



# DAIKOMCW 109



HIGH YIELD STRENGTH STEELS  
100ksi

## DESCRIPTION

### Metal all position flux cored wire

Copper-plated tubular cored wire, slag-free with metal powder filling, low-Ni-Mo alloyed. For single pass or multipass welding of high strength steels with high elastic limit, up to 550 MPa. It has stable operating characteristics, excellent sidewall fusion and filling, low splash level and is usable in short, spray and pulsed. Excellent resilience values down to -50 ° C. To be used only under protection of Ar + CO2 mixture.

## SPECIFICATIONS

EN ISO 18276-A	T 55 5 Z M M 1 H5	AWS A5.36	E91T15-M21
Shielding	M21	Positions	PA, PB, PC, PD, PE, PF, PG
Current	DC+	Packaging Type	B5300 spool

## ASME QUALIFICATIONS

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

CHEM. COMP. %	DEFAULT	MECHANICAL PROPERTIES	MIN. PER STANDARD	PRODUCT
C	0.08	Tensile strength R <sub>m</sub> MPa	640	720
Mn	1.8	Yield strength R <sub>p0.2</sub> MPa	550	620
Ni	0.6	Elongation A (L <sub>0</sub> =5d <sub>0</sub> ) %	18	18
Cr	0.03	Impact Charpy ISO-V	47J @ -50°C	47J @ -50°C
Mo	0.4	Impact Charpy ISO-V	-	-
Si	0.6			
Cu	0.15			
		WELDING PARAMETERS	1.2 mm	1.6 mm
		Ampere	160A - 280A	180A - 350A
		Voltage	18V - 30V	30V - 34V
		Packaging	Ø 1,2÷1,6mm	Ø 1,2÷1,6mm
		Packaging Type	B5300 spool	B5300 spool





# 100ksi

DESCRIPTION

HIGH YIELD STRENGTH STEELS

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## APPLICATION

These consumables are designed to ensure excellent impact resistance even at low temperatures, making them ideal for use in constructions with high-strength low-alloy (HSLA) steels, such as cranes, earth-moving equipment, and the like. They are also particularly suitable for offshore fabrications and components in the chemical and petrochemical industries. Preheating based on the base material and thickness is crucial, considering that higher strength materials often require a minimum preheat of 100 °C. For some HSLA steels, it's advisable to avoid interpass temperatures above 200 °C, as they may compromise the weld joint's strength and toughness. Post-weld heat treatment (PWHT) is closely related to the base material and the specific application.

## ALLOY TYPE

Mn-Ni-Mo low alloy consumables for welding high strength steels with ultimate tensile strength to 690 MPa (100ksi).

## MICROSTRUCTURE

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.:** S460, S500, S550, S620, S620Q, S620QL, S620QL1, S690Q, S690QL, S690QL1, S600MC, S650MC, S700MC, L690M, L830M

**ASTM:** A 514 Gr. F, H, Q, A 709 Gr. 100 Type B, E, F, H, Q, A 709 Gr. HPS 100W

**API:** 5L X65, 5L X70, 5L X80+

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



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