

# Stick Electrode for Low Temperature Resistant Steel

## KN-816C1

### Classification

AWS	A 5.5	E8016-C1
JIS	Z3211	E5516-N5
EN	2560-A	E 46 6 2Ni B
GB	T 5118	E5516-C1

Type of coating: Low hydrogen type

### Applications and Features

- (1) It is suitable for welding 540N/mm<sup>2</sup> grade steel for low temperature resistance.
- (2) Good weldability and X-ray quality welds.
- (3) Weld metal contains 2.5%Ni and good impact properties at -60°C.
- (4) Ideal for welding low temperature machine, Al-killed steel for low temperature and 2.5%Ni steel, such as JIS G3127 and SL2N 255.

### 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
0.070	0.43	0.90	0.010	0.008	2.60

### Typical Mechanical Properties of Weld Metal (PWHT:745°Cx1Hr)

Tensile Strength N/mm <sup>2</sup> (kgf/mm <sup>2</sup> )	Yield Strength N/mm <sup>2</sup> (kgf/mm <sup>2</sup> )	Elongation %	Charpy V-Notch	
			°C	J (kgf -m)
570(58.1)	480(48.9)	31	0	—
			-60	82(8.4)

### 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	—