

# L-60LT

JIS Z 3211 E6216-G

\*AWS A5.5 E9016-G

## For 590MPa High Tensile Strength Steel

### APPLICATIONS

Welding of 590MPa high tensile strength steel (N-TUF490) for low temperature service for structures to be used in frigid area, pressure vessels, storage tanks and offshore structures.

### CHARACTERISTICS

L-60LT is an extra low hydrogen type electrode for all positions with high resistance to moisture absorption. Weld metal shows excellent toughness at temperatures around  $-50^{\circ}\text{C}$  and CTOD (crack tip opening displacement) value.

### GUIDELINES FOR USAGE

1. Electrodes should be redried at  $350\sim 400^{\circ}\text{C}$  for 60 minutes before use,
2. Preheating in accordance with the type of steel, plate thickness, restraint, etc., i.e. at  $50\sim 100^{\circ}\text{C}$  for a 35mm thick plate, is necessary to prevent cracks.
3. Select the optimum heat input in accordance with the required specification of structures and plate thickness to assure desired toughness and CTOD value. Arc length should be kept as short as possible during welding.

### WELDING POSITION



#### ■ TYPICAL CHEMICAL COMPOSITION OF WELD METAL ( % )

C	Si	Mn	Ni	Mo	Ti	B
0.07	0.41	1.51	0.67	0.18	0.03	0.002

#### ■ TYPICAL MECHANICAL PROPERTIES OF WELD METAL

Yield strength, MPa	Tensile Strength, MPa	Elongation, %	Charpy 2V-notch at $-50^{\circ}\text{C}$ , J
600	680	26	180

#### ■ TYPICAL CTOD VALUES OF WELD JOINT (AS WELDED)

Base Metal (Thickness)	Groove	Welding Conditions	CTOD Value, (mm)		
			$-10^{\circ}\text{C}$		
A537C1.2 Mod (25mm)	Y	Diameter: 4.0mm Position: V-up Heat Input: 32kJ/cm	1.17	1.11	1.26

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

Diameter (mm)		3.2	4.0	5.0
Length (mm)		350	400	400
Current A	F, H-Fil	100~140	140~190	190~250
	V-up, OH	90~130	120~170	140~190

Approval: ABS, DNV

Identification color: End-silver, secondary-brown