



Selectarc B90AC

*Inconel type Electrode
For alternative current*

Classification

AWS A5.11 : ENiCrFe-3

ISO 14172 : E-Ni 6182 (NiCr15Fe6Mn)

Description & Applications

Semi-synthetic basic coated electrode with 140% recovery welded in alternative current and with an Inconel 600 type nickel base deposit. Used for repairing and joining of Nickel alloys, 5% Nickel steels, cryogenic stainless steels (down to -196°C), Incoloy 800 and other high temperature steels. High performance for joining dissimilar materials as stainless steels to low alloyed steels, stainless steels to Nickel alloys, buttering of difficult to weld steels. Deposit insensitive to cracks, very good resistance to acids, salt and alkaline solutions, molten salt. Resistant in oxidizing and carburizing atmospheres (avoid sulphurous atmosphere).

Main applications: Oven parts, burners, heat treatment equipment, cement works , moulds, tanks, transport and storage of liquid gas. Chemical industries, petrochemical industries, glassworks, civil engineering, repair and maintenance workshops.

Note: "Inconel" and "Incoloy" are registered trade names of Inco Alloys

Base materials

UNS	Alloy	DIN	Material N°
	5%Ni	12Ni19	1.5680
N06600	600	NiCr15Fe	2.4816
N08800	800	X10NiCrAlTi3220	1.4876
N08810	800H	X5NiCrAlTi3120	1.4958
	DS	X8NiCrSi3818	1.4862

Typical Weld Metal Composition (%)

C	Si	Mn	Cr	Nb	Fe	Ni
<0.05	0.5	5.5	15.0	2.0	7.0	Rem.

All Weld Metal Mechanical Properties

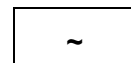
$R_{p0.2}$ (MPa)	R_m (MPa)	A_5 (%)	KV (J)	
>380	>600	>30	+20°C	>80
			-196°C	>60

Welding Current & Instructions

Electrode	$\varnothing \times L$ (mm)	2,5x350	3,2x350	4,0x350	5,0x450
Current	(A)	80	110	140	180

Redrying 1h at 250°C , if necessary. Hold a shirt arc and guide the electrode steep, only with a slight inclination against the vertical. Select low amperage giving still a stable arc and weave only slightly to keep the dilution with the base material low and to get a low heat input. Depending on the carbon equivalent, difficult to weld steels have to be preheated up to $200-450^{\circ}\text{C}$.

FT En-493-160301



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