AERONAUTICAL MATERIAL SPECIFICATIONS

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc. 485 Lexington Ave., New York 17, N.Y.

AMS 4892

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Revised

ALLOY CASTINGS, SAND AND CENTRIFUGAL, CORROSION AND HEAT RESISTANT
Nickel Base - 29.5Cu - 4Si
As Cast

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

2. APPLICATION: Primarily for parts requiring resistance to wear and galling under light to medium loads against dissimilar materials of higher hardness, and retention of hot hardness up to 1000 F.

3. COMPOSITION:

Nickel + Cobalt	60.0 min
Copper	27.0 - 31.0
Silicon	3.5 - 4.5
Iron	2.5 max
Manganese	1.5 max
Cobalt (if determined)	1.0 max
Carbon	0.25 max
Sulfur	0.015 max

4. CONDITION: As cast.

4.1 Centrifugal castings shall be rough turned and bored, unless otherwise specified.

4.2 Sand cast solid round bars shall be rough turned, unless otherwise specified.

5. TECHNICAL REQUIREMENTS:

5.1 Hardness: Material over 1/4 in. in thickness shall have hardness not lower than Brinell 275 or equivalent.

5.2 Material 1/4 in. or less in thickness shall, after precipitation heat treatment by heating to 1100 F ± 25, holding at heat for 4 - 6 hr, and air or furnace cooling, be capable of meeting the requirements of 5.1. For complicated sections, parts should be charged into a furnace which is at a temperature not higher than 600 F.

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 specified, 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 imperfections.

6.3 Radiographic and other quality standards shall be as agreed upon by purchaser and vendor.