AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS5725

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Revised

STEEL, CORROSION AND HEAT RESISTANT
16Cr - 25Ni - 6Mo

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

2. FORM: Bars up to and including 1-1/2 in. in diameter or distance between parallel sides.

3. APPLICATION: Parts, such as bolts, dowels and fittings, for use up to 1250 F.

4. COMPOSITION:

Carbon	0.12 max
Manganese	2.00 max
Phosphorus	0.030 max
Sulfur	0.030 max
Silicon	1.00 max
Chromium	15.00 - 17.50
Nickel	24.00 - 27.00
Molybdenum	5.50 - 7.00
Nitrogen	0.10 - 0.20
Copper	0.50 max

5. CONDITION: Unless otherwise specified, bars shall be cold worked and aged.

6. TECHNICAL REQUIREMENTS:

6.1 Aging: Bars shall be aged by heating to not lower than 1200 F, holding at temperature for not less than 4 hours and cooling in air.

6.2 Physical Properties: Bars shall conform to the following requiremtns:

Tensile Strength, psi	120,000 min
Yield Strength at 0.2% offset or at 0.0107 inch in 2 in. extension under load, psi	100,000 min
Elongation, % in 4D	18 min
Reduction of Area, %	35 min
Hardness, Brinell	248-321

7. QUALITY: Material shall be uniform in quality and condition, clean, sound, smooth and free from foreign materials and from internal and external defects detrimental to fabrication or to performance of parts.

8. TOLERANCES: Unless otherwise specified, tolerances shall conform to the latest issue of AMS 2241 as applicable.

9. REPORTS:

9.1 Unless otherwise specified, the vendor of the product shall furnish with each shipment three copies of a notarized report of the results of tests for chemical composition and physical properties of each heat in the shipment. This report