



DAIKOWM 413



COPPER ALLOYS
CuNi 70-30

DESCRIPTION

70/30 copper-nickel solid wire

The weld metal of this wire rod is designed to match the CuNi 70/30 alloys and is nominally 67% Cu and 30% Ni. The consumable is suitable for surfacing and cladding provided buffer layer is made (normally buttering is made with alloy 400 or pure nickel). Applications include offshore construction, desalination plant, evaporators, condenser, etc, in salt and sea water processing system.

SPECIFICATIONS

EN ISO 24373	S Cu 7158 / CuNi30Mn1FeTi	AWS A5.7	ERCuNi
DIN 1733	SG-CuNi30Fe	Shielding	I1, I3
Positions	PA, PB, PC, PD, PE, PF, PG	Current	DC+
Packaging Type	Drums, B300, D200 and D100 spools.		

ASME QUALIFICATIONS

F-No (QW432)	34
A-No (QW442)	-

HARDNESS

80HV - 110HV

CHEM. COMP. %	DEFAULT	MECHANICAL PROPERTIES	MIN. PER STANDARD	PRODUCT	
Mn	0.8	Tensile strength R _m MPa	345	400	
Ni	31	Yield strength R _{p0.2} MPa	-	200	
P	0.003	Elongation A (L ₀ =5d ₀) %	0	38	
S	0.005	Impact Charpy ISO-V	-	200J @ 20°C	
Si	0.01	Impact Charpy ISO-V	-	-	
Fe	0.5	WELDING PARAMETERS	1.0 mm		
Ti	0.3		1.2 mm		
Pb	0.001		Ampere	130A - 200A	185A - 245A
			Voltage	24V - 28V	26V - 30V
		Packaging	Ø 0,8÷1,6mm	Ø 0,8÷1,6mm	
		Packaging Type	Drums, B300, D200 and D100 spools.	Drums, B300, D200 and D100 spools.	



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DESCRIPTION

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APPLICATION

The CuNi 70-30 consumable is particularly suitable for overlay and cladding operations, provided a buttering layer is created. This is commonly done using alloy 400 or pure nickel. The 70/30 consumables are ideal for welding 70/30, 80/20, and 90/10 base materials. They match the 70/30 base materials in terms of strength and color, and allow for overmatched welding on 90/10 alloys for optimal strength. This material is widely used in offshore constructions, desalination plants, evaporators, condensers, and systems for treating saline and marine water. No preheat is required, and the maximum interpass temperature is 150°C, with no need for PWHT. It is crucial to avoid contamination in the weld area with foreign materials, particularly sources of lead, tin, or zinc, to prevent cracking in the weld metal.

ALLOY TYPE

70/30 copper-nickel alloys.

MICROSTRUCTURE

Solid solution, single phase alloy.

MATERIALS

EN W.Nr.: 2.0872 (CuNi10Fe), 2.0882 (CuNi30Mn1Fe), 2.0883 (CuNi30Fe2Mn2)

ASTM: C71500, C96400 (cast)

UNS: C71500, C96400, C70600, C96200

PROPRIETARY: Cunifer 30 (VDM), Cunifer 10 (VDM), Osna®-30 (KME), Osna®-10 (KME)

WELDING & PWHT

Particularly suitable for welding applications that require high resistance to corrosion in aggressive environments. This includes systems exposed to saline and seawater, where long-term durability is critical.

