

AERONAUTICAL

MATERIAL SPECIFICATIONS

AMS 5360B

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc.

485 Lexington Ave., New York 17, N.Y.

Issued 9-1-47
Revised 1-15-59

STEEL CASTINGS, INVESTMENT, CORROSION AND HEAT RESISTANT 17Cr - 13Ni - 2Mo

1. ACKNOWLEDGMENT: A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. APPLICATION: Primarily for small parts, such as stator vanes and nozzle diaphragm vanes, for use at temperatures up to 1600 F. At high temperatures, strength of this steel is slightly higher than, and oxidation resistance is similar to, that of the 18-8 types.
3. COMPOSITION: Castings shall conform to the following:

Carbon	0.15 max
Manganese	2.0 max
Silicon	0.75 max
Phosphorus	0.04 max
Sulfur	0.03 max
Chromium	16.0 - 18.0
Nickel	12.0 - 14.0
Molybdenum	1.5 - 2.25
Copper	0.50 max

- Ø 4. CONDITION: Solution heat treated, unless otherwise specified.

5. TECHNICAL REQUIREMENTS:

- 5.1 Casting: Castings shall be poured either from remelted master heat metal or directly from a master heat. A master heat is previously refined metal of a single furnace charge. Gates, sprues, risers, and rejected castings shall not be remelted directly, without refining, for pouring of castings; they may be used in preparation of master heats. When permitted by purchaser, metal in the form of shot from more than one master heat may be uniformly blended together to form a master heat lot; the total weight of metal in a master heat lot shall not exceed 7000 pounds.
- 5.2 Solution Heat Treatment: Shall be accomplished by heating to 1950 F $\pm$ 50, holding at heat for not less than 30 min., and cooling in air.

6. QUALITY:

- 6.1 Castings shall be uniform in quality and condition, sound, and free from foreign materials and from internal and external imperfections detrimental to fabrication or to performance of parts. Castings shall have smooth surfaces and shall be well cleaned. Unless otherwise permitted, metallic shot or grit shall not be used for final cleaning.
- 6.2 When castings are broken for fracture test, the fracture shall have uniform color and be substantially free from oxides and other defects.