Techalloy 80S-B6

DESCRIPTION

Techalloy 80S-B6 is used for the welding of materials with a similar composition that are utilized in high temperature service conditions. This is an air hardening material that requires a minimum preheat and interpass temperature of 350°F.

SPECIFICATIONS & APPROVALS

Quality Systems :
ISO Q9001-2000

Specifications :
AWS/ASME SFA: A5.23 EB-6: A5.28 ER80S-B6
UNS: N/A
European Standard: N/A

Approvals

TYPICAL CHEMICAL COMPOSITON

C	Mn	Si	Fe	Cr	Ni	Cu	Mo	S / P	Al
0.07	0.45	0.35	Bal.	5.50	0.10	0.10	0.55	.01 / .01	0.005

TYPICAL MECHANICAL PROPERTIES of WELD METAL

Tensile Strength	Yield Strength	Elongation 4d
83.5 ksi	70.9 ksi	25%
580 Mpa	490 Mpa	

NOTE: Mechanical properties shown above were obtained with a postweld heat treatment of 1375°F for one hour.

WELDING PARAMETERS

Process	Electrical	Voltage	Amperage	Shielding Gas	Gas Flow, CFH	Welding Speed
GMAW *Spray Transfer*	DCEP	28 - 32	.035" (0.90mm) 160-180	98 Ar - $2O_2$	30 - 50	30-50 IPM
		30 - 34	.045" (1.14mm) 180-220			
			.062" (1.60mm) 210-250			
Short Circuit	DCEP	22 -25	.035" (0.90mm) 100 - 140	75 Ar - $25CO_2$		
		23 - 26	.045" (1.14mm) 120 -150			
Globular				100% CO2		
GTAW	DCEN	20	.093" (3.20mm) 125-175	100%Ar	30 - 40	
			.125" (3.20mm) 175-250			
SAW	DCEP	28	3/32" (2.50mm) 400	N/A	N/A	110 IPM
			1/8" (3.14mm) 450			80 IMP
			5/32" (4.00mm) 500			65 IPM