DAIKOWT 96

GTAW

HIGH YIELD STRENGTH STEELS
110ksi

DESCRIPTION

Low-alloy rod for steels with high yield strength

Copper-coated solid low-alloy rod, ni-cr-mo, for welding high yield strength steels, with tensile strength greater than 770 MPa. Excellent impact strength values at low temperatures, down to -40 °C. Suitable for construction, offshore structures, chemical and oil industries. The rod is also used in the production of high-strength low-alloy steels, where it can be applied in the construction of industrial machinery, cranes, and other components requiring high mechanical strength.

SPECIFICATIONS

EN ISO 16834-A	W 69 4 Mn3Ni1CrMo	**AWS A5.28**	ER110S-G
Shielding	I1	**Positions**	PA, PB, PC, PD, PE, PF
Current	DC-	**Packaging Type**	5kg carton tube

ASME QUALIFICATIONS

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

CHEM. COMP. %	DEFAULT
C	0.08
Mn	1.6
Ni	1.5
Cr	0.27
Al	0.1
V	0.09
P	0.01
S	0.015
Mo	0.22
Si	0.6
Cu	0.17

MECHANICAL PROPERTIES	MIN. PER STANDARD	PRODUCT
Tensile strength R_m MPa	760	800
Yield strength $R_{p0.2}$ MPa	690	760
Elongation A (L_0=5d_0) %	-	18
Impact Charpy ISO-V	47J @ -40°C	70J @ -40°C
Impact Charpy ISO-V	-	-

WELDING PARAMETERS	1.6 mm	2.4 mm
Ampere	95A - 135A	145A - 205A
Voltage	-	-
Packaging	Ø 1,2÷3,2mm	Ø 1,2÷3,2mm
Packaging Type	5kg carton tube	5kg carton tube

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)