

Stick Electrode for Heat Resistant Steel

KL-816B1

Classification

| | | |
|-----|--------|-------------|
| AWS | A 5.5 | E8016-B1 |
| JIS | Z3223 | E5516-CM |
| EN | 3580-A | E CrMo0.5 B |
| GB | T 5118 | E5516-B1 |

Type of coating: Low hydrogen type

Applications and Features

- (1) KL-816B1 is suitable for welding Cr-Mo alloy steel.
- (2) Weld metal contains 0.5%Cr-0.5%Mo.
- (3) It is ideal for welding boilers, petro-chemical plants, forged steel and alloy steel, such as ASTM A387Gr.2, JIS SCM V 1.

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 |
|-------|------|------|-------|-------|------|------|
| 0.070 | 0.45 | 0.80 | 0.013 | 0.008 | 0.54 | 0.50 |

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) |
|--|--|-----------------|----------------------|------------|
| 620(63.2) | 550(56.1) | 30 | 0 -29 | — — |

Size and Suggested Operating Range (AC or DC+)

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