



Designation: A 106 – 02

An American National Standard
Used in USDOE-NE standards

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

This standard is issued under the fixed designation A 106; 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.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope *

1.1 This specification² covers seamless carbon steel pipe for high-temperature service (Note 1) in NPS $\frac{1}{8}$ to NPS 48 inclusive, with nominal (average) wall thickness as given in ANSI B 36.10. It shall be permissible to furnish pipe having other dimensions provided such pipe complies with all other requirements of this specification. Pipe ordered under this specification shall be suitable for bending, flanging, and similar forming operations, and for welding. When the steel is to be welded, it is presupposed that a welding procedure suitable to the grade of steel and intended use or service will be utilized (Note 2).

NOTE 1—It is suggested, consideration be given to possible graphitization.

NOTE 2—The purpose for which the pipe is to be used should be stated in the order. Grade A rather than Grade B or Grade C is the preferred grade for close coiling or cold bending. This note is not intended to prohibit the cold bending of Grade B seamless pipe.

1.2 Supplementary requirements (S1 to S7) of an optional nature are provided for seamless pipe intended for use in applications where a superior grade of pipe is required. These supplementary requirements call for additional tests to be made and when desired shall be so stated in the order.

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

NOTE 3—The dimensionless designator NPS (nominal pipe size) has been substituted in this standard for such traditional terms as “nominal diameter,” “size,” and “nominal size.”

1.4 The following precautionary caveat pertains only to the test method portion, Sections 11, 12, 13, 14, and 15, of this specification: *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

- A 530/A 530M Specification for General Requirements for Specialized Carbon and Alloy Steel Pipe³
- E 213 Practice for Ultrasonic Examination of Metal Pipe and Tubing⁴
- E 309 Practice for Eddy-Current Examination of Steel Tubular Products Using Magnetic Saturation⁴
- E 381 Method of Macroetch Testing Steel Bars, Billets, Blooms, and Forgings⁵
- E 570 Practice for Flux Leakage Examination of Ferromagnetic Steel Tubular Products⁴

2.2 ANSI Standard:

- ANSI B 36.10 Welded and Seamless Wrought Steel Pipe⁶

2.3 Military Standards:

- MIL-STD-129 Marking for Shipment and Storage⁷
- MIL-STD-163 Steel Mill Products, Preparation for Shipment and Storage⁷

2.4 Federal Standard:

- Fed. Std. No. 123 Marking for Shipments (Civil Agencies)⁷
- Fed. Std. No. 183 Continuous Identification Marking of Iron and Steel Products⁷

2.5 Other Standards:

- SSPC-SP 6 Surface Preparation Specification No. 6⁸

3. Ordering Information

3.1 The inclusion of the following, as required will describe the desired material adequately, when ordered under this specification:

- 3.1.1 Quantity (feet or number of lengths),
- 3.1.2 Name of material (seamless carbon steel pipe),
- 3.1.3 Grade (Table 1),
- 3.1.4 Manufacture (hot-finished or cold-drawn),
- 3.1.5 Size (NPS and weight class or schedule number, or both; outside diameter and nominal wall thickness; or inside

³ Annual Book of ASTM Standards, Vol 01.01.

⁴ Annual Book of ASTM Standards, Vol 03.03.

⁵ Annual Book of ASTM Standards, Vol 03.01.

⁶ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036.

⁷ Available from Standardization Documents Order Desk, DODSSP, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5098.

⁸ Available from Steel Structures Painting Council (SSPC), 40 24th St., 6th Floor, Pittsburgh, PA 15222-4656.

¹ This specification is under the jurisdiction of Committee A01 on Steel, Stainless Steel and Related Alloys and is the direct responsibility of Subcommittee A01.09 on Carbon Steel Tubular Products.

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² For ASME Boiler and Pressure Vessel Code applications see related Specifications SA-106 in Section II of that Code.

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