

# TenarisHydril Blue® Connection

## Scope

These guidelines apply specifically to the use of TenarisHydril Blue® connections, all variants including Dopeless® connections.

This document is part of the TenarisHydril Running Manual, and provides an overview of best practices for these specific products. It should be used in conjunction with the rest of the sections within the TenarisHydril Running Manual.

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 need to be clearly explained and agreed with the client representative prior to implementation and fully documented in the running report.

## References

- GDL23349 - Pre-Running Preparation
- GDL23353 - Blue® Series and Legacy Series Make up Acceptance
- FTD29356 - Premium Connections Approved Thread Compounds
- GDL31457 - Recommended Guidelines for the Field Inspection of TenarisHydril Connections

## 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. Identify the product to be run including the version of Dopeless® Technology if applicable and all accessory connections.
4. 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.
5. The use of a torque turn computer monitoring equipment is strongly recommended when assembling any TenarisHydril Blue connection whether doped or Dopeless® variants.

## 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 TenarisHydril Running Manual (GDL23349 - "Pre Running Preparation").
3. If Dopeless® pipes have storage compound, it should be removed with dry rags prior to run. However, minor residual storage compound remaining is acceptable.
4. Verify all pipe and accessories have genuine TenarisHydril manufactured connections.

5. Visually inspect thread and seal areas prior to running, ensuring no damage is evident.
6. On Dopeless® connections check condition of both pin and box coating ensuring no peel off or degradation has occurred.
7. Verify the compatibility with accessories such as cement heads, safety valves, cross overs, etc.
8. Connections in doped and Dopeless® Technology variants are fully compatible for same OD/weight.
9. Connection weight interchange compatibility is indicated in product Data Sheet available from the Tenaris website.
10. Verify material grade of all accessories ensuring compatibility with the main string.

## Inspection

1. Inspection criteria for all TenarisHydril connections is as outlined 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.

## Blue® Configuration

The diagram below is applicable to doped and Dopeless® variants.

5 TPI  $\leq$  5 ½"

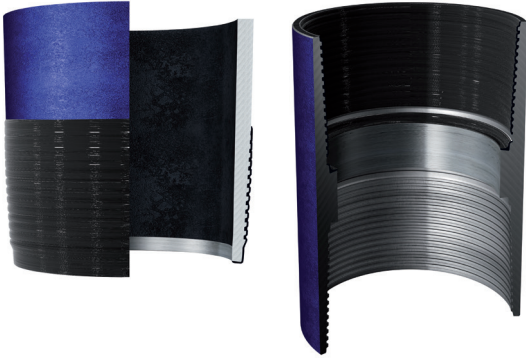
4 TPI  $>$  5 ½"



DOPE POCKET

SEAL  
TORQUE SHOULDER

## Thread Compound Application, doped variant

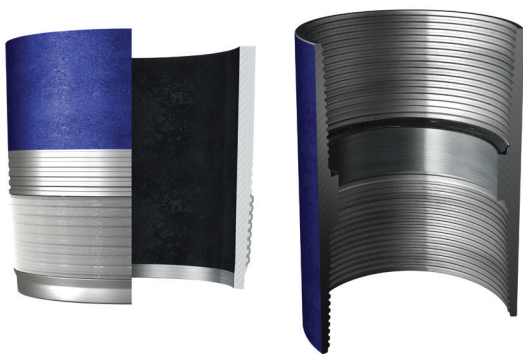


1. Apply a thin coating of thread compound on the pin and box connections, fully covering all threads, seals, pin nose and torque shoulders, the thread form should be fully visible.
2. The amount of dope applied to the box should be approximately 50% of the amount applied to the pin.
3. Do not fill the dope pocket.
4. Use Tenaris approved thread compounds and apply the friction factor indicated in FTD29356.

## Thread Lock Application, doped variant

Ensure connections are 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 pin seal or torque shoulder.



3. Apply thread compound to the box seal and torque shoulder.
4. Do not fill the dope pocket.
5. Apply the thread lock manufacturers indicated friction factor.

## Thread Compound Application Blue<sup>®</sup> Dopeless<sup>®</sup> Connections<sup>®</sup>

1. Dopeless<sup>®</sup> connections do not require the application of thread compound for make up.
2. If for whatever reason thread compound has to be applied to Blue<sup>®</sup> Dopeless<sup>®</sup> connections, whether both pin and box are Dopeless<sup>®</sup> or when mixing a doped connection with Dopeless<sup>®</sup> proceed as indicated below.
  - Apply a very thin coating of thread compound on all pin threads, seal and pin nose.
  - Apply a thin layer of thread compound on the box seal.

## Blue<sup>®</sup> Dopeless<sup>®</sup> Connections Thread Lock

1. Ideally the connections to be thread locked should be the doped variant with the connections cleaned of thread compound and completely dried, then thread lock and dope applied as per page 6.
2. When thread locking Dopeless<sup>®</sup> connections remove the coating from the threads on the pin connection where the thread lock is to be applied.
3. Use a hand or rotary brass wire wheel to remove the coating from the threads, ensuring no contact is made with the seal.
4. Leave the coating on the pin seal, torque shoulder and threads where no thread lock is to be applied.
5. Dopeless<sup>®</sup> boxes should be washed with hot water then dried prior to thread locking.

