Society of Automotive Engineers, Inc.
TWO PENNSYLVANIA PLAZA, NEW YORK, N.Y. 10000

AEROSPACE MATERIAL SPECIFICATION

AMS 5840

Issued 5-1-69
Revised

STEEL WIRE, WELDING, CORROSION AND MODERATE HEAT RESISTANT
13Cr - 8.0Ni - 2.3Mo - 1.1Al
Vacuum Melted

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

2. APPLICATION: Primarily for use as filler metal for inert gas arc welding of critical weldments of precipitation hardening, corrosion resistant steels of generally similar composition and where the weld is required to have high strength and corrosion resistance comparable to that of the base metal.

3. COMPOSITION:

	min	max
Carbon	--	0.05
Manganese	--	0.10
Silicon	--	0.10
Phosphorus	--	0.008
Sulfur	--	0.010
Chromium	12.25	13.25
Nickel	7.50	8.50
Molybdenum	2.00	2.50
Aluminum	0.90	1.35
Nitrogen	--	0.01
Oxygen	--	0.005 (50 ppm)
Hydrogen	--	0.0025 (25 ppm)

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

4. CONDITION:

4.1 Unless otherwise specified, wire shall be solution heat treated, overaged, and lightly cold drawn and shall have a bright finish. Wire shall be furnished on disposable spools for machine welding or in cut lengths for manual welding, as ordered.

4.2 Drawing compounds, oxides, and dirt shall be removed.

4.2.1 If cleaning is necessary to remove surface contamination or scaling, only a light pickle followed by vacuum degassing shall be used.

5. TECHNICAL REQUIREMENTS:

5.1 Welding: Melted wire shall flow smoothly and evenly during welding and be capable of producing acceptable welds.

5.2 Spooled Wire: Shall conform to the following unless otherwise agreed upon by purchaser and vendor.