

Stick Electrode for Nickel and Nickel-Based Alloy

KNi-70B

Classification

AWS A5.11	ENiCrFe-2
JIS Z3224	DNiCrFe-2
EN 14172	ENi6092
GB T 13814	ENiCrFe-2

Type of coating: Low hydrogen

Applications and Features

- (1) KNi-70B is designed for welding in DC.
- (2) It provides good heat and corrosion resistance at high temperature (<980°C).
- (3) It is ideal for welding Ni-Cr-Fe alloy, 9%Ni steel, forged/casting working pieces, and dissimilar materials (carbon steel, stainless steel, nickel or nickel-based alloy).

Welding Instruction

- (1) Clean the surface of the base metal before welding.
- (2) It is difficult for welding in V & O-H positions, so F welding is recommended.
- (3) Baking temperature should be between 350~400°C during 30~60 minutes before welding.
No PWHT is required for base metal.
- (4) To avoid weave arc, make a short arc in low current.
- (5) To avoid porosity, use the back step method for welding. (Please refer to Appendix A)

Typical Chemical Composition of Weld Metal (wt %)

C	Si	Mn	P	S	Ni	Cr	Nb	Fe	Mo
0.080	0.40	1.90	0.009	0.008	68.00	14.20	1.76	9.20	2.40

Typical Mechanical Properties of Weld Metal

Tensile Strength N/mm ² (kgf/mm ²)	Yield Strength N/mm ² (kgf/mm ²)	Elongation %	Charpy V-Notch	
			°C	J (Kgf-m)
600(61.2)	390(39.8)	43	-196	72(4.1)

Size and Suggested Operating Range (DC+)

Diameter (mm) x Length(mm)	2.6x300	3.2x350	4.0x350	4.8x350	
Amp	H	60~85	80~120	100~150	140~180
	V/O-H	55~85	65~110	85~135	—