DAIKOMCW 120

FCAW

HIGH YIELD STRENGTH STEELS
120ksi

DESCRIPTION

Metal all position flux cored wire

Seamless metal core wire for welding of very high strength Nickel-Chromium-Molybdenum alloyed steels with Ar-CO2 shielding gas. Virtually spatter free in the spray-arc range. Particularly suitable for robotic applications. The weld profile is easily controllable making this wire well suited for gap bridging and positional welding. It is designed for those applications requiring 120 Ksi minimum tensile strength and good charpy v-notch toughness, such as when welding HY-80, HY-100, Strenx® 900, S890QL, S960Q.

SPECIFICATIONS

EN ISO 18276-A	T 89 4 Mn2Ni1CrMo M M 2	**AWS A5.36**	E120T15
Shielding	M21	**Positions**	PA, PB, PC, PD, PE, PF, PG
Current	DC+	**Packaging Type**	BS300 spool

ASME QUALIFICATIONS

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

CHEM. COMP. %	DEFAULT
C	0.06
Mn	1.6
Ni	2.2
Cr	1
P	0.02
S	0.02
Mo	0.4
Si	0.5
Cu	0.15

MECHANICAL PROPERTIES	MIN. PER STANDARD	PRODUCT
Tensile strength R_m MPa	940	980
Yield strength $R_{p0.2}$ MPa	890	880
Elongation A (L_0=5d_0) %	15	15
Impact Charpy ISO-V	47J @ -40°C	47J @ -50°C
Impact Charpy ISO-V	-	-

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	BS300 spool	BS300 spool

DAIKO

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DESCRIPTION

APPLICATION

This category of consumables is designed for applications requiring a minimum tensile strength of 120 Ksi and high performance in terms of Charpy V-notch resilience. They are commonly used in industries that include lifting and handling machinery, bridge construction, tank manufacturing and transportation, as well as shipbuilding, railway, mining industries, frames, crane construction, and trailers, as well as other high-strength structural applications. It is essential to provide preheating based on the base material and thickness. However, higher strength consumables normally require at least a 100 °C preheat. In some HSLA steels, it is important to note that interpass temperatures above 200 °C may reduce both material strength and toughness. Post welding heat treatment (PWHT) is generally determined by the base material and the specific application.

ALLOY TYPE

Mn-Ni-Mo low alloy consumables for welding high strength steels with ultimate tensile strength up to 825 MPa (120 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

This material is used for a variety of high strength steels. HY-80, HY-90, HY-100. S890 and higher strength grades, thermo mechanically treated fine grain steels.

EN W.Nr.: S890QL, S960Q

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

PROPRIETARY: Strenx® 900 (SSAB), Alform® 900 X-treme (voestalpine)