AERONAUTICAL MATERIAL SPECIFICATION

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AMS 5392D

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ALLOY IRON CASTINGS, SAND, CORROSION RESISTANT
15Ni - 6.5Cu - 2.1Cr

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 temperatures up to 800 F.

3. COMPOSITION:

Carbon	2.4 - 2.8
Manganese	1.0 - 1.5
Silicon	1.5 - 2.5
Phosphorus	0.30 max
Sulfur	0.12 max
Chromium	1.8 - 2.4
Nickel	14.0 - 16.0
Copper	6.0 - 7.0
Lead	0.003 max

3.1 If castings have sections less than 3/4 in. thick, carbon and silicon may each be as high as 3.0.

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

5. TECHNICAL REQUIREMENTS:

5.1 Hardness: Shall be Brinell 140-180 using 3000 kg load, or Rockwell B 75-88.

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

5.3 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 sufficiently non-magnetic to prevent a small steel magnet from adhering to the casting.

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.