E91T1-B3

Classification: AWS A5.29 / ASME SFA 5.29 E91T1-B3C, E91T1-B3M

Description: E91T1-B3 is used for single and multiple pass, all position welding of 2 ¼% Cr/ 1% Mo steels that are subjected to high temperature service. Applications include welding A387 Gr. 22 plate and A335 P22 pipe. It has increased deposition rates compared to covered and solid electrodes, greater tolerance of mill scale and rust. Fast freezing slag removes cleanly and easily and has low spatter emission. Shielding Gases: 100% CO_2 or 75% Ar/25% CO_2

Typical Deposit Chemistry: %

	C	Mn	P	S	Si	Cr	Mo
CO_2	.08	.51	.01	.01	.59	2.27	.99
75Ar/25CO_2	.08	.54	.01	.01	.62	2.35	.98

Typical Mechanical Properties:

	SR 1 hr. @ 1275°F	
	CO_2	**75Ar/25CO_2**
Tensile Strength(psi)	102,100	105,300
Yield Strength (psi)	87,400	87,700
Elongation	18	19

Typical Welding Parameters – Carbon & Low Alloy – Flux Cored -All position-CO_2*- DCEP

Dia.	Position	Operating Range		Optimum			
		Amps	Volts	Amps	WFS (ipm)	Volts	ESO
.035"	Flat	125-250	21-30	200	600	27	3/8"-3/4"
	Overhead	115-220	21-28	175	490	25	3/8"-3/4"
	Vertical Up	120-215	21-28	170	450	25	3/8"-3/4"
.045"	Flat	130-300	21-32	250	450	28	½ - 1"
	Overhead	150-280	21-30	190	305	26	½ - 1"
	Vertical Up	130-260	21-29	190	305	25	½ - 1"
1/16"	Flat	150-400	22-34	330	330	29	½"-1"
	Overhead	150-310	22-28	225	180	26	½ -1"
	Vertical Up	150-280	22-27	225	180	25	½ - 1"

*For 75Ar/25CO_2 decrease voltage by 1 to 1.5 volts.