



DAIKOFCW 2CrMoB



CREEP RESISTING STEELS
2Cr1Mo

DESCRIPTION

Basic flux cored wire for flat and horizontal position

Basic flux cored designed for prolonged elevated temperature service up to about 600°C, especially in steam generation power plants (piping, valve bodies, turbine casting, boiler superheater). Suitable for corrosion resistance to sulphur bearing crude oil at 250-450° C. 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

ISO 17634-A	CrMo2 B M 4	AWS A5.36	E90T5-M21PY-B3
DIN	-	Werkstoff Number	-
Certifications	-	Shielding	M21
Positions	PA, PB, PC	Current	DC+

ASME QUALIFICATIONS	FERRITE	PREN	HARDNESS
F-No (QW432) 6	-	-	-
A-No (QW442) 4	-	-	-

CHEM. COMP. %	DEFAULT	MECHANICAL PROPERTIES	MIN	VARIANT
C	0.07	Tensile strength R _m MPa	620	640
Mn	1.1	Yield strength R _{p0.2} MPa	540	540
Cr	2.2	Elongation A (L ₀ =5d ₀) %	17	18
P	0.02	Impact Charpy ISO-V	-	-
S	0.02	Impact Charpy ISO-V	-	-
Mo	1			
Si	0.4			
Cu	0.1			
		WELDING PARAMETERS	1.2 mm	1.6 mm
		Ampere	100A - 300A	160A - 420A
		Voltage	16V - 28V	31V - 35V
		Packaging	Ø 1,2÷1,6mm	Ø 1,2÷1,6mm
		Packaging Type	BS300 spool	BS300 spool



The information in this datasheet is the result of detailed research and is considered accurate as of the publication date. However, we cannot guarantee its complete accuracy, and it is subject to change without notice. Actual results may vary due to many factors like welding procedures, material composition, temperature conditions, bevel configuration, and specific manufacturing techniques. We accept no liability for any errors or omissions in this datasheet. For the most current information, please visit www.daikowelding.com.



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DESCRIPTION

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APPLICATION

Engineered for extended high-temperature use, reaching up to 600°C, these consumables find primary applications in steam-generating power plants. They excel in various components, such as piping, turbine castings, steam chests, valve bodies, and boiler superheaters. Some also serve in refineries, ensuring corrosion resistance to sulfur-bearing crude oil within the range of 250-450°C. In the chemical and petrochemical industries, they resist hydrogen attack during the fabrication of hydrocrackers, coal liquefaction plants, and NH₃ pressure vessels (up to 450°C). In their as-welded state, these consumables yield a valuable 300HV hardness weld deposit suitable for build-up or hard surfacing, effectively countering metal-to-metal wear, heavy impact, and aiding in the repair of P20 mold steel. Maintaining a minimum preheat and interpass temperature of 250°C, rising to 300°C for thick sections, is crucial throughout the welding cycle and post-welding. Unless specified for unique applications, post-weld heat treatment (PWHT) is always necessary, typically at 690°C, with the duration contingent on section thickness.

ALLOY TYPE

2¼Cr-1Mo alloyed steel consumables for elevated temperature service.

MICROSTRUCTURE

After PWHT, the microstructure consists of tempered bainite.

MATERIALS

EN W.Nr.: 11 CrMo 9-10 (1.7383), 10 CrMo 9-10 (1.7380), G5-18CrMo 9 10 (1.7379), G5-12CrMo 9 10 (1.7380), 6CrMo 9 10 (1.7385), 12CrMo 9 10 (1.7375).

ASTM: A387 Gr 21&22, A182 F22, A217 WC9, A234 WP22, A199 T21,T22, A200 T21,T22, A335 P22, A234 WP22.

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