

TL-60

AWS A5.5 E8016-G
EN ISO 2560-A-E 46 3 Z B 1 2
JIS Z 3211 E5516-G

Characteristics and Applications:

TL-60 is a low hydrogen type electrode for the welding of 550N/mm² grade high tensile steel in all positions. It is suitable for high carbon steels, low manganese steels, ships and high pressure vessels due to its good crack resistance. Proper base metals include forging, structural steel, alloy steel, high pressure pipe, pressure vessel, ASTM A299/302/372, etc..

Notes on usage:

1. Be sure to clean up the contaminations on the base metal and welding seam so as not to derogate the weld metal quality from particles.
2. Maintain short arc length. Moving range should be controlled within 3 times of the wire's dia when you are welding with weave method.
3. Dry the electrodes at 350~400°C for 60 minutes before use. Take out a batch of half day consumption and keep in the environment at 100~150°C during welding process.
4. Do not exceed the range of recommended current. Over heat input might decrease the impact value.
5. Use back-step method to prevent arc starting from blowholes and hold for 3-5 seconds at every end-up.

Typical chemical composition of weld metal (wt%):

	C	Mn	Si	P	S	Ni	Cr	Mo	V	Cu	Nb
AWS	-	≥ 1.0	-	≤ 0.03	≤ 0.03	-	-	-	-	-	-
EN ISO	-	-	-	-	-	-	-	-	-	-	-
Typical value	0.08	1.50	0.50	0.02	0.007	0.018	0.030	0.002	0.007	0.006	0.004

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	≥ 460(67)	≥ 550(80)	≥ 19	-	620°C x1hr
EN ISO	≥ 460(67)	530-680(77-99)	≥ 20	≥ 47(35)	-
Typical value	525(76)	610(88)	30	70(52)	620°C x1hr

Welding position:



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

Diameter (mm)	3.2	4.0	5.0
Length (mm)	350	450	450
Amps	F	90-130	140-180
	V&OH	80-120	120-160

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