

Stick Electrode for Low Temperature Resistant Steel

KN-816C3

Classification

AWS	A 5.5	E8016-C3
JIS	Z3211	E5516-N1
EN	2560-A	E 46 4 1Ni B
GB	T 5118	E5516-C3

Type of coating: Low hydrogen type

Applications and Features

- (1) It is suitable for welding 540N/mm² grade steel for low temperature resistance.
- (2) It provides superior weldability and X-ray quality welds.
- (3) Weld metal contains 1.1%Ni-0.25%Mo and good impact properties at -40°C.
- (4) It is ideal for welding in LNG storage tanks or 1%Ni steel for low temperature resistance.

Welding Position

All Positions

Welding Instruction

- (1) Clean up the contaminations on the steel.
- (2) Dry the electrodes at 350~400°C for 60 minutes before welding.
- (3) Keep arc as short as possible. Take the back step method to prevent porosity at arc start and re-start. (Please refer to Appendix A)
- (4) High heat input will lower the impact value. Please carefully select the welding current.
- (5) The preheat temperature for thick plate is 50~100°C.

Typical Chemical Composition of Weld Metal (wt %)

C	Si	Mn	P	S	Ni
0.060	0.52	0.88	0.010	0.008	0.93

Typical Mechanical Properties of Weld Metal (As welded)

Tensile Strength N/mm ² (kgf/mm ²)	Yield Strength N/mm ² (kgf/mm ²)	Elongation %	Charpy V-Notch	
			°C	J (kgf -m)
560(57.1)	490(50.0)	32	0	—
			-40	118(12.0)

Size and Suggested Operating Range (AC or DC+)

Diameter (mm) x Length(mm)		2.6x300	3.2x350	4.0x400	5.0x400
Amp	H	70~100	100~140	140~180	180~230
	V-up/OH	60~90	90~130	120~160	—