



DAIKOWM 96



HIGH YIELD STRENGTH STEELS
110ksi

DESCRIPTION

Low alloy solid wire for high yield strength steels

Ni-Cr-Mo low alloy copper plated solid wire for welding high yield strength steels, with tensile strength higher than 770 MPa. Excellent resilience values at low temperatures, down to -40°C. Suitable for carpentry, off-shore constructions, chemical and petroleum industries. The wire is also used in the production of high strength low alloy steels, where it can be used in the construction of industrial machines, cranes, and other components that require high mechanical strength.

SPECIFICATIONS

EN ISO 16834-A	G 69 4 Mn3Ni1CrMo	AWS A5.28	ER110S-G
Certifications	CE	Shielding	M20, M21
Positions	PA, PB, PC, PD, PE, PF, PG	Current	DC+
Packaging Type	Drums, B300, D200 and D100 spools.		

ASME QUALIFICATIONS

F-No (QW432)	6
A-No (QW442)	12

CHEM. COMP. %	DEFAULT	MECHANICAL PROPERTIES	MIN. PER STANDARD	PRODUCT
C	0.08	Tensile strength R _m MPa	760	780
Mn	1.6	Yield strength R _{p0.2} MPa	690	700
Ni	1.5	Elongation A (L ₀ =5d ₀) %	-	23
Cr	0.27	Impact Charpy ISO-V	47J @ -40°C	70J @ -40°C
Al	0.1	Impact Charpy ISO-V	-	-
V	0.09			
P	0.01			
S	0.015			
Mo	0.22			
Si	0.6			
Cu	0.17			
		WELDING PARAMETERS	1.0 mm	1.2 mm
		Ampere	170A - 220A	180A - 300A
		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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APPLICATION

Ideal for joining high-strength thermomechanically refined and quenched and tempered fine-grain structural steels and tubes. The deposited metal provides excellent strength even at low temperatures when used with gas mixes. It has good deformability, making it particularly suitable for use in crane construction, buildings, and vehicles. It is critical to preheat according to base material and thickness; materials that could be welded with higher-strength consumables normally require a minimum preheat of 100 °C. For some HSLA steels, exceeding interpass temperatures of 200 °C can compromise strength and toughness. The post-weld heat treatment (PWHT) varies depending on the base material and the specified application.

ALLOY TYPE

Mn-Ni-Mo low alloy consumables for welding high strength steels with ultimate tensile strength up to 750 MPa (110 ksi).

MICROSTRUCTURE

The microstructure of all the consumables is predominantly ferrite; some will contain high proportions of acicular ferrite for optimum as-welded toughness

MATERIALS

For joining of quenched and tempered and thermomechanically rolled fine-grained structural steels. For use in building, crane and vehicle constructions.

EN W.Nr.: S690QL1, L555M, S690Q, S690QL, S690QL1, S650MC, S700MC

ASTM: A 514 Gr. F, H, Q

API: 5L X80, 5L X90, 5L X100

PROPRIETARY: N-A-XTRA® M 700 (ThyssenKrupp), Strenx® 700 (SSAB)

