

ASTM B730 / ASME SB730

Standard Specification for Welded Nickel (UNS N02200/UNS N02201) and Nickel Copper Alloy (UNS N04400) Tube

This specification covers nickel (UNS N02200), low carbon nickel (UNS N02201), and nickel copper alloy (UNS N04400) in the form of welded and annealed or welded and stress-relieved tube intended for general corrosive service and for mechanical applications.

A. Chemical Requirements :-

The material shall conform to the requirements as to chemical composition prescribed in Table 1.

Table 1

Element	Nickel (UNS N02200)	Low-Carbon Nickel (UNS N02201)	Nickel-Copper (UNS N04400)
Nickel, min	99.0	99.0	63.0
Copper	0.25 max	0.25 max	28.0–34.0
Iron, max	0.4	0.4	2.6
Manganese, max	0.35	0.35	2
Carbon, max	0.15	0.02	0.3
Silicon, max	0.35	0.35	0.5
Sulfur, max	0.01	0.01	0.024

B. Mechanical and Other Requirements :-

1. Mechanical Properties—

- i. The material shall conform to the requirements for mechanical properties prescribed in Table 2.

Table 2

Condition and Size	Tensile Strength, min, psi (MPa)			Yield Strength (0.2 % offset), min, psi (MPa)			Elongation in 2 in. or 50 mm (or 4D), min, %		
	Nickel	Low- Carbon Nickel	UNS N04400	Nickel	Low- Carbon Nickel	UNS N04400	Nickel	Low- Carbon Nickel	UNS N04400
Annealed:									
5 in. (127 mm) and under outside diameter	55000 (380)	50000 (345)	70000 (480)	15000 (105)	12000 (80)	28000 (195)	35	35	35
Over 5 in. (127 mm) in outside diameter	55000 (380)	50000 (345)	70000 (480)	12000 (80)	10000 (70)	25000 (170)	40	40	35
Stress-relieved:									
All sizes	65000 (450)	60000 (415)	85000 (585)	40000 (275)	30000 (205)	55000 (380)	15	15	15

2. Flattening Test.
3. Flange Test.
4. Nondestructive Tests:
 - i. Tubes shall be subjected to the nondestructive tests outlined in the following test categories:
 - a. Category 1—Hydrostatic, eddy-current, or ultrasonic test at the manufacturer's option unless the purchaser specifies.
 - b. Category 2—Hydrostatic, pneumatic plus eddy current, or ultrasonic test at the manufacturer's option unless the purchaser specifies.

C. General Requirements :-

1. Material furnished under this specification shall conform to the applicable requirements of Specification B 751 unless otherwise provided herein.

Related Keywords

- **astm b730 pdf**
- **asme sb730**
- **astm b730 pdf**