SAE The Engineering Society For Advancing Mobility Land Sea Air and Space®

400 COMMONWEALTH DRIVE, WARRENDALE, PA 15096

AEROSPACE RECOMMENDED PRACTICE

Submitted for recognition as an American National Standard

ARP 600

Issued 10-15-60
Revised 11-5-87

REV. A

TORQUE DETERMINATION, METHOD OF, FOR TUBE OR HOSE END FITTING CONNECTIONS, FLARED, FLARELESS, OR MISCELLANEOUS SCREW THREAD STYLE

1. GENERAL:

1.1 Selection of Materials: Torques to be determined for tube or hose end connections shall be specific for a material combination; however, may vary upon consideration of variables for a given tube size. These variables include tube material, fitting material, testing medium, required proof pressure and lubricant used. Resultant torques from substitution of listed variables will vary for a given tube size. Therefore, a developed torque is satisfactory only for the specific combination used in its formulation. These values are to be used for connecting tubing and hose assemblies to each other and/or to related equipment.

2. TORQUE DETERMINATION PROCEDURE (MINIMUM):

A. Assemble thirty (30) specimens of a given tube size and material combination and lubricate to the degree and type which will not be deleterious to the end system use or application.

B. Group into six (6) categories of five (5) assemblies each, and tighten each category to estimated values in arithmetical increments of inch pounds or foot pounds. That is, X + 10"#, X + 20"#, X + 30"#, etc.

C. Pressurize with the applicable testing medium to required pressure and record sample leakage for each category. Evaluate results and select the minimum torque of which all five (5) samples of a given category showed no leakage.

D. Loosen all thirty (30) assemblies, and retighten to the above established torque. Pressurize to required proof pressure and observe for leakage. If there is no leakage, then the torque value shall be termed "MINIMUM TORQUE". In the event leakage occurs on any one sample of the thirty (30), select the next highest value from C. and repeat above sequence.