Designation: A915/A915M – 08

StandardSpecification for Steel Castings, Carbon, and Alloy, Chemical Requirements Similar to Standard Wrought Grades[1]

This standard is issued under the fixed designation A915/A915M; 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 carbon and low alloy steel castings having chemical analyses similar to that of the standard wrought grades.

1.2 Several grades are covered and are designated by chemical composition shown in Table 1.

1.3 The values stated in either inch-pound units or SI units are to be regarded separately as standard. Within the text, the SI units are shown in brackets. 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 nonconformance with the specification. Inch-pound units are applicable for material ordered to Specification A915 and SI units for material ordered to Specification A915M.

2. Referenced Documents

2.1 *ASTM Standards:*[2]

A370 Test Methods and Definitions for Mechanical Testing of Steel Products

A781/A781M Specification for Castings, Steel and Alloy, Common Requirements, for General Industrial Use

3. Ordering Information

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

3.1.1 Quantity,

3.1.2 Specification, including year, date, and grade,

3.1.3 Description of the casting by pattern number or drawing. Dimensional tolerances shall be included on the casting drawing,

3.1.4 Options in the specification, and

3.1.5 Supplementary requirements desired, including standards of acceptance.

4. Heat Treatment

4.1 Grades SC 1020 and SC 1025 may be supplied unheat treated or heat treated as described in 4.2.

4.2 Castings shall be heat treated either by full annealing, normalizing, normalizing and tempering, or quenching and tempering. Unless otherwise specified in the inquiry, contract, or order, the castings may be heat treated by any of these heat treatments or combination of these heat treatments at the option of the manufacturer.

4.3 Heat treatment shall be performed after the castings have been allowed to cool below the transformation range.

4.4 The furnace temperature for heat treating shall be effectively controlled by the use of recording-type pyrometers.

5. Chemical Composition

5.1 The steel shall conform to the requirements of chemical composition as prescribed in Table 1.

5.2 The product analysis tolerances given in Specification A781/A781M shall apply to all product analysis performed on castings supplied to this specification.

6. General Conditions for Delivery

6.1 Material furnished to this specification shall conform to the applicable requirements of Specification A781/A781M, including the supplementary requirements indicated on the purchaser's order.

7. Repair by Welding

7.1 Weld repairs shall be inspected to the same quality standards used to inspect the castings. When castings are produced with Supplementary Requirement S1 specified, weld repairs shall be inspected by magnetic particle examination to the same standards used to inspect the castings. When castings are produced with Supplementary Requirement S2 specified, weld repairs in which the depth of the cavity prepared for repair welding exceeds 20 % of the wall thickness or 1 in. [25 mm], whichever is smaller, or in which the cavity prepared for

[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.

Current edition approved March 1, 2008. Published March 2008. Originally approved in 1993. Last previous edition approved in 2003 as A915/A915M – 93 (2003). DOI: 10.1520/A0915_A0915M-08.

[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.

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