



Standard Specification for Steel Investment Castings General Requirements, for Pressure-Containing Parts¹

This standard is issued under the fixed designation A 985; 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 a group of common requirements, which are mandatory for steel castings produced by the investment casting process for pressure-containing parts under each of the following ASTM Specifications:

Title of Specification	ASTM Designation
Steel Castings, Carbon, Suitable for Fusion Welding for High-Temperature Service	A 216/A 216M ²
Steel Castings, Martensitic Stainless and Alloy, for Pressure-Containing Parts Suitable for High-Temperature Service	A 217/A 217M ²
Castings, Austenitic, Austenitic-Ferritic (Duplex), for Pressure-Containing Parts	A 351/A 351M ²
Steel Castings, Ferritic and Martensitic, for Pressure-Containing Parts Suitable for Low-Temperature Service	A 352/A 352M ²
Steel Castings, Alloy, Specially Heat-Treated, for Pressure-Containing Parts, Suitable for High-Temperature Service	A 389/A 389M ²
Steel Castings Suitable for Pressure Service	A 487/A 487M ²

1.2 This specification also covers a group of supplementary requirements, which may be applied to the above specifications as indicated therein. These requirements are provided for use when additional testing or inspection is desired and apply only when specified individually by the purchaser in the order.

1.3 When investment casting are ordered, the requirements of this specification shall take precedence over the individual material specification requirements.

1.4 The values stated in either inch-pound or SI units are to be regarded separately as the standard. Within the text, the SI units are shown in parentheses. The values in each system are not exact equivalent; therefore, each system must be used independently of the other. Combining values from the two systems may result in nonconformance with this specification. Inch-pound units are applicable for material ordered to Specification A 985 and SI units for material ordered to Specification A 985M.

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 establish appropriate safety and health practices and determine the applica-*

bility of regulatory limitations prior to use.

2. Referenced Documents

2.1 ASTM Standards:

- A 216/A 216M Specification for Steel Castings, Carbon, Suitable for Fusion Welding for High-Temperature Service²
- A 217/A 217M Specification for Steel Castings, Martensitic Stainless and Alloy, for Pressure-Containing Parts Suitable for High-Temperature Service²
- A 351/A 351M Specification for Castings, Austenitic, Austenitic-Ferritic (Duplex), for Pressure-Containing Parts²
- A 352/A 352M Specification for Steel Castings, Ferritic and Martensitic, for Pressure-Containing Parts Suitable for Low-Temperature Service²
- A 370 Test Methods for Definitions for Mechanical Testing of Steel Products
- A 389/A 389M Specification for Steel Castings, Alloy, Specially Heat-Treated, for Pressure-Containing Parts, Suitable for High-Temperature Service²
- A 487/A 487M Specification for Steel Castings Suitable for Pressure Service²
- A 488/A 488M Practice for Steel Castings, Welding, Qualification of Procedures and Personnel²
- A 609/A 609M Practice for Castings, Carbon, Low-Alloy, and Martensitic Stainless Steel, Ultrasonic Examination Thereof²
- A 751 Test Methods, Practices, and Terminology for Chemical Analysis of Steel Products³
- A 800/A 800M Practice for Steel Castings, Austenitic Alloy, Estimating Ferrite Content Thereof²
- A 903/A 903M Specification for Steel Castings, Surface Acceptance Standards, Magnetic Particle and Liquid Penetrant Inspection²
- A 919 Terminology Relating to Heat Treatment of Metals²
- E 29 Practice for Using Significant Figures in Test Data to Determine Conformance with Specifications⁴
- E 94 Guide for Radiographic Testing⁵
- E 125 Reference Photographs for Magnetic Particle Indications on Ferrous Castings⁵

¹ This practice is under the jurisdiction of ASTM Committee A-01 on Steel, Stainless Steel, and Related Alloys and is the direct responsibility of Subcommittee A01.08 on Castings.

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² Annual Book of ASTM Standards, Vol 01.02.

³ Annual Book of ASTM Standards, Vol 01.01.

⁴ Annual Book of ASTM Standards, Vol 14.02.

⁵ Annual Book of ASTM Standards, Vol 03.03.