

Record 18-108**Subsection WA
General Requirements**

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Article WA-7000 Reference Standards**WA-7100 General Requirements**

Dimensions of standard products shall comply with the dimensional standards listed in [Table WA-7100-1](#) when the standard is referenced in the Division 3 Subsection. However, compliance with these standards does not replace or eliminate the requirements for stress analysis when called for by [Article WB-3000](#), [Article WC-3000](#), or [Article WD-3000](#) for a specific component.

Table WA-7100-1
Dimensional Standards

Standard ID	Published Title	Section III Referenced Edition	Other Acceptable Editions
Pipes and Tubes			
ASME B36.10M	Welded and Seamless Wrought Steel Pipe	2004 2015	2004 , 2000, 1996, 1985
ASME B36.19M	Stainless Steel Pipe	2004	1985 (R1994)
Fittings, Flanges, and Gaskets			
ASME B16.5	Pipe Flanges and Flanged Fittings	2009 2017	2013 , 2009 , 2003, 1998, 1988, 1981
ASME B16.9 [Note (1)]	Factory-Made Wrought Butt welding Fittings	2007 2012	2007 , 2001, 1993, 1986, 1981
ASME B16.11	Forged Fittings, Socket-Welding and Threaded	2016 , 2009	2011 , 2009 , 2001, 1996, 1980

Standard ID	Published Title	Section III	
		Referenced Edition	Other Acceptable Editions
ASME B16.20	Metallic Gaskets for Pipe Flanges: Ring-Joint Spiral Wound and Jacketed	2007 2012	2007 , 2000, 1998, 1984
ASME B16.21	Nonmetallic Flat Gaskets for Pipe Flanges	2005 2016	2011 , 2005 , 1992
ASME B16.25	Buttwelding Ends	1997 2012	1997 , 1986
ASME B16.47	Large Diameter Steel Flanges	2006 2017	2011 , 2006 , 1998
MSS SP-43	Wrought and Fabricated Butt-Welding Fittings for Low Pressure, Corrosion Resistant Applications	2008 2013	2008 , 1991 (R1996) (R2001) , 1982 (R1986) , 1982
Bolting			
ASME B18.2.1 [Note (2)]	Square, Hex, Heavy Hex, and Askew Head Bolts and Hex, Heavy Hex, Hex Flange, Lobed Head and Lag Screws	2010 2012	2010 , 1999, 1981
ASME/ANSI B18.2.2 [Note (2)]	Square and Hex Nuts (Inch Series)	1987 (R1999) 2015	2010 , 1987, 1972 (R1983)
ASME B18.3 [Note (2)]	Socket Cap, Shoulder, and Set Screws, Hex and Spine Keys (Inch Series)	2003 2012	2003 , 1998, 1986, 1982
ASME B18.31.2	Continuous Thread Stud, Double-End Stud, and Flange Bolting Stud (Stud Bolt) (Inches Series)	2014
Threads			
ASME B1.1 [Note (2)]	Unified Inch Screw Threads (UN and UNR Thread Form)	2003 (R2008)	1989, 1982
ANSI/ASME B1.20.1 [Note (2)]	Pipe Threads, General Purpose (Inch)	1983 (R2006) 2013	1983 (R1992)
ANSI B1.20.3 [Note (2)]	Dry-seal Pipe Threads (Inch)	1976 (R2008)	1976 (R1981) (R1982) (R1991) (R1998)

GENERAL NOTE: [Reaffirmed versions of the listed standards are also acceptable.](#)

Notes:

(1) Analysis per ASME B16.9, para. 2.2, is acceptable only for caps and reducers.

(2) These standards are referenced for dimensional purposes only. Any manufacturing or inspection requirements contained in item are not mandatory. The SA or SB Material Specification specifies the applicable manufacturing and inspection requirements.

END OF NOTES

The standards and specifications referenced in the text of each Subsection are listed in [Table WA-7100-2](#). Where reference is made within Division 3 to requirements, that are part of the ASME Boiler and Pressure Vessel Code, they are not included in this Table.

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INFORMATION ONLY**

Table WA-7100-2

Standards and Specifications Referenced in Division 3

Standard ID	Published Title	Section III Referenced Edition
The American Society of Mechanical Engineers (ASME)		
ASME NQA-1	Quality Assurance Requirements for Nuclear Facility Applications	2008, 2009a
ASME QAI-1	Qualifications for Authorized Inspection	Latest
American Society for Nondestructive Testing (ASNT)		
SNT-TC-1A	Personnel Qualification and Certification in Nondestructive Testing	2011
American Society for Testing and Materials (ASTM)		
ASTM E23	Standard Test Methods for Notched Bar Impact Testing of Metallic Materials	2002a
ASTM E185	Standard Practice for Design of Surveillance Programs for Light-Water Moderated Nuclear Power Reactor Vessels	2010
ASTM E186	Standard Reference Radiographs for Heavy-Walled (2 to 4 1/2-in.) [(51 to 114-mm)] Steel Castings	67, 73, 75, 79
ASTM E208	Standard Test Method for Conducting Drop-Weight Test to Determine Nil-Ductility Transition Temperature of Ferritic Steels	1991
ASTM E280	Standard Reference Radiographs for Heavy-Walled (4 1/2 to 12-in.) [(114 to 305-mm)] Steel Castings	68, 72, 75
ASTM E399	Standard Test Method for Plane-Strain Fracture Toughness of Metallic Materials	1983, 1990
ASTM E446	Standard Reference Radiographs for Steel Castings up to 2 in. (51 mm) in Thickness	72, 75, or 78
ASTM E604	Standard Test Method for Dynamic Tear Testing of Metallic Materials	1983
ASTM E1820	Standard Test Method for Measurement of Fracture Toughness	2001
ASTM F788	Standard Specification for Surface Discontinuities of Bolts, Screws, and Studs, Inch and Metric Series	2013
ASTM F812	Standard Specification for Surface Discontinuities of Nuts, Inch and Metric Series	2012
American Welding Society (AWS)		
AWS A4.2	Calibrating Magnetic Instruments to Measure the Delta Ferrite Content of Austenitic and Duplex Ferritic-Austenitic Stainless Steel	1991
American National Standards Institute (ANSI)		
ANSI N14.5	Leakage Test on Packages for Transportation	1997, 2014