



AEROSPACE MATERIAL SPECIFICATIONS

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc.

485 Lexington Ave., New York, N. Y. 10017

AMS 6274G

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STEEL BARS, FORGINGS, AND TUBING 0.50Cr - 0.55Ni - 0.20Mo (0.18 - 0.23C) (SAE 8620)

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, mechanical tubing, and forging stock.
3. **APPLICATION:** Primarily for carburized parts which require high minimum core hardness and allow wide hardness range in sections 3/8 in. and less in thickness. The core may or may not be machinable after hardening.
4. **COMPOSITION:**

	min	max
Carbon	0.18	0.23
Manganese	0.75	1.00
Silicon	0.20	0.35
Phosphorus	--	0.025
Sulfur	--	0.025
Chromium	0.40	0.60
Nickel	0.40	0.70
Molybdenum	0.15	0.25
Copper	--	0.35

- 4.1 **Check Analysis:** Composition variations shall meet the requirements of the latest issue of AMS 2259, paragraph titled "Low Alloy Steels".
5. **CONDITION:**
 - 5.1 **Bars:** Unless otherwise ordered, in a machinable condition and hot finished having hardness not higher than Brinell 229 or equivalent, except that bars ordered cold finished may have hardness as high as Brinell 248 or equivalent.
 - 5.2 **Forgings:** As ordered.
 - 5.3 **Mechanical Tubing:** In a machinable condition and cold finished, having hardness not higher than Rockwell C 25 or equivalent, except that tubing ordered hot finished shall be furnished in a machinable condition having hardness not higher than Rockwell B 99 or equivalent.
 - 5.4 **Forging Stock:** As ordered by the forging manufacturer.
6. **TECHNICAL REQUIREMENTS:** When ASTM methods are specified for determining conformance to the following requirements, tests shall be conducted in accordance with the issue of the ASTM method listed in the latest issue of AMS 2350.
 - 6.1 **Hardenability:** Steel shall conform to the hardenability in 6.1.1, unless purchaser stipulates that the hardness in 6.1.2 shall apply:

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