



Designation: B 674 – 96 (Reapproved 2002)^{ε1}

Standard Specification for UNS N08904, UNS N08925, and UNS N08926 Welded Tube¹

This standard is issued under the fixed designation B 674; 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.

^{ε1} NOTE—Paragraph 1.4 was added editorially in June 2002.

1. Scope

1.1 This specification covers UNS N08904, UNS N08925,* and UNS N08926 welded tube for general corrosion applications.

1.2 This specification covers outside diameter and nominal wall tube.

1.2.1 The tube sizes covered by this specification are 1/8 to 5 in. (3.2 to 127 mm) in outside diameter and 0.015 to 0.320 in. (0.38 to 8.13 mm), inclusive, in wall thickness.

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

1.4 *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 become familiar with all hazards including those identified in the appropriate Material Safety Data Sheet for this product/material as provided by the manufacturer, to establish appropriate safety and health practices, and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

B 751 Specification for General Requirements for Nickel and Nickel Alloy Welded Tube²

3. Ordering Information

3.1 Orders for material to this specification should include the following information:

3.1.1 Quantity (feet or number of lengths),

3.1.2 UNS number,

3.1.3 Size (outside diameter, minimum or average wall thickness),

3.1.4 Length (random or specific),

3.1.5 Class, and

3.1.6 ASTM designation.

3.1.7 *Product Analysis*—State if required.

3.1.8 *Certification*—State if a certification or a report of test results is required.

3.1.9 *Purchaser Inspection*—State which tests or inspections are to be witnessed, if any. Tables 1 and 2

TABLE 1 Chemical Requirements

Element	Composition, %		
	UNS N08904	UNS N08925	UNS N08926
Carbon, max	0.020	0.020	0.020
Manganese, max	2.00	1.00	2.00
Phosphorus, max	0.045	0.045	0.03
Sulfur, max	0.035	0.030	0.01
Silicon, max	1.00	0.50	0.5
Nickel	23.0 to 28.0	24.0 to 26.0	24.00 to 26.00
Chromium	19.0 to 23.0	19.0 to 21.0	19.00 to 21.00
Molybdenum	4.0 to 5.0	6.0 to 7.0	6.0 to 7.0
Copper	1.0 to 2.0	0.8 to 1.5	0.5 to 1.5
Nitrogen	...	0.1 to 0.2	0.15 to 0.25
Iron	balance	balance	balance

4. Materials and Manufacture

4.1 Tube shall be made from flat-rolled alloy by an automatic welding process with no addition or filler metal. Subsequent to welding and prior to final annealing, the material shall be cold-worked in either the weld metal only or both weld and base metal.

NOTE 1—The recommended heat treatment shall consist of heating to a temperature of 1985 to 2100°F (1085 to 1150°C) for UNS N08904 or 2010 to 2100°F (1100 to 1150°C) for UNS N08925 and UNS N08926, followed by quenching in water or rapid cooling by other means.

4.2 Tube shall be furnished with oxide removed. When bright annealing is used, descaling is not necessary.

5. Chemical Composition

5.1 The material shall conform to the composition limits specified in Table 1. One test is required for each lot as defined in Specification B 751.

5.2 If a product analysis is performed, it shall meet the chemistry limits prescribed in Table 1, subject to the analysis tolerances of Specification B 751.

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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* New designation established in accordance with Practice E 527 and SAE J1086, Practice for Numbering Metals and Alloys (UNS).

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