

**AEROSPACE
MATERIAL
SPECIFICATION**

AMS 5509

Issued 1-15-60

Revised 7-1-81

ALLOY SHEET AND STRIP, CORROSION AND HEAT RESISTANT
15Cr - 4.5Ni - 4W - 4Mo - 3Ti - 1Al
Consumable Electrode Vacuum Melted

This specification has been declared "NONCURRENT" by the Aerospace Materials Division, SAE, as of 10-13-80. It is recommended that this specification not be specified for new designs.

This cover sheet should be attached to the initial issue of the subject specification.

AERONAUTICAL MATERIAL SPECIFICATIONS

AMS 5509

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

Issued 1-15-60
Revised

ALLOY SHEET AND STRIP, CORROSION AND HEAT RESISTANT
15Cr - 45Ni - 4W - 4Mo - 3Ti - 1Al
Consumable Electrode Vacuum Melted

1. ACKNOWLEDGMENT: A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. FORM: Sheet, strip, and plate.
3. APPLICATION: Primarily for parts and assemblies, such as welded turbine nozzle assemblies, burner liner parts, tail pipes, exhaust cone assemblies, and hollow turbine blades, requiring high strength up to 1600 F and oxidation resistance up to 1800 F.
4. COMPOSITION:

Check Analysis
Under Min or Over Max

Carbon	0.08	max	--	0.01
Manganese	0.75	max	--	0.03
Silicon	0.75	max	--	0.05
Phosphorus	0.040	max	--	0.005
Sulfur	0.040	max	--	0.005
Chromium	14.00	- 16.00	0.25	0.25
Nickel	42.00	- 48.00	0.35	0.35
Molybdenum	3.00	- 4.50	0.10	0.10
Tungsten	3.00	- 4.50	0.15	0.15
Titanium	2.70	- 3.30	0.07	0.07
Aluminum	0.75	- 1.30	0.10	0.10
Boron	0.0080	- 0.016	0.0004	0.001
Iron		remainder		

5. CONDITION: Unless otherwise specified, material shall be solution heat treated and descaled, having a surface appearance as close as possible to a commercial corrosion resistant steel No. 2D finish; standards for acceptance and rejection shall be as agreed upon by purchaser and vendor.
6. TECHNICAL REQUIREMENTS:
 - 6.1 Heat Treatment: Material shall be solution heat treated by heating to 1900 F $\pm$ 25, holding at least for a time based on 60 min. per inch of thickness, but not less than 3 min., and quenching in water.