

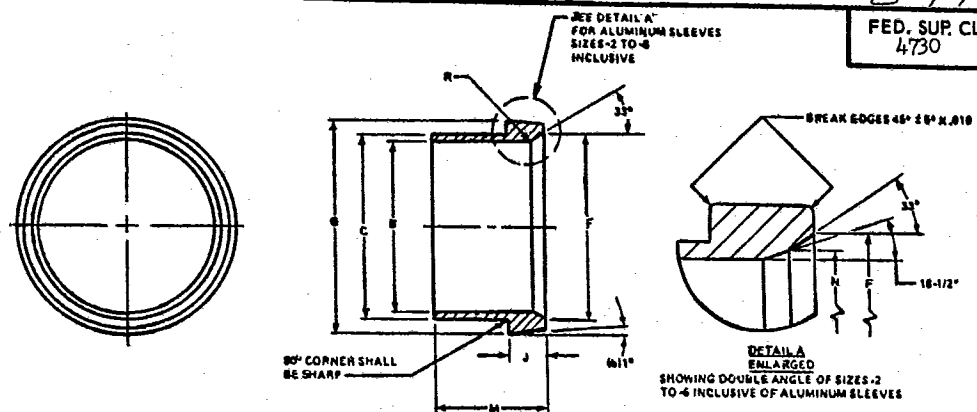
E-19-05

User activities: Army - ME, AV, CL, MI
Navy - AS
Air Force - 99

Activities: Army - ME, AV
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DIA - CS

Rev

This standard is approved for use by all Departments and Agencies of the Department of Defense. Selection for all new engineering and design applications and for repetitive use shall be made from this document when applicable.



FED. SUP. CLASS 4730

- (a) CONCENTRICITY: B, C, F, AND G SHALL BE CONCENTRIC TO EACH OTHER WITHIN .005 TOTAL INDICATOR READING FOR TUBE SIZES UP TO AND INCLUDING 3/4 INCH, AND .010 TOTAL INDICATOR READING FOR SIZES 1 INCH AND ABOVE.
- (b) OPTIONAL METHOD OF MANUFACTURE: STEEL SLEEVES MAY BE FABRICATED FROM MIL-T-5066 (C1025) SEAMLESS STEEL TUBING. THE 1° ANGLE ON THE SHOULDER OF THE SLEEVE IS NOT REQUIRED WHEN FABRICATED FROM SEAMLESS STEEL TUBING. WARPING OF SLEEVES FROM ANY CAUSE SHALL NOT BE CAUSE FOR REJECTION IF THEY FIT THE MINIMUM DIMENSIONS OF THE AN818 NUT WHEN ASSEMBLED ON A LENGTH OF TUBING.
- (c) MATERIAL: STEEL, MIL-S-6758 (4130), MIL-S-5626 (4140), QQ-S-637 (C1137, C1141); CORROSION RESISTANT STEEL (CRES), QQ-S-763, CLASS 304 OR 316; ALUMINUM ALLOY, QQ-A-225/4 (2014), QQ-A-225/6 (2024); BRASS, QQ-B-626, COMPOSITION 21 OR 22. SEE PROCUREMENT SPECIFICATION.
- FINISH: STEEL, CADMIUM PLATE (QQ-P-416, TYPE II, CLASS 2, BLACK). CRES, PASSIVATE (MIL-S-5002). ALUMINUM ALLOY, ANODIC TREATMENT (MIL-A-8625, TYPE II).
- BREAK ALL SHARP EDGES AND REMOVE ALL HANGING BURRS AND SLIVERS.
- DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: DECIMALS ±.005, ANGLES ±1/2°.
- NO CODE LETTER IN PART NUMBER FOR STEEL. ADD B AFTER DASH NUMBER FOR BRASS. ADD D AFTER DASH NUMBER FOR ALUMINUM ALLOY. ADD J AFTER DASH NUMBER FOR CRES, TYPE 304. ADD K AFTER DASH NUMBER FOR CRES, TYPE 316.

