DAIKOWT 208

GTAW

NICKEL ALLOYS
Pure Nickel

DESCRIPTION

Pure nickel rod with titanium deoxidation

Nickel-based rod with approximately 3% titanium, ideal for welding pure nickel (at least 99.6%), common wrought nickel, and low-carbon nickel. Also indispensable for dissimilar welds between pure nickel, stainless steels, carbon steels, nickel alloys, Monel 400, and cupronickel. It is used in pressure vessels, heat exchangers, pipelines for chemical plants (e.g., salt production, chlorination, caustic soda evaporation), wherever high corrosion resistance is required in alkaline environments.

SPECIFICATIONS

EN ISO 18274	S Ni 2061	**AWS A5.14**	ERNi-1
Shielding	I1	**Positions**	PA, PB, PC, PD, PE, PF
Current	DC-	**Packaging Type**	5kg carton tube

ASME QUALIFICATIONS

F-No (QW432)	41
A-No (QW442)	-

CHEM. COMP. %	DEFAULT
C	0.02
Mn	0.4
Ni	96
Al	0.1
P	0.005
S	0.005
Si	0.3
Cu	0.02
Fe	0.1
Ti	3

MECHANICAL PROPERTIES	MIN. PER STANDARD	PRODUCT
Tensile strength R_m MPa	380*	740
Yield strength $R_{p0.2}$ MPa	0	500
Elongation A (L_0=5d_0) %	0	43
Impact Charpy ISO-V	-	100J @ -196°C
Impact Charpy ISO-V	-	-

WELDING PARAMETERS	1.6 mm	2.4 mm
Ampere	80A - 120A	130A - 160A
Voltage	10V - 13V	14V - 18V
Packaging	Ø 1,0÷4,0mm	Ø 1,0÷4,0mm
Packaging Type	5kg carton tube	5kg carton tube

DAIKO

Pure Nickel

DESCRIPTION

APPLICATION

These consumables are designed to provide pure nickel with low carbon content, enriched with the addition of titanium to ensure optimal grain refinement and superior deoxidation. They are particularly suitable for homogenous welds of pure nickel, buffer layers, and for the cladding of joint surfaces and flanges. The solid wire also proves ideal in welding cast iron, resulting in a soft and low-strength deposit. Typical applications include products such as tanks and vessels, process piping, and heat exchangers. They are widely used in chemical plants dedicated to salt production, chlorination processes, and caustic soda evaporation, as well as for handling corrosive alkalis and halides. They operate effectively at temperatures up to 150 °C, without the need for post-weld heat treatments (PWHT).

ALLOY TYPE

Low carbon pure nickel weld metal with titanium de-oxidation.

MICROSTRUCTURE

In the as-welded condition the microstructure consists of almost pure nickel austenite. It is strongly ferromagnetic at room temperature.

MATERIALS

EN W.Nr.: 2.4066 (Ni 99.6), 2.4068(LC-Ni99), 2.4061 (LC Ni 99.6)
UNS: N02200, N02201
PROPRIETARY: Nickel 200, 201 (Special Metals), Nickel 99.6, 99.2 (VDM)