



DEPARTMENT OF THE NAVY

PUGET SOUND NAVAL SHIPYARD  
1400 FARRAGUT AVENUE  
BREMERTON, WASHINGTON 98314-5001

IN REPLY REFER TO  
9505  
Ser 260LCM/026  
04 JUN 2001

From: Commander, Puget Sound Naval Shipyard

Subj: **APPROVAL OF SWAGELOK 1/4" THROUGH 1" OD, 3750 PSI CRES  
MECHANICALLY ATTACHED FITTINGS (MAFs) SURFACE SHIPS ONLY**

Ref: (a) Swagelok Company Test Report ASTM F 1387-93 Swagelok Tube Fitting  
Qualification Test Summary and Report of 20 Apr 00  
(b) ASTM F1387-93, Standard Specification for the Performance of Mechanically  
Attached Fittings  
(c) NAVSHIPYD Norfolk Uniform Industrial Process Instruction (UIPI) 0505-452A  
Fittings, Elastic Strain Preload (ESP), Lokring, Shipboard Installation Procedure  
(d) Naval Ships' Technical Manual S9086-RK-STM-010/CH-505 Piping Systems  
(e) Swagelok Tube Fitters's Manual

1. Based on references (a) and (b), the subject MAFs are hereby approved for use on United States Navy Surface Ships subject to the requirements herein. This approval does not apply to submarines, nuclear systems or machinery spaces on nuclear surface ships, or Level I applications at this time.

2. The sole NAVSEA approved manufacturer of the subject MAFs is Swagelok Company, Solon, Ohio, telephone number (440) 248-4600. These are grip-type MAFs and are designated as Type IV, Grade B (CRES), Class 8 (3750 psi) per reference (b) and have design temperature ratings of -65 to 1000 degrees Fahrenheit. They are approved for use in systems requiring fire-hardened fittings, as defined in Change 4 to reference (c), in sizes greater than 1/2" OD only. Approval of these MAFs for use in systems requiring fire-hardened fittings in sizes 1/4" OD through 1/2" OD is pending further testing.

3. These MAFs are approved for use on 0.035" to 0.109" wall CRES tubing in sizes 1/4" OD through 1"OD per MIL-P-24691/3, MIL-T-8606, ASTM A213, ASTM A269, or equivalent.

4. Use of the subject MAFs is contingent upon Navy approval of a training program based on reference (d). Navy contractors must submit a process control procedure to the Naval contracting activity for approval prior to installation. A Uniform Industrial Process Instruction (UIPI) will be issued. Meanwhile, NAVSEA approved manufacturer's instructions, reference (e), shall be used for installation.

5. The requirements of this letter will be incorporated into reference (d).

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6. This letter is being issued by Puget Sound Naval Shipyard as the Life Cycle Manager for piping components. This Shipyard must be notified if any questions or problems arise regarding these MAFs.

7. This Shipyard's technical point of contact is Mr. Steve Roemen, Code 260.5LCM, DSN 439-0447, or Commercial (360) 476-0447, Fax (360) 476-1438.

8. The contents of this correspondence do not in any way change the terms of any understanding, solicitation or contract existing with the Government. Any change inferred will not be effective or binding upon the Government unless formalized by an appropriate contractual document executed by the cognizant contractual administrative contracting officer.



A. F. TUTTLE  
By direction

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EB (D413, G. DAVIS)

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Swagelok Company