ITEMS CODED C ON PREVIOUS ISSUES OF THIS STANDARD ARE NO LONGER TO BE FURNISHED. PROCURING ACTIVITIES MUST SPECIFY APPLICABLE CRES MATERIAL CODE AS PART OF THE STANDARD PART NUMBER. EXAMPLE OF PART NUMBERS:
MS20819-5 - SLEEVE, 5/16 TUBING OD, STEEL. MS20819-5B - SLEEVE, 5/16 TUBING OD, BRASS.
MS20819-8D - SLEEVE, 1/2 TUBING OD, ALUMINUM ALLOY. MS20819-8J - SLEEVE, 1/2 TUBING OD, CRES (304).
MS20819-8K - SLEEVE, 1/2 TUBING OD, CRES (316).

FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BID. ALUMINUM ALLOY SLEEVES (CODE D) ARE INACTIVE FOR BOTH NEW DESIGN AND REPLACEMENT PARTS. FOR REPLACEMENT SLEEVES SUBSTITUTE CADMIUM PLATED STEEL (NO CODE) OR CRES (CODE J OR K).

| DASH NO. | TUBING OD | (a) B | (a) C | (a) F | (a) G | J | M | N | R ±.016 RAD | | WEIGHT MAX (LBS.) | | | |
|----------|-----------|-------------------------|-------------------------|-------|-------------------------|------|-------|------|-------------|----------|-------------------|----------|------|-------|
| | | +0.003 -0.000 DIA | +0.000 -0.003 DIA | DIA | +0.000 -0.003 DIA | | | | STEEL | AL ALLOY | STEEL | AL ALLOY | CRES | BRASS |
| 2 | 1/8 | .130 | .172 | .205 | .267 | .125 | .344 | .178 | | | | | | |
| 3 | 3/16 | .193 | .234 | .267 | .329 | .141 | .406 | .240 | .031 | | | | | |
| 4 | 1/4 | .255 | .297 | .315 | .383 | | | .288 | | | | | | |
| 5 | 5/16 | .318 | .366 | .375 | .445 | .156 | .438 | .348 | | | | | | |
| 6 | 3/8 | .380 | .432 | .441 | .502 | .172 | .500 | .414 | .047 | | | | | |
| 8 | 1/2 | .505 | .562 | .589 | .682 | .219 | .562 | | | | | | | |
| 10 | 5/8 | .631 | .690 | .705 | .797 | .234 | .656 | | .062 | .062 | | | | |
| 12 | 3/4 | .756 | .826 | .880 | .972 | .266 | .688 | | | | | | | |
| 16 | 1 | 1.006 | 1.081 | 1.130 | 1.222 | .281 | .781 | | .078 | .078 | | | | |
| 20 | 1-1/4 | 1.260 | 1.339 | 1.412 | 1.534 | .312 | .906 | | | | | | | |
| 24 | 1-1/2 | 1.510 | 1.609 | 1.630 | 1.784 | .344 | | | .094 | .094 | | | | |
| 28 | 1-3/4 | 1.762 | 1.882 | 1.945 | 2.159 | .375 | 1.125 | | | | | | | |
| 32 | 2 | 2.014 | 2.159 | 2.195 | 2.409 | .406 | 1.188 | | .109 | .109 | | | | |
| 40 | 2-1/2 | 2.516 | 2.659 | 2.695 | 2.911 | .469 | 1.312 | | | | | | | |
| 48 | 3 | 3.016 | 3.172 | 3.195 | 3.411 | .531 | 1.375 | | | | | | | |

ⓐ REDRAWN ⓑ denotes changes

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|---|---------------------------|--------------------------------------|-------------------|
| P.A. Air Force-99 | International Interest | TITLE SLEEVE, FLARED TUBE FITTING | MILITARY STANDARD |
| Other Cust Navy - AS | | | MS20819 |
| Procurement Specification MIL-F-5509 | SUPERSEDES: AN819 | | PAGE 1 OF 1 |

DD FORM 1 MAY 73 672 (Coordinated) PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

4730-0990

REVISED 21 MAR 79 APPROVED 26 AUG 57