UNITED STATES WELDING CORPORATION

USW ALLOY DESIGNATION AND DESCRIPTION	**TURBALOY® 15-5 VM** **MC-GRADE** **GTAW SOLID BARE WELDING WIRE** **IRON BASE**	**ISSUED** JANUARY 2007 REVISION NO. A	**DATA SHEET** 5826 (31)

CROSS-REFERENCE CONFORMANCE SPECIFICATIONS

AMS 5826
UNS S15500
15-5 PH
USWC 5826 (V)

15Cr 5.1Ni 0.3Cb 3.2Cu
AMS 5659 (Chemistry only)
Available in HQ-GRADE

METALLURGICAL BACKGROUND INFORMATION

TURBALOY® 15-5 VM is produced by vacuum induction melting and remelting techniques. The final wire is manufactured by special lubricant-free, roller-die forming followed by surface abrasion and cleaning processes.
These manufacturing processes ensure consistent metallurgical integrity of the alloy with regard to control of trace elements and physical purity of the welding wire surface.
TURBALOY® 15-5 VM is a martensitic, precipitation hardening stainless engineering alloy giving excellent strength and toughness in thick section weldments together with corrosion resistance equivalent to 304SS. This high grade wire is used to weld alloys of similar composition where optimum weld properties are required.

MATERIALS TO BE WELDED AND APPLICATIONS

AMS 5659, 5348, 5347, 5346, 5356, 5357, 5400, 5862.
UNS S15500. ASTM A564, A 693, A705 (XM - 12 grades).

Non-air hardening, preheat generally not needed. May be substituted for AMS 5659, AMS 5825 and AMS 5803.

WIRE CHEMISTRY WT%

Carbon	0.025	0.050	Columbium	5xC	0.40
Manganese	0.25	0.75	Copper	3.00	3.50
Silicon	-	0.60	Molybdenum	-	0.30
Sulfur	-	0.010	Aluminum	-	0.025
Phosphorus	-	0.020	Nitrogen	-	0.040 (400ppm)
Chromium	14.40	15.30	Oxygen	-	0.01 (100ppm)
Nickel	4.75	5.50	Hydrogen	-	0.0006 (6ppm)
			Iron		Balance

WELD PROPERTIES

Hardness of base alloy:
Hardened: 43 HRC
Annealed: 27 HRC

Density: 7.8gm /cc

SIZES AND FORMS AVAILABLE

STRAIGHT LENGTHS
5 lb. (2.2kg) packs
36" (914mm) lengths
Flag tagged for traceability.
(Double tagging and other lengths on request)
Wide range of diameters.

SPOOLED WIRE
Precision layer wound, with controlled cast and helix
12" (300mm) diameter spools standard
8" (200mm), 4" (100mm) and proprietary spool sizes on request.
Wide range of diameters and spool weights.

PACKAGING

Sealed, air-evacuated, argon purged Vapor Barrier e nvelopes with desiccants ensure full protection from atmospheric contamination and prolonged shelf-life.

DISTRIBUTED BY:

3579 HIGHWAY 50 EAST #104 □ CARSON CITY, NEVADA 89701-2826
775/883-7878 □ 800/423-5964 □ FAX: 775/883-7776