INTERPRETATIONS TO ASME B16.9

(These interpretations are not part of ASME B16.9-1993 and are included for information only.)

INTRODUCTION

As a service to persons who use the B16 Standards, the B16 Committee renders interpretations of the requirements upon request. The procedure for requesting an interpretation is described in the following paragraphs.

The interpretations include all replies which have been approved by the B16 Main Committee in response to inquiries concerning interpretation of this Standard.

An interpretation applies either to the Edition and Addenda in effect on the date of issuance of the interpretation or the Edition and Addenda stated in the interpretation. Subsequent revisions to this Standard may supersede the interpretation.

PROCEDURE FOR REQUESTING INTERPRETATIONS

On request, the B16 Committee will render an interpretation of any requirement of this Standard. Interpretations can only be rendered in response to a written request, which should be addressed to:

Secretary, B16 Main Committee
The American Society of Mechanical Engineers
United Engineering Center
345 East 47th Street
New York, NY 10017

The request for interpretation should be clear and unambiguous. It is further recommended that the inquirer submit his request using the following format:

(a) Subject. Cite the applicable paragraph number(s) and/or give a concise description of the subject.

(b) Question. Phrase the question as a request for an interpretation of a specific requirement suitable for general understanding and use, not as a request for an approval of a proprietary design or situation. The inquirer may also include any plans or drawings which are necessary to explain the question; however, they should not contain proprietary names or information.

Requests which are not in this format may be rewritten in this format prior to being answered, which may inadvertently change the original intent of the request.

ASME procedures provide for reconsideration of an interpretation when or if additional information is available which the inquirer believes might affect the interpretation. Further, persons aggrieved by an interpretation may appeal to the cognizant ASME committee or subcommittee. ASME does not "approve," "certify," "rate," or "endorse" any item, construction, proprietary device, or activity.

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INTERPRETATIONS NO. 1

Replies to Technical Inquiries Issued From January 1, 1986 Through October 31, 1992

Interpretation: 1-1

Subject: Paragraph 1.2, Scope

Date Issued: February 19, 1986

File: B16-85-019

Question: Are straight cone taper and step reducers included in the scope of ANSI B16.9-1978?

Reply: Yes. See para. 1.2 of the Standard.

Interpretation: 1-2

Subject: Paragraph 1.3, Scope

Date Issued: April 8, 1987

File: B16-86-005

Question: Do fabricated fittings employing intersection welds fall within the scope of ASME/ANSI B16.9-1986?

Reply: No. See para. 1.3.

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Interpretation: 1-3

Subject: Paragraph 1.1, "Factory-Made"

Date Issued: June 10, 1987

File: B16-87-002

Question (1): What is the definition or intended meaning of the term "factory-made" as used in ANSI B16.9-1978, Section 1, Scope, para. 1.1?

Reply (1): "Factory-made" means production facilities, manufacturing methods (using tools, dies, jigs, and fixtures), and inspection procedures to a quality control system of a standard line of butt-welding fittings.

Question (2): Section 1, Scope, para. 1.3 considers fabricated laterals, or other fittings employing intersection welds, as pipe fabrications to be designed in accordance with ANSI B31. Is the intent of this provision to exclude fabricated fittings from the provisions of ANSI B16.9?

Reply (2): Yes.

Question (3): Do elbows with miter joints meet the provisions of Section 7, Surface Contours, para. 7.1?

Reply (3): No.

Interpretation: 1-4

Subject: Inside Diameter of Fittings

Date Issued: February 27, 1990

File: B16-88-002

Question: Does ANSI B16.9-1978 place any minimum dimensional requirements on the inside diameter of fittings at a position other than the welding ends?

Reply: No.

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Interpretation: 1-5

Subject: Paragraph 9, Design Proof Test

Date Issued: February 27, 1990

File: B16-88-003

Question (1): Does para. 9 of ASME/ANSI B16.9-1986 require you to use the nominal wall thickness of the pipe that the test fitting marking identifies when calculating the burst pressure "P"?

Reply (1): Yes.

Question (2): Is the actual wall thickness of the pipe used in the test required to be greater than the nominal wall thickness of the pipe that the fitting marking identifies?

Reply (2): ASME/ANSI B16.9-1986 does not address the requirements for the wall thickness of the pipe used in the test.

Interpretation: 1-6

Subject: Table A1, Tolerances

Date Issued: February 27, 1990

File: B16-88-004

Question: Does a NPS 30 buttweld long radius elbow that has an out-of-roundness value of 10 mm (major outside diameter 814 mm and a minor outside diameter of 804 mm) meet the dimensional tolerance requirements of ASME/ANSI B16.9-1986, Table A1?

Reply: No. The O.D. of a NPS 32 long radius elbow has a nominal outside diameter at the weld bevel of 813 mm with a +7 mm, −5 mm tolerance and an out-of-roundness tolerance of 12 mm. The minor outside diameter of the fitting is out of tolerance.

