



Standard Specification for Seamless Austenitic Steel Pipe for High-Temperature Central-Station Service¹

This standard is issued under the fixed designation A 376/A 376M; 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 austenitic steel pipe intended for high-temperature central-station service. Among the grades covered are five H grades and two nitrogen grades (304N and 316N) that are specifically intended for high-temperature service.

1.2 Optional supplementary requirements (S1 through S10) are provided. These supplementary requirements specify additional tests that will be made only when stated in the order, together with the number of such tests required.

1.3 Grades TP321 and TP321H have lower strength requirements for nominal wall thicknesses greater than $\frac{3}{8}$ in. [9.5 mm].

1.4 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. 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:

A 262 Practices for Detecting Susceptibility to Intergranular Attack in Austenitic Stainless Steels³

A 999/A 999M Specification for General Requirements for Alloy and Stainless Steel Pipe⁴

E 112 Test Methods for Determining the Average Grain Size⁵

E 213 Practice for Ultrasonic Examination of Metal Pipe and Tubing⁶

E 381 Method of Macroetch Testing, Steel, Bars, Billets, Blooms, and Forgings⁵

E 426 Practice for Electromagnetic (Eddy-Current) Examination of Seamless and Welded Tubular Products, Austenitic Stainless Steel, and Similar Alloys⁶

2.2 ASME Boiler and Pressure Vessel Code: Section IX Welding Qualifications⁷

2.3 Other Standards:

SNT-TC-1A Personnel Qualification and Certification in Nondestructive Testing⁷

3. Ordering Information

3.1 Orders for material to this specification should include the following, as required to describe the desired material adequately:

3.1.1 Quantity (feet, centimetres, or number of lengths),

3.1.2 Name of material (seamless austenitic steel pipe),

3.1.3 Grade (Table 1),

3.1.4 Size (nominal size, or outside diameter and schedule number or average wall thickness),

3.1.5 Lengths (specific or random), (Permissible Variations in Length Section of Specification A 999/A 999M),

3.1.6 End finish (Ends Section of Specification A 999/A 999M),

3.1.7 Optional requirements (Section 8) (see Hydrostatic Test Requirements Section and the Permissible Variation in Weight for Seamless Pipe Section for weighing individual lengths, of Specification A 999/A 999M), (see 9.6, repairing by welding; 13.2, die stamping),

3.1.8 Test report required (Certification Section of Specification A 999/A 999M),

3.1.9 Specification designation, and

3.1.10 Special requirements or any supplementary requirements selected, or both.

4. General Requirements

4.1 Material furnished to this specification shall conform to the applicable requirements of the current edition of Specification A 999/A 999M unless otherwise provided herein.

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 For ASME Boiler and Pressure Vessel Code applications see related Specification SA-376 in Section II of that Code.

³ Annual Book of ASTM Standards, Vol 01.03.

⁴ Annual Book of ASTM Standards, Vol 01.01.

⁵ Annual Book of ASTM Standards, Vol 03.01.

⁶ Annual Book of ASTM Standards, Vol 03.03.

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