Selectarc Ni82

Basic coated
Nickel base type Electrode

Classification

AWS A5.11 : ~ENiCrFe-3 ISO 14172 : E-Ni 6082 (NiCr20Mn3Nb)
Material N° : 2.4648

Description & Applications

Basic coated nickel base electrode, with an alloyed core wire, for cladding of low alloyed and alloyed steels,for welding iron- and nickel base alloys and for dissimilar joints. Used for low temperature alloys as well as for high temperature alloys, for service temperatures from –196℃ up to 900℃.

Main applications: Construction and repair welding of high strength steels, tool steels, corrosion resistant steels , high temperature and nickel alloys in component manufacturing, furnace construction, cement industry.

Base materials

UNS	Alloy	DIN	Material N°
K81340	9%Ni	X8Ni9	1.5662
N06600	600	NiCr15Fe	2.4816
N06601	601	NiCr23Fe	2.4851
N08800	800	X10NiCrAlTi3220	1.4876
N08810	800H	X5NiCrAlTi3120	1.4958
	DS	X8NiCrSi3818	1.4862

Typical Weld Metal Composition (%)

C	Si	Mn	Cr	Nb	Fe	Mo	Ni
0.03	0.4	5.0	19.0	2.2	3.0	1.5	Rem.

All Weld Metal Mechanical Properties

$R_{p0,2}$ (MPa)	R_m (MPa)	A_5 (%)	KV (J)
400	650	46	+20℃ >80 -196℃ >65

Welding Current & Instructions

Electrode	ØxL (mm)	2,5x300	3,2x350	4,0x350	5,0x450
Current	(A)	50-70	70-95	90-120	120-160

Redrying 1 h at 250-300℃. Joints to weld must be c lean, exempt from grease, cracks. Guide electrodes with a slight declination, weld with a short arc and prevent a high heat input by applying the stringer bead technique (weaving max. 2-3 times core wire diameter). **Do not preheat Nickel alloy in case of homogeneous assemblies. On high carbon steel assemblies, preheat base material at 200 to 500℃ following steel grade to avoid cracks in heat affected zone.**

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