field inspection of TenarisHydril connections, FSOG 13-005.

## Equipment, Material & Documents

1. Verify all pipe and accessories have genuine TenarisHydril manufactured connections.
2. 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](mailto:contact-tenarishydril@tenaris.com).
3. The use of a torque turn computer monitoring system is strongly recommended to be used to make up Blue® Heavy Wall connections.

## Pre-Running

1. Never move or handle pipe without the correct thread protectors securely in place.
2. Ensure connections are cleaned 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. Check condition of both pin and box Dopeless® coating ensuring no peel off or degradation has occurred.
6. Verify the compatibility of the Blue® Heavy Wall connection with any accessories such as cement heads, safety valves, cross overs, etc.
7. Connection weight interchange compatibility is indicated in the TenarisHydril premium connections catalogue.
8. 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 FSOG 13-005.
2. Pay particular attention to seal areas.
3. Ensure there is no raised metal on the external seal lead in area directly behind the last pin thread.
4. Ensure the pin and box torque shoulders have no dents, tears or raised material which could interfere with correct assembly.

## Blue® Heavy Wall Configuration

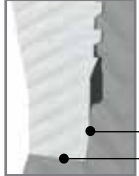
Single or twin start threads, dependent on connection weight, are not interchangeable.

Always check compatibility and visually inspect threads prior to mixing weights.

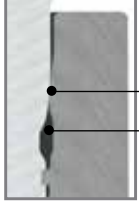




3 OR 4 TPI  
HOOKED THREAD



INTERNAL SEAL  
TORQUE SHOULDER



EXTERNAL SEAL  
LEAD IN AREA

## Blue® Heavy Wall Dopeless®



1. Minor rust or discolouring of the pin connection can be removed with the use of a clean dry rag ensuring the Dopeless® coating remains intact.
2. Minor rust or discolouring of the box connection can be removed with the use of scotchbrite and a clean dry rag ensuring the Dopeless® coating remains intact.
3. Dopeless® connections do not require the application of thread compound for make up.

If for whatever reason thread compound has to be applied to Blue® Heavy Wall Dopeless® connections, whether both pin and box are Dopeless® or when mixing a doped connection with a Dopeless®, apply thread compound as indicated below.

### NON DOPELESS® PIN INTO DOPELESS® BOX

- Apply a thin coating of thread compound on all pin threads, seals and pin nose.
- Apply a thin coat of thread compound to box internal & external seals and torque shoulder.
- Do not fill the dope pockets with thread compound.

### DOPELESS® PIN INTO STANDARD BOX

- Apply a very thin coating of thread compound on all pin threads only.
- Do not dope pin seals or box connection.

### DOPELESS® PIN INTO DOPELESS® BOX

- Apply a very thin layer of thread compound on all pin threads only.
- Do not dope pin seals or box connection.

|               | DOPELESS® PIN         | STANDARD PIN                                       |
|---------------|-----------------------|--|
| Standard Box  | Dope Pin Threads Only | See page 9   |
| Dopeless® Box | Dope Pin Threads Only | Dope Pin Threads, Seal & Shoulder. Dope Box Seals. |

If applying thread compound to Dopeless® connections use doped variant torque values.

## Blue® Heavy Wall Dopeless® Thread Lock

1. Ideally when running a Dopeless® string the connections to be thread locked should be the non Dopeless® variant with the connections cleaned of thread compound and completely dried, then thread lock and dope applied as per page 10.
2. When thread locking Dopeless® connections remove the Dopeless® coating from the threads of the pin connection where the thread lock is to be applied.
3. Leave the Dopeless® coating on the pin seals, torque shoulder and threads where no thread lock is to be applied.
4. Dopeless® boxes should be washed with hot water then dried prior to thread locking. Alternatively use a wire brush or rotary brass wheel brush to clean the surface.
5. Thread lock should be applied to 50% of the pin threads immediately behind the pin nose seal area, as per the diagram in page 10.
6. Apply the thread lock manufacturers indicated friction factor.
7. The application of thread dope is not required.



## Thread Compound Application

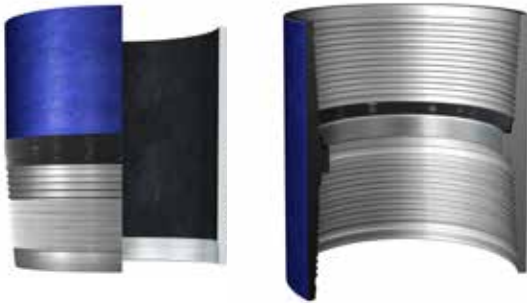
If two non Dopeless® connections are to be assembled apply thread compound as indicated below.



