



DESCRIPTION

Solid wire for welding 2%Ni steel

Submerged arc wire designed for welding low-alloyed steels for low temperature applications. Typically, they are used for welding 2.5% Nickel steels and other materials requiring good toughness at temperatures as low as -60°C.

SPECIFICATIONS

EN ISO 14171-A	S2Ni2	AWS A5.23	ENi2
Shielding	DAIKOFLUX 493-W	Positions	PA, PB, PC
Current	DC/AC	Packaging Type	K415 spool and drums.

ASME QUALIFICATIONS

F-No (QW432)	6
A-No (QW442)	10

CHEM. COMP. %

C	0.1
Mn	1
Ni	2.25
P	0.01
S	0.01
Mo	0.01
Si	0.15
Cu	0.15

MECHANICAL PROPERTIES

Tensile strength R_m MPa	610
Yield strength $R_{p0.2}$ MPa	510
Elongation A ($L_0=5d_0$) %	24
Impact Charpy ISO-V	65J @ -60°C

WELDING PARAMETERS

	2.4 mm	3.2 mm	4.0 mm
Ampere	300A - 410A	430A - 530A	480A - 580A
Voltage	26V - 30V	27V - 31V	27V - 32V
Packaging	Ø 2,0÷4,0mm	Ø 2,0÷4,0mm	Ø 2,0÷4,0mm
Packaging Type	K415 spool and drums.	K415 spool and drums.	K415 spool and drums.

NOTES

SAW mechanical properties depend on wire/flux combination, refer to flux TDS.



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2Ni

DESCRIPTION

CRYOGENIC STEELS

2Ni

APPLICATION

Ideal for the production of storage tanks, process plants, and related piping, this product guarantees excellent fracture toughness properties in welded joints at temperatures down to -60 °C. The inclusion of approximately 2.5% Ni enables microstructural refinement and improves tolerance against procedural variations compared to unalloyed C-Mn weld metals. Additionally, it promotes the formation of a stable patina, essential for maintaining the characteristics of weather-resistant steels, thus representing a valid alternative to the use of corresponding consumables. Preheating should be performed according to the base material and its thickness. While AWS specifications for consumables require post-weld heat treatment (PWHT), many applications can be left in the as-welded condition. The need for PWHT is usually determined by the applicable design codes.

ALLOY TYPE

Nominally 2.5%Ni low alloy steels.

MICROSTRUCTURE

In the as-welded condition the microstructure is ferritic with a component of acicular ferrite for optimum toughness.

MATERIALS

Low temperature applications, fine-grained steels that contain up to 2.5% Nickel.

ASTM: A203 gr. A & B plate, A333 gr. 6 pipe, A350 gr. LF1 & LF2 forgings, A352 gr. LC2 casting

API: 5L X52, 5L X56, 5L X60, 5L X65

