AN AMERICAN NATIONAL STANDARD

Large Metallic Valves for Gas Distribution (Manually Operated, NPS 2½ to 12, 125 psig Maximum)

ANSI/ASME B16.38-1985

REAFFIRMED 1994

FOR CURRENT COMMITTEE PERSONNEL
PLEASE SEE ASME MANUAL AS-11

REAFFIRMED 2005

FOR CURRENT COMMITTEE PERSONNEL
PLEASE E-MAIL CS@asme.org

SPONSORED AND PUBLISHED BY

THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS

United Engineering Center 345 East 47th Street New York, N. Y. 10017

Copyright ASME International
Provided by IHS under license with ASME
No reproduction or networking permitted without license from IHS

Not for Resale

Date of Issuance: July 15, 1986

The 1985 Edition of this Standard is being issued with an automatic addenda subscription service. The use of an addenda allows revisions made in response to public review comments or committee actions to be published on a regular yearly basis; revisions published in addenda will become effective 6 months after the Date of Issuance of the addenda. The next edition of this Standard is scheduled for publication in 1988.

ASME issues written replies to inquiries concerning interpretations of technical aspects of this Standard. The interpretations will be included with the above addenda service. Interpretations are not part of the addenda to the Standard.

This code or standard was developed under procedures accredited as meeting the criteria for American National Standards. The Consensus Committee that approved the code or standard was balanced to assure that individuals from competent and concerned interests have had an opportunity to participate. The proposed code or standard was made available for public review and comment which provides an opportunity for additional public input from industry, academia, regulatory agencies, and the public-at-large.

ASME does not "approve," "rate," or "endorse" any item, construction, proprietary device, or activity.

ASME does not take any position with respect to the validity of any patent rights asserted in connection with any items mentioned in this document, and does not undertake to insure anyone utilizing a standard against liability for infringement of any applicable Letters Patent, nor assume any such liability. Users of a code or standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, is entirely their own responsibility.

Participation by federal agency representative(s) or person(s) affiliated with industry is not to be interpreted as government or industry endorsement of this code or standard.

ASME accepts responsibility for only those interpretations issued in accordance with governing ASME procedures and policies which preclude the issuance of interpretations by individual volunteers.

No part of this document may be reproduced in any form,
in an electronic retrieval system or otherwise,
without the prior written permission of the publisher.

Copyright © 1986 by
THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS
All Rights Reserved
Printed in U.S.A.

Copyright ASME International
Provided by IHS under license with ASME
No reproduction or networking permitted without license from IHS

Not for Resale

FOREWORD

(This Foreword is not part of ANSI/ASME B16.38-1985.)

The B16 Standards Committee was organized in the spring of 1920 and held its organizational meeting on November 21 of that year. The group operated as a Sectional Committee (later redesignated as a Standards Committee) under the authorization of the American Engineering Standards Committee [subsequently named American Standards Association, United States of America Standards Institute, and now American National Standards Institute (ANSI)]. Sponsors for the group were The American Society of Mechanical Engineers, Manufacturers Standardization Society of the Valve and Fittings Industry, and the Heating and Piping Contractors National Association (later the Mechanical Contractors Association of America). In 1982 the B16 Committee was reorganized as an ASME Committee operating under procedures accredited by ANSI.

The American Gas Association determined that standardization of gas valves used in distribution systems was desirable and needed. The A.G.A. Task Committee on Standards for Valves and Shutoffs was formed and development work commenced in 1958. In 1968 it was determined that a more acceptable document would result if approval were gained from ANSI, and to facilitate such action the A.G.A. Committee became Subcommittee 13 of the B16 activity. This B16 group was later renamed Subcommittee L, which is its current designation.

The first standard developed by the Subcommittee was ANSI B16.33, which was published in 1973. As a follow-up, ANSI B16.38 was subsequently developed to cover larger sizes of gas valves and shutoffs, and was first published in 1978.

The present Standard offers more performance requirements than has been customary in many B16 standards. It is expected that this will permit both manufacturers and users greater latitude in producing and using products made to this Standard.

