

N-12M

☆AWS A5.5 E8016-C1

For 610MPa High Tensile Strength Steel

DESCRIPTION

Welding of 610MPa high tensile strength steel (N-TUF490) for low temperature service steel.

APPLICATION

N-12M is a low hydrogen type electrode for all positions. This electrode is used by direct current (DCEP) polarity. Weld metal shows excellent low temperature toughness under post weld heat treatment (PWHT).

PROCEDURE

1. Welding is operated in DCEP electrode positive polarity.
2. Electrodes should be dried at 350~400°C for 60 minutes before use.
3. Preheating in accordance with the type of steel, plate thickness, restraint, etc., i.e. at 50~100°C for a 35mm thick plate, is necessary to prevent cracks.
4. Select the optimum heat input in accordance with the required specification of structure and plate thickness to assure desired toughness.
5. Arc length should be kept as short as possible during welding.

WELDING POSITION



■ TYPICAL CHEMICAL COMPOSITION OF WELD METAL (%)

C	Si	Mn	P	S	Ni	Mo
0.07	0.36	1.15	0.011	0.002	2.59	0.12

■ TYPICAL MECHANICAL PROPERTIES OF WELD METAL

Yield Strength, MPa	Tensile Strength, MPa	Elongation, %	Charpy 2V-notch at -50°C, J	PWHT
579	659	25	161	580°C×4.5h

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

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

Identification color: End greeny, secondary white

SMAW



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