Ni82 (DC+)

NICKEL ALLOY

DESCRIPTION

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 – 320°F (–196°C) up to 1652°F (900°C).

CLASSIFICATION

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

TYPICAL 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

Alloys: 9%Ni, 600, 601, 800, 800H, DS

PROCEDURE

Redrying 1 h at 482°F-572°F (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. 2-3 times core wire diameter). **Do not preheat Nickel alloy in case of homogeneous assemblies. On high carbon steel assemblies, preheat base material at 392°F(200°C) to 932°F (500°C) following steel grade to avoid cracks in heat affected zone.**

MECHANICAL PROPERTIES

Tensile strength:	> 94 274 psi (> 650 MPa)
Yield strength:	> 56 564 psi (> 390 MPa)
Elongation:	> 40 %
Impact (Charpy V):	> 80 J at +68°F (20ºC) - > 65 J at -320°F (-196ºC)

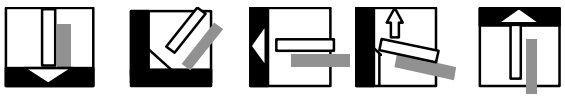
TYPICAL WELD METAL COMPOSITION (%)

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