Editorial changes were made throughout the text and tables to bring the format in line with the rest of the B16 series of standards and to clarify the intent of this Standard. Revisions include changes to the qualification requirements and to requirements for construction and valve ends, updating of reference standards, and editorial changes to the text and tables.

The cover, headings, and designation of the standard have also been revised to reflect reorganization of the B16 Committee as an ASME Committee. This Standard is offered on a subscription service basis that includes interpretations and addenda up to the issuance of a new edition.

All requests for interpretations or suggestions for revisions should be sent to the Administrative Secretary, B16 Committee, The American Society of Mechanical Engineers, United Engineering Center, 345 East 47th Street, New York, N.Y. 10017.

Following approval by the B16 Committee and its ASME Supervisory Board, this Standard was approved as an American National Standard by ANSI on November 8, 1985.

Copyright ASME International
Provided by IHS under license with ASME
No reproduction or networking permitted without license from IHS
Not for Resale

--`,,```,,,,````-`-`,,`,,`,`,,`---

Copyright ASME International
Provided by IHS under license with ASME
No reproduction or networking permitted without license from IHS

Not for Resale

ASME B16 COMMITTEE
Standardization of Valves, Flanges, Fittings, Gaskets, and Valve Actuators

(The following is the roster of the Committee at the time of approval of this Standard.)

OFFICERS

W.G. Canham, *Chairman*
W.N. McLean, *Vice Chairman*
M.J. Hogan, *Secretary*

COMMITTEE PERSONNEL

P.H. Awtrey, Walworth Co., Greensburg, Pennsylvania
W. Ballis, Columbia Gas Distribution Co., Columbus, Ohio
J.E. Batey, Oak Ridge National Laboratory, Oak Ridge, Tennessee
S.L. Blachman, American Gas Association Laboratories, Cleveland, Ohio
R.R. Brodin, Fischer Controls International, Inc., Marshalltown, Iowa
W.J. Burns, Department of Water and Power, Los Angeles, California
W.G. Canham, Brentwood, Missouri
J.C. Church, Mamaroneck, New York
A. Cohen, Copper Development Association, Greenwich, Connecticut
J.S. Cole, ITT Grinnell Industrial Piping, Inc., Kernersville, North Carolina
F.G. Doar, Southern Services, Inc., Birmingham, Alabama
W.C. Farrell, Jr., Stockham Valves and Fittings, Inc., Birmingham, Alabama
D.R. Frikken, Monsanto Co., St. Louis, Missouri
M.W. Garland, Frick Co., Waynesboro, Pennsylvania
J.C. Inch, Mueller Brass Co., Hartsville, Tennessee
J.S. John, Houston, Texas
W.G. Knecht, Anchor/Darling Valve Co., Williamsport, Pennsylvania
R. Koester, The William Powell Co., Cincinnati, Ohio
J.D. Koski, U.S. Coast Guard, Washington, D.C.
J.E. LeCoff, Elkins Park, Pennsylvania
B.H. Leonard, Atherton, California
J. Longacre, Nibco Inc., Elkhart, Indiana
O.P. Lovett, Newark, Delaware
J.H. McCauley, McCauley Mechanical, Chicago, Illinois
W.N. McLean, Crane Co., Carol Stream, Illinois
B.J. Milleville, Rockwell International, Pittsburgh, Pennsylvania
A.D. Nalbandian, ITT Grinnell Corp., Providence, Rhode Island
M.E. O'Hagan, Valve Manufacturers Association, Washington, D.C.
J.A. Osterberg, American Bureau of Shipping, New York, New York
H.W. Palm, Crane Co., St. Louis, Missouri
A.F. Rhodes, Anglo Energy, Ltd., Houston, Texas
R.A. Schmidt, Ladish Co., Russellville, Arkansas
T.F. Stroud, Ductile Iron Pipe Research Association, Birmingham, Alabama
M.R. Suchomel, Underwriters Laboratories Inc., Northbrook, Illinois
R.E. White, Repairs Inc., South Bend, Indiana
D. Wilson, Mobile Pipeline Co., Dallas, Texas
V.F. Wolff, Phillips Petroleum Co., Bartlesville, Oklahoma

