



AEROSPACE MATERIAL SPECIFICATIONS

AMS 5805B

Superseding AMS 5805A

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc.

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

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STEEL WIRE, WELDING, CORROSION AND HEAT RESISTANT 15Cr - 26Ni - 1.3Mo - 2.2Ti - 0.30V Vacuum Melted

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 use as filler metal for inert gas arc welding of critical weldments of precipitation hardening corrosion resistant steels of similar composition where the weld is required to have comparable strength and corrosion resistance to those of the parent metal.

3. **COMPOSITION:**

	min	max
Ø Carbon	--	0.08
Manganese	--	2.00
Silicon	--	1.00
Phosphorus	--	0.010
Sulfur	--	0.010
Chromium	13.50	- 16.00
Nickel	24.00	- 27.00
Molybdenum	1.00	- 1.50
Titanium	2.00	- 2.45
Boron	0.0030	- 0.010
Vanadium	0.10	- 0.50
Aluminum	--	0.35
Oxygen	--	0.005 (50 ppm)
Hydrogen	--	0.0005 (5 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 cold drawn, bright finish, as-drawn temper. 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 pickling is necessary to remove surface contamination or scaling, only a light pickle shall be used, followed by vacuum degassing.

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.
 - 5.2.1 **Cast:** Wire shall have imparted to it a curvature such that a specimen sufficient in length to form one loop, when cut from the spool and laid on a flat surface, shall form a circle not less than 15 in. and not greater than 30 in. in diameter.

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