UNITED STATES WELDING CORPORATION

USW ALLOY DESIGNATION AND DESCRIPTION	**TURBALOY® 349** **MC-GRADE** **GTAW SOLID BARE WELDING WIRE** **IRON BASE**	**ISSUED** JANUARY 2007 REVISION NO. A	**DATA SHEET** 5782 (17)

CROSS-REFERENCE CONFORMANCE SPECIFICATIONS

AMS 5782
UNS S63197
MSRR 9500/211
349SS

20.5Cr 9.0Ni 0.50Mo 1.5W 1.2Cb 0.20Ti
USWC 5782 (V)
19-9W Mo
(Similar to 19.9DL AISI 651 and 19-9DX AISI 652).
Available in HQ-GRADE

METALLURGICAL BACKGROUND INFORMATION

TURBALOY® 349 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 ensures consistent metallurgical integrity of the alloy with regard to control of trace elements and physical purity of the welding wire surface.

TURBALOY® 349 is a high strength stainless alloy for use at elevated temperatures and is used for welding alloys of similar composition for gas turbine component manufacture and overhaul.

MATERIALS TO BE WELDED AND APPLICATIONS

AISI 651, 652.
AMS 5720, 5721, 5722, 5526, 5527, 5579, 5723, 5724, 5538, 5539, 5369.

PWHT 1650-1800°F helps to minimize sensitivity to intergranular corrosion.
GM turbine buckets, tailpipes, manifolds, superchargers.

WIRE CHEMISTRY WT%

Carbon	0.07	0.13	Molybdenum	0.35	0.65
Manganese	1.00	2.00	Tungsten	1.25	1.75
Silicon	0.30	0.65	Columbium	1.00	1.40
Sulfur	-	0.10	Titanium	0.10	0.30
Phosphorus	-	0.15	Copper	-	0.50
Chromium	19.00	22.00	Tantalum	-	0.050
Nickel	8.00	9.50	Iron		Balance

WELD PROPERTIES

Melting range: 2500° - 2600 ° F

Density: 7.93 gm/cc

Hardness: 95 - 107 HRB depending on heat treatment.

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