WELDWIRE COMPANY, INC. **Technical Information**

Chrome Moly Welding Wire

Alloy: WW80S-B6 Conforms to Certification: AWS A5.28
Class: ER80S-B6 ASME SFA A5.28

Alloy: ER80S-B6
Weld Process: Mig and Tig Welding Processes

AWS Chemical Composition Requirements

C = 0.10 max	Ni = 0.60 max
Mn = 0.40 - 0.70	Cr = 4.50 – 6.00
Si = 0.50 max	Mo = 0.45 - 0.65
P = 0.025 max	Cu = 0.35 max
S = 0.025 max	Other = 0.50 max

Deposited Chemical Composition % (Typical)

C = 0.07	P = 0.015	Cr = 5.25
Mn = 0.60	S = 0.006	Mo = 0.50
Si = 0.04	Ni = 0.45	Cu = 0.20

Deposited All Weld Metal Properties % (AW)

Tensile Strength	82,000psi
Yield Strength	72,000psi
Elongation	27%

Deposited Charpy-V-Notch Impact Properties %

Not Applicable

Deposited Mechanical Properties % (SR)
(1575ºF 2 hours)

Tensile Strength	78,500psi
Yield Strength	60,500psi
Elongation	32%

Application

This type of material contains 4% - 6% chromium and about 0.50% molybdenum. It is used to weld materials of similar composition, usually in the form of pipe or tubing for high temperature service applications.

Recommend using preheat and inter-pass temperature of 350º F min. during welding.

Recommended Welding Parameters

Process	Diameter of Wire	Voltage (V)	Amperage (A)	Gas
Tig	.035 inches x 36	10 – 12	50 – 70	100% Argon
	.045 inches x 36	10 – 12	70 – 100	100% Argon
	1/16 inches x 36	12 – 15	100 - 125	100% Argon
	3/32 inches x 36	15 – 20	125 - 175	100% Argon
	1/8 inches x 36	15 – 20	175 - 250	100% Argon
MIG-Sprayer Transfer	.035 inches	28 – 32	165 – 200	98% Argon + 2% Helium
	.045 inches	30 – 34	180 – 220	75% Argon + 25% Co_2
	1/16 inches	30 – 34	230 – 260	100% Co_2
MIG-Short Arc Transfer	.035 inches	22 – 25	100 – 140	100% Co_2
	.045 inches	23 – 26	120 – 150	75% Argon + 25% Co_2

If additional information is needed Contact Weldwire Company, Inc. 800-523-1266