

Running, Pulling and Racking Pipe in Stands

In order to ensure performance continuity of the Tenaris product and connections being racked, run and pulled in stands of two or three pipes, the following recommendations are applicable to all TenarisHydril premium connections.

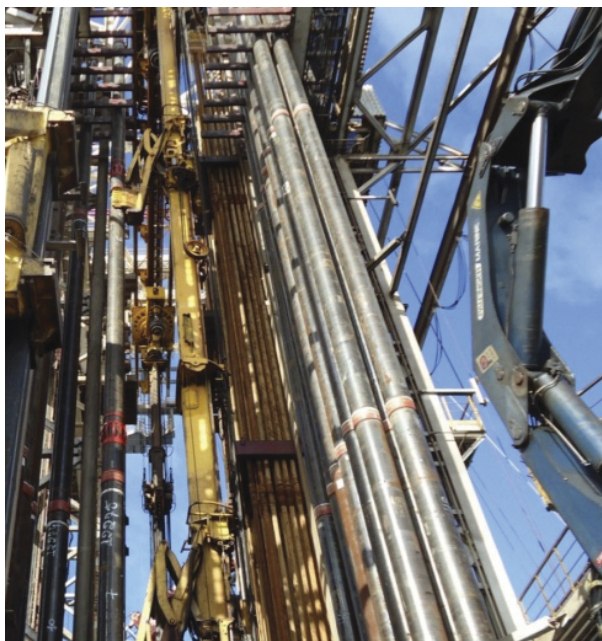
Flush, semi-flush and Blue® Riser connections, by their very design, are more susceptible to damage from impact and pressure acting on the thinner wall of the pin nose when racked in stands. Damage can be caused by incorrect or poorly fitted protectors, uneven / hard stand back area, rough handling resulting in high impact when setting stands down on stand back area, side loading created by non-vertical racking and cyclical loading on the pin nose created by rig movement during adverse weather. For these reasons there is a higher risk of damage being inflicted on thin-walled flush or semi-flush connections, this risk increases relative to the OD of the pipe but can be minimized by diligently applying these guidelines. If any doubt exists on racking pipe in the derrick, please contact Tenaris for further analysis.

When running or pulling stands, a weight compensator is recommended to assist in maneuvering and stabbing in a smooth, controlled, safe manner.

Stand Building and Racking Back

1. Once delivered to the rig the pipe should be visually inspected for any obvious handling damage to pipe body and protectors.
2. Drifting of the pipe if completed on location should be carried out from box to pin end.
3. Connections should be cleaned, dried and inspected. Then have clean, dry thread protectors re-installed.
4. All protectors should be left securely in place until the pipe is at the rig floor just prior to running.
5. When protectors are removed, they should be stored in such a manner as to prevent debris or fluid contamination.
6. When removing protectors from Dopeless® connections ensure the rubber seal rings have not remained attached to the pin or box connections.
7. When transporting the pipe to the V-Door protectors should remain in place to prevent damage being inflicted on the connections.
8. While building stands the recommended running and make up practices for the specific connection as indicated in the TenarisHydril Running Manual should be implemented.
9. Except for Dopeless® connections ensure all threads and seal areas are adequately covered with thread compound as per TenarisHydril Running Manual recommendations for the specific connection.

10. Open-ended pin protectors should be installed on the pin end to allow the egress of any fluid from the pipe ID.
11. Dopeless® connections should always have the correct protectors installed, open ended to allow the egress of fluid. Ensure the rubber seal rings are correctly in place.
12. Thread protectors can shatter or split with the extra weight of a stand bearing down upon them. For stands of three or heavy pipe use either open end composite thread protectors or stand back protectors designed for this type of operation.
13. When racking back, the stands should be secured as vertically as possible to prevent sag or excessive pipe movement due to rig heave / pitch / roll / strong wind.



STANDS RACKED VERTICALLY PREVENTING SAG / BENDING.

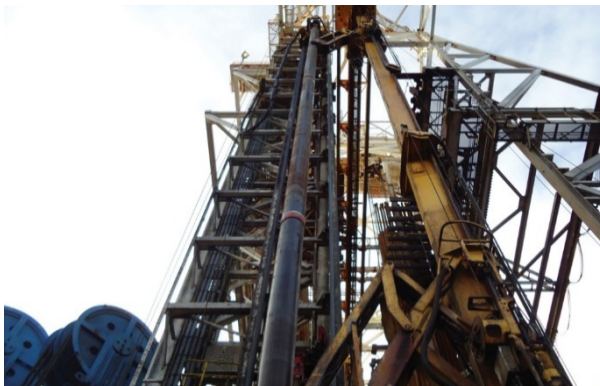
14. If the pipe stands are seen to be suffering excessive movement due to heave / pitch / roll / strong wind, then a support band should be secured round the middle of the stands between the rig floor and the derrick racking fingers. This band should be of rope or other such soft material, under no circumstances should wire slings, hawsers or winch lines be used around the pipe.

15. When racking back, the stands should be lowered onto a wooden stand back area slowly to prevent the protectors fracturing or crossing. A wooden stand back area is recommended to prevent pin protector shatter.

