AEROSPACE
MATERIAL SPECIFICATIONS

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc. 485 Lexington Ave., New York, N.Y. 10017

AMS 5593A
Superseding AMS 5593
Issued 7-15-63
Revised 11-1-67

ALLOY SHEET, STRIP, AND PLATE, HEAT RESISTANT
25.5Cr - 45.5Ni - 3.2Co - 3.2Mo - 3.2W - 18Fe

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

2. APPLICATION: Primarily for parts and assemblies requiring heat and oxidation resistance and where such parts may require welding during fabrication. Material is oxidation resistant up to 2150 F (1177 C).

3. COMPOSITION:

	min	max
Carbon	--	0.08
Manganese	--	2.00
Silicon	0.75	1.50
Phosphorus	--	0.030
Sulphur	--	0.030
Chromium	24.00	27.00
Nickel	44.00	47.00
Cobalt	2.50	4.00
Molybdenum	2.50	4.00
Tungsten	2.50	4.00
Copper	--	0.50
Tin	--	0.025
Lead	--	0.025
Iron	remainder	

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

4. CONDITION: Unless otherwise ordered, the product shall be supplied in the following condition:

4.1 Sheet Under 0.050 In. Thick and Strip: Cold rolled, solution heat treated free from continuous carbide network, and descaled.

4.2 Sheet 0.050 In. and Over Thick and Plate: Hot rolled, solution heat treated free from continuous carbide network, and descaled.

5. TECHNICAL REQUIREMENTS:

5.1 Tensile Properties:

Tensile Strength, psi	120,000 max
Elongation, % in 2 in. or 4D	30 min

5.1.1 Elongation requirement does not apply to sheet and strip under 0.020 in. in thickness.

5.1.2 Hardness: Shall be not higher than Rockwell B 95 or equivalent.