

INCH-POUND

WW-P-460E
15 December 2009
SUPERSEDING
WW-P-460D
28 February 1994

FEDERAL SPECIFICATION

PIPE FITTINGS; BRASS OR BRONZE (THREADED), CLASSES 125 AND 250 POUND

The General Services Administration has authorized the use of this federal specification, by all Federal agencies.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers threaded pipe fittings made of brass or bronze, classes 125 and 250. Certain requirements also pertain to wrought or cast plugs, bushings, couplings, and caps.

1.2 Classification. Fittings are to be furnished in the size and pressure rating designated by the applicable detail specification sheet, as specified.

2. APPLICABLE DOCUMENTS

2.1 Government publications. The following documents, of the issues in effect on the date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein:

Detail Specification Sheet

MS14305	-	Fittings, Pipe, Brass or Bronze, Threaded (Tees, Crosses, 45-Deg. Elbows, and Couplings), Class 125
MS14306	-	Fittings, Pipe, Brass or Bronze, Threaded (Reducers, Close and Open Return Bends, and 45-Deg. Y-Branches), Class 125
MS14307	-	Elbows, Pipe, Brass or Bronze, Threaded, 45-Deg., Street, Class 125
MS14308	-	Elbows, Pipe, Brass or Bronze, Threaded, 90-Deg., Reducing, Class 125
MS14309	-	Tees, Pipe Brass or Bronze, Threaded, Reducing, Class 125
MS14310	-	Caps, Pipe, Brass or Bronze, Threaded, Class 125
MS14311	-	Fittings, Pipe, Brass or Bronze Threaded (90-Deg. Elbows, Tees, Crosses, 45-Deg. Elbows, and Couplings), Class 250
MS14312	-	Elbows, Pipe, Brass or Bronze, Threaded, 90-Deg., Reducing, Class 250
MS14314	-	Plugs, Pipe, Brass or Bronze, Threaded (Square Head and Square Socket), Classes 250 and 125
MS51845	-	Elbows, Pipe, Brass or Bronze, Threaded, 90-Deg., Straight, Class 125

(Copies of military specifications and standards required by contractors in connection with specific procurement functions are obtained from the Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094 or available online at <http://assist.daps.dla.mil/quicksearch>.)

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data that may improve this document should be sent to: Defense Supply Center, Columbus, DSCC-VAI, 3990 East Broad Street, Columbus, OH 43218-5000, or emailed to, FluidFlow@dsc.dla.mil . Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online at http://assist.daps.dla.mil .
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2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless a specific issue is identified, the issue in effect on date of invitation for bids or request for proposal shall apply.

American Society of Mechanical Engineers (ASME)

ASME B16.15 - Cast Bronze Threaded Fittings

(Copies of these documents are available online at <http://www.asme.org> or from the ASME International, Three Park Avenue, New York, NY 10016-5990.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein (except for detail specification sheets), the text of this specification takes precedence. Nothing in this specification, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Specification sheets. The individual item requirements shall be as specified herein and in accordance with the applicable specification sheets.

3.2 Requirements. Fittings shall be furnished in the size and pressure rating designated by the applicable detail specification sheets, MS14305, MS14306, MS14307, MS14308, MS14309, MS14310, MS14311, MS14312, MS14314, and MS51845, (see 1.2 and 6.2), and shall meet the applicable requirements of ASME B16.15.

3.3 First article. When specified in the contract or purchase order, a sample shall be subjected to first article inspection (see 4.2.1 and 6.2).

3.4 Pressure-temperature ratings. Pressure-temperature ratings shall be in accordance with ASME B16.15.

3.5 Hydrostatic strength. Fittings shall be capable of withstanding, without rupture or any leakage, an internal hydrostatic pressure of two times the pressure rating for a period of one minute.

3.6 Size. Size and dimensions shall be in accordance with ASME B16.15.

3.7 Material. The material shall be in accordance with ASME B16.15.

3.8 Tolerances. Tolerances shall be in accordance with ASME B16.15.

3.9 Threading. Threading shall be in accordance with ASME B16.15.

3.10 Marking. Marking shall be in accordance with ASME B16.15.

3.11 Workmanship. Workmanship shall be in accordance with ASME B16.15.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract, the contractor may use his own, or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the government. The government reserves the right to perform any of the inspections set forth in this specification where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.

4.1.1 Responsibility for compliance. All items shall meet all requirements of sections 3 and 5. The inspection set forth in this document shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in this document shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the government for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material.

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4.1.2 Component and material inspection. Components and materials shall be inspected in accordance with all the requirements specified herein and in applicable referenced documents.

4.2 Classification of inspections. The inspection requirements specified herein are as follows:

- a. First article inspection (see 4.2.1).
- b. Quality conformance inspection (see 4.2.2).

