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400 COMMONWEALTH DRIVE WARRENDALE PA 15096

AEROSPACE MATERIAL SPECIFICATION

AMS 4925B

Issued 11-1-52
Revised 10-1-82

UNS R56440

TITANIUM ALLOY BARS AND FORGINGS

4Al - 4Mn

Annealed, 130,000 psi Yield

This specification was declared "NONCURRENT" by the Aerospace Materials Division, SAE, as of 10-28-68. It is recommended, therefore, that this specification not be specified for new designs.

This cover sheet should be attached to the "B" revision of the subject specification.

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This specification has been declared "CANCELLED" by the Aerospace Materials Division, SAE, as of 10-1-82. By this action, subject specification number and title will be deleted from the active specification index of Aerospace Material Specifications.

It has been indicated by several producers that the subject alloy is no longer being produced.

This specification is under the jurisdiction of AMS Committee "G".

SAE Technical Board rules provide that: "All technical reports, including standards approved and practices recommended, are advisory only. Their use by anyone engaged in industry or trade or their use by governmental agencies is entirely voluntary. There is no agreement to adhere to any SAE standard or recommended practice, and no commitment to conform to or be guided by any technical report. In formulating and approving technical reports, the Board and its Committees will not investigate or consider patents which may apply to the subject matter. Prospective users of the report are responsible for protecting themselves against liability for infringement of patents."

CANCELLED



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Revised 3-15-66

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1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. **FORM:** Bars, forgings, and forging stock.
3. **APPLICATION:** Primarily for parts requiring strength up to 750 F (399 C).
4. **COMPOSITION:** The product shall conform to the following:

	min	max
Manganese	3.0	5.0
Aluminum	3.0	5.0
Iron	--	0.50
Oxygen, if determined	--	0.20 (1)
Carbon	--	0.15
Nitrogen	--	0.07
Hydrogen	--	0.0125 (125 ppm)
Other Impurities, total	--	0.40 (2)
Titanium	remainder	

(1) Oxygen need not be determined but if found in excess of this limit shall not be cause for rejection if all other requirements of this specification are met.

(2) Need not be reported.

- 4.1 **Check Analysis:** Composition variations shall meet the requirements of the latest issue of AMS 2249.
5. **CONDITION:** Unless otherwise specified, material shall be supplied in the following condition:
 - 5.1 **Bars:** Hot finished, with or without subsequent cold reduction, annealed, and descaled.
 - 5.2 **Forgings:** Annealed and descaled.
6. **TECHNICAL REQUIREMENTS:** Material shall conform to the following requirements and, unless otherwise specified, shall be capable of meeting these requirements at room temperature in specimens, taken from bars or forgings, that have been maintained at $700\text{ F} \pm 10$ ($371.1\text{ C} \pm 5.6$) under an axial stress of 50,000 psi for not less than 100 hours.
 - 6.1 **Tensile Properties:** These properties apply when the rate of strain is maintained at 0.003 - 0.007 in. per in. per min. through the yield strength 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 machine having a strain rate pacer, using a rate of 0.005 in. per in. per min. through the yield strength. These properties apply to section thicknesses 3 in. and under; properties of heavier sections shall be as agreed upon by purchaser and vendor.

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