

Chrome Moly Welding Wire

Alloy: WW90S-B3
Class: ER90S-B3

Conforms to Certification: AWS A5.28
ASME SFA A5.28

Alloy: ER90S-B3

Weld Process: Mig and Tig Welding Processes

AWS Chemical Composition Requirements

C = 0.07 - 0.12	Ni = 0.20 max
Mn = 0.40 - 0.70	Cr = 2.30 - 2.70
Si = 0.40 - 0.70	Mo = 0.90 - 1.20
P = 0.025 max	Cu = 0.35 max
S = 0.025 max	Other = 0.50 max

Deposited All Weld Metal Properties % (AW)

Tensile Strength	94,000psi
Yield Strength	80,500psi
Elongation	19%

Deposited Chemical Composition % (Typical)

C = 0.10	P = 0.009	Cr = 2.55
Mn = 0.62	S = 0.008	Mo = 1.08
Si = 0.48	Ni = 0.06	Cu = 0.12

Deposited Charpy-V-Notch Impact Properties %

At +68°F 80 ft. lbs.

Application

ER90S-B3 is for welding 2¼ chrome, 1 moly steels, pipe material used in the petroleum industry for elevated temperature service.

Recommended Welding Parameters

<u>Process</u>	<u>Diameter of Wire</u>	<u>Voltage (V)</u>	<u>Amperage (A)</u>	<u>Gas</u>
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