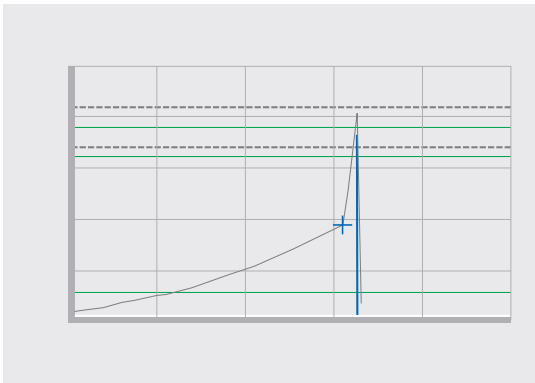
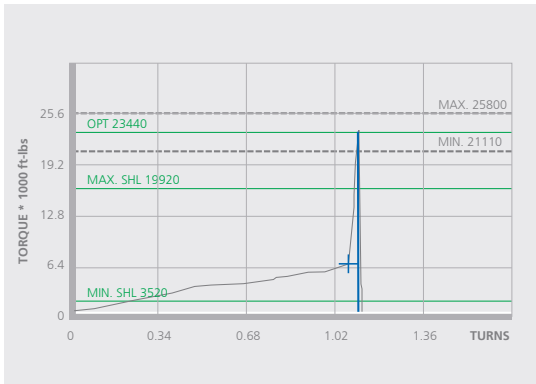
6. Apply a thin coating of thread lock on 50% of the pin threads furthest from the pipe body, as per the diagram on page 6. The application of thread compound is not required.

7. When assembling Dopeless® Technology connections with thread lock utilize the torque obtained from the tool available at [https://dcp.tenaris.com/Mixed\\_Assemblies](https://dcp.tenaris.com/Mixed_Assemblies)

## Torque Application

1. The use of computer make up analysis equipment is strongly recommended when assembling Blue® connections, doped and Dopeless® variants.
2. Shoulder points for the connections can be found in the appropriate product data sheet.
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. The computer make up profile for TenarisHydril Blue® connections, doped and Dopeless® variants, should be similar to the ones below.





7. For sizes  $\leq 5 \frac{1}{2}$ " the maximum acceptable delta turn indicated cannot exceed 0.12
8. For sizes  $> 5 \frac{1}{2}$ " the maximum acceptable delta turn indicated cannot exceed 0.1
9. Refer to document GDL23353 - "Blue® Series and Legacy Series Make up Acceptance" for further detail on make-up acceptance.
10. Torque values of mixed assemblies can be obtained from the tool available at [https://dcp.tenaris.com/Mixed\\_Assemblies](https://dcp.tenaris.com/Mixed_Assemblies).

## Running

1. The use of a stabbing guide is strongly recommended.
2. The use of a weight compensator is strongly recommended for chrome, pipe with an OD  $\geq 14"$  and stands of 3 pipe  $\geq 7"$ .
3. To avoid cross threading, stab pipe in a smooth controlled fashion ensuring the pipe is vertical when doing so, continue to support and stabilize 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, completely disassemble, clean and inspect both connections.
6. Maximum assembly speeds are indicated in the table below. These are applicable for running in singles with a tong or CRT and assuming ideal conditions.
7. Conditions may dictate lower assembly speeds than the maximums indicated. High winds or excessive pipe movement among other variables will necessitate a lower RPM to be used.

TSH BLUE		OD	SPIN IN RPM	FINAL M/U RPM
Carbon Steel	Doped variant	2 3/8" - 4"	15	5
		4 1/2" - 7 5/8"	30	5
		Above 7 5/8"	15	5
	Dopeless® and Dopeless® 3.0	3 1/2" - 4"	15	5
		Above 4"	30	5

8. Walk chrome pipe all the way in to hand-tight position, then apply tong only for final make up.

## Pulling

1. Automatic stabbing system or stabber is recommended to maintain the pipe in a vertical position.
2. The use of a stabbing guide is recommended to assist in centralizing the pin to prevent hang up.
3. The use of a weight compensator is strongly recommended for chrome, pipe with an OD  $\geq 14$ " and stands of 3 pipe  $\geq 7$ ".
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 by hand after initial break.
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.
11. Do not apply storage compound to Dopeless<sup>®</sup> connections.

12. For long term storage of Dopeless® connections, refurbishment by qualified personnel is recommended.
13. Ensure clean, dry, Dopeless® protectors with seal rings correctly in place are installed on Dopeless® connections.
14. If refurbishment cannot be done prior to storage, storage compound may be applied to Dopeless® connections. In this case, remove rubber rings from the Dopeless® thread protectors prior to installation as they are not compatible with storage compound.

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