TN-38

AWS A5.5 E8018-C2 EN ISO 2560-A E 46 6 3Ni B 1 2 JIS Z 3211 E5518-N7

Characteristics and Applications:

TN-38 is an iron-powder low hydrogen electrode for the welding of low temperature service steel. It provides good impact value at -75°C. The weld metal contains 3.5%Ni. It is suitable for the welding LPG tanks or 3.5%Ni steel for low temperature service. The welding can produce good X-ray soundness, high deposition rate. Proper base metals are also including high-carbon steel, low Manganese alloy steel, 540~610N/mm² high tensile steel, cast iron, steel pipe for low temperature service, pressure vessel, ASTM A333 Gr.3.4.7.9/A336 Gr.F31/A350 Gr.LF3/A352 Gr.LC3/ A420 Gr.WPL3/A469/A470/A572/A707 Gr.L7.L8/A757 Gr.B3N.B3Q/A765 Gr.3, 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. Pre-heat at $50\sim100^{\circ}$ C and PWHT at $600\sim620^{\circ}$ C.

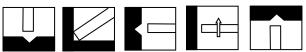
Typical chemical composition of weld metal (wt%):

	С	Mn	Si	Р	S	Ni
AWS	≦0.12	≦1.25	≦0.80	≦0.03	≦0.03	3.00-3.75
EN ISO	-	≦1.4	-	-	-	2.6-3.8
Typical value	0.055	0.90	0.20	0.013	0.004	3.30

Typical mechanical properties of weld metal:

	Yield strength MPa(ksi)	Tensile strength MPa(ksi)	Elongation %	Charpy V-Notch J (ft-lbf) -75°C (-100°F)	PWHT
AWS	≥460(6 7)	≥550(80)	≧19	≥27(20)	605°C x1hr
EN ISO	≥460(6 7)	530-680(77-99)	≧17	≥47(35)(60°C)	-
Typical value	518(76)	592(86)	28	120(88)	605°Cx1hr

Welding position:



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

Diameter (mm)		er (mm)	3.2	4.0	5.0
Length (mm)		n (mm)	350	450	450
	Current	F	100-140	140-180	180-230
	(Amps)	V&OH	80-110	130-160	-

^{*}The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and TienTai Electrode Co., Ltd. expressly disclaims any liability incurred from any reliance thereon. Typical data is obtained when welded and tested in accordance with AWS specification. Other tests and procedures may produce different results. No data is to be construed as recommendation for any welding condition or technique not controlled by TienTai Electrode Co., Ltd.

