

# Stick Electrode for Low Temperature Resistant Steel

## KN-818C3

### Classification

AWS	A 5.5	E8018-C3 /E5518-C3
JIS	Z3211	E5518-N2
EN	2560-A	E 46 4 1Ni B
GB	T 5118	E5518-C3

Type of coating: Iron powder low hydrogen type

### Applications and Features

- (1) KN-818C3 is suitable for welding 540N/mm<sup>2</sup> grade steel for low temperature resistance.
- (2) It provides high deposition rate, good mechanical properties and X-ray quality welds.
- (3) Weld metal contains 1.0%Ni-0.20%Mo and good impact properties at -40°C.
- (4) It is ideal for welding in ASTM A226 (A, B), A235 (F, G), A236(C, E, F) and A302 steel.

### 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 90~120°C.

### Typical Chemical Composition of Weld Metal (wt %)

C	Si	Mn	P	S	Ni
0.070	0.62	0.90	0.013	0.012	1.02

### Typical Mechanical Properties of Weld Metal (As welded)

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)
560(57.1)	470(48.0)	29	-40	128(13.1)
			-45	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	—