Techalloy 4130

DESCRIPTION

Techalloy 4130 is a high strength, low alloy welding wire used for joining high strength steels of similar chemical composition and for overlay applications where moderate hardness is required. This wire may be used for the GMAW, GTAW, and SAW welding processes. A preheat and interpass temperature of 400°F is required.

The mechanical properties stated below were obtained by heating the weld metal to 1550°F, oil quenching and tempering at 1050°F.

SPECIFICATIONS & APPROVALS

Quality Systems :
ISO Q9001-2000

Specifications :
AWS/ASME SFA: N/A
UNS: N/A
European Standard: N/A

Approvals

TYPICAL CHEMICAL COMPOSITON

C	Mn	Si	Fe	Cr	Ni	Cu	Mo	S / P	Al
0.30	0.52	0.28	Bal.	0.95	0.10	0.20	0.20	.01 / .01	0.005

TYPICAL MECHANICAL PROPERTIES of WELD METAL

Tensile Strength	Yield Strength	Elongation 4d
145.0 Ksi	130.0 Ksi	11%

WELDING PARAMETERS

Process	Electrical	Voltage	Amperage	Shielding Gas	Gas Flow, CFH	Welding Speed
GMAW *Spray Transfer*	DCEP	28 - 32	.035" (0.90mm) 165-200	98 Ar - $2O_2$	30 - 50	30-50 IPM
		30 - 34	.045" (1.14mm) 180-220			
			.062" (1.60mm) 230-260			
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