Inweld 120S-1

Chemical Composition of AWS A5.28 ER120S-1

C	Mn	Si	P	S	Ni	Cr	Mo	V	Ti	Al	Cu	Fe	Other
0.10	1.40-1.80	0.25-0.60	0.010	0.010	2.00-2.80	0.60	0.30-0.65	0.03	0.10	0.10	0.25	Balance	0.50

Single values are maximum unless otherwise specified.

Description and Applications

This filler metal deposits high-strength, very tough weld metal for critical applications. Originally developed for welding HY-80 and HY-100 steels for military applications, they are also used for a variety of structrual applications wheter tensile strength requirements exceed 100 ksi (690 MPa), and exellent toughness is required to temperatures as low as -60ºF (-50ºC). Mechanical properties obtained from weld deposits made with electrodes of these classifications will vary depending on heat input used.

Procedure

Typical Weld Metal Properties

	AWS Spec
Average As-Welded Hardness:	
Tensile Strength:	120,000
Yield Strength:	105,000
Elongation:	14%

Recommended Parameters

*GMAW (MIG) Parameters – DCEP (DC+)

Short Circuit using 100% CO2 or 75% Ar/25% CO2 Shielding Gas

Wire Diameter	Voltage	Amperage
.030	15-21	40-145
.035	16-22	50-180
.045	17-22	75-250

Spray Arc (98% Ar/2% O2) Shielding Gas

.030	24-28	135-230
.035	24-28	165-300
.045	24-30	200-375
1/16	24-32	275-500

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