



Ni182 (DC+)

NICKEL ALLOY

DESCRIPTION

Basic coated electrode with a NiCrFe 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. For joining dissimilar materials as stainless steels to low alloyed steels, stainless steels to Nickel alloys, for buttering of difficult to weld steels. Deposit insensitive to cracks, very good resistance against acids, salt and alkaline solutions, molten salt. Resistant in oxidizing and carburizing atmospheres (avoid a sulphurous atmosphere).

CLASSIFICATION

AWS A5.11: ENiCrFe-3 ISO 14172: E-Ni 6182 (NiCr15Fe6Mn) Material N°: 2.4620
UNS: W86182

TYPICAL APPLICATIONS

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

BASE MATERIALS

Alloys: 600, 800, 800H, DS

PROCEDURE

Redrying 1 h at $482-572^{\circ}\text{F}$ ($250-300^{\circ}\text{C}$). 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. 2-3 times core wire diameter).

MECHANICAL PROPERTIES

Tensile strength: > 89 923 psi (> 620 MPa)
Yield strength: > 55 114 psi (> 380 MPa)
Elongation: > 35 %
Impact (Charpy V): > 80 J at $+68^{\circ}\text{F}$ (20°C) - > 65 J at -320°F (-196°C)

TYPICAL WELD METAL COMPOSITION (%)

C	Mn	Si	Cr	Fe	Mo	Nb	Ni
<0.04	6.0	0.4	16.5	6.0	0.2	2.0	Rem

WELDING PARAMETERS

Diameter:	4.0 mm (5/32")	3.2 mm (1/8")	2.5 mm (3/32")
Amperage:	90-120 A	70-95 A	50-70 A

WELDING POSITIONS

1G/PA



2F/PB



2G/PC



3G/PF



4G/PE

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