DAIKOWS S3NiMo

SAW

HIGH YIELD STRENGTH STEELS
100ksi

DESCRIPTION

Low alloy solid wire for high yield strength steels

Low-alloy copper-coated submerged arc welding wire with Ni-Mo additions designed for welding high yield strength steels and with tensile strength higher than 700 MPa. Good impact strength at low temperatures. Suitable for the metal working industry, offshore fabrication, chemical and petrochemical industry. It also has applications in fabrications of high strength low-alloy steels, which may be used for industrial machinery construction, cranes and other highly stressed structural components.

SPECIFICATIONS

EN ISO 26304-A	S3Ni1Mo	**AWS A5.23**	EF3
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	0.11
Mn	1.8
Ni	1
Cr	0.03
P	0.005
S	0.002
Mo	0.5
Si	0.2
Cu	0.03

MECHANICAL PROPERTIES	PRODUCT
Tensile strength R_m MPa	670
Yield strength $R_{p0.2}$ MPa	570
Elongation A (L_0=5d_0) %	22
Impact Charpy ISO-V	80J @ -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.

100ksi

DESCRIPTION

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)