# AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 5365A

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## STEEL CASTINGS, SAND, CORROSION AND HEAT RESISTANT
## 25Cr - 20Ni

1. ACKNOWLEDGMENT: A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.

2. APPLICATION: Parts, such as nozzle diaphragm vanes and assemblies requiring both corrosion and heat resistance, and where such parts may require welding during fabrication. Parts and assemblies requiring oxidation resistance up to approximately 2000 F, but useful at the higher temperatures only when stresses are very low. Strength at elevated temperatures is similar to that of the 18-8 types.

3. COMPOSITION:

| | |
|---|---|
| Carbon | 0.10 - 0.18 |
| Manganese | 2.0 max |
| Silicon | 0.50 - 1.5 |
| Phosphorus | 0.04 max |
| Sulfur | 0.04 max |
| Chromium | 23.0 - 26.0 |
| Nickel | 19.0 - 22.0 |
| Molybdenum | 0.50 max |
| Copper | 0.50 max |

4. CONDITION: Annealed, unless otherwise specified.

5. TECHNICAL REQUIREMENTS:

5.1 Annealing: Castings shall be annealed by heating to 2050 F ± 50, holding at that temperature for not less than 30 minutes and cooling in air.

5.2 Hardness: Castings shall have hardness not higher than Brinell 170 or equivalent.

5.3 Fracture Test: When castings are broken for fracture test, the fracture shall have uniform color and be substantially free from oxides and other defects.

6. QUALITY:

6.1 Castings shall be uniform in quality and condition, sound, and free from foreign materials and from internal and external defects detrimental to fabrication or to performance of parts. Castings shall have smooth surfaces and shall be well cleaned.

6.2 Unless otherwise specified, castings shall be produced under radiographic control.

6.3 Inspection standards and procedures shall be as agreed upon by purchaser and vendor.