

# TenarisHydril Wedge 623® Connection

## Scope

These guidelines apply specifically to the use of TenarisHydril Wedge 623® 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. 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).

## Pre-Running

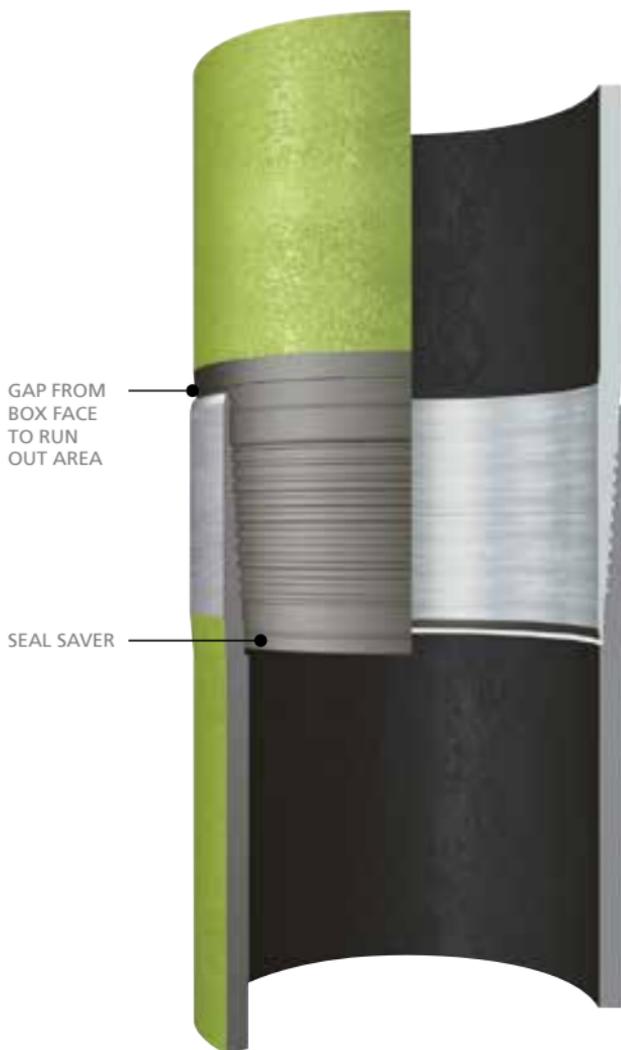
1. Never move or handle pipe without the correct thread protectors securely in place.
2. Ensure connections are clean and free of all debris and / or contaminants, cleaning methods employed should conform to the recommendations contained within the TenarisHydril Running Manual.
3. Visually inspect thread and seal areas prior to running, ensuring no damage is evident.
4. Verify all pipe and accessories have genuine TenarisHydril manufactured connections.
5. Verify the compatibility of the Wedge 623® connection with any accessories such as cement heads, safety valves, cross-overs, etc.
6. Check condition of both pin and box Dopeless® coating ensuring no peel off or degradation has occurred.
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.
9. Check availability, compatibility and condition of handling plugs, minimum of 3 to ensure efficiency of process.
10. Ensure handling plugs are genuine TenarisHydril connections and are marked as Wedge 623®.

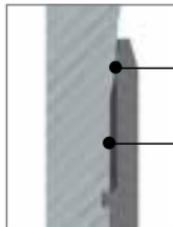
11. Wedge 523® handling plugs cannot be used.
12. Note part number and maximum load rating stamped on flange.
13. Never exceed maximum load rating.
14. Ensure handling plug OD / weight is compatible with the pipe connections, Wedge 623® has limited same OD / weight interchange capability.
15. Ensure the single joint elevators to be used with the handling plugs have adequate clearance to move over the expanded box connection and fit securely against the plug flange.
16. Refer to the TenarisHydril running manual for the care and use of handling / lift plugs.

## Inspection

1. Inspection criteria for all Wedge Series 600™ connections is as outlined in the Field Service Operative Guideline FSOG 13-005.
2. Pay particular attention to seal areas.
3. Ensure the pin seal saver has no deformation or dents which cause material to protrude.
4. Ensure the cylindrical area between the last thread and the external seal of the pin has no tearing or raised areas which may contact the corresponding box external seal during make up.
5. Check box connections for meshes or ovality caused by transportation, handling or storage.

