1. Scope

1.1 This specification covers UNS N08925,* UNS N08354, 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 ¼ 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 ASTM International has adopted definitions whereby some grades, such as UNS N08904, previously in this specification were recognized as stainless steels, because those grades have iron as the largest element by mass percent. Such grades are under the oversight of ASTM Committee A01 and its subcommittees. The products of N08904 previously covered in this specification are now covered by Specification A249/A249M.

1.4 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.5 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 (MSDS) 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:

- A249/A249M Specification for Welded Austenitic Steel Boiler, Superheater, Heat-Exchanger, and Condenser Tubes
- B751 Specification for General Requirements for Nickel and Nickel Alloy Welded Tube
- E527 Practice for Numbering Metals and Alloys in the Unified Numbering System (UNS)

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 (outsize 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 (see Tables 1 and 2).

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 1975 to 2150°F (1080 to 1180°C) for UNS N08354 or N08926.

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

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2 For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For Annual Book of ASTM Standards volume information, refer to the standard’s Document Summary page on the ASTM website.
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 B751.

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 B751.

6. Mechanical and Other Properties

6.1 Mechanical Properties—The material shall conform to the mechanical property requirements specified in Table 2. One test is required for each lot as defined in Specification B751.

6.2 Flattening Test—A flattening test shall be made on each end of one tube per lot. Superficial ruptures resulting from surface imperfections shall not be cause for rejection.

6.3 Flange Test—A flange test shall be made on each end of one tube per lot.

6.4 Nondestructive Test Requirements:

6.4.1 Class 1—Each piece in each lot shall be subject to one of the following four tests: hydrostatic, pneumatic (air underwater), eddy current, or ultrasonic.

6.4.2 Class 2—Each piece in each lot shall be subjected to a leak test and an electric test as follows:

6.4.2.1 Leak Test—Hydrostatic or pneumatic (air underwater).

6.4.2.2 Electric Test—Eddy current or ultrasonic.

6.5 The manufacturer shall have the option to test to Class 1 or 2 and select the nondestructive test methods, if not specified by the purchaser.

7. General Requirements

7.1 Material furnished under this specification shall conform to the applicable requirements of the current edition of Specification B751 unless otherwise provided herein.

8. Keywords

8.1 UNS N08925; UNS N08354; UNS N08926; welded tube