AEROSPACE MATERIAL SPECIFICATION

AMS5328™ **REV. E**

Issued	1936-07
Revised	1987-10
Noncurrent	1998-02
Reaf. Nonc.	2013-04
Stabilized	2017-08

Superseding AMS5328D

Steel Castings, Investment
0.80Cr - 1.8Ni - 0.35Mo (0.28 - 0.36C) (SAE 4330 Modified)
Annealed

J23260

RATIONALE

AMS5328E has been stabilized as mature technology.

STABILIZED NOTICE

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1. SCOPE:

1.1 Form:

This specification covers a low-alloy steel in the form of investment castings.

1.2 Application:

Primarily for parts of thin to moderately thick cross-section which require heat treatment to minimum tensile strengths up to 180,000 psi (1240 MPa).

2. APPLICABLE DOCUMENTS:

The following publications form a part of this specification to the extent specified herein. The latest issue of Aerospace Material Specifications shall apply. The applicable issue of other documents shall be as specified in AMS 2350.

2.1 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096.

2.1.1 Aerospace Material Specifications:

AMS 2350 - Standards and Test Methods
AMS 2360 - Room Temperature Tensile Properties of Castings
AMS 2635 - Radiographic Inspection
AMS 2640 - Magnetic Particle Inspection
AMS 2645 - Fluorescent Penetrant Inspection
AMS 2694 - Repair Welding of Aerospace Castings
AMS 2804 - Identification, Castings

2.2 ASTM Publications:

Available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

ASTM A370 - Mechanical Testing of Steel Products
ASTM E192 - Reference Radiographs of Investment Steel Castings for Aerospace Applications
ASTM E350 - Chemical Analysis of Carbon Steel, Low-Alloy Steel, Silicon Electrical Steel, Ingot Iron, and Wrought Iron

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2.3 U.S. Government Publications:

Available from Commanding Officer, Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120.

2.3.1 Military Standards:

MIL-STD-794 - Parts and Equipment, Procedures for Packaging and Packing of

3. TECHNICAL REQUIREMENTS:

3.1 Composition:

Shall conform to the following percentages by weight, determined by wet chemical methods in accordance with ASTM E350 or by spectrochemical or other analytical methods approved by purchaser:

	min	max
Carbon	0.28	0.36
Manganese	0.60	1.00
Silicon	0.50	1.00
Phosphorus	--	0.025
Sulfur	--	0.025
Chromium	0.65	1.00
Nickel	1.65	2.00
Molybdenum	0.30	0.45
Copper	--	0.35

3.2 Condition:

Annealed.

3.3 Casting:

Castings shall be poured either from remelted metal from a master heat or directly from a master heat. In either case, metal for casting shall be qualified as in 3.4.

3.3.1 A master heat is refined metal of a single furnace charge or is metal blended as in 3.3.2. Gates, sprues, risers, and rejected castings shall be used only in preparation of master heats; they shall not be remelted directly, without refining, for pouring of castings.

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