Designation: B705 – 24

Standard Specification for Nickel-Chromium-Molybdenum-Niobium Alloy, Nickel-Chromium-Molybdenum-Silicon Alloy, and Nickel-Iron-Chromium-Molybdenum-Copper Alloy Welded Pipe[1]

This standard is issued under the fixed designation B705; 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.

1. Scope*

1.1 This specification covers welded UNS N06625,[2] UNS N06219[2] and UNS N08825[2] pipe in the annealed condition (temper) for general corrosion applications.

1.2 This specification covers pipe sizes in schedules shown in the Permissible Variations in Outside Diameter and Wall Thickness for Welded Pipe table of Specification B775.

1.3 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.

1.4 The following precautionary caveat pertains only to the test methods portion, Section 8, of this specification: *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 establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*[3]

B775 Specification for General Requirements for Nickel and Nickel Alloy Welded Pipe

B880 Specification for General Requirements for Chemical Check Analysis Limits for Nickel, Nickel Alloys and Cobalt Alloys

B899 Terminology Relating to Non-ferrous Metals and Alloys

2.2 *ASME Boiler and Pressure Vessel Code:*[4]

Section IX Welding and Brazing Qualifications

3. Terminology

3.1 *Definitions:*

3.1.1 For definitions of terms used in this standard, refer to Terminology B899.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *Class 1*—Welded, cold-worked, annealed, and nondestructively tested in accordance with 9.1.

3.2.2 *Class 2*—Welded, cold-worked, annealed, and nondestructively tested in accordance with 9.2.

3.2.3 *Grade 1*—Annealed condition, relevant for UNS N06625.

3.2.4 *Grade 2*—Solution annealed condition, relevant for UNS N06625.

4. General Requirement

4.1 Material furnished in accordance with this specification shall conform to the applicable requirements of the current edition of Specification B775 unless otherwise provided herein.

5. Ordering Information

5.1 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:

5.1.1 Alloy name or UNS number,

5.1.2 ASTM designation,

5.1.3 *Dimensions:*

[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.

Current edition approved April 1, 2024. Published April 2024. Originally approved in 1982. Last previous edition approved in 2017 as B705 – 17. DOI: 10.1520/B0705-24.

[2] New designation established in accordance with Practice E527 and SAE J 1086, Practice for Numbering Metals and Alloys (UNS).

[3] 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.

[4] Available from American Society of Mechanical Engineers (ASME), ASME International Headquarters, Three Park Ave., New York, NY 10016-5990, http://www.asme.org.

*A Summary of Changes section appears at the end of this standard