TL-50

AWS A5.1 E7016
EN ISO 2560-A E 42 3 B 1 2
JIS Z 3211 E4916

Characteristics and Applications:

TL-50 is a low hydrogen type electrode for the welding of 490N/mm^2 high tensile steel. The welding can be done with stable arc, less spatters, good slag covering, release, and good X-ray soundness. It is suitable for low alloy steels, medium carbon steels, heavy steel plates, cast steels. Proper base metals such as: structural steel, steel tubes for Heat transfer, plate for pressure vessel, low-alloy steel tube, mechanical structural carbon-steel plate, API-5L.A25.X52.X56.X60.X65, etc. Due to good X-ray and mechanical properties, TL-50 is used for skill testing and competition by choice.

Notes on usage:

1. Clean up the contaminations on the base metal to avoid porosity and crack.
2. Dry the electrodes at 300-350℃ for 60 minutes, and keep at 100-150℃ 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.

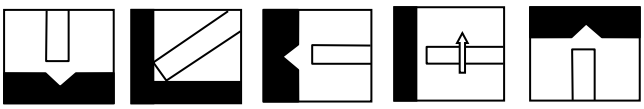
Typical chemical composition of weld metal (wt%):

	C	Mn	Si	P	S
AWS	≦0.15	≦1.6 0	≦0.75	≦0.035	≦0.035
EN ISO	-	≦2.0	-	-	-
Typical value	0.08	1.1	0.5	0.020	0.006

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	445(65)	550(80)	27	140(103)

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	60-90	90-130	130-180		180-240
	V&OH	50-80	90-120	110-160		160-200

COVERED ELECTRODES

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