DAIKOFCW 66B

FCAW

CARBON STEELS

WEATHERING STEEL-Cor-Ten®

DESCRIPTION

All position basic flux cored wire for welding weathering steels

Flux cored wire with Ni-Cu-Cr additions mainly used for weathering steels. Applications include architectural structures, bridges and exhaust gas flues. The wire shows excellent weldability in flat and horizontal position, smooth and bright bead, very low spatter losses, easy to remove slag and exceptional mechanical properties even at low temperatures.

SPECIFICATIONS

EN ISO 17632-A	T 46 4 Z P M 1	**AWS A5.36**	E80T5
Shielding	M21	**Positions**	PA, PB, PC
Current	DC+	**Packaging Type**	BS300, D200 spools

ASME QUALIFICATIONS

F-No (QW432)	6
A-No (QW442)	1

CHEM. COMP. %	DEFAULT
C	0.05
Mn	1.2
Ni	1.2
Cr	0.3
P	0.02
S	0.02
Si	0.45
Cu	0.5

MECHANICAL PROPERTIES	MIN. PER STANDARD	PRODUCT
Tensile strength R_m MPa	550	590
Yield strength $R_{p0.2}$ MPa	460	430
Elongation A (L_0=5d_0) %	17	20
Impact Charpy ISO-V	47J @ -40°C	47J @ -40°C
Impact Charpy ISO-V	-	-

WELDING PARAMETERS	1.2 mm	1.6 mm
Ampere	130A - 290A	170A - 400A
Voltage	18V - 30V	28V - 32V
Packaging	Ø 1,0÷1,6mm	Ø 1,0÷1,6mm
Packaging Type	BS300, D200 spools	BS300, D200 spools

DAIKO

WEATHERING STEEL-Cor-Ten®

DESCRIPTION

APPLICATION

This type of steel is primarily used for constructing structures with weather-resistant steels, thanks to precise control of copper addition. This ensures corrosion resistance three times higher and a more stable patina compared to traditional carbon-manganese (C-Mn) steel. Its applications include architectural structures, bridges, drainpipes, and chimneys. It is particularly effective against corrosion in seawater, especially in harsh arctic waters with high oxygenation and salinity. It is often used in the welding of microalloyed and C-Mn steels for icebreaker ships and offshore structures. It is essential to preheat based on the thickness of the joint and its restraint. Typically, the material is left in the 'as-welded' condition, without further treatments.

ALLOY TYPE

Low alloy steel with Ni-Cu-Cr additions for welding weathering steels.

MICROSTRUCTURE

In the as-welded condition the microstructure is ferritic with a high proportion of acicular ferrite for optimum toughness.

MATERIALS

EN W.Nr.: S235JRW (1.8960), S235J2W (1.8961), S235J0W (1.8958), S275J0W, S275J2W, S355J0W (1.8959), S355J2W (1.8963), S355J0WP (1.8945)
ASTM: A588 gr. A, B, C, K, A242 gr. 1, 2
PROPRIETARY: Cor-Ten® A, B (US Steel), Patinax® (Thyssenkrupp)