

TL-508

AWS A5.1 E7018
EN ISO 2560-A-E 42 3 B 3 2 H10
JIS Z 3211 E4918

Characteristics and Applications:

TL-508 is a low hydrogen type electrode for the welding of 490N/mm² grade high tensile steel. The welding can be done with high deposition rate, good X-ray soundness and mechanical properties. It is especially suitable for nuclear power stations, petroleum chemical plants, and heavy steel plates. Proper base metals such as: structural steel, steel casting, thin plate, steel strip, carbon steel tube, etc..

Notes on usage:

1. Bake the electrodes at 300-350°C for 60 minutes before using. Take out a batch of half day consumption and keep in the environment at 100~150°C during welding process.
2. Use back-step method to prevent arc starting from blowholes and hold for 3-5 seconds at every end-up.
3. Maintain short arc length. Moving range should be controlled within 3 times of the wire's dia when you are welding with weave method.
4. Do not exceed the range of proper currents. Over heat input might decrease the impact toughness.

Typical chemical composition of weld metal (wt%):

	C	Mn	Si	P	S	Ni	Cr	Mo	V	Nb	Cu
AWS	≤0.15	≤1.60	≤0.75	≤0.035	≤0.035	≤0.30	≤0.20	≤0.30	≤0.08	-	-
EN ISO	≤0.15	≤2.0	-	-	-	≤0.3	≤0.2	≤0.2	≤0.05	≤0.05	≤0.3
Typical value	0.07	1.30	0.60	0.020	0.005	0.012	0.021	0.005	0.013	0.004	0.01

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)
AWS	≥400(58)	≥490(70)	≥22	≥27(20)
EN ISO	≥420(61)	500-640(73-93)	≥20	≥47(35)
Typical value	502(73)	584(85)	30	100(74)

Welding position:



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

Diameter (mm)		2.6	3.2	4.0		5.0
Length (mm)		350	350	350	450	450
Amps	F	55-85	90-130	130-180		170-240
	V&OH	50-80	80-120	110-160		150-180

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