

Stick Electrode for Nickel and Nickel-Based Alloy

KNi-60-4

Classification

AWS	A5.11	ENiCrMo-4
JIS	Z3224	E Ni 6276
EN	14172	E Ni 6276
GB	T 13814	E Ni 6276

Type of coating: Low hydrogen

Applications and Features

- (1) KNi-60-4 is designed for welding in DC with good weldability and stable arc.
- (2) The weld metal contains low carbon to reduce carbide.
- (3) It provides good pitting corrosion and oxidation resistance at high temperature.
- (4) It is ideal for welding HASTELLOY C-276, nickel alloy and dissimilar materials.

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	W	Fe	Mo
0.040	0.34	0.71	0.003	0.003	Remains	16.40	3.54	5.30	16.82

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)
730(74.4)	490(50.0)	40	-196	50(5.1)

Size and Suggested Operating Range (DC+)

Diameter (mm) x Length(mm)	2.6x300	3.2x350	4.0x350	4.8x350	
Amp	H	60~85	70~115	95~145	140~180
	V/O-H	55~85	65~110	85~135	—