

Stick Electrode for Hardfacing

KH-60-R

Classification

| | | |
|-----|-------|---------------|
| AWS | A5.13 | — |
| JIS | Z3251 | DF3B-600-R |
| EN | 14700 | E Fe4 |
| GB | T 984 | EDPCrMo-A5-03 |

Type of coating: High titania type

Applications and Features

- (1) Weld metal is martensite structure with stable hardness but inferior toughness.
- (2) It is difficult to be machined and cut.
- (3) It provides excellent arc re-start, slag removal and bead appearance.
- (4) It is suitable for severe metal-to-earth wear condition, such as repairing valve brackets, pump linings and blades.

Welding Instruction

- (1) Dry the electrodes at 70-100°C for 30-60 minutes before use.
- (2) Preheat temperature should be $\geq 200^{\circ}\text{C}$ and PWHT should be 600°C .
- (3) Use high tensile strength low hydrogen electrode for the buffer layer in multi-layer build-up and base metal with high hardenability.

Typical Chemical Composition of Weld Metal (wt. %)

| C | Si | Mn | Cr | Mo |
|-------|------|------|------|------|
| 0.420 | 0.45 | 0.75 | 6.30 | 0.60 |

Typical Hardness of Weld Metal

| Condition | Hardness | Vicker's hardness (HV) | Rockwell's hardness (HRC) | Shore's hardness (HS) |
|--|----------|------------------------|---------------------------|-----------------------|
| Interpass temp. $\leq 150^{\circ}\text{C}$ | | 630 | 57 | 77 |
| Continuous build-up | | 600 | 55 | 74 |

Size and Suggested Operating Range (AC or DC+)

| Diameter x Length(mm) | 3.2x350 | 4.0x350 | 5.0x350 | 6.0x400 |
|-----------------------|---------|---------|---------|---------|
| Amp | 80~120 | 120~170 | 160~210 | 200~280 |