Copyright ASME International
Provided by IHS under license with ASME
No reproduction or networking permitted without license from IHS
Not for Resale

PERSONNEL OF SUBCOMMITTEE L ON GAS SHUTOFFS AND VALVES

S.L. Blachman, *Chairman,* American Gas Association Laboratories, Cleveland, Ohio
P.D. Stumpf, *Secretary,* The American Society of Mechanical Engineers, New York, New York
J.E. Allen, Public Service Electric & Gas Co., Newark, New Jersey
G.L. Anderson, Dresser Industries, Inc., Bradford, Pennsylvania
C.W. Arnott, Brooklyn Union Gas Co., Brooklyn, New York
D.W. Duffy, Rockwell International Corp., Pittsburgh, Pennsylvania
C.E. Floren, Mueller Co., Decatur, Illinois
W.G. Heldbrier, A.Y. McDonald Manufacturing Co., Dubuque, Iowa
C.R. Heseman, Illinois Power Co., Decatur, Illinois
E.E. Moore, Eclipse Inc., Rockford, Illinois
R.B. Pinkston, Consolidated Natural Gas Services, Pittsburgh, Pennsylvania
M.A. Robinson, Conbraco Industries, Inc., Matthews, North Carolina
E.L. Schmitt, Kerostest Manufacturing Corp., Pittsburgh, Pennsylvania
R.C. Stewart, Worthington, Ohio
F.R. Volgstadt, Perfection Corp., Madison, Ohio
A.G. Yeager, Jr., New Orleans Public Service, Inc., New Orleans, Louisiana

Copyright ASME International
Provided by IHS under license with ASME
No reproduction or networking permitted without license from IHS
Not for Resale

CONTENTS

Foreword iii
Standards Committee Roster v

1 Scope 1
2 Construction 1
3 Qualification Requirements 2
4 Production Testing 3

Figure
1 Bend Test Assembly 5

Tables
1 Duration of Test 2
2 Bending Moment Values 4
3 Flow and Head Loss Coefficients 4

Annex
A References 6

Copyright ASME International
Provided by IHS under license with ASME
No reproduction or networking permitted without license from IHS
Not for Resale

Copyright ASME International
Provided by IHS under license with ASME
No reproduction or networking permitted without license from IHS
Not for Resale

AN AMERICAN NATIONAL STANDARD

LARGE METALLIC VALVES FOR GAS DISTRIBUTION (MANUALLY OPERATED, NPS 2½ TO 12, 125 psig MAXIMUM)

SCOPE

.1 Valve Types

This Standard covers only manually operated metallic valves in nominal pipe sizes 2½ through 12 having the inlet and outlet on a common center line, which are suitable for controlling the flow of gas from open to fully closed, for use in distribution and service lines where the maximum gage pressure at which such distribution piping systems may be operated in accordance with the Code of Federal Regulations (CFR), Title 49, Part 192, Transportation of Natural and Other Gas by Pipeline; Minimum Safety Standard, does not exceed 125 psi (8.6 bar). Valve seats, seals, and stem packing may be nonmetallic.

.2 Application

This Standard sets forth the minimum capabilities, characteristics, and properties which a newly manufactured metallic valve must possess in order to be considered suitable for use in piping systems indicated above with natural gas, manufactured gas [includes synthetic natural gas (SNG)], and liquefied petroleum gases (distributed as a vapor, with or without the admixture of air) or mixtures thereof. (Nonmetallic components, such as elastomer seals or sealants, may be adversely affected by gases having high hydrogen content or compounds likely to form condensates. Specific application details must be considered.) Details of design and manufacture, including design and production tests other than those stated in this Standard, remain the responsibility of the manufacturer.

.3 Referenced Standards

Standards and specifications referenced under this Standard are shown in Annex A.

2 CONSTRUCTION

2.1 General

(*a*) Each completed and assembled valve shall be capable of meeting the requirements set forth in this Standard. The workmanship employed in the manufacture and assembly of each valve shall provide gas tightness, safety and reliability of performance, and freedom from injurious imperfections and defects.