Running in Stands

1. A weight compensator is strongly recommended when running stands of 3 pipe $\geq 7"$.
2. Once the stand is picked up and the pin protector removed, the connections should be wiped clean of excess fluid, then inspected for damage or corrosion.
3. Any connection damage witnessed should be repaired as per Tenaris field repair guidelines by a qualified Tenaris representative.
4. If a connection cannot be repaired the joint/stand should be laid out or affected joint replaced.
5. All damaged connections should be cleaned, dried and have storage compound applied prior to clean dry protectors being securely installed.
6. The rejected connection should be identified by a 2" red paint band around the OD of the damaged end and the pipe segregated to ensure it is not picked up again.

7. While stands are being made up, ensure they do not exhibit excessive wobble or movement. Ideally stands should be stabilized when rotating. Stabilization is critical during strong winds and / or heavy rig movement.



STABILIZATION OF STAND DURING MAKE UP AND BREAK OUT.

8. Reduce rotation speed if stands exhibit excessive wobble or movement.

9. A stabbing guide should be used every time a stand or single joint is stabbed or disconnected.

10. For Wedge™ Series connections in doped variant:

- During an initial run of pre-assembled stands the torque of every intermediate connection should be checked (see point 11 below).

- If the stands are RIH multiple times, the torque of each intermediate connection should be checked every time to ensure no back off occurs while the stands are racked in the derrick.

11. Torque check process for the intermediate connections on Wedge™ Series run with thread compound:

- Apply specified optimum torque to the intermediate connection.
- If rotation is witnessed relax the tong once optimum torque has been attained, scribe a line across the pin and box connections then re-apply optimum torque.
- For Wedge™ Series 500 and Wedge™ Series 600 if rotation of more than ½" is witnessed upon the second application of optimum torque, re-apply optimum torque + 20%.
- For Wedge™ Series 400 movement up to 1" is acceptable. If rotation above 1" is witnessed, re-apply optimum torque.

12. For Dopeless® connections and connections not belonging to Wedge™ Series, it is unnecessary to check the torque of the intermediate joints when running in stands.

Pulling Stands

1. A weight compensator is strongly recommended when pulling stands of 3 pipe $\geq 7"$.
2. If possible, prior to pulling the string it would be beneficial to pump 10 barrels of fresh water into the string above the high viscosity pill in order to flush hole fluid from the pipe ID.
3. As the stand is pulled excess hole fluid should be wiped from the OD with a wiper rubber.

4. Once the initial break is achieved the connection should be rotated out at 5 RPM or slower ensuring no excessive pipe movement or sway is induced to the stand during rotation. If pipe sway or wobble does occur, cease rotation immediately.
5. Do not allow the connection to 'bounce' heavily on disassembly, count the turns from break and slow rotation at final turn.
6. Once fully rotated out the stabbing guide should be placed over the connection to assist centralization of the pin connection and prevent thread hang up.
7. The stand should be lifted out of the box slowly.
8. When disconnected, the pin and box connections should be rinsed with fresh water, dried and inspected. If no damage is witnessed, fresh thread compound should be applied to threads and seals, then clean/dry open-ended protectors should be securely installed if planned for multiple trips in a short timeframe.
9. If the string will be racked back in stands for a prolonged period (>2 weeks), connections should be cleaned, dried, inspected and long-term storage compound applied to each exposed connection during the pull, then clean/dry open-ended protectors should be securely installed. Storage compound should be cleaned off and thread compound applied prior to run the stands.
10. Follow the recommendations from the previous section "Stand Building and Racking Back", points 8 to 15.

11. For operations involving multiple trips and in order to extend the life of the string, it is recommended to rotate connection breaks on every second POOH by breaking off the top joint, cleaning and protecting the connections and laying on deck to be RIH first on next run or made up to the last stand POOH.

Breaking Down and Laying Out

1. When breaking down the stands to lay out in singles, the process as indicated for pulling stands should be applied, ensuring all connections are thoroughly cleaned of corrosive fluid and if possible dry the connections.
2. For doped variant connections, apply storage compound to both pin and box ends, then securely install clean, dry thread protectors.
3. Ensure Dopeless® connections are clean and dry, then install Dopeless® protectors with seal rings correctly in place.
4. For long-term storage of Dopeless® connections, refurbishment by qualified personnel is recommended. If refurbishment cannot be done prior to storage, storage compound may be applied to Dopeless® connections. In this case, ensure to remove rubber rings from Dopeless® thread protectors prior to installation as they are not compatible with storage compound.
5. All pipe should be cleaned thoroughly to remove all corrosive fluids and inspected as soon as possible upon return to logistics base or yard to prevent corrosion rejects.

Corrosion Barrier / Fiber Glass Lined

1. If the connections are of the Corrosion Barrier (CB) or Fiber Glass Lined (FGL) variants ensure the rings are removed and discarded each time the pipe is pulled. A new ring should be installed for every make up.
2. Inspect the CB ring groove for damage, corrosion and cleanliness.

Tenaris has produced this manual for general information only. While every effort has been made to ensure the accuracy of the information contained within this publication, Tenaris does not assume any responsibility or liability for any loss, damage, injury resulting from the use of information and data herein. Tenaris products and services are only subject to the Company's standard terms and Conditions or otherwise to the terms resulting from the respective contracts of sale, services or license, as the case may be. The information in this publication is subject to change or modification without notice. For more complete information please contact a Tenaris's representative or visit our website at www.tenaris.com. ©Tenaris 2025. All rights reserved.