AEROSPACE
MATERIAL SPECIFICATIONS

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc. 485 Lexington Ave., New York 17, N.Y.

AMS 5613G

Issued 3-1-48
Revised 9-1-65

STEEL BARS, TUBING, FORGINGS, AND RINGS, CORROSION AND MODERATE HEAT RESISTANT 12.5Cr (SAE 51410)

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

2. FORM: Bars, mechanical tubing, forgings, flash welded rings, and stock for forgings or flash welded rings.

3. APPLICATION: Primarily for parts and assemblies, such as compressor wheels and blades, requiring oxidation resistance up to 1000 F (538 C), but useful at the higher temperatures only when stresses are low.

4. COMPOSITION:

	min	max
Carbon	--	0.15
Ø Manganese	--	1.00
Silicon	--	1.00
Phosphorus	--	0.040
Sulfur	--	0.030
Chromium	11.50	13.50
Nickel	--	0.75
Molybdenum	--	0.50
Aluminum	--	0.05
Nitrogen (1)	--	0.08
Copper	--	0.50
Tin	--	0.05

(1) Determination not required for routine acceptance.

4.1 Check Analysis: Composition variations shall meet the requirements of the latest issue of AMS 2248.

5. CONDITION: Unless otherwise specified, material shall be supplied in the following condition:

5.1 Bars: All hexagons, and other bars 2.75 in. and under in diameter or distance between parallel sides shall be cold finished. All bars shall be annealed, in a machinable condition, having hardness not higher than Brinell 241 or equivalent.

5.2 Mechanical Tubing: Cold finished, having hardness not higher than Brinell 241 or equivalent.

5.3 Forgings: As ordered.

5.4 Flash Welded Rings: Annealed, having hardness not higher than Brinell 241 or equivalent.

5.4.1 Flash welded rings shall not be supplied unless specified on purchaser's part drawing. When supplied, they shall be manufactured in accordance with the latest issue of AMS 7493, unless otherwise specified.

5.5 Stock for Forgings or Flash Welded Rings: As ordered by the forging or flash welded ring manufacturer.

Printed in U. S. A.