Inweld 80S-B3L

AWS A5.28 ER80S-B3L

Chemical Composition of Inweld 80S-B3L

Fe	C	Cr	Ni	Mo	Mn	Si	P	S	V	Other
Balance	0.05	2.30-2.70	0.20	0.09-1.02	0.40-0.70	0.40-0.70	0.025	0.025	---	0.50

Single values are maximum unless otherwise specified.

Description and Applications

ER80S-B2 is used to weld 1/2Cr-1/2Mo, 1Cr-1/2Mo, and 1-1/4Cr-1/2Mo steels for elevated temperatures and corrosive service. It is also used for joining dissimilar combinations of Cr-Mo and carbon steels. All transfer modes of the GMAW process may be used. Careful control of preheat, inter-pass temperatures, and post heat is essential to avoid cracking. ER80S-B2 is classified after post weld heat treatment. Special care must be used when using it in the as-welded condition due to higher strength levels.

Typical Weld Metal Properties

	AWS Spec
Tensile Strength:	80,000 psi
Yield Strength:	68,000 psi
Elongation:	17%

Recommended Parameters

GMAW (DCEP – Electrode+)

Wire Diameter	Voltage	Amperage	Wire Feed IPM
0.023”	14-19	30-85	10-15
0.030”	15-20	40-130	12-24
0.035”	16-25	60-235	11-40
0.045”	18-23	90-290	12-22

GTAW (DCEN – Electrode-)

Filler Wire Size	Tungsten Dia.	Voltage	Amperage	Argon (CFH)
1/16”	1/16”	12	100-160	20
3/32”	3/32”	12	120-250	20
1/8”	1/8”	12	150-300	25