

NITTETSU L-80SN

JIS Z 3211 E7816-N9M3U

☆AWS A5.5 E11016-G

For 780MPa High Tensile Strength Steel

APPLICATIONS

Welding of 780MPa high tensile strength steel (WEL-TEN 780) for offshore structures, pressure vessels, storage tanks and structures to be used in frigid area.

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CHARACTERISTICS

NITTETSU L-80SN is a ultra low hydrogen type electrode with high resistance to moisture absorption. Weld metal shows excellent toughness at around -80°C . It can be used with confidence for welding extremely thick plates such as racks of offshore structures since extremely low diffusible hydrogen content in weld metal assures satisfactory crack resistance.

GUIDELINES FOR USAGE

1. Electrodes should be redried at $350\sim 400^{\circ}\text{C}$ for 60 minutes before use, kept at $100\sim 150^{\circ}\text{C}$ and taken out only as needed.
2. Preheating in accordance with the type of steel, plate thickness, restraint, etc., i.e. at $100\sim 150^{\circ}\text{C}$ for a 35mm thick plate, is necessary to prevent cracks.
3. Welding with excessively high heat input, i.e. more than 40 kJ/cm for a 35 mm thick plate, should be avoided to assure strength and toughness of weld.

■ TYPICAL CHEMICAL COMPOSITION OF WELD METAL (%)

C	Si	Mn	Ni	Mo	Diffusible Hydrogen (Gas Chromatography) ml /100g
0.05	0.36	1.39	4.64	0.48	1.6

■ TYPICAL MECHANICAL PROPERTIES OF WELD METAL

0.2% Proof Stress, MPa	Tensile Strength, MPa	Elongation, %	Charpy 2V-notch at -80°C , J
760	860	22	90

■ SIZES & RECOMMENDED CURRENT RANGE <AC or DC(+)>

Diameter (mm)		3.2	4.0	5.0	6.0
Length (mm)		350	400	400	400
Current	F	100~140	140~190	190~250	250~310
	A V, OH	90~130	120~170	140~190	—

Approval: ABS, LR, NV

Identification color: End-pink, secondary-green