



Standard Specification for Steel Castings, Ferritic and Martensitic, for Pressure-Containing and Other Applications, for Low-Temperature Service¹

This standard is issued under the fixed designation A757/A757M; 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.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope*

1.1 This specification covers carbon and alloy steel castings for pressure-containing and other applications intended primarily for petroleum and gas pipelines in areas subject to low-ambient temperatures. Castings shall be heat treated by normalizing and tempering or liquid quenching and tempering. All classes are weldable under proper conditions. Hardenability of some grades may limit usable section size.

1.2 The values stated in either inch-pound units or SI units are to be regarded separately as standard. The values stated in each system are not exact equivalents; therefore, each system must be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

1.2.1 Unless the order specifies an “M” designation, the material shall be furnished to inch-pound units.

1.3 *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 and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*²

A488/A488M Practice for Steel Castings, Welding, Qualifications of Procedures and Personnel
A703/A703M Specification for Steel Castings, General Requirements, for Pressure-Containing Parts
A985/A985M Specification for Steel Investment Castings

¹ This specification is under the jurisdiction of ASTM Committee A01 on Steel, Stainless Steel and Related Alloys and is the direct responsibility of Subcommittee A01.18 on Castings.

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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.

General Requirements, for Pressure-Containing Parts
A1067/A1067M Specification for Test Coupons for Steel Castings

2.2 *American Society of Mechanical Engineers:*³
ASME Boiler and Pressure Vessel Code

2.3 *Manufacturers Standardization Society of the Valve and Fittings Industry Standards:*⁴

MSS SP-55 Quality Standard for Steel Castings for Valves, Flanges, Fittings, and Other Piping Components - Visual Method for Evaluation of Surface Irregularities

3. Terminology

3.1 *Definitions:*

3.1.1 Definitions in Specification A703/A703M are applicable to this specification.

3.1.2 Definition of nominal thickness, T , applies to quenched and tempered castings with a thickness exceeding 2 in. [50 mm]. Nominal thickness, T , is the maximum thickness of the pressure-containing wall of the casting exclusive of padding added for directional solidification, flanges, appendages, and sections designated by the designer as non-critical.

4. General Conditions for Delivery

4.1 Except for investment castings, castings furnished to this specification shall be in accordance with the requirements of Specification A703/A703M, including any supplementary requirements that are indicated in the purchase order. Failure to comply with the general requirements of Specification A703/A703M constitutes nonconformance with this specification. In case of conflict between the requirements of this specification and Specification A703/A703M, this specification shall prevail.

³ Available from American Society of Mechanical Engineers (ASME), ASME International Headquarters, Three Park Ave., New York, NY 10016-5990, <http://www.asme.org>.

⁴ Available from Manufacturers Standardization Society of the Valve and Fittings Industry (MSS), 127 Park St., NE, Vienna, VA 22180-4602, <http://www.mss-hq.com>.

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