

TL-86B6

AWS A5.5 E8016-B6
EN ISO 3580-B-E5516-5CM
JIS Z 3223 E5516-5CM

Characteristics and Applications:

TL-86B6 is a low hydrogen type electrode. The weld metal contains 5%Cr-0.5%Mo. It provides high tensile strength, good toughness, and good heat resistance. The product is suitable for all-position welding of 5%Cr-0.5%Mo steel such as ASTM A387 Gr.5 for refineries, petrochemical and electric power plants. Proper base metals are including pipe (ASTM A213-T5, A335-P5), drawing steel (A387-5), forging (A182-F5), etc..

Notes on usage:

1. Clean up the contaminations on the base metal and welding seam so as not to derogate the weld metal quality from particles.
2. Dry the electrodes at 350-400°C for 60 minutes before using.
3. Use back-step method to prevent arc starting from blowholes and hold for 3-5 seconds at every end-up.
4. Maintain short arc length. Moving range should be controlled within 3 times of the wire's dia when you are welding with weave method.
5. Do not exceed the range of recommended current. Over heat input might decrease the impact value.
6. Pre-heat the workpiece at 250~350°C and proceed PWHT according to relevant specifications.

Typical chemical composition of weld metal (wt%):

	C	Mn	Si	P	S	Cr	Mo
AWS	0.05-0.10	≤ 1.0	≤ 0.90	≤ 0.03	≤ 0.03	4.0-6.0	0.45-0.65
EN ISO	0.05-0.10	≤ 1.00	≤ 0.90	≤ 0.030	≤ 0.030	4.0-6.0	0.45-0.65
Typical value	0.070	0.60	0.5	0.02	0.01	4.9	0.55

Typical mechanical properties of weld metal:

	Yield strength MPa(ksi)	Tensile strength MPa(ksi)	Elongation %	PWHT
AWS	≥ 460(67)	≥ 550(80)	≥ 19	740°Cx1hr
EN ISO	≥ 460(67)	≥ 550(80)	≥ 17	740°Cx1hr
Typical value	550(80)	640(93)	23	740°Cx1hr

Welding position:



Sizes and recommended current range (AC or DC <+>):

Diameter (mm)		3.2	4.0		5.0
Length (mm)		350	350	450	450
Amps	F	90-130	100-160		160-210
	V&OH	90-110	110-140		-

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