

Stick Electrode for Heat Resistant Steel

KL-816B2

Classification

AWS	A 5.5	E8016-B2
JIS	Z3223	E5516-1CM
EN	3580-A	E CrMo1 B
GB	T 5118	E5516-B2

Type of coating: Low hydrogen type

Applications and Features

- (1) KL-816B2 is suitable for welding Cr-Mo alloy steel.
- (2) Weld metal contains 1.25%Cr-0.5%Mo.
- (3) It provides great creep resistance at 450°C.
- (4) It is ideal for welding high pressure steel pipes, heat exchanger steel pipes of boilers, rolled, cast and forged steel, such as ASTM A387Gr.11 and JIS SCMV3.

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	0.46	0.64	0.015	0.010	1.28	0.53

Typical Mechanical Properties of Weld Metal (PWHT:690°Cx1Hr)

Tensile Strength N/mm ² (kgf/mm ²)	Yield Strength N/mm ² (kgf/mm ²)	Elongation %	Charpy V-Notch	
			°C	J (kgf -m)
630(64.2)	540(55.1)	28	0	—
			-29	—

Size and Suggested Operating Range (AC or DC+)

Diameter (mm) x Length(mm)	3.2x350	4.0x400	5.0x400
Amp	90~140	90~140	140~190
	80~120	80~120	120~160