Ni625 (DC+)

NICKEL ALLOY

DESCRIPTION

Basic coated electrode with an alloyed core wire for welding of Nickel-Chromium-Molybdenum alloys to themselves and to lower alloyed steels as well as for welding of special austenitic stainless steels. Good weldability in all positions, except vertical down; stable arc, medium slag removal, regular weld beads. Due to its composition the weld metal is highly resistant to corrosion and presents a high yield and a high tensile strength.

CLASSIFICATION

AWS A5.11: ENiCrMo-3 ISO 14172: E-Ni 6625 (NiCr22Mo9Nb) UNS: W86112

TYPICAL APPLICATIONS

Welding of Off-shore components, boilers, vessels, piping systems in the chemical and petrochemical industries as well as components of flue gas desulfurizing plants.

BASE MATERIALS

Alloys: 9%Ni, 625, 825,904L, 254SMo

PROCEDURE

Redrying 1 h at 482-572°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 times core wire diameter). Nickel base alloys are welded without preheating and an interpass temperature <302°F (150°C).

MECHANICAL PROPERTIES

Tensile strength:	> 110 228 psi (> 760 MPa)
Yield strength:	> 65 266 psi (> 450 MPa)
Elongation:	> 30 %
Impact (Charpy V):	> 70 J at +68°F (20ºC)

TYPICAL WELD METAL COMPOSITION (%)

C	Mn	Si	Cr	Fe	Mo	Nb	Ni
<0.04	0.6	0.4	22.0	3.0	9.0	3.4	Rem

WELDING PARAMETERS

Diameter:	4.0 mm (5/32”)	3.2 mm (1/8”)	2.5 mm (3/32”)
Amperage:	90-120 A	70-100 A	50-70 A

WELDING POSITIONS

1G/PA 2F/PB 2G/PC 3G/PF 4G/PE

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