4.2.1 First article inspection. The first article inspection shall be performed on one fitting when a first article is required (see 3.2 and 6.2). This inspection shall include the examination of 4.3 and the test of 4.4. The first article may be either a first production item or a standard production item from the supplier's current inventory provided the item meets the requirements of the specification and is representative of the design, construction, and manufacturing technique applicable to the remaining items to be furnished under the contract.

4.2.2 Quality conformance inspection. The quality conformance inspection shall include the examination of 4.3, the test of 4.4, and the packaging inspection of 4.5.

4.3 Examination. Each fitting shall be examined for compliance with the requirements in section 3 of this document. This element of inspection shall encompass all visual examinations and dimensional measurements. Noncompliance with any specified requirements or presence of one or more defects preventing or lessening maximum efficiency shall constitute cause for rejection.

4.4 Test.

4.4.1 Air pressure test. The first article shall be subjected to an air-pressure test of not less than 60 pounds per square inch gage (415 kilopascal) while the fitting is under water. The fitting shall not leak air at any part of the surface.

4.4.2 Alternate pressure test. As an alternate test, the fitting shall be subjected to an internal hydrostatic pressure of two times the pressure rating for a period of one minute. Under the hydrostatic pressure test, the fitting shall not leak or sweat at any part of the surface.

4.5 Preparation for delivery inspection. The preservation, packaging, packing, and marking of the item shall be inspected to verify conformance to the requirements of section 5.

5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When packaging of materiel is to be performed by DoD or in-house contractor personnel, these personnel need to contact the responsible packaging activity to ascertain packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activities within the Military Service or Defense Agency, or within the Military Service's system commands. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. NOTES

INFORMATION FOR GUIDANCE ONLY. (This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The pipe fittings are intended for use as outlined below:

6.1.1 Class 125 fittings. Class 125 pipe fittings are generally used for saturated steam service with pressure/temperature ratings as required for class 125 fittings in ASME B16.15.

6.1.2 Class 250 fittings. Class 250 pipe fittings are normally used for saturated steam service with pressure/temperature ratings as required for Class 250 fittings in ASME B16.15.

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6.2 Acquisition requirements. Acquisition documents should specify the following:

- a. Title, number, and date of this specification.
- b. PIN required (see 1.2 and 3.1).
- c. When a first article is required for inspection and approval (see 3.2 and 4.2.1).
- d. Level of preservation and packaging, and level of packing required (see 5.1).

6.3 Data requirements. When this specification is used in an acquisition and data are required to be delivered, the data requirements will be developed as specified by an approved Data Item Description (DID) and delivered in accordance with the approved Contract Data Requirements List (DD Form 1423) incorporated into the contract. When the provisions of DoD Federal Acquisition Regulations (FAR) Supplement, Part 27, Sub-Part 227.405-70 are invoked and the DD Form 1423 is not used, the data should be delivered by the contractor in accordance with the contract requirements.

6.4 Part Identification Number (PIN). The PIN to be used for fittings applied to this specification is found in the applicable MS sheet.

6.4.1 Guidance on use of alternative parts with less hazardous or nonhazardous materials. This specification provides for a number of alternative plating materials via the PIN. Users should select the PIN with the least hazardous material that meets the form, fit and function requirements of their application.

6.5 Subject term (key word) listing.

Bushings
Caps
Couplings
Crosses
Elbows
Plugs
Reducers
Return Bends
Tees
Y-Branches

6.6 Environmentally preferable material. Environmentally preferable materials should be used to the maximum extent possible to meet the requirements of this specification. As of the dating of this document, the U.S. Environmental Protection Agency (EPA) is focusing efforts on reducing 31 priority chemicals. The list of chemicals is available on their website at <http://www.epa.gov/epawaste/hazard/wastemin/priority.htm>. Included in the EPA list of 31 priority chemicals are cadmium, lead, and mercury. Use of the materials on the list should be minimized or eliminated unless needed to meet the requirements specified herein (see Section 3).

6.7 Guidance on use of alternative parts with less hazardous or non-hazardous materials. This specification provides for a number of alternative plating materials via the PIN. Users should select the PIN with the least hazardous material that meets the form, fit, and function requirements of their application.

6.8 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

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CONCLUDING MATERIAL

MILITARY INTERESTS:

Military Coordinating Activity
Navy - YD

Custodians:
Army - CR4
Navy - YD
Air Force - 99
DLA - CC

Review activities:
Army - AR, CE, EA
Navy - CG, MC
Air Force - 71

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - FSS

Preparing activity:
DLA - CC

(Project 4730-2009-002)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <http://assist.daps.dla.mil>.