1. Apply a thin coating of thread compound on the pin connection, fully covering all threads, seals, pin nose and torque shoulder, the thread form should be fully visible.
2. Apply a thin coating of thread compound on the box internal seal and torque shoulder, do not fill the dope pocket.
3. Apply a thin coating of thread compound on the box external seal and lead in area, do not pack the dope pocket.
4. For Tenaris approved thread compounds, apply the friction factor indicated in TSH-MD-00.0002 For thread compounds other than those listed, apply the thread compound manufacturers indicated friction factor.

## Thread Lock Application

For non Dopeless® connections apply thread lock as indicated below.

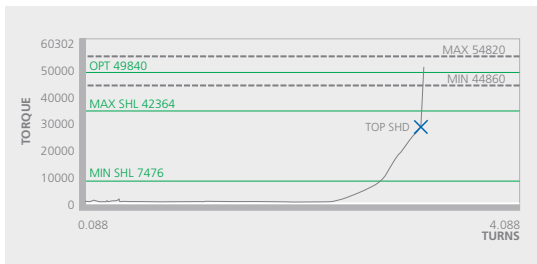
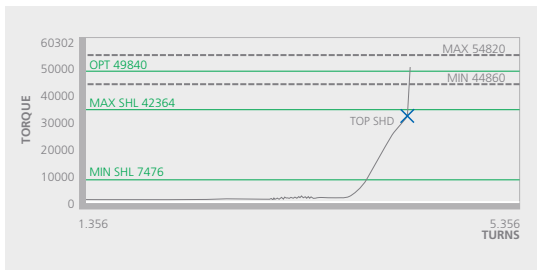


Connections must be clean and dry when applying thread lock.

1. Apply a thin coating of thread lock on 50% of the pin threads furthest from the pipe body.
2. Apply thread compound on the pin external seal and lead in area after the last thread.
3. Do not apply thread lock on the internal seal or torque shoulder.
4. Apply thread compound to the box internal seal and torque shoulder, do not fill the dope pocket.
5. Apply the thread lock manufacturers indicated friction factor.

## Torque Application

1. The use of computer make up analysis equipment is strongly recommended when assembling Blue® Heavy Wall connections.
2. Computer equipment should have the capability of displaying torque turn graph profiles.
3. The use of torque time prevents accurate graph interpretation of connection assembly.
4. Check calibration certificates of the torque gauge and computer equipment.
5. Shoulder points for Blue® Heavy Wall connections.
  - Minimum 15% of optimum.
  - Maximum 85% of optimum.
6. Reference torque should initially be set at 5% of optimum torque.
7. The dump valve should be set at optimum torque, verify correct operation on the pipe body prior to first make up.
8. Set the computer turns to 2 initially then adjust as necessary to attain good graph depiction.
9. Refer to the TenarisHydril Running Manual, make up acceptance section for further explanation.
10. The computer graph make up profile for Blue® Heavy Wall connections should be similar to the ones below.



**11.** Blue® Heavy Wall connections have limited same size/weight interchange capability, if mixing weight/grade ensure compatibility of design and apply the lower torque values of the two connections.

**12.** Blue® Heavy Wall connections of the same size may have one or two thread starts depending on wall thickness; close inspection of dissimilar weight connections is essential, the different thread start types cannot be mixed.

**13.** If different weight or grade of connections are to be mixed, verify compatibility and apply the lower of the indicated make up torques.

**14.** When assembling Dopeless® connections the torques applied must be taken from the Dopeless® variant product data sheet.

15. When mixing standard doped and Dopeless® connections apply doped variant torque values.
16. When assembling Dopeless® connections with thread lock, apply the non Dopeless® torque values, taken from the standard product data sheet.

## 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 and 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. Twin thread start connections can have as little as 2 ½ turns from stabbing to make up.
5. **Twin Start Threads:** Upon commencement of rotation use low gear and rotate at 5 RPM or below to final make up torque.
6. **Single Start Threads:** Commence rotation slowly to ensure no cross threading then spin in at 10 RPM or lower, final make up should be made below 5 RPM.
7. If cross threading is evident, immediately reverse rotate the pipe, completely disassemble, clean and inspect both connections.
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 below the centre of the coupling.
5. Do not grip the coupling over the external seal area.
6. Apply power tong in low RPM (3-5 RPM) to break the connection, ensuring the pipe is stabilized during the break and spin out process.
7. Do not exceed 10 RPM during spin out.
8. As soon as the connection 'drops' during break out stop rotation.
9. Walk Chrome pipe all the way out by hand after initial break.
10. Visual inspection is recommended to classify the thread condition, any rejected connections should be clearly marked and segregated for further investigation.
11. Apply clean, dry thread protectors on clean, dry connections.
12. For any non Dopeless® connections storage / thread compound should always be applied to connections post job, even rejects.

- 13. Do not apply storage compound to Dopeless® connections.
- 14. For long term storage of Dopeless® connections, refurbishment by qualified personnel is recommended.
- 13. Ensure Dopeless® protectors with seal rings correctly in place are installed.

