



Standard Specification for General Requirements for Nickel and Nickel Alloy Welded Pipe¹

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1. Scope

1.1 This specification contains various requirements that, with the exception of Section 5 and Section 10, are mandatory requirements to the following ASTM nickel and nickel alloy, longitudinally welded piping specifications:²

Title of Specification	ASTM Designation ²
Welded UNS N08020, UNS N08024, and UNS N08026 Alloy Pipe	B 464
Welded Nickel-Iron-Chromium Alloy Pipe	B 514
Welded Nickel-Chromium-Iron-Alloy (UNS N06600) Pipe	B 517
Welded Nickel and Nickel-Cobalt Alloy Pipe	B 619
UNS N08904, UNS N08925, and UNS N08926 Welded Pipe	B 673
UNS N08366 and UNS N08367 Welded Pipe	B 675
Nickel-Alloy (UNS N06625 and N08825) Welded Pipe	B 705
Ni-Cr-Mo-Co-W-Fe-Si Alloy (UNS N06333) Welded Pipe	B 723
Welded Nickel (UNS N02200/UNS N02201) and Nickel Copper Alloy (UNS N04400) Pipe	B 725

1.2 One or more of the test requirements of Section 5 apply only if specifically stated in the product specification or in the purchase order.

1.3 In case of conflict between a requirement of the product specification and a requirement of this general specification, only the requirement of the product specification needs to be satisfied.

1.4 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

2. Referenced Documents

2.1 ASTM Standards:

B 880 Specification for General Requirements for Chemical Check Analysis Limits for Nickel, Nickel Alloys and Cobalt Alloys²

E 8 Test Methods for Tension Testing of Metallic Materials³

E 18 Test Methods for Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials³

¹ This specification is under the jurisdiction of ASTM Committee B02 on Nonferrous Metals and Alloys and is the direct responsibility of Subcommittee B02.07 on Refined Nickel and Cobalt and Their Alloys.

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² *Annual Book of ASTM Standards*, Vol 02.04.

³ *Annual Book of ASTM Standards*, Vol 03.01.

E 29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications⁴

E 39 Test Methods for Chemical Analysis of Nickel⁵

E 76 Test Methods for Chemical Analysis of Nickel Copper Alloys⁵

E 112 Test Methods for Determining the Average Grain Size³

E 213 Practice for Ultrasonic Examination of Metal Pipe and Tubing⁶

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

E 571 Practice for Electromagnetic (Eddy-Current) Examination of Nickel and Nickel Alloy Tubular Products⁶

E 1473 Test Methods for Chemical Analysis of Nickel, Cobalt, and High-Temperature Alloys⁷

2.2 ANSI Standards:⁸

B 1.20.1 Pipe Threads

B 36.10 Welded and Seamless Wrought Steel Pipe

B 36.19 Stainless Steel Pipe

3. Terminology

3.1 Definitions:

3.1.1 *average diameter*—the average of the maximum and minimum outside diameters, as determined at any one cross section of the pipe.

3.1.2 *nominal wall*—a specified wall thickness with a plus or minus tolerance from the specified thickness.

3.1.3 *welded pipe*—a round hollow produced by forming flat stock and joining the single longitudinal seam by welding, and produced to the particular dimensions commercially known as pipe sizes (NPS).

4. Chemical Composition

4.1 In case of disagreement, the chemical composition shall be determined in accordance with the following methods:

⁴ *Annual Book of ASTM Standards*, Vol 14.02.

⁵ *Annual Book of ASTM Standards*, Vol 03.05.

⁶ *Annual Book of ASTM Standards*, Vol 03.03.

⁷ *Annual Book of ASTM Standards*, Vol 03.06.

⁸ Available from American National Standards Institute, 11 W. 42nd St., 13th Floor, New York, NY 10036.