

TLH-98B3

AWS A5.5 E9018-B3 H4
EN ISO 3580-B-E6218-2C1M H5

Characteristics and Applications:

TLH-98B3 is an iron powder low hydrogen type electrode with low impurity for low alloy heat resistance steel. The weld metal contains 2.25%Cr-1%Mo that makes the electrodes more suitable for the welding of piping steels (STPA24, A335-P22), boilers (STBA24, A199T22, A213T22, A200T22), heat exchanger pipes (A182-F22, A336-F22) which the service temperature is at 550°C. The product provides good creep rupture strength at high temperature.

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.

Typical chemical composition of weld metal (wt%):

	C	Mn	Si	P	S	Cr	Mo
AWS	0.05-0.12	≤0.90	≤0.80	≤0.03	≤0.03	2.00-2.00	0.90-1.20
EN ISO	0.05-0.12	≤0.90	≤1.00	≤0.030	≤0.030	2.00-2.50	0.90-1.20
Typical value	0.073	0.53	0.17	0.020	0.01	2.20	1.00

Typical mechanical properties of weld metal:

	Yield strength MPa(ksi)	Tensile strength MPa(ksi)	Elongation %	Charpy V-Notch J (ft-lbf) -30°C (-20°F)	PWHT
AWS	≥530(77)	≥620(90)	≥17	-	690°Cx1hr
EN ISO	≥530(77)	≥620(90)	≥15	-	690°Cx1hr
Typical value	600(87)	700(102)	22	70(52)	690°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		140-190		190-240	
	V&OH	80-110		130-160		-	

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