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Interpretation: 1-7

Subject: Table 2 Dimensions of 45° Elbows

Date Issued: February 27, 1990

File: B16-88-006

Question: Does ASME/ANSI B16.9-1986 require dimensions on 45° elbows that would permit two (2) to be welded in series and meet the dimensional requirements of the corresponding size 90° elbow?

Reply: No.

Interpretation: 1-8

Subject: Paragraph 9.3.5, Proof Tests

Date Issued: February 27, 1990

File: B16-88-008

Question: Are fittings made to ASME/ANSI B16.9-1986, that were designed by successful proof tests which fulfilled the requirements of earlier editions of B16.9, considered as fulfilling the requirements of the 1986 edition?

Reply: Yes, provided the test data has been reviewed and meets the B16.9-1986 requirements.

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Interpretation: 1-9

Subject: Tolerances in Parallelism

Date Issued: May 10, 1990

File: B16-90-003

Question: Do Table 7 and/or Table 1 of ASME/ANSI B16.9-1986 have a tolerance on parallelism between face and backface of the lap of a Lap Joint Stub End?

Reply: No.

Interpretation: 1-10

Subject: Paragraph 11.2, Dimensions

Date Issued: May 10, 1990

File: B16-90-004

Question: Do the provisions of para. 11.2, ANSI B16.9-1978, prohibit the use of vernier, micrometer, electronic read-out equipment, etc. for the determination of actual dimensions of B16.9 fittings?

Reply: No.

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Interpretation: 1-11

Subject: Design Proof Test

Date Issued: August 8, 1990

File: B16-90-008

Question: Does ASME/ANSI B16.9-1986 cover Design Proof Test requirements for branch fittings (other than tees or crosses covered in Tables 5 and 6) in which reinforcement considerations must be analyzed?

Reply: No.

Interpretation: 1-12

Subject: Paragraph 9.2.3, Design Proof Test

Date Issued: June 27, 1990

File: B16-90-014

Question: What value of "S" shall be used in the formulae for P (Adj) (adjusted proof test pressure, psig) and P (computed bursting pressure of pipe which the fitting's marking identifies, psig) presented in para. 9.2.3, ANSI B16.9-1978?

Reply: The value of "S" is the same for both equations as follows: S = Minimum specified tensile strength of the pipe which the fittings marking identifies, psi.

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Interpretation: 1-13

Subject: Tolerances

Date Issued: January 23, 1991

File: B16-90-028

Question (1): According to ASME/ANSI B16.9-1986, must all inside diameter, outside diameter, and wall thickness tolerances (see Tables 1 and A1) be met for each fitting?

Reply (1): Yes.

Question (2): Is there any precedence under which the tolerance must be applied?

Reply (2): No.

Question (3): In ASME/ANSI B16.9-1986, is there a maximum tolerance on wall thickness?

Reply (3): No.

Interpretation: 1-14

Subject: Taper Boring

Date Issued: January 23, 1991

File: B16-90-029

Question (1): According to ASME/ANSI B16.9-1986, when a B16.9 fitting dimension is shortened due to taper boring, what tolerances apply?

Reply (1): Those in Table 1, Tolerances. See also para. 1.3.

Question (2): According to ASME/ANSI B16.28-1986, when a B16.28 fitting dimension is shortened due to taper boring, what tolerances apply?

Reply (2): Those in Table 1, Tolerances.

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Interpretation: 1-15

Subject: Table A1, Tolerances

Date Issued: January 24, 1991

File: B16-90-019

Question: Does Table A1, ASME/ANSI B16.9-1986, specify tolerances for inside diameter out-of-roundness?

Reply: No.

Interpretation: 1-16

Subject: Clarification of Long Radius Elbow

Date Issued: January 25, 1991

File: B16-90-027

Question: Does ASME/ANSI B16.9-1986, for 90° long radius elbows, require the openings to be joined by circular arcs on the external surfaces?

Reply: Yes, but the circular arcs may be terminated in tangents. See ASME/ANSI B16.9-1986, Section 7, Surface Contours.

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Interpretation: 1-17

Subject: Paragraph 9.2.2, Other Components

Date Issued: February 19, 1991

File: B16-90-031

Question: Is the actual wall thickness or the pipe material used in the Design Proof Test Assembly described in ASME/ANSI B16.9-1986 in para. 9.2.2 limited to the nominal wall thickness or compatible pipe material that the fitting marking identifies?

Reply: No.

Interpretation: 1-18

Subject: Proof Testing of Fittings

Date Issued: September 19, 1991

File: B16-90-011

Question: Can successful proof pressure test data of an ASME/ANSI B16.9-1986 fitting such as a tee be applied to qualify a non-similar B16.9 fitting such as an elbow?

Reply: No. Test data may only be applied to qualify fittings similar to the test fittings as outlined in Section 9.4, ASME/ANSI B16.9-1986.

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Interpretation: 1-19

Subject: Wall Thickness Limitations for Fittings

Date Issued: September 19, 1991

File: B16-91-012

Question: Does ASME/ANSI B16.9-1986 have any restrictions on the maximum wall thickness used for B16.9 fitting construction?

