

# Stick Electrode for Heat Resistant Steel

## KL-918B3

### Classification

AWS	A 5.5	E9018-B3
JIS	Z3223	E6218-2C1M
EN	3580-A	E CrMo2 B
GB	T 5118	E6018-B3

Type of coating: Iron powder low hydrogen type

### Applications and Features

- (1) KL-918B3 is suitable for welding Cr-Mo alloy steel.
- (2) It provides high deposition rate and good weldability.
- (3) Weld metal contains 2.25%Cr-1%Mo.
- (4) It is ideal for welding high pressure steel pipes, heat exchanger steel pipes of boilers and steels for petro-chemical plants, such as ASTM A387Gr.22 and JIS SCMV4.

### 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) Preheat and interpass temperature: 160~190°C, PWHT: 675~705°C.

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

C	Si	Mn	P	S	Cr	Mo
0.080	0.70	0.69	0.013	0.009	2.32	1.07

### Typical Mechanical Properties of Weld Metal (PWHT:690°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)
670(68.3)	590(60.2)	24	0	—
			-29	—

### Size and Suggested Operating Range (AC or DC+)

Diameter (mm) x Length(mm)		3.2x350	4.0x400	5.0x400
Amp	F	90~140	140~190	180~240
	V-up/OH	80~120	120~160	—