



SOUTHWEST GAS CORPORATION

ENGINEERING STAFF

MATERIAL SPECIFICATION

Section No:	MS J-1
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Issue Date:	02/26/20
Superseded Date:	02/19/15

Prepared By: Engineering Staff 

Approved By: Jerome T. Schmitz 

PRESSURE CONTROL FITTINGS

Equalization Fittings

1. SCOPE

This specification covers equalization fittings, both threaded on one end and threaded on both ends with steel or brass completion plugs and steel caps. The sizes are 1-, 1¼-, 1½- and 2-inch nominal pipe size for threaded on one or both ends and 3-inch nominal pipe size for abandon nipples threaded on one end. The maximum pressure rating of equalization fittings is 250 psig or 1440 psig.

Equalization fittings covered by this specification, when installed as a single component, may be installed without an installation pressure test.

2. APPLICABLE DOCUMENTS

- 2.1 American National Standards Institute (ANSI) B-1.20.1, "Pipe Threads, General Purpose."
- 2.2 American National Standards Institute (ANSI) B-16.11, "Forged Fittings, Socket-Welding and Threaded."
- 2.3 American Petroleum Institute (API) Specification 5-L, "Specification for Line Pipe."
- 2.4 ASTM International (ASTM) A-106, "Specification for Seamless Carbon-Steel Pipe for High-Temperature Services."
- 2.5 ASTM International (ASTM) B-16, "Specification for Free-Cutting Brass Rod, Bar and Shapes for Use in Screwed Machines."
- 2.6 ASTM International (ASTM) A-53M-10 (Oct. 2010), "Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless."
- 2.7 ASTM International (ASTM) A-105, "Specification for Rolled Steel Pipe Flanges, Forged Fittings, and Valves and Parts for High-Temperature Service."





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2. APPLICABLE DOCUMENTS (Cont'd)

- 2.8 United States Department of Transportation (DOT), Code of Federal Regulations (CFR), Title 49, Part 192, "Transportation of Natural and Other Gas by Pipeline; Minimum Safety Standards."

NOTE: Unless otherwise specified, the editions of the above document incorporated in whole or in part by 49 CFR 192 are applicable. The above documents, and parts of documents (including annexes), not incorporated by 49 CFR 192 are incorporated by this Material Specification and will be the most recent edition. If a conflict exists between the applicable documents and/or this Material Specification, the requirements of 49 CFR 192 shall govern, and if all other conflicts, the more stringent requirement shall govern

3. TERMINOLOGY

3.1 General

- 3.1.1 "Southwest Gas," "Southwest" or "SWG" wherever used in this specification and other related documents will refer exclusively to Southwest Gas Corporation.
- 3.1.2 The terms "approved," "as approved," "satisfactory," "as directed," "or equal" or other similar terms wherever used in this specification and other related documents will mean "as determined by Southwest Gas," unless specifically stated otherwise.
- 3.1.3 "Product Information Package" or "PIP" wherever used in this specification and other related documents will mean the required technical product information that a manufacture must submit to SWG to determine if the product is suitable for use by SWG, unless specifically stated otherwise.



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4. MATERIALS AND MANUFACTURING

- 4.1 Brass plugs, sizes 3/4-inch and 1-inch, shall be manufactured in accordance with ASTM B-16.
- 4.2 Equalization fittings manufactured from steel pipe will be manufactured in accordance with ASTM A-106, A-53 or API 5-L.
- 4.3 Forged steel equalization fittings and completion plugs will be manufactured in accordance with ASTM A-105.
- 4.4 Forged steel caps will be manufactured in accordance with ANSI B-16.11.
- 4.5 American brass alloy 244 plugs, size 1/2-inch, covered by this specification will be manufactured in accordance with ASTM B-16.
- 4.6 All applicable requirements of ANSI B-1.20.1, shall apply, except as required to meet the performance requirements of paragraphs 5.2 and 5.3.

5. PERFORMANCE REQUIREMENTS

- 5.1 Each equalization fitting will be able to withstand a hydrotest or a test with nitrogen to at least 1.5 times the rated maximum working pressure.
- 5.2 All thread designs will allow the operation of the appropriate control valve and/or control valve adapter.
- 5.3 All thread designs will allow for the proper operation of all components of the equalization fitting. For example, the threading on the completion plug and the internal threads on the equalization fitting will allow installation of the completion plug during the hot-tap process.



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6. DIMENSIONS AND TOLERANCES

The dimensions and tolerances must be in accordance with Appendix A of this specification.

7. INSPECTION

- 7.1 Successful review of the Product Information Package (PIP), as well as any future reference by SWG to the Seller's part number or internal code number in any future contract or purchase, will mean only that no conflict with the specification was found, and will not relieve the Seller from meeting all the requirements of this specification.
- 7.2 SWG retains the option to inspect the manufacture and testing of equalization fittings sold to SWG.
- 7.3 SWG will make appropriate inspections and tests of all materials, products or systems supplied to this specification. SWG will have the right, at their option, to reject any material which fails to conform to this specification. Any such rejection may take place at the manufacturer's facility; the supplier's warehouse or any subsequent delivery location, before or after SWG assumes possession. Notice of the rejection will be made promptly to the supplier by SWG. The defective product will be replaced or returned for credit at the manufacturer's expense.
- 7.4 Any changes in the manufacturing of previously approved materials, products or systems described in this material specification for sale to SWG, must be approved by SWG's Engineering Staff. **Failure to obtain SWG's approval may be cause for rejection and disqualification as an approved supplier.**




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8. CERTIFICATION

The manufacturer's or supplier's certification will be furnished to Southwest. This certification shall state that samples representing each lot have been manufactured, tested and inspected in accordance with this specification and that all requirements have been met. When requested or specified in the purchase order or contract, a report of test results will be provided.

For components with material yield strength grades of 42,000 psi (X42) or greater and with nominal diameters of greater than 2 inches, testing documentation demonstrating the physical characteristics of the components which include, at a minimum, diameter, yield strength, ultimate tensile strength, wall thickness, seam type and chemical composition shall be provided to Southwest in accordance with 49 CFR 192.

Upon the request of Southwest, the certification of an independent third-party indicating conformance to the specification may be considered at Southwest's expense.

9. SAFETY DATA SHEETS

In accordance with law, the Seller will supply Safety Data Sheets for all applicable items supplied under this specification to the following:

- 1) The Receiving Location
- 2) Engineering Staff
- 3) Southwest Gas Corporation
Corporate Safety
Mail Station LVA-120
P.O. Box 98510
Las Vegas, NV 89193-8510

10. PRODUCT MARKING

All equalization fittings will be marked with the following:

- Manufacturer's name or trademark
- Material designation
- Size



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11. PACKAGING AND PACKAGE MARKING

11.1 Equalization fittings will be individually wrapped and packaged in a manner to prevent damage during transportation and storage. Installation instructions will be packaged with each shipment.

11.2 The package will be marked with the following:

- Manufacturer's name or trademark
- Material designation
- Size

12. STOCK CLASSIFICATION DESCRIPTION

EQUALIZATION FITTING, ____ (SIZE) ____ MAOP, ____ (MATERIAL GRADE SPECIFICATIONS).