

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
29 West 39th Street
New York City

AMS 5725A

Issued 5-1-48

Revised 2-15-52

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

1. ACKNOWLEDGMENT: A vendor shall mention this specification number and its revision letter 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: Primarily for parts, such as bolts, dowels, and fittings, for use up to 1250 F.
4. COMPOSITION:

Check Analysis Under Min or Over Max

Ø	Carbon	0.12 max	--	0.01
	Manganese	2.00 max	--	0.04
	Silicon	1.00 max	--	0.05
	Phosphorus	0.040 max	--	0.005
	Sulfur	0.030 max	--	0.005
	Chromium	15.00 - 17.50	0.20	0.20
	Nickel	24.00 - 27.00	0.20	0.20
	Molybdenum	5.50 - 7.00	0.10	0.10
	Nitrogen	0.10 - 0.20	0.03	0.03
	Copper	0.50 max	--	0.03

5. CONDITION: Cold worked and aged.

6. TECHNICAL REQUIREMENTS:

- 6.1 Aging: Bars shall be aged by heating to not lower than 1200 F, holding at heat for not less than 2 hr and cooling in air.

6.2 Tensile Properties:

Tensile Strength, psi	120,000 min
Yield Strength at 0.2% offset, or at 0.0107 in. in 2 in. Extension Under Load (E=30,000,000), psi	100,000 min
Elongation, % in 4D	18 min
Reduction of Area, %	35 min

- 6.3 Hardness: Bars shall have hardness of Brinell 248-321 or equivalent.

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.

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