



FLANGE TORQUE PROCEDURE

The assembly of all piping systems shall be done in accordance with ASME B31.3, 335, 335.1, 335.2, 335.3, and 335.4

Before assembly the gasket surfaces (Flange Face) should be totally cleaned and inspected for damage as per ASME B16.5 Table II-3

The "Bill of Materials" shall be checked to ensure the proper gaskets, grade, size and length of studs and size and grade of nuts are being used.

The torque value used shall be that of the gasket manufacturer, This value will ensure the gasket does not get crushed during tightening.

Listed below is the sequence that shall be followed during the flange torque procedure. All tightening of nuts shall be done with calibrated torque wrenches.

- A. Lubricate bolt and nut threads and nut bearing face (where it contacts the flange).with Jet-Lube "Coper Kote" or equivalent lube.
- B. After flange assembly and all nuts have been run down by hand, start wrench tightening following the sequence of the numbers indicated on the following pages, (marking the number on the flange with a crayon aids in keeping track of the tightening process).
- C. During all of the following steps, keep any gap between flanges even all around the circumference, and nuts made up approximately the same amount on each end of the bolt.
 - 1. First time around just snug the nuts with a hand wrench.
 - 2. Second time around tighten the nuts firmly with the same wrench.
 - 3. Third time around apply approximately 25% recommended torque.
 - 4. Fourth time around apply approximately 50% recommended torque.
 - 5. Fifth time around, apply 100% of recommended torque.



6. If possible, re-torque after 24 hours. Most of any bolt preload loss occurs within 24.
7. The final torque load shall be done in the presence of the shop foreman and representation of the Q.C department and owners inspector.
8. After all the flanged pipe connections have been completed, the "Torque Test Record" shall be filled out and signed by the fitter, shop foreman, Q.C. Manager and the owners inspector indicating compliance with ASME B16.5 and RJV Gas Field Services "Torque Test Procedure".

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