



AEROSPACE MATERIAL SPECIFICATION

AMS5361™**REV. G**

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Superseding AMS5361F

Steel Castings, Sand and Centrifugal, Corrosion and Heat Resistant,
18.5Cr - 13.5Ni - 2.1Mo,
Solution Heat Treated
(Composition similar to UNS J93072)

RATIONALE

AMS5361G stabilizes this document because it represents mature technology that is not expected to change and thus no further revisions are anticipated.

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1. SCOPE

1.1 Form

This specification covers a corrosion and heat-resistant steel in the form of sand or centrifugal castings.

1.2 Application

These products have been used typically for parts requiring corrosion and heat resistance up to 1600 °F (870 °C). At elevated temperatures, strength of this steel is slightly higher than, and oxidation resistance is similar to, 18Cr - 8Ni type steels, but usage is not limited to such applications.

2. APPLICABLE DOCUMENTS

The issue of the following documents in effect on the date of the purchase order forms a part of this specification to the extent specified herein. The supplier may work to a subsequent revision of a document unless a specific document issue is specified. When the referenced document has been cancelled and no superseding document has been specified, the last published issue of that document shall apply.

2.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org.

AMS2360 Room Temperature Tensile Properties of Castings

AMS2635 Radiographic Inspection

AMS2645 Fluorescent Penetrant Inspection

AMS2694 In-Process Welding of Castings

AMS2804 Identification, Castings

AMS-H-6875 Heat Treatment of Steel Raw Materials

2.2 ASTM Publications

Available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, Tel: 610-832-9585, www.astm.org.

ASTM A 370 Mechanical Testing of Steel Products

ASTM E 353 Chemical Analysis of Stainless, Heat-Resisting, Maraging, and Other Similar Chromium-Nickel-Iron Alloys

ASTM E 446 Reference Radiographs for Steel Castings up to 2 Inches (51 mm) in Thickness

3. TECHNICAL REQUIREMENTS

3.1 Composition

Shall conform to the following percentages by weight shown in Table 1, determined by wet chemical methods in accordance with ASTM E 353, or by spectrographic or other analytical methods approved by purchaser:

TABLE 1 - COMPOSITION

Element	min	max
Carbon	0.15	0.25
Manganese	--	2.00
Silicon	--	1.00
Phosphorus	--	0.04
Sulfur	--	0.04
Chromium	17.00	20.00
Nickel	12.00	15.00
Molybdenum	1.75	2.50
Copper	--	0.75

3.2 Condition

Solution heat treated.

3.3 Casting

A melt shall be the metal poured from a single furnace charge of 15 000 pounds (6800 kg) or less. A lot shall be all castings of the same part number poured from a single melt in not more than eight consecutive hours and solution heat treated together as a batch.