

Weldcote Metals

Alloy ER90S-B3

AWS A5.28



Description and Applications:

ER90S-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.

Chemical Composition of ER90S-B3

C	Mn	Si	P	S	Ni	Cr	Mo	V	Ti	Zr	Al	Cu	other
0.07-0.12	0.40-0.70	0.40-0.70	0.025	0.025	0.20	2.30-2.70	0.90-1.20	--	--	--	--	0.35	0.50

Single values are maximum unless otherwise specified.

(As Welded)

Shielding Gas: Argon/1-5% O₂

Tensile Strength (min) psi: 90,000

MPA: 620

Yield Strength (min) psi: 78,000

MPA: 540

Elongation % (min) 17