(*b*) Minimum levels of performance, quality, and materials of valves used shall be those described in one or more of the following standards and specifications or the equivalent[1] for pressure–temperature ratings Class 125 or 150: MSS SP-67, MSS SP-70, MSS SP-72, MSS SP-78, MSS SP-80, MSS SP-84, and ANSI B16.34 (see Annex A).

(*c*) All materials including lubricants that are exposed to gas shall be resistant to the action of the gases referred to in para. 1.2 or to the specific gas specified by the purchaser.

2.2 Tamperproof Features

Where valves are specified to be tamperproof, they shall have features which minimize the possibility of disassembly of pressure-containing parts with other than specialized tools.

2.3 Configuration

2.3.1 Operating Indication

(*a*) Valves designed for one-quarter turn operation shall be designed to visually show the open and closed position of the valve. A rectangular stem head or a position indicator shall indicate the closed position of the valve port when the longitudinal axis of the stem head or indicator is perpendicular to the axis of the

[1] The word *equivalent* is used in the sense of providing equivalent safety.

Copyright ASME International
Provided by IHS under license with ASME
No reproduction or networking permitted without license from IHS
Not for Resale

connecting pipe. If a separate indicator is employed, it shall be designed such that it cannot be assembled to incorrectly indicate the position of the valve.

(*b*) Valves shall close by clockwise stem rotation unless otherwise specified by the purchase order. The direction for closing the valve shall be indicated.

2.3.2 Valve Ends. Valve ends shall conform to the following standards where applicable: ANSI/ASME B1.20.1, ANSI B16.1, ANSI B16.5, ANSI B16.11, ANSI B16.25, and ANSI B16.34 (see Annex A).

2.3.3 Dimensions. Face-to-face and end-to-end dimensions of valves (other than ball, butterfly, or diaphragm valves) with flanged ends or buttwelding ends shall conform to the requirements of ANSI B16.10. Face-to-face and end-to-end dimensions of ball valves with flanged ends or buttwelding ends shall conform to the dimensions contained in MSS SP-72. Face-to-face dimensions for butterfly valves shall be in accordance with the dimensions contained in MSS SP-67.

2.4 Marking

Each valve, in addition to the markings required by MSS SP-25, shall bear the designation "B16.38" and "T" for tamperproof construction where tamperproof features are included but are not easily identifiable without disassembling the valve. The marking "T" may be shown on the operating head or stem.

2.5 Lubrication (Sealant)

Valves which require pressure lubrication (by the injection of sealant through fittings to the sealing surfaces of the valve) shall be capable of being lubricated in both the full-open and the full-closed position while subject to an inlet gage pressure of 125 psi (8.6 bar).

3 QUALIFICATION REQUIREMENTS

3.1 Qualification Tests

In a range of sizes of valves which use the same materials and are proportionally designed, qualification tests consisting of tests for gas tightness, temperature resistance, bending, and flow capacity shall be conducted on at least one sample of one of the two largest sizes in the following ranges:

Range #1 — NPS 5 and smaller valves
Range #2 — NPS 6 to 12 valves

TABLE 1 DURATION OF TEST

Valve Size, NPS	Minimum Duration, min
2½ – 5	2
6 – 10	5
12	10

If the sizes regularly manufactured do not span the ranges shown, then the largest size manufactured in each range shall be tested.

Valves which require pressure lubricating as described in para. 2.5 may not be relubricated during the qualification tests.

3.2 Number of Tests

Qualification tests need only be conducted on an initial basis provided no material or design changes have been made which could adversely affect the results of any qualification test results, and provided the valve was manufactured under a quality control system which provides assurance that each item manufactured is of comparable quality and capable of performances essentially equivalent to that of the tested unit. Otherwise the necessary qualification tests must be repeated.

All pressures specified in the following tests are gage pressures.

3.3 Gas Tightness

A valve shall provide a shutoff when in the closed position and shall not leak to the atmosphere in the open, intermediate, or closed position.

3.3.1 Method of Test for Gas Tightness

(*a*) *Shell Test.* With the valve in the open or partially open position and the outlet capped, air or gas pressures of first 4 ±2 psi (0.3 ±0.13 bar) and then 188 psi (13 bar) shall be applied to the inlet of the valve with the valve immersed in a bath of water at a temperature of 74 ±15°F (23 ±8°C). Leakage (as evidenced by the breaking away of bubbles) shall not be permitted. The minimum duration of each portion of the test shall be as specified in Table 1.

