




SOUTHWEST GAS CORPORATION

® ENGINEERING STAFF

MATERIAL SPECIFICATION

Prepared By: Engineering Staff 

Approved By: Jerome T. Schmitz 

PIPE FITTINGS

Fittings, Forged Steel, Socket Weld

Section No:	MS B-3
Page No.:	1 of 9
Issue Date:	06/19/18
Superseded Date:	03/01/16

1. SCOPE

This specification covers 1/4-inch through 2-inch forged steel socket weld fittings with a class rating of 3000-pound. This specification covers forged steel socket weld couplings, half couplings, elbows, tees, crosses, caps and reducer inserts.

All forged steel; socket weld fittings covered by this specification do not require a pressure test.

2. APPLICABLE DOCUMENTS

- 2.1 ANSI (American National Standards Institute), B-16.11, "Forged Fittings, Socket-welding and Threaded."
- 2.2 ASTM International (American Society for Testing Material), A-105, "Standard Specifications for Carbon Steel Forgings for Piping Applications."
- 2.3 MSS (Manufacturer's Standardization Society of the Valve and Fittings Industry) SP-79, "Socket Welding Reducer Inserts."
- 2.5 Title 49, Code of Federal Regulations, Part 192, "Transportation of Natural and Other Gas by Pipeline; Minimum Safety Standards" (49 CFR 192).

NOTE: Unless otherwise specified, the editions of the documents 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. In the event a conflict exists between the applicable documents and/or this Material Specification, the requirements of 49 CFR 192 shall govern, and in the event of 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.



SOUTHWEST GAS CORPORATION

® ENGINEERING STAFF

MATERIAL SPECIFICATION

Prepared By: Engineering Staff 

Approved By: Jerome T. Schmitz 

PIPE FITTINGS

Fittings, Forged Steel, Socket Weld

Section No:	MS B-3
Page No.:	2 of 9
Issue Date:	06/19/18
Superseded Date:	03/01/16

3. TERMINOLOGY (Cont'd)

3.1.3 The term “forged steel” as defined by ASTM A-105.3.

3.1.4 “Product Information Package” or “PIP” wherever used in this specification and other related documents will mean the required technical product information that a manufacturer must submit to SWG to determine if the product is suitable for use by SWG, unless specifically stated otherwise.

4. MATERIALS AND MANUFACTURE

4.1 Socket weld fittings and reducer inserts will be manufactured from forged steel, as a minimum, in accordance with ANSI B-16.11, ASTM A-105 and MSS SP-79 and any additional requirements as defined in this specification.

4.2 All socket weld fittings and reducer inserts will be manufactured in accordance with quality assurance procedures sufficient to ensure that each fitting meets the design and quality requirements equal to the prototype fitting.

5. PERFORMANCE REQUIREMENTS

5.1 All fittings under this specification will be capable of withstanding a hydrotest equivalent of the yield strength for Schedule 80 piping of the same nominal size.

5.2 All fittings and reducer inserts will be weldable using Southwest Gas welding procedures.

6. DIMENSIONS AND TOLERANCES

6.1 All steel fittings manufactured to this specification will meet the dimension and tolerance requirements of ANSI B-16.11. Dimensions are shown in Appendix A.


6.2 All reducer inserts manufactured to this specification will meet the dimension and tolerance requirements of MSS SP-79. Dimensions are shown in Appendix B.



SOUTHWEST GAS CORPORATION

® ENGINEERING STAFF

MATERIAL SPECIFICATION

Prepared By: Engineering Staff 

Approved By: Jerome T. Schmitz 

PIPE FITTINGS

Fittings, Forged Steel, Socket Weld

Section No:	MS B-3
Page No.:	3 of 9
Issue Date:	06/19/18
Superseded Date:	03/01/16

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 any and all materials, products or systems referenced in this specification that are sold to SWG.
- 7.3 SWG will make appropriate inspections and tests of any and 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 rejection will be made promptly thereafter 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.**

8. CERTIFICATION

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


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



SOUTHWEST GAS CORPORATION

® ENGINEERING STAFF

MATERIAL SPECIFICATION

Prepared By: Engineering Staff 

Approved By: Jerome T. Schmitz 

PIPE FITTINGS

Fittings, Forged Steel, Socket Weld

Section No:	MS B-3
Page No.:	4 of 9
Issue Date:	06/19/18
Superseded Date:	03/01/16

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-511
P.O. Box 98510
Las Vegas, NV 89193-8510

10. PRODUCT MARKING

10.1 All fittings sold to Southwest will be marked with the following:

- Manufacturer's name or trademark
- Material designation (A-105)
- B-16
- Class 3000 or 3M
- Size

10.2 Where size and shape of the fitting does not permit the inclusion of all information listed in Paragraph 10.1, they may be omitted in the reverse order given.

11. PACKAGING AND PACKAGE MARKING

11.1 All fittings will be packaged in a manner to prevent damage during transportation and storage.

11.2 The packaging will be marked with the following:


- Manufacturer's name or trademark
- Size
- Socket weld _____ (elbow, tee, cross, coupling, half coupling insert or cap)



SOUTHWEST GAS CORPORATION

® ENGINEERING STAFF

MATERIAL SPECIFICATION

Prepared By: Engineering Staff 

Approved By: Jerome T. Schmitz 

PIPE FITTINGS

Fittings, Forged Steel, Socket Weld

Section No:	MS B-3
Page No.:	5 of 9
Issue Date:	06/19/18
Superseded Date:	03/01/16

12. STOCK CLASSIFICATION DESCRIPTION

ELBOW, TEE, CROSS, COUPLING, HALF-COUPLING INSERT, CAP,
(45°, 90°), FORGED STEEL, SOCKET WELD, ____-INCH, 3000 LB CLASS.