

Selectarc Ni-A

Nickel base Electrode For fabrication and repair

Classification

Description & Applications

Basic coated nickel base electrode, with an alloyed core wire, for joining and repairing of high temperature alloys, dissimilar joining of stainless steel to creep resistant steels, for joining alloy 800, 800H, HK40, HP45 etc. The electrode distinguishes itself by a soft arc, easy slag removal and regular weld beads.

Main applications: Thermal power stations, ovens, thermal equipment for heat treatment, petrochemical installations.

Base materials

UNS	Alloy	DIN	Material N°
N08705	HP45	G-X40NiCrSi3525	1.4857
		G-X40NiCrNb3525	1.4852
J94204	HK40	G-X40CrNiSi2520	1.4848
N08800	800	X10NiCrAlTi3220	1.4876
N08810	800H	X5NiCrAlTi3120	1.4958
	DS	X8NiCrSi3818	1.4862

Typical Weld Metal Composition (%)

С	Si	Mn	Cr	Nb	Fe	Мо	Ni
0.04	0.4	3.0	16.0	2.2	6.0	1.5	Rem.

All Weld Metal Mechanical Properties

$R_{p0,2}$ (MPa)	R_{m} (MPa)	A ₅ (%)	KV (J)
390	650	40	+20°C >80

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°C. Joints to weld must be clean, 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 times core wire diameter). Nickel base alloys are welded without preheating and an interpass temperature <150°C. For repair welding of steels with high carbon content a preheating between 200- 500°C has to be applied. A post weld heat treatment can be performed without influence on the weld deposit.

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