

# Stick Electrode for Nickel and Nickel-Based Alloy

## KNi-70A

### Classification

AWS A5.11	ENiCrFe-1
JIS Z3224	E Ni 6062
EN 14172	E Ni 6062
GB T 13814	E Ni 6062

Type of coating: Low hydrogen

### Applications and Features

- (1) KNi-70A is designed for welding in DC only with superior weldability.
- (2) It provides good heat and corrosion resistance at high temperature (<980°C)
- (3) It is used for butt welding in INCONEL, INCONEL to low alloy, stainless steel, etc.

### 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	Co
0.060	0.24	3.20	0.006	0.007	71.13	14.52	2.21	9.23	0.11

### Typical Mechanical Properties of Weld Metal

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)
630(64.2)	420(42.8)	42	-196	89(9.1)

### 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	—