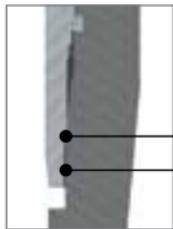
## Wedge 623® Configuration





EXTERNAL SEAL

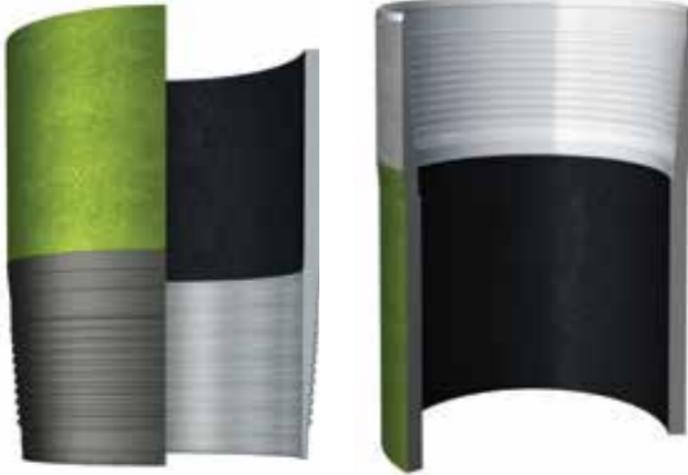
CYLINDRICAL AREA



INTERNAL SEAL

SEAL SAVER

## Wedge 623® 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 a non abrasive plastic scouring pad and a clean, dry rag ensuring the Dopeless® coating remains intact.
3. Dopeless® connections do not require the application of thread compound for assembly.

## Thread Compound Application Wedge 623<sup>®</sup> Dopeless<sup>®</sup>

If for whatever reason dope has to be applied to Wedge 623<sup>®</sup> Dopeless<sup>®</sup> connections, whether both pin and box are Dopeless<sup>®</sup> or when mixing a doped connection with a Dopeless<sup>®</sup> one apply thread compound as indicated below.

### NON DOPELESS<sup>®</sup> PIN INTO DOPELESS<sup>®</sup> BOX

- Apply a thin coating of thread compound on all pin threads, seals and pin nose.
- Ensure the area of the pin end from the last thread to the external seal area is completely and evenly covered with thread compound.
- Apply a thin coat of thread compound to box internal and external seal area.

### DOPELESS<sup>®</sup> 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.

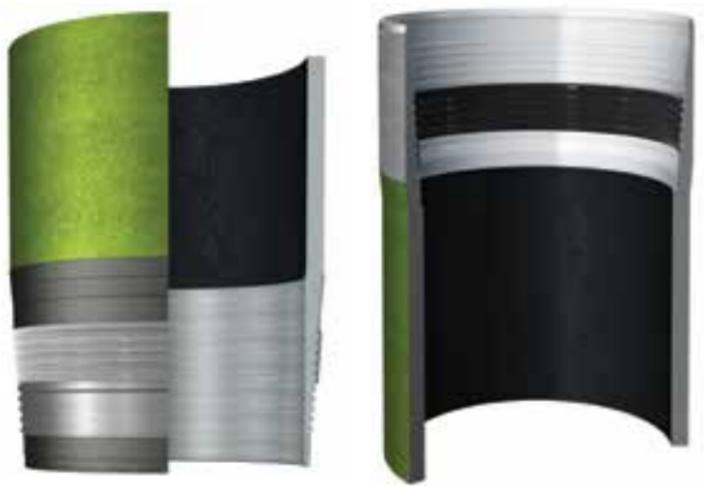
### DOPELESS<sup>®</sup> PIN INTO DOPELESS<sup>®</sup> BOX

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

	DOPELESS <sup>®</sup> PIN	NON DOPELESS <sup>®</sup> PIN
Non Dopeless <sup>®</sup> Box	Dope Pin Threads Only	Dope Threads and Seals of Pin on Carbon. Dope threads and Seals of Pin and Box on Chrome.
Dopeless <sup>®</sup> Box	Dope Pin Threads Only	Dope Pin Threads & Seals. Dope Box Seals.

## Thread Lock Application Non Dopeless® Connections

1. Ideally when running a Dopeless® string the connections to be thread locked should be non Dopeless® with the connections cleaned of thread compound and completely dried, then thread lock and dope applied as below:



Connections must be clean and dry when applying thread lock.

2. Thread lock should be applied to the threads furthest from the pin nose, approximately 50% of the threads should have thread lock applied.

3. Running compound should then be applied to the threads at the back of the box connection and internal seal.

4. Thread compound should also be applied to the pin external seal and area from last thread.

## Wedge 623® Dopeless® Thread Lock

1. When thread locking Dopeless® connections remove the Dopeless® coating from the threads on the pin connection where the thread lock is to be applied prior to the application of thread lock.
2. Leave the Dopeless® coating on the pin seals and threads where no thread lock is to be applied.
3. Dopeless® boxes should be washed with hot water then dried prior to thread locking.
4. Thread lock should be applied to the threads furthest from the pin nose, approximately 50% of the threads should have thread lock applied as per diagram on page 8.
5. Do not apply thread lock to seal areas.
6. The application of thread compound is not required.

## Torque Application

1. Set tong dump valve at optimum torque then test on pipe body.
2. If dope is to be applied to Dopeless®, 'double bump' the first connection make up:
  - Apply Dopeless® torques as per appropriate data sheet.
  - Once optimum torque has been attained relax the tong and re-apply optimum torque.
  - If movement over ½" is witnessed re-apply optimum torque +20%.

