Standard Specification for Welded, Unannealed Austenitic Stainless Steel Tubular Products[1]

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1. Scope

1.1 This specification covers straight seam and spiral butt seam welded unannealed austenitic stainless steel tubular products intended for low and moderate temperatures and corrosive service where heat treatment is not necessary for corrosion resistance. Table 1 lists the five grades covered by this specification. The user of this specification should be aware that a minimum amount of testing and examination is required of the basic product. The user requiring additional testing or examination is referred to the supplemental requirements or Ordering Information, or both. Users requiring a tubular product with post-weld heat treatment or with radiographic examination are referred to Specification A 312/A 312M, A 358/A 358M, or A 409/A 409M, as applicable.

1.2 This specification covers welded unannealed tubular products 3 in. (75 mm) through 48 in. (1200 mm) in outside diameter and in nominal wall thicknesses of 0.062 in. (1.5 mm) through 0.500 in. (12.5 mm) produced to this specification. Tubular products having other diameters or wall thickness, or both, may be furnished provided it complies with all other requirements of this specification.

1.3 The values stated in inch-pound units are to be regarded as the standard.

2. Referenced Documents

2.1 *ASTM Standards:*

A 240 Specification for Heat-Resisting Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels[2]

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

A 312/A 312M Specification for Seamless and Welded Austenitic Stainless Steel Pipes[3]

A 358/A 358M Specification for Electric-Fusion-Welded Austenitic Chromium-Nickel Alloy Steel Pipe for High-Temperature Service[3]

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

A 409/A 409M Specification for Welded Large Diameter Austenitic Steel Pipe for Corrosive or High-Temperature Service[3]

A 700 Practices for Packaging, Marking, and Loading Methods for Steel Products for Domestic Shipment[4]

A 941 Terminology Relating to Steel, Related Alloys, and Ferroalloys[3]

A 999/A 999M Specification for General Requirements for Alloy and Stainless Steel Pipe[3]

E 340 Test Method for Macroetching Metals and Alloys[5]

E 527 Practice for Numbering Metals and Alloys (UNS)[3]

2.2 *AWS Standards:*

A 5.4 Corrosion—Resisting Chromium and Chromium-Nickel Steel Covered Welding Electrodes[6]

A 5.9 Corrosion–Resisting Chromium and Chromium-Nickel Steel Welding Rods and Bare Electrodes[6]

2.3 *SAE Standard:*

SAE J1086 Practice for Numbering Metals and Alloys (UNS)[7]

3. Terminology

3.1 *Definitions:*

3.2 The definitions in Specification A 999/A 999M and Terminology A 941 are applicable to this specification.

4. Ordering Information

4.1 Orders for material to this specification should include the following:

4.1.1 Quantity (feet, metres, or number of pieces),

4.1.2 Name of material (welded unannealed austenitic stainless steel tubular products),

4.1.3 Straight seam or spiral butt seam,

4.1.4 Grade (see Table 1),

[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 A01.10 on Stainless and Alloy Steel Tubular Products.

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

[3] *Annual Book of ASTM Standards,* Vol 01.01.

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

[5] *Annual Book of ASTM Standards,* Vol 03.01.

[6] Available from American Welding Society, 2501 N.W. 7th St., Miami, FL 33125.

[7] Available from Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096.

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