

Standard Specification for Seamless and Welded Ferritic/Austenitic Stainless Steel Pipe¹

This standard is issued under the fixed designation A790/A790M; 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 specification² covers seamless and straight-seam welded ferritic/austenitic steel pipe intended for general corrosive service, with particular emphasis on resistance to stress corrosion cracking. These steels are susceptible to embrittlement if used for prolonged periods at elevated temperatures.

1.2 Optional supplementary requirements are provided for pipe when a greater degree of testing is desired. These supplementary requirements call for additional tests to be made and, when desired, one or more of these may be specified in the order.

1.3 **Appendix X1** of this specification lists the dimensions of welded and seamless stainless steel pipe as shown in ANSI B36.19. Pipe having other dimensions may be furnished provided such pipe complies with all other requirements of this specification.

1.4 The values stated in either SI units or inch-pound units are to be regarded separately as standard. Within the text, the SI units are shown in brackets. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard. The inch-pound units shall apply unless the *M* designation of this specification is specified in the order.

NOTE 1—The dimensionless designator NPS (nominal pipe size) has been substituted in this standard for such traditional terms as nominal diameter, size, and nominal size.

2. Referenced Documents

2.1 *ASTM Standards*:³

A370 Test Methods and Definitions for Mechanical Testing of Steel Products

A923 Test Methods for Detecting Detrimental Intermetallic Phase in Duplex Austenitic/Ferritic Stainless Steels

A941 Terminology Relating to Steel, Stainless Steel, Related Alloys, and Ferroalloys

A999/A999M Specification for General Requirements for Alloy and Stainless Steel Pipe

E213 Practice for Ultrasonic Testing of Metal Pipe and Tubing

E309 Practice for Eddy-Current Examination of Steel Tubular Products Using Magnetic Saturation

E381 Method of Macroetch Testing Steel Bars, Billets, Blooms, and Forgings

E426 Practice for Electromagnetic (Eddy-Current) Examination of Seamless and Welded Tubular Products, Titanium, Austenitic Stainless Steel and Similar Alloys

E527 Practice for Numbering Metals and Alloys in the Unified Numbering System (UNS)

2.2 *ANSI Standards*:⁴

B1.20.1 Pipe Threads, General Purpose

B36.10 Welded and Seamless Wrought Steel Pipe **B36.19** Stainless Steel Pipe

2.3 *SAE Standard*:⁵

SAE J 1086

2.4 *Other Standard*:⁶

SNT-TC-1A Personal Qualification and Certification in Nondestructive Testing

2.5 *AWS Standard*:⁷

A5.9 Corrosion-Resisting Chromium and Chromium-Nickel Steel Welding Rods and Electrodes

3. Terminology

3.1 *Definitions*—For definitions of terms used in this specification refer to Terminology **A941**.

*A Summary of Changes section appears at the end of this standard