(*b*) *Seat Test.* Following the shell test, and after removing the outlet cap, with the valve in the full-closed position, air or gas pressures of first 4 ±2 psi (0.3 ±0.13 bar) and then 188 psi (13 bar) shall be applied to one end of the valve with the valve immersed in a bath of water at a temperature of 74 ±15°F (23 ±8°C). Leakage (as evidenced by the breaking

Copyright ASME International
Provided by IHS under license with ASME
No reproduction or networking permitted without license from IHS
Not for Resale

way of bubbles) shall not be permitted over the time eriods specified in Table 1. The test pressures shall ıen be applied to the other valve end under the same :st conditions and acceptance criteria.

.4 Continued Operation

A valve shall provide a shutoff as determined or as utlined in para. 3.3 after having been operated for :n cycles between the limits of full closed to full open nd back to full closed when subjected to an internal ir or gas pressure of 125 psi (8.6 bar) with the outlet apped.

.5 Temperature Resistance

A valve shall be operable at metal temperatures anging from −20°F (−29°C) to 150°F (66°C) without affecting the capability of the valve to control the low of gas and without leakage to the atmosphere.

3.5.1 Method of Test

(*a*) The valve shall be maintained at a temperature f −20°F (−29°C) for a period long enough to allow ll parts to come to equilibrium temperature. With the alve subjected to an internal air or gas pressure of 125 si (8.6 bar) and the outlet side sealed, it shall be deterıined that it can be opened and closed in a normal ıanner.

(*b*) The valve shall then be maintained at a temperture of 150°F (66°C) for a period long enough to alow all parts to come to equilibrium temperature. Vith the valve subjected to an internal air or gas presure of 125 psi (8.6 bar) and the outlet sealed, it shall e determined that it can be opened and closed in a ormal manner.

(*c*) The valve shall then be allowed to return to a emperature of 74 ± 15°F (23 ± 8°C) and subjected to he test outlined in para. 3.3.

3.6 Structural Provisions — Bending

A valve shall withstand the bending test specified elow.

3.6.1 Method of Test for Bending

(*a*) A valve shall withstand without harmful effects he bending moment specified in Table 2 adjusted by he appropriate ratio in (1) or (2) below.

(*1*) For ductile materials:

$$\frac{\text{Actual Yield Strength of Body Material}}{\text{Specified Minimum Yield Strength of Body Material}}$$

(*2*) For nonductile materials:

$$\frac{\text{Actual Tensile Strength of Body Material}}{\text{Specified Minimum Tensile Strength of Body Material}}$$

Strength values shall be determined in accordance with the appropriate material specification.

(*b*) Two bending tests shall be conducted, one with the load applied parallel to the valve stem and one with it applied perpendicular to the valve stem. The valve shall be in the half-open position and pressurized internally to a pressure of 125 psi (8.6 bar) for the period of time indicated in Table 1 with no visible leakage to the atmosphere. The cover (from which protrudes the stem or equivalent) shall be placed in tension when loaded in the parallel-to-the-stem position. While subjected to these moments, the valve shall operate through a full cycle of opening and closing. The test fixture shall apply an essentially uniform bending load with zero shear load (neglecting fixture pipe and valve weight) throughout the valve length as provided by the arrangement in Fig. 1.

(*c*) After the bending load is removed, there shall be no permanent deformation that would render the valve inoperable or cause it to leak to the atmosphere when tested as specified in para. 3.3.1.

3.7 Flow Capacity

The shape, size, and configuration of the flow passage in fully open valves shall be designed to provide flow and head loss coefficients specified in Table 3. Qualification tests shall be conducted using a technically competent procedure such as that contained in ANSI/ISA SP-75.02. The test fluid and the type of test facility and instrumentation are at the discretion of the manufacturer and shall be fully described in his records.

