UNITED STATES WELDING CORPORATION

USW ALLOY DESIGNATION AND DESCRIPTION	TURBOCAST™ 694 GTAW SOLID BARE HARD FACING WIRE COBALT BASE	ISO 9001 AS 9100 Revision A	DATA SHEET 1674

CROSS-REFERENCE CONFORMANCE SPECIFICATIONS

MSRR9500/226
DMR 34-070
PWA 694
B50TF55

28Cr 5Ni 19.5W 1V
USW 1674
CM64
B50A842

METALLURGICAL BACKGROUND INFORMATION

TURBOCAST™ 694 undergoes a series of proprietary abrading and cleaning processes to remove all surface contaminants. These manufacturing processes ensure a consistent ultra-clean weld wire surface.

TURBOCAST™ 694 is a Co-Cr-W high temperature, hard surfacing alloy.

MATERIALS TO BE WELDED AND APPLICATIONS

TURBOCAST™ 694 is applied to cobalt and nickel base superalloy turbine blade components to improve performance using the GTAW process.

An important application is gas turbine blade and bucket Z-Notch repair.
Pure argon gas shielding and ultra clean conditions are required.

WIRE CHEMISTRY WT%

Carbon	0.70	1.00	Molybdenum	-	0.50
Manganese	-	1.00	Iron	-	3.0
Silicon	-	1.00	Boron	0.005	0.10
Chromium	26.00	30.00	Tungsten	18.0	21.0
Nickel	4.00	6.00	Vanadium	0.75	1.25
			Cobalt		Balance

WELD PROPERTIES

Average hardness, double bead, arc deposited produces, 50Rc (510 HV) at ambient and 310 HV at 1200°F Density: 7.82 gm/cc

SIZES AND FORMS AVAILABLE

STRAIGHT LENGTHS
5 lb. (2.2kg) packs
25" lengths
Flag tagged for traceability.
(Double tagging and other lengths on request)
.062" - .045" – 0.035" – 0.030" – 0.025" – 0.020"

PACKAGING

Sealed polyethylene envelopes. (Desiccants optional)

DFARS Compliant

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