

AERONAUTICAL MATERIAL SPECIFICATION

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ALLOY IRON CASTINGS, SAND, CORROSION RESISTANT 15Ni - 6Cu - 2Cr

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

2. **APPLICATION:** Parts requiring moderate corrosion and heat resistance at operating temperature up to 800 F.

3. **COMPOSITION:**

⊕	Carbon	2.40 - 2.80
	Manganese	1.00 - 1.50
	Silicon	1.50 - 2.50
	Phosphorus	0.30 max
	Sulfur	0.12 max
	Chromium	1.80 - 2.40
	Nickel	14.00 - 16.00
	Copper	6.00 - 7.00
	Lead	0.003 max

4. **CONDITION:** As cast, unless otherwise specified on the drawing.

5. **TECHNICAL REQUIREMENTS:**

5.1 **Hardness:** Brinell 130-175 or Rockwell B 75-85.

5.2 **Microstructure:** Austenite matrix with uniformly distributed graphite flakes.
⊕ Parts shall be capable of being cooled to -75 F without the austenite transforming to martensite; parts so cooled, after returning to room temperature, shall be non-magnetic when tested with a hand magnet.

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 When castings are broken for fracture test, the fracture shall have uniform color and be substantially free from oxides and other defects.
- 6.3 Unless otherwise specified, castings shall be produced under radiographic control.
- 6.4 Inspection standards and procedures shall be as agreed upon by purchaser and vendor.
- 6.5 Casting shall not be repaired by plugging, welding or other methods without written permission from the purchaser.

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