4 PRODUCTION TESTING

Gas tightness of production valves shall be demonstrated by subjecting each valve to first a shell test and then a seat test using air or gas pressure to at least 188 psi (13 bar). Leakage (as evidenced by the breaking away of bubbles) shall not be permitted over a time period of at least 15 sec.

Copyright ASME International
Provided by IHS under license with ASME
No reproduction or networking permitted without license from IHS
Not for Resale

TABLE 2 BENDING MOMENT VALUES[1]

Nominal Pipe Size [Note (2)]	Test Bending Moment		Wall Thickness	
	lbf-in.	N·m	in.	mm
2½	31,000	3 500	0.188	4.78
3	44,000	4 975	0.188	4.78
3½	59,000	6 675	0.188	4.78
4	75,000	8 475	0.188	4.78
5	116,000	13 100	0.188	4.78
6	164,000	18 525	0.188	4.78
8	335,000	37 850	0.219	5.56
10	512,000	57 850	0.219	5.56
12	812,000	91 750	0.250	6.35

NOTES:
(1) Values are calculated bending moments using 35,000 psi SMYS steel pipe with wall thicknesses shown in the Table.
(2) For valves having different size inlet and outlet, the smaller size shall determine the bending value.

TABLE 3 FLOW AND HEAD LOSS COEFFICIENTS

Nominal Valve Size [Note (1)]	Minimum Gas Flow at Reference Conditions [Note (2)]		Alternate Coefficients			
			Valve Coefficient C_v Min. [Note (3)]	Head Loss in Pipe Velocity Heads K, Max. [Note (4)]	Equivalent Length of Standard Weight or Schedule 40 Pipe, Max.	
	ft^3/hr	m^3/h			ft	m
2½	4,400	125	150	1.5	17	5.2
3	6,000	170	200	2.0	30	9.1
3½	8,000	227	270	2.0	35	10.7
4	9,900	280	330	2.1	43	13.1
5	15,000	425	490	2.4	65	19.8
6	19,000	538	630	3.0	100	30.5
8	30,000	850	990	3.7	180	54.9
10	47,000	1330	1560	3.7	230	70.1
12	66,000	1870	2200	3.7	280	85.3

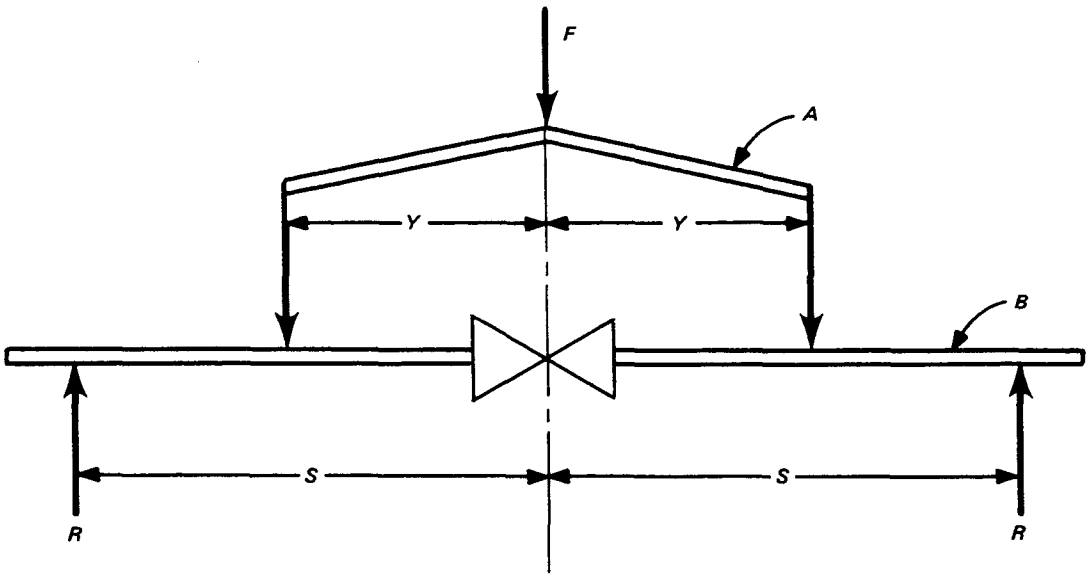
NOTES:
(1) For valves having different size inlet and outlet, the smaller size shall determine the coefficient.
(2) Minimum gas flow in standard cubic feet per hour (cubic meters per hour) with the valve in the fully open position at an inlet gage pressure of 0.5 psi (0.035 bar), 70°F (21.1°C), 0.64 specific gravity, and 0.3 in. (7.6 mm) water column net valve pressure drop, assuming valve in Schedule 40 pipe.
(3) C_v = flow of water at 60°F (16°C) in U.S. gallons per minute which a valve will pass at a pressure drop of 1.0 psi (0.07 bar).
(4) K = head loss coefficient consistent with the equation:

