Weldcote Metals

Alloy ER80S-B2 AWS A5.28





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, interpass temperatures, and postheat is essential to avoid cracking. ER80S-B2 is classified after postweld heat treatment. Special care must be used when using it in the as-welded condition due to higher strength levels.

Chemical Composition of ER80S-B2

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C	Mn	S1	P	S	N1	Cr	Mo	V	T1	Zr	Αl	Cu	other
0.07-0.12	0.40-0.70	0.40-0.70	0.025	0.025	0.20	1.20-1.50	0.40-0.65					0.35	0.50

Single values are maximum unless otherwise specified.

(As Welded)

Shielding Gas: Argon/1-5% 02

Tensile Strength (min) psi: 80,000

MPa: 550

Yield Strength (min) psi: 68,000

MPa: 470

Elongation % (min) 19

Weldcote Metals believes this data to be accurate and to reflect qualified expert opinion regarding current research. However, Weldcote Metals can not make any expressed or implied warranty as to this information.