Reply: No, provided the ends are prepared to match the customer's pipe within the tolerances specified in Table 1.

Interpretation: 1-20

Subject: Table 9, Straight Cone Taper Reducers

Date Issued: April 2, 1992

File: B16-91-013

Question: Are straight cone taper reducers included in the scope of ASME/ANSI B16.9-1986?

Reply: Yes, however the welding end preparations described in ASME/ANSI B16.9, Section 8 shall be met. The referencing Code may have additional requirements.

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Interpretation: 1-21

Subject: Table 1, Tolerances

Date Issued: July 31, 1992

File: B16-92-006

Question: Do the inside, outside diameters, and minimum wall thickness tolerances of B16.9-1978, Table 1 apply throughout the fitting?

Reply: Table 1 tolerances for the I.D. and O.D. dimensions apply at the ends of the fitting. The wall thickness tolerance applies throughout the fitting.

Interpretation: 1-22

Subject: Test Procedures

Date Issued: August 19, 1992

File: B16-92-014

Question: When calculating the adjusted proof test pressure $P_{(adj.)}$ per ASME/ANSI B16.9-1986, para. 9.3, for a filler metal added welded test fitting, can a welded tensile test specimen, representative of the test fitting, be used in determining the actual tensile strength of the test fitting material $S_{(act)}$?

Reply: Yes, provided the tensile specimen and tensile strength meet the applicable material requirements of para. 5.0.

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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(R1992)
Dryseal Pipe Threads (Inch) ..... B1.20.3-1976(R1991)
Cast Iron Pipe Flanges and Flanged Fittings B16.1-1989
Malleable Iron Threaded Fittings B16.3-1992
Gray Iron Threaded Fittings B16.4-1992
Pipe Flanges and Flanged Fittings B16.5-1988
Factory-Made Wrought Steel Buttwelding Fittings B16.9-1993
Face-to-Face and End-to-End Dimensions of Valves B16.10-1992
Forged Fittings, Socket-Welding and Threaded B16.11-1991
Cast Iron Threaded Drainage Fittings B16.12-1991
Ferrous Pipe Plugs, Bushings, and Locknuts with Pipe Threads B16.14-1991
Cast Bronze Threaded Fittings, Class 125 and 250 ..... B16.15-1985
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 B16.21-1992
Wrought Copper and Copper Alloy Solder Joint Pressure Fittings B16.22-1989
Cast Copper Alloy Solder Joint Drainage Fittings — DWV B16.23-1992
Cast Copper Alloy Pipe Flanges and Flanged Fittings, Class 150, 300, 400, 600, 900, 1500, and 2500 ..... B16.24-1991
Buttwelding Ends B16.25-1992
Cast Copper Alloy Fittings for Flared Copper Tubes B16.26-1988
Wrought Steel Buttwelding Short Radius Elbows and Returns B16.28-1986
Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings — DWV B16.29-1986
Cast Copper Alloy Solder Joint Fittings for Sovent Drainage Systems B16.32-1992
Manually Operated Metallic Gas Valves for Use in Gas Piping Systems Up to 125 psig (Sizes ½ Through 2) B16.33-1990
Valves — Flanged, Threaded, and Welding End B16.34-1988
Orifice Flanges B16.36-1988
Large Metallic Valves for Gas Distribution (Manually Operated, NPS 2½ to 12, 125 psig Maximum) ... B16.38-1985
Malleable Iron Threaded Pipe Unions, Classes 150, 250, and 300 ..... B16.39-1986
Manually Operated Thermoplastic Gas Shutoffs and Valves in Gas Distribution Systems B16.40-1985
Functional Qualification Requirements for Power Operated Active Valve Assemblies for Nuclear Power Plants ..... B16.41-1983(R1989)
Ductile Iron Pipe Flanges and Flanged Fittings, Class 150 and 300 ..... B16.42-1987
Wrought Copper and Copper Alloy Solder Joint Fittings for Sovent® Drainage Systems B16.43-1982
Cast Iron Fittings for Sovent® Drainage Systems B16.45-1987
Large Diameter Steel Flanges (NPS 26 Through NPS 60) B16.47-1990
Power Piping B31.1-1992
Fuel Gas Piping B31.2-1968
Chemical Plant and Petroleum Refinery Piping B31.3-1993
Liquid Transportation Systems for Hydrocarbons, Liquid Petroleum Gas, Anhydrous Ammonia, and Alcohols B31.4-1992
Refrigeration Piping B31.5-1992
Gas Transmission and Distribution Piping Systems B31.8-1992
Building Services Piping B31.9-1988
Slurry Transportation Piping Systems B31.11-1989
ASME Guide for Gas Transmission and Distribution Piping Systems — 1986 (not an ANSI Standard) .....
Manual for Determining the Remaining Strength of Corroded Pipelines (not an ANSI Standard) B31G-1991
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)

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