



DESCRIPTION

Basic coated electrode with 2,5% Ni

Electrode designed for welding low-alloy fine grain steels and nickel steels with impact requirements down to -75°C. Suitable for the construction of cryogenic plant and pipework in petrochemical industry and for general low temperature applications. Its basic coating ensures excellent positional welding characteristics with good gap bridging ability. The weld pool and slag are easy to control and facilitate the achievement of a clean bead surface even in narrow preparations and in root pass.

SPECIFICATIONS

EN ISO 2560-A	E 46 6 2Ni B 42 H5	AWS A5.5	E8018-C1
Shielding	-	Positions	PA, PB, PC, PD, PE, PF
Current	DC+, AC	Packaging Type	Carton box

ASME QUALIFICATIONS

F-No (QW432)	4
A-No (QW442)	10

CHEM. COMP. %	DEFAULT	MECHANICAL PROPERTIES	MIN. PER STANDARD	PRODUCT		
C	0.06	Tensile strength R _m MPa	550	630		
Mn	1.1	Yield strength R _{p0.2} MPa	460	460		
Ni	2.2	Elongation A (L ₀ =5d ₀) %	19	20		
P	0.01	Impact Charpy ISO-V	27J @ -75°C	47J @ -75°C		
S	0.01	Impact Charpy ISO-V	-	-		
Mo	0.05					
Si	0.6					
Cu	0.1					
		WELDING PARAMETERS	2.5 mm	3.2 mm	4.0 mm	5.0 mm
		Ampere	65A - 95A	100A - 140A	130A - 190A	180A - 240A
		Voltage	-	-	-	-
		Packaging	45 pcs/kg	21 pcs/kg	14 pcs/kg	10 pcs/kg
		Packaging Type	Carton box	Carton box	Carton box	Carton box

NOTES

Pcs/kg is indicative, actual number may vary ± 5%.



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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

