DAIKOWS 700

SAW

HIGH YIELD STRENGTH STEELS
110ksi

DESCRIPTION

Low alloy solid wire for high yield strength steels

Ni-Cr-Mo low alloy submerged arc welding wire for 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

AWS A5.23	EG	**Shielding**	DAIKOFLUX 490-W, 491-W
Positions	PA, PB, PC	**Current**	DC/AC
Packaging Type	K415 spool and drums.		

ASME QUALIFICATIONS

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

CHEM. COMP. %	DEFAULT
C	0.07
Mn	1.7
Ni	1.6
Cr	0.15
P	0.005
S	0.004
Mo	0.25
Si	0.5
Cu	0.2

MECHANICAL PROPERTIES	PRODUCT
Tensile strength R_m MPa	760
Yield strength $R_{p0.2}$ MPa	690
Elongation A (L_0=5d_0) %	18
Impact Charpy ISO-V	47J @ -40°C

WELDING PARAMETERS	2.4 mm	3.2 mm	4.0 mm
Ampere	350A - 450A	430A - 530A	480A - 580A
Voltage	27V - 31V	27V - 31V	28V - 32V
Packaging	Ø 2,0÷4,0mm	Ø 2,0÷4,0mm	Ø 2,0÷4,0mm
Packaging Type	K415 spool and drums.	K415 spool and drums.	K415 spool and drums.

NOTES

SAW mechanical properties depend on wire/flux combination, refer to flux TDS.

DAIKO

110ksi

DESCRIPTION

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)