



# Selectarc B90

*Inconel type Electrode  
For fabrication and repair*

## Classification

AWS A5.11 : ENiCrFe-3  
UNS : W 86182

ISO 14172 : E-Ni 6182 (NiCr15Fe6Mn)

## Description & Applications

Semi-synthetic basic coated electrode with 140% recovery and 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	Mo	Ni
<0.05	0.5	5.5	16.0	2.0	<10.0	0.2	Rem.

## All Weld Metal Mechanical Properties

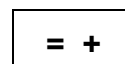
R <sub>p0.2</sub> ( MPa )	R <sub>m</sub> ( MPa )	A <sub>5</sub> ( % )	KV ( J )
380	640	46	+20°C >80 -196°C >60

## Welding Current & Instructions

Electrode	ØxL ( mm )	2,5x350	3,2x350	4,0x350	5,0x450
Current	( A )	75	110	135	160

Redrying 1 h at 250-300°C. Joints to weld must be clean, exempt from grease, cracks. Weld with a minimum heat input in order to eliminate the phenomena of hot cracks. For welding carbon steels a preheating of 200-500°C, depending on the carbon equivalent, is recommended.

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