



Designation: **A376/A376M – 19**

Used in USDOE-NE standards

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

This standard is issued under the fixed designation A376/A376M; 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 service. Among the grades covered are H grades and nitrogen grades that are specifically intended for high-temperature service.

NOTE 1—This specification was originally developed for use for piping in the central stations of electric-power generating thermal plants. However, its use is not restricted to such applications and it may be used in other applications for which the attributes of the materials, as defined by this specification, are appropriate.

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 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 2—The dimensionless designators NPS (nominal pipe size) and DN (Diametre Nominel) have been substituted in this standard for such traditional terms as “nominal diameter,” “size,” and “nominal size.”

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

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.

Current edition approved Nov. 1, 2019. Published November 2019. Originally approved in 1954. Last previous edition approved in 2017 as A376/A376M – 17. DOI: 10.1520/A0376_A0376M-19.

² For ASME Boiler and Pressure Vessel Code applications see related Specification SA-376 in Section II of that Code.

2. Referenced Documents

2.1 ASTM Standards:³

A262 Practices for Detecting Susceptibility to Intergranular Attack in Austenitic Stainless Steels

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

E112 Test Methods for Determining Average Grain Size

E213 Practice for Ultrasonic Testing of Metal Pipe and Tubing

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

2.2 Other Standards:

SNT-TC-1A Personnel Qualification and Certification in Nondestructive Testing⁴

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 A999/A999M),

3.1.6 End finish (Ends Section of Specification A999/A999M),

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 A999/A999M), (see 9.6, repairing by welding; 13.3, die stamping),

³ For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

⁴ Available from American Society for Nondestructive Testing (ASNT), P.O. Box 28518, 1711 Arlingate Ln., Columbus, OH 43228-0518.