



SOUTHWEST GAS CORPORATION

® ENGINEERING STAFF

MATERIAL SPECIFICATION

Section No:	MS D-6
Page No.:	1 of 12
Issue Date:	03/01/16
Superseded Date:	02/18/15

Prepared By: Engineering Staff 

Approved By: Jerome T. Schmitz 

VALVES AND STOPS

Valve, Ball, Steel, Threaded and Socket Weld

1. SCOPE

This specification covers steel ball valves in sizes 1/4-inch to 2-inch NPS. These valves require no lubrication to obtain a positive shut-off. Ball valves covered by this specification are used in regulator stations, control lines, static lines and other specialized purposes. All ball valves 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 (INCH)."
- 2.2 Manufacturers Standardization Society (MSS) Standard Practice (SP) 25, "Standard Marking System for Valves, Fittings, Flanges and Unions."
- 2.3 United States Department of Transportation (DOT), Code of Federal Regulations, Title 49, Part 192, "Transportation of Natural and Other Gas by Pipeline; Minimum Safety Standards."

NOTE: Unless otherwise specified, the editions of the above documents incorporated by DOT 49 CFR 192 are applicable. Documents not incorporated by DOT 49 CFR 192 will be the most recent edition.

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 manufacturer 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 Threads will conform with ANSI B-1.20.1
- 4.2 The valve ball will be made with material approved by Southwest and have a protective coating to prevent galling and seizure, and to improve sealings and bearing characteristics.
- 4.3 Seals will be compatible with natural gas.
- 4.4 The ball valve will be reduced or full bore.
- 4.5 The ball valve will close in a clockwise direction. Stops will be provided to limit rotation to 90 degrees from full open to full close. A position indicator will be supplied on the stem of the valve.
- 4.6 Southwest reserves the right to require air seat testing or hydrostatic shell testing.
- 4.7 Threaded ball valves must be available with compatible locking or tamper-proof device. When locked with a padlock or barrel lock, valve operation must be prevented.
- 4.8 The sealing of the threaded ball valve stem will not be dependant on mechanical adjustment or replaceable packing.

5. PERFORMANCE REQUIREMENTS

- 5.1 Threaded ball valves will not leak while operating at the rated pressure.
- 5.2 Threaded ball valves will have no leakage when seat tested at 10 psig or 1000 psig.
- 5.3 The opening and closing of threaded ball valves must be accomplished using only the handle provided and without leakage through the stem.

6. DIMENSIONS AND TOLERANCES

- 6.1 Thread dimensions and tolerances will conform to ANSI B-1.20.1.
- 6.2 Face-to-face, end-to-end and face-to-end dimensions and tolerances are shown in Figures D-6.1 to D-6.6 in Appendix A of this specification. Reduce bore valves will have the same dimensions as full bore valves.



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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 facility; the supplier's ware house 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.**

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.

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



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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 LVO-510
P.O. Box 98510
Las Vegas, NV 89193-8510

10. PRODUCT MARKING

10.1 Each threaded ball valve will be marked on the body with the items listed below and shall be in accordance with the marking requirements of MSS SP 25. If there is not room, the items may be omitted in reverse order starting with the last item.

- Manufacturer's Name or Trademark (may be omitted anytime there is not enough space)
- Material Designation
- Rating Designation
- Valve Trim Identification
- Thread Identification
- Size

10.2 Each threaded ball valve will have an identification plate with the information listed below. If there is not room, the items will be omitted in reverse order starting with the last item.

- Manufacturer's Name or Trademark (may be omitted if space is not adequate)
- Material Designation
- Rating Designation
- Valve Trim Identification



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11. PACKAGING

Threaded ball valves will be packaged to protect the threads. Threaded ends will be free of paint.

12. STOCK CLASSIFICATION DESCRIPTION

VALVE; BALL; _____ INCH WITH THREADED OR SOCKET WELD ENDS; 2000 PSIG MINIMUM.