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An American National Standard

Standard Specification for Wrought Ferritic, Ferritic/Austenitic, and Martensitic Stainless Steel Piping Fittings[1]

This standard is issued under the fixed designation A 815/A 815M; 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 two general classes, WP and CR, of wrought ferritic, ferritic/austenitic, and martensitic stainless steel fittings of seamless and welded construction covered by the latest revision of ANSI B16.9, ANSI B16.11, ANSI B16.28, MSS Standard Practice SP-79, and MSS Standard Practice SP-43. Fittings differing from these standards may be furnished in accordance with Supplementary Requirement S8.

1.1.1 Class WP fittings are subdivided into four subclasses: Classes WP-S, WP-W, WP-WX, and WP-WU. They are manufactured to the requirements of ANSI B16.9, B16.11, B16.28, or MSS Standard Practice SP-79, and they shall have pressure ratings compatible with 12.2. Class WP-S fittings are those manufactured from seamless product by a seamless method of manufacture (marked with class symbol WP-S); Class WP-W fittings are those which contain welds where the fitting fabrication or construction welds have been radiographed (marked with class symbol WP-W); and Class WP-WX fittings are those which contain welds where all welds have been radiographed (marked with class symbol WP-WX); and Class WP-WU fittings are those which contain welds where all welds have been ultrasonically tested (marked with class symbol WP-WU).

1.1.2 Class CR fittings are those manufactured to the requirements of MSS SP-43, and they shall have pressure ratings compatible with 12.3.

1.2 This specification does not apply to cast fittings.

1.3 Optional supplementary requirements are provided. When desired, one or more of these may be specified in the order.

1.4 This specification is expressed in both inch-pound units and in 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 *ASTM Standards:*

A 262 Practices for Detecting Susceptibility to Intergranular Attack in Austenitic Stainless Steels[2]

A 370 Test Methods and Definitions for Mechanical Testing of Steel Products[2]

A 388/A388M Practice for Ultrasonic Examination of Heavy Steel Forgings[3]

A 751 Test Methods, Practices, and Terminology for Chemical Analysis of Steel Products[2]

A 763 Practices for Detecting Susceptibility to Intergranular Attack in Ferritic Stainless Steels[2]

E 165 Test Method for Liquid Penetrant Examination[4]

2.2 *ASME Standards:*[5]

B16.9 Wrought Steel Butt-Welding Fittings

B16.11 Forged Steel Fittings, Socket-Welding and Threaded

B16.28 Wrought Steel Butt-Welding Short Radius Elbows and Returns

2.3 *MSS Standards:*[6]

SP-25 Standard Marking System for Valves, Fittings, Flanges, and Unions

SP-43 Standard Practice for Light Weight Stainless Steel Butt-Welding Fittings

SP-79 Socket-Welding Reducer Inserts

2.4 *ASME Boiler and Pressure Vessel Codes:*[5]

Section VIII Division I, Pressure Vessels

Section IX Welding Qualifications

2.5 *ASNT Standard:*[7]

SNT-TC-1A(1984) Recommended Practice for Nondestructive Testing Personnel Qualification and Certification

[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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[2] *Annual Book of ASTM Standards*, Vol 01.03.

[3] *Annual Book of ASTM Standards*, Vol 01.05.

[4] *Annual Book of ASTM Standards*, Vol 03.03.

[5] Available from American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990.

[6] Available from Manufacturers' Standardization Society of the Valve and Fittings Industry, 127 Park St., N.E., Vienna, VA 22180.

[7] Available from American Society for Nondestructive Testing, 4153 Arlingate Plaza, P.O. Box 28518, Columbus, OH 43228-0518.

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