

Inweld 90S-B3

AWS A5.28 ER90S-B3

Chemical Composition of Inweld 90S-B3

Fe	C	Cr	Ni	Mo	Mn	Si	P	S	V	Cu
Balance	0.07- 0.12	2.30- 2.70	0.20	0.90- 1.20	0.40- 0.70	0.40- 0.70	0.025	0.025	---	0.50

Single values are maximum unless otherwise specified.

Description and Applications

90S-B3 is used to weld such alloys as 2 1/4% Cr-1% Mo steels, which are found in high temperature and high pressure piping and vessels. May also be used on carbon steels to Cr-Mo steels but should always have careful control of preheat, inter-pass and post-heat to avoid cracking. Use with a pre-heat and inter-pass temperature of 375°F minimum.

Typical Weld Metal Properties

	<u>AWS Spec</u>
Tensile Strength:	90,000 psi
Yield Strength:	78,000 psi
Elongation:	17%

Recommended Parameters

GMAW (DCEP – Electrode+) Spray

<u>Wire Diameter</u>	<u>Voltage</u>	<u>Amperage</u>
0.030"	24-28	135-230
0.035"	24-28	165-300
0.045"	24-30	200-375
1/16"	24-32	275-500
3/32"	24-33	300-600

GTAW

<u>Wire Diameter</u>	<u>Voltage</u>	<u>Amperage</u>	<u>Argon (CFH)</u>
0.023"	14-19	30-90	20-25
0.030"	15-21	40-145	20-25
0.035"	16-22	50-180	20-25
0.045"	17-22	75-250	20-25

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