



Standard Specification for Wrought-Carbon Steel Butt-Welding Piping Fittings with Improved Notch Toughness¹

This standard is issued under the fixed designation A 758/A 758M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers wrought-carbon steel butt-welding seamless or welded fittings specially processed to ensure better notch toughness than that to be expected in fittings manufactured to the requirements of Specification A 234/A 234M.

1.1.1 Included are elbows, caps, tees, reducers, and other type fittings covered by ASME B 16.9.

1.1.2 Heat treatment is required for all fittings.

1.1.3 Fittings with mandatory radiographic examination of welds are included.

1.1.4 Supplementary requirements are provided for use when additional testing or examination is desired.

1.1.5 Cast fittings, and fittings formed from all weld metal, are not included.

1.2 Several type of fittings are provided, as follows:

Type	Heat Treatment Required	Weld Seam Finish (5.3.2)	Radiography Required?
30	normalize	UW-35	no
31	normalize	UW-35	yes
32	normalize	UW-35 and ground flush	yes
40	normalize and temper	UW-35	no
41	normalize and temper	UW-35	yes
42	normalize and temper	UW-35 and ground flush	yes
50	quench and temper	UW-35	no
51	quench and temper	UW-35	yes
52	quench and temper	UW-35 and ground flush	yes

1.3 It shall be the responsibility of the purchaser to determine whether material meeting the requirements of this specification is satisfactory for the service application.

1.4 This specification is expressed in both inch-pound units and SI units. However, unless the order specifies the applicable “M” specification designation (SI units), the material shall be furnished to inch-pound units.

1.5 The values stated in either inch-pound units or SI units are to be regarded separately as standard. Within the text, the

SI units are shown in brackets. The values stated in each system are not exact equivalents; therefore, each system must be used independently of the other. Combining values from the two systems may result in nonconformance with the specification.

2. Referenced Documents

2.1 In addition to those reference documents listed in Specification A 960, the following list of standards apply to this specification:

2.2 ASTM Standards:

A 234/A 234M Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and Elevated Temperatures²

A 275/A 275M Test Method for Magnetic Particle Examination of Steel Forgings³

A 370 Test Methods and Definitions for Mechanical Testing of Steel Products⁴

A 960 Specification for Common Requirements for Wrought Steel Piping Fittings²

E 165 Practice for Liquid Penetrant Inspection Method⁵

E 709 Practice for Magnetic Particle Examination⁵

2.3 ASME Boiler and Pressure Vessel Code (ASME Code):⁶ Section VIII, Division 1 Pressure Vessels

Section IX, Welding and Brazing Qualifications

2.4 ASME Standard:

B 16.9 Standards for Steel Butt-Welding Fittings⁶

2.5 ASNT Standard:

SNT-TC-1A-1984 Practice for Nondestructive Examination Personnel Qualification and Certification⁷

3. Ordering Information

3.1 See Specification A 960.

² Annual Book of ASTM Standards, Vol 01.01.

³ Annual Book of ASTM Standards, Vol 01.05.

⁴ Annual Book of ASTM Standards, Vol 01.03.

⁵ Annual Book of ASTM Standards, Vol 03.03.

⁶ Available from ASME International, Three Park Avenue, New York, NY 10016-5990.

⁷ Available from American Society for Nondestructive Testing, 1711 Arlingate Plaza, P.O. Box 28518, Columbus, OH 43228-0518.

¹ This specification is under the jurisdiction of ASTM Committee A01 on Steel, Stainless Steel, and Related Alloys, and is the direct responsibility of Subcommittee A01.22 on Steel Forgings and Wrought Fittings for Piping Applications and Bolting Materials for Piping and Special Purpose Applications.

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