

TL-118M

JIS Z 3212 D8016
AWS A5.5 E11018M
EN 757 E 62 5 Mn2NiMo B 32

Characteristics and Applications:

TL-118M is an iron powder low hydrogen type, 760N/mm² grade high tensile steel electrode with excellent slag covering and crack resistance. Owing its good mechanical properties, it is suitable for HY80, HT80, HSLA80 high tensile steel welding of pressure vessel, bridge, offshore structure, construction machinery. While in welding heat treatable low alloy steel (such as SCM21/4 chrome-molybdenum steel, SNCM8 Nickel Chromium Molybdenum Steel, etc.), due to high content of carbon, pre-heating of thick plate, maintenance of inter-pass temperature and slow cool-down are sometimes required according to base metal type.

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. Dry the electrodes at 350-400°C for 60 minutes before use.
3. Maintaining short arc length as possible is highly recommended. While welding with weave method, moving range should be controlled within 3 times of the wire's dia.
4. Use back-step method and hold for 3-5 seconds at every end-up to prevent arc starting from blowholes.
5. When the heat input is excessive, the impact value tends to be reduced. Therefore, select proper heat input depending on the required impact value.
6. Pre-heat at 100~150°C is sometime required according to base metal or its thickness.

Typical chemical composition of weld metal (wt%)

C	Mn	Si	P	S	Ni	Mo	Cr
0.08	1.60	0.45	0.018	0.008	2.00	0.35	0.30

Typical mechanical properties of weld metal

YS (MPa)	TS (MPa)	EL %	CVN -50°C J
700	800	22	54

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	130-180	180-240
	V&OH	80-120	110-160	-

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