



Standard Specification for Nickel Seamless Pipe and Tube¹

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1. Scope

1.1 This specification² covers nickel (UNS N02200)* and low-carbon nickel (UNS N02201)* in the form of cold-worked seamless pipe and tube in the conditions shown in Table 1 and Table X1.1.

1.1.1 Hot-worked material is available. Properties are to be agreed upon between the manufacturer and purchaser.

1.2 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 829 Specification for General Requirements for Nickel and Nickel Alloy Seamless Pipe and Tube³

3. General Requirement

3.1 Material furnished under this specification shall conform to the applicable requirements of Specification B 829 unless otherwise provided herein.

4. Ordering Information

4.1 It is the responsibility of the purchaser to specify all requirements that are necessary for the safe and satisfactory performance of material ordered under this specification. Examples of such requirements include, but are not limited to, the following:

4.1.1 Alloy name or UNS number.

4.1.2 ASTM designation and year of issue.

4.1.3 *Condition* (see Appendix X2).

4.1.4 *Finish* (see Appendix X2).

4.1.5 *Dimensions*:

4.1.5.1 *Tube*—Specify outside diameter and nominal or minimum wall.

4.1.5.2 *Pipe*—Specify standard pipe size and schedule.

4.1.5.3 *Length*—Cut to length or random.

4.1.6 *Quantity*—Feet or number of pieces.

4.1.7 *Hydrostatic Pressure Requirements*—Specify test pressure if other than required by Specification B 829.

4.1.8 *Certification*—State if certification is required.

4.1.9 *Samples for Product (Check) Analysis*—State whether samples for product (check) analysis should be furnished (see 5.2).

4.1.10 *Purchaser Inspection*—If purchaser wishes to witness tests or inspection of material at place of manufacture, the purchase order must so state indicating which tests or inspections are to be witnessed.

4.1.11 *Small-Diameter and Light-Wall Tube (Converter Sizes)*—See Appendix X1.

5. Chemical Composition

5.1 The material shall conform to the composition limits specified in Table 1 of Specification B 829.

5.2 If a product (check) analysis is performed by the purchaser, the material shall conform to the product (check) analysis variations in Table 2.

TABLE 2 Chemical Requirements

Element	Composition, %	
	Nickel (UNS N02200)	Low-Carbon Nickel (UNS N02201)
Ni, ⁴ min	99.0	99.0
Cu, max	0.25	0.25
Fe, max	0.40	0.40
Mn, max	0.35	0.35
C, max	0.15	—
C, max	—	0.02
Si, max	0.35	0.35
S, max	0.01	0.01

⁴ Element shall be determined arithmetically by difference.

6. Mechanical and Other Properties

6.1 *Tension Test*—The material shall conform to the tensile properties specified in Table 1. The sampling and specimen preparation are as covered in Specification B 829

6.1.1 Tensile properties for material specified as small-diameter and light-wall tube (converter sizes) shall be as prescribed in Table X1.1.

6.2 *Hydrostatic Test*—If any pipe or tube shows leaks during hydrostatic testing, it shall be rejected.

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 For ASME Boiler and Pressure Vessel Code applications see related Specification SB-161 in Section II of that Code.

* New designation established in accordance with ASTM E527 and SAE J1086, Practice for Numbering Metals and Alloys (UNS).

³ *Annual Book of ASTM Standards*, Vol 02.04.