$$h_1 = K\left(\frac{V^2}{2g}\right)$$

where

h_1 = head loss produced by valve, ft (m)
V = fluid velocity in pipe, ft/sec (m/s)
g = acceleration due to gravity, ft/sec^2 (m/s^2)

Copyright ASME International
Provided by IHS under license with ASME
No reproduction or networking permitted without license from IHS Not for Resale



A = load application yoke
B = connecting pipe, Schedule 80 of a size to match the valve nominal size
F = applied load
R = reaction force = *F*/2
S = distance from valve center line to reaction point
Y = distance from valve center line to the applied load

Formula for Bending Moment M_b

$$M_b = \frac{F}{2}(S - Y)$$

FIG. 1 BEND TEST ASSEMBLY

Copyright ASME International
Provided by IHS under license with ASME
No reproduction or networking permitted without license from IHS
Not for Resale

ANNEX A
REFERENCES

(This Annex is an integral part of ANSI/ASME B16.38-1985 and is placed after the main text for convenience.)

The following is a list of standards and specifications referenced in this Standard, showing the year of approval.

ASME Publications (Approved as American National Standards)

ANSI/ASME B1.20.1-1983	Pipe Threads, General Purpose (Inch)
ANSI B16.1-1975	Cast Iron Pipe Flanges and Flanged Fittings, Class 25, 125, 250 and 800
ANSI B16.5-1981	Pipe Flanges and Flanged Fittings
ANSI B16.10-1973	Face-to-Face and End-to-End Dimensions of Ferrous Valves
ANSI B16.11-1980	Forged Steel Fittings, Socket-Welding and Threaded
ANSI B16.25-1979	Buttwelding Ends
ANSI B16.34-1981	Valves — Flanged and Buttwelding End

ISA Publications

ANSI/ISA SP-75.02-1982[1]	Standard Control Valve Capacity Test Procedure

MSS Publications

MSS SP-25-1978(R1983)	Standard Marking System for Valves, Fittings, Flanges and Unions
MSS SP-67-1976	Butterfly Valves
MSS SP-70-1976	Cast Iron Gate Valves, Flanged and Threaded Ends
MSS SP-72-1970	Ball Valves with Flanged or Butt-Welding Ends for General Service
MSS SP-78-1977	Cast Iron Plug Valves, Flanged and Threaded Ends
MSS SP-80-1974	Bronze Gate, Globe, Angle and Check Valves
MSS SP-84-1978	Steel Valves, Socket Welding and Threaded Ends

[1]The ISA approval date for SP-75.02 is 1981.

Copyright ASME International
Provided by IHS under license with ASME
No reproduction or networking permitted without license from IHS
Not for Resale

Publications of the following organizations appear on the above list:

ASME	The American Society of Mechanical Engineers 345 East 47th Street New York, NY 10017 ASME Order Department 22 Law Drive Box 2300 Fairfield, NJ 07007-2300
ISA	Instrument Society of America 67 Alexander Drive P.O. Box 12277 Research Triangle Park, NC 27709
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry 127 Park Street, N.E. Vienna, VA 22180

Publications appearing above which have been approved as American National Standards may also be obtained from:

ANSI	American National Standards Institute 1430 Broadway New York, NY 10018

Copyright ASME International
Provided by IHS under license with ASME
No reproduction or networking permitted without license from IHS
Not for Resale