- Repeat process, checking to ensure no other factors are absorbing the applied torque.
- Often the issue is caused by excessive application of thread compound.
- Continue making up further joints applying higher torque if required.
- For connections  $\geq 10 \frac{3}{4}$ " double bump every make up when dope is applied.
- Refer to the TenarisHydril Running Manual torque application section.

3. Do not apply the thread compound manufacturers friction correction factor.

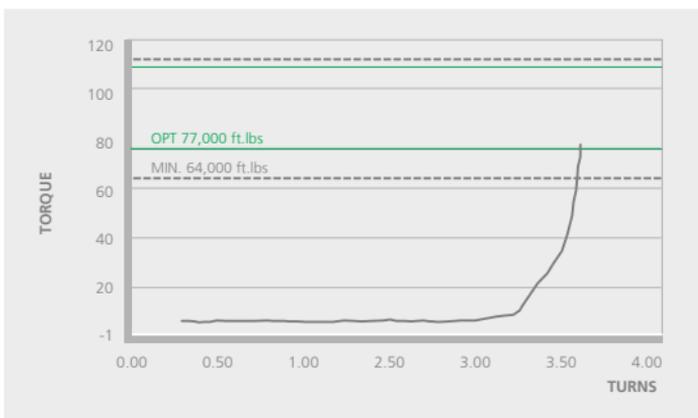
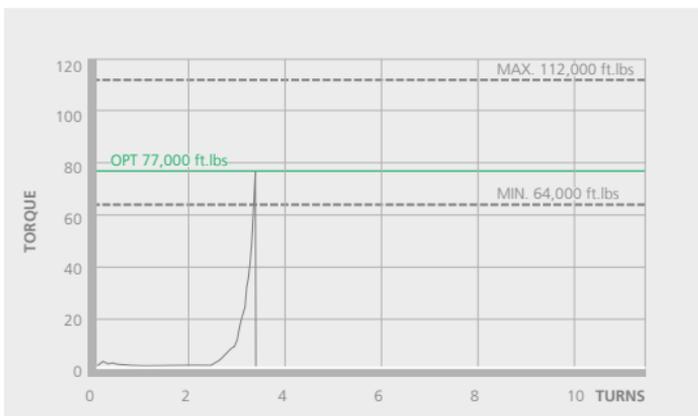
4. Do not apply thread lock manufacturers friction factor, apply optimum torque + 20% then double bump the connection.

5. Computer make up equipment is not mandatory for Wedge 623® connections in carbon steel however it is recommended.

6. Computer make up equipment is highly recommended for Wedge 623® connections in chrome material.

7. Graph analysis for Wedge 623® is similar to that of Wedge 625® and Wedge Series 500™, refer to the TenarisHydril Running Manual make up acceptance section for further explanation.

8. If computer equipment is used to monitor connection make up, the graph profile should be similar to the ones below:



9. Wedge 623<sup>®</sup> connection has limited same size / weight interchange capability, if mixing weight / grade ensure compatibility of design and apply the higher torque values of the two connections.

10. Wedge 623<sup>®</sup> is not compatible with Wedge 523<sup>®</sup>.

## Running

1. The use of a stabbing guide is strongly recommended.
2. The use of slip type elevators are recommended.
3. The use of a safety clamp is strongly recommended when running Wedge 623® connections.
4. The use of a weight compensator is strongly recommended for chrome, large OD and heavy weight pipe.
5. Prior to stabbing ensure the rubber anti corrosion protection rings have been removed with the protectors and are not on the connection.
6. 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.
7. For chrome material pipe spin in by hand with the use of a strap wrench.
8. Upon commencement of initial rotation use low RPM (5 RPM or below) in order to ensure the pipe has not cross threaded during stabbing. If cross threading is evident, immediately reverse rotate the pipe slowly.
9. Apply power tong at low RPM (do not exceed 5 RPM) for final make up.
10. Do not exceed 15 RPM during spin in.
11. Ensure back up tong is located below the box expanded area to prevent distortion of the connection.
12. Upon attainment of optimum torque there should be a slight gap between the box face and the start of the machined run out area.

## 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. Apply the back up tong jaw well below the expanded area of the box.
4. Apply power tong in low RPM (3-5 RPM) to break out the connection, ensuring the pipe is stabilized during the break out process.
5. Once the connection is broken release back up jaws and spin out below 15 RPM.
6. For Chrome material pipe, once the connection is broken spin out by hand with the use of a strap wrench.
7. It is recommended the stabbing guide is used when lifting the pin from the box to prevent hang up of the threads.
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.
10. Ensure clean, dry, Dopeless® protectors with seal rings correctly in place are installed.
11. For long term storage of Dopeless® connections, refurbishment by qualified personnel is recommended.