

# API 8 Round Connections

## Scope

These guidelines apply specifically to the use of API 8RD (STC, LTC, EUE, NUE) connections. This document is based on API RP 5C1 which is the main document applicable for this connection.

## References

- API RP 5C1: Recommended Practice for care and use of casing and tubing, latest edition.
- API 5A3: Recommended practice on thread compounds for casing, tubing and line pipe.
- ISO 13678: Petroleum and natural gas industries  
-Evaluation and testing of thread compounds for use with casing, tubing, line pipe and drill stem elements.
- API RP 5A5: Field inspection of new casing, tubing, and plain-end drill pipe.
- API RP 5B1: Gauging and inspection of casing, tubing, and line pipe threads.
- API 5B: Specification for Threading, Gauging and Thread Inspection of Casing, Tubing and Line Pipe Threads.
- API TR5TP: Torque-Position Assembly Guidelines for API Casing and Tubing Connections.

## Equipment, Material & Documents

1. Verify API modified thread compound is available.
2. If other compound is to be used, ensure it provides adequate lubrication and sealability. Refer to API RP 5A3 or ISO 13678 for further details.

## Pre-Running

1. If drifting the connections at the rig site it is recommended to do so from box to pin end.
2. Ensure connections are cleaned and free of all debris and / or contaminants.
3. Use high pressure water with detergent to clean the connections, it is not advisable to use an oil based solvent which may leave a residue on the threads.
4. Never move or handle pipe without the correct thread protectors securely in place.
5. Visually inspect threads prior to running, ensuring no damage is evident.
6. Verify compatibility of the API 8RD pipe with any accessories such as pup joints.
7. Verify material grade of all accessories ensuring compatibility with main string.

## Inspection

1. Inspection criteria for all API connections is as outlined in API RP 5A5.
2. Ensure the complete thread area has no tears, gouges or raised metal.
3. Black crested threads within the complete thread length area must not exceed 25% of the circumference of two (2) threads.
4. Complete thread length is indicated in API RP 5B1.
5. Any gouge or tear which traverses from the coupling OD to the face is cause for rejection.

## Thread Compound Application

1. Apply a thin coating of thread compound on pin and box connections, fully covering all threads.
2. The thread form should be fully visible.



3. During make up an API 8RD connection has high interference between flanks, leading to high friction. Hence, it is very important to apply dope correctly on both ends to avoid galling. Due to connection configuration the thread crests and roots are not in contact, there is a gap to be filled by the running compound.

## Thread Lock Application



1. Connections must be clean and dry when applying thread lock.
2. Apply a thin coating of thread lock on 50% of the pin threads furthest from the pipe body.
3. Do not apply thread compound to pin or box.

## Make Up

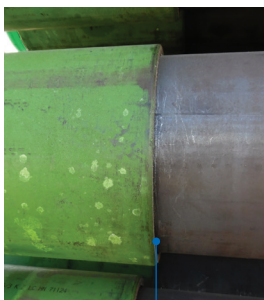
Make up process and torque values are referenced in API RP 5C1.

### MAKE UP WITH OPTIMUM TORQUE

To achieve correct make up, apply optimum torque. After reaching this value, it is necessary to verify the box face position reaches the vanish point of the pin, with a tolerance of  $\pm$  two threads from the box face.



VANISH POINT



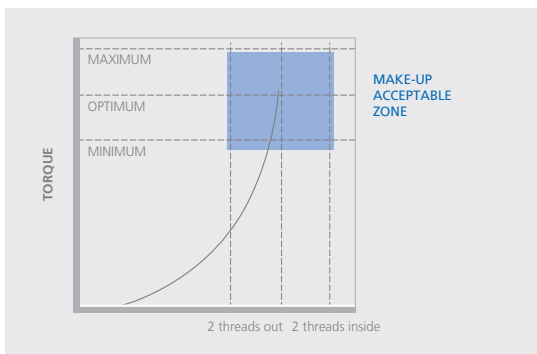
NO VISIBLE  
THREADS

### MAKE UP WITH MAXIMUM TORQUE

If after applying optimum torque there are several threads visible beyond the box face, apply 25% more torque to reach an acceptable final position. If after applying the additional torque there is more than three threads exposed, the joint must be rejected as questionable.

## MAKE UP WITH MINIMUM TORQUE

If the box face surpasses thread vanish point by more than two (2) thread turns without attaining 75% of optimum torque, the joint should be treated as questionable and rejected.



Casing sizes ( $\geq 4 \frac{1}{2}$ " ) will have a  $\frac{3}{8}$ " (0.375") equilateral triangle stamped at the pin end, this triangle is solely an aid to establish the location of the thread vanish point and is not a basis for make up acceptance / rejection.

## Pulling

1. Automatic stabbing system or stabber is highly recommended to maintain the pipe in a vertical position.
2. Apply the back up tong jaw on the lower part, over the mill end of the coupling.
3. Apply power tong in low RPM (3-5 RPM) to break out the connection, ensuring the pipe is stabilised during the break and spin out process.
4. Visual inspection is recommended to classify the thread condition. Any rejected connections should be clearly marked and segregated for further investigation.
5. Apply clean, dry thread protectors after applying storage compound on clean, dry connections.
6. Storage / thread compound should always be applied to connections post job, even rejects.

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