AMERICAN NATIONAL STANDARDS FOR PIPING, PIPE FLANGES, FITTINGS, AND VALVES

Scheme for the Identification of Piping Systems ..... A13.1-1981(R1985)
Pipe Threads — General Purpose (Inch) B1.20.1-1983
Dryseal Pipe Threads (Inch) ..... B1.20.3-1976(R1982)
Cast Iron Pipe Flanges and Flanged Fittings, Class 25, 125, 250 and 800 ..... B16.1-1975
Malleable Iron Threaded Fittings, Class 150 and 300 ..... B16.3-1977
Cast Iron Threaded Fittings, Classes 125 and 250 ..... B16.4-1985
Pipe Flanges and Flanged Fittings B16.5-1981
Factory-Made Wrought Steel Buttwelding Fittings B16.9-1978
Face-to-Face and End-to-End Dimensions of Ferrous Valves B16.10-1973
Forged Steel Fittings, Socket-Welding and Threaded B16.11-1980
Cast Iron Threaded Drainage Fittings B16.12-1983
Ferrous Pipe Plugs, Bushings, and Locknuts with Pipe Threads B16.14-1983
Cast Bronze Threaded Fittings, Class 125 and 250 ..... B16.15-1978
Cast Copper Alloy Solder Joint Pressure Fittings B16.18-1984
Ring-Joint Gaskets and Grooves for Steel Pipe Flanges B16.20-1973
Nonmetallic Flat Gaskets for Pipe Flanges B16.21-1978
Wrought Copper and Copper Alloy Solder Joint Pressure Fittings B16.22-1980
Cast Copper Alloy Solder Joint Drainage Fittings — DWV B16.23-1984
Bronze Pipe Flanges and Flanged Fittings, Class 150 and 300 ..... B16.24-1979
Buttwelding Ends B16.25-1979
Cast Copper Alloy Fittings for Flared Copper Tubes B16.26-1983
Wrought Steel Buttwelding Short Radius Elbows and Returns B16.28-1978
Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings — DWV B16.29-1980
Cast Copper Alloy Solder Joint Fittings for Sovent® Drainage Systems B16.32-1984
Manually Operated Metallic Gas Valves for Use in Gas Piping Systems Up to 125 psig (Sizes ½ Through 2) B16.33-1981
Valves — Flanged and Buttwelding End B16.34-1981
Steel Orifice Flanges, Class 300, 600, 900, 1500 and 2500 Including 1979 Addenda — Class 400 ..... B16.36-1975
Hydrostatic Testing of Control Valves B16.37-1980
Large Metallic Valves for Gas Distribution (Manually Operated, NPS 2½ to 12, 125 psig Maximum) B16.38-1985
Malleable Iron Threaded Pipe Unions, Class 150, 250 and 300 ..... B16.39-1977
Manually Operated Thermoplastic Gas Shutoffs and Valves in Gas Distribution Systems B16.40-1985
Ductile Iron Pipe Flanges and Flanged Fittings, Class 150 and 300 ..... B16.42-1979
Wrought Copper and Copper Alloy Solder Joint Fittings for Sovent® Drainage Systems B16.43-1982
Power Piping B31.1-1983
Fuel Gas Piping B31.2-1968
Chemical Plant and Petroleum Refinery Piping B31.3-1984
Liquid Petroleum Transportation Piping Systems B31.4-1979
Refrigeration Piping B31.5-1983
Gas Transmission and Distribution Piping Systems B31.8-1982
Building Services Piping B31.9-1982
ASME Guide for Gas Transmission and Distribution Piping Systems — 1983 (not an ANSI Standard) .....
Corrosion Control for ANSI B31.1 Power Piping Systems (not an ANSI Standard) .....
Welded and Seamless Wrought Steel Pipe B36.10M-1985
Stainless Steel Pipe B36.19M-1985
Self-Operated and Power-Operated Safety-Related Valves Functional Specification Standard ..... N278.1-1975(R1984)

The ASME Publications Catalog shows a complete list of all the Standards published by the Society.

The catalog and binders for holding these Standards are available upon request.



J05585

Copyright ASME International
Provided by IHS under license with ASME
No reproduction or networking permitted without license from IHS
Not for Resale