AEROSPACE MATERIAL SPECIFICATION

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

AMS 4923

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Revised

TITANIUM ALLOY
2Cr - 2Fe - 2Mo
Annealed - 120,000 psi Yield

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

2. FORM: Bars, forgings, and forging stock.

3. APPLICATION: Primarily for parts requiring strength up to 450 F and oxidation resistance up to 700 F.

4. COMPOSITION: The product shall conform to the following:

Chromium	1.5 - 3.0
Iron	1.5 - 3.0
Molybdenum	1.5 - 3.0
Oxygen	0.20 max
Carbon	0.10 max
Nitrogen	0.10 max
Hydrogen	0.0125 max
Other Elements, each	0.10 max
Other Elements, total	0.40 max
Titanium	remainder

5. CONDITION: Unless otherwise specified, hot finished, with or without subsequent cold reduction, annealed, and descaled.

6. TECHNICAL REQUIREMENTS: Material shall conform to the following requirements, and shall be capable of meeting these requirements after being heated to 1200 F ± 25 in air for 24 hr and cooled in air, unless otherwise agreed upon by purchaser and vendor.

6.1 Tensile Properties: These properties apply when the rate of strain is maintained through the yield strength between the values of 0.003 in. per in. per min. and 0.007 in. per in. per min., and then is increased so as to produce failure in approximately one additional minute. When a dispute occurs between purchaser and vendor over the yield strength values, a referee test shall be performed on a test machine having a strain rate pacer, using a rate of 0.005 in. per in. per min. through the yield strength.

Tensile Strength, psi	130,000 min
Yield Strength at 0.2% Offset or at 0.0195 in. in 2 in. Extension Under Load (E = 15,500,000), psi	120,000 min
Elongation, % in 4D (Sections under 3 in.)	15 min
Reduction of Area, % (Sections under 3 in.)	25 min

6.2 Hardness: Material shall have hardness not higher than Rockwell C 36 or equivalent.

6.3 Room Temperature Notched Stress-Rupture Test: Specimens taken from bars and forgings shall be capable of meeting the following requirements.