

## Techalloy 80S-B8

### DESCRIPTION

Techalloy 80S-B8 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 preheat and interpass temperature of 450°F.

### SPECIFICATIONS & APPROVALS

**Quality Systems :**

ISO Q9001-2000

**Specifications :**

AWS/ASME SFA: A5.23 EB-8; A5.28 ER80S-B8

UNS: N/A

European Standard: N/A

**Approvals**

### TYPICAL CHEMICAL COMPOSITON

C	Mn	Si	Fe	Cr	Ni	Cu	Mo	S / P	Al
0.08	0.45	0.35	Bal.	9.15	0.10	0.10	1.00	.01 / .01	0.005

### TYPICAL MECHANICAL PROPERTIES of WELD METAL

Tensile Strength	Yield Strength	Elongation 4d
84.5 Ksi	70.5 Ksi	28%
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
<u>GMAW</u> <i>Spray Transfer</i>	DCEP	28 - 32	.035" (0.90mm) 160-180	98 Ar - 2O <sub>2</sub>	30 - 50	30-50 IPM
		30 - 34	.045" (1.14mm) 180-210			
			.062" (1.60mm) 210-250			
<i>Short Circuit</i>	DCEP	22 -25	.035" (0.90mm) 100 - 140	75 Ar - 25CO <sub>2</sub>		
		23 - 26	.045" (1.14mm) 120 -150			
<i>Globular</i>				100% CO <sub>2</sub>		
<u>GTAW</u>	DCEN	20	.093" (3.20mm) 125-175	100% Ar	30 - 40	
			.125" (3.20mm) 175-250			
<u>SAW</u>	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