DAIKOFCW 97S

FCAW

HIGH YIELD STRENGTH STEELS
110ksi

DESCRIPTION

Rutile all position flux cored wire

Rutile folded flux cored wire formulated for welding high yield strength steels, with tensile strength higher than 770 MPa. Excellent resilience values at low temperatures, down to -40°C. It can be used in the construction of industrial machines, cranes, and other components that require high mechanical strength. Self-releasing slag requiring less cleaning and pickling, very low spatter formation and increased travel speeds allow to obtain noticeable savings in time and costs.

SPECIFICATIONS

EN ISO 18276-A	T 69 4 Z P M 2 H5	**AWS A5.29**	E111T1-GM
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	0.07
Mn	1.86
Ni	2.49
P	0.007
S	0.006
Mo	0.16
Si	0.31

MECHANICAL PROPERTIES	PRODUCT
Tensile strength R_m MPa	815
Yield strength $R_{p0.2}$ MPa	740
Elongation A (L_0=5d_0) %	20
Impact Charpy ISO-V	47J @ -40°C

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

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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)