

EN ISO 3580-A: E CrMo1 B 4 2 H5
 EN ISO 3580-B: E5518-1CM H5
 AWS A5.5: E8018-B2H4R
 AWS A5.5M: E5518-B2H4R

BÖHLER FOX DCMS Kb

**SMAW basic electrode, low-alloyed,
 high temperature**

Description

Basic low hydrogen electrode for 1% Cr 0.5% Mo alloyed boiler, plate, and tube steels. Approved in long-term condition up to +570°C service temperature. Fully alloyed core wire which will provide reliable creep rupture properties for the whole service life of a boiler plant. High ductility and crack resistance. The weld metal deposit is heat treatable. Very low hydrogen content (acc. AWS condition HD < 4 ml/100 g). Metal recovery approx. 115%. Suitable for step-cooling application. Bruscato ≤15ppm. Post weld tempering at 660-700°C for at least ½ h followed by cooling in furnace down to 300°C and still air.

Typical Composition of All-weld Metal

	C	Si	Mn	Cr	Mo	P	As	Sb	Sn
wt-%	0.1	0.35	0.7	1.05	0.5	≤0.010	≤0.005	≤0.005	≤0.005

Mechanical Properties of All-weld Metal

	a	v
yield strength R_e N/mm ² (MPa):	530 (≥490)	380 (≥330)
tensile strength R_m N/mm ² (MPa):	630 (≥590)	520 (≥490)
elongation A ($L_0=5d_0$) %:	23 (≥22)	28 (≥24)
impact work ISO-V KV J +20°C:	160 (≥100)	190 (≥100)

a annealed 680°C/2h/furnace down to 300°C/air

v quenched/tempered 930°C/0.5 h/air + 680°C/10 h/furnace down to 300°C/air

Operating Data



re-drying: if necessary:

300-350°C, min. 2 h

electrode identification:

FOX DCMS Kb 8018-B2 E CrMo1 B

ø mm	L mm	amps A
2.5	250/350	80-110
3.2	350	100-140
4.0	350/450	130-180
5.0	450	180-220

=+

Preheat and interpass temperature for 13CrMo4-5 steels 200-250°C.

Base Materials

high temperature steels and similar alloyed cast steels, case hardening and nitriding steels of similar chemical composition, similar alloyed heat treatable steels with tensile strength up to 780 N/mm², steels resistant to caustic cracking

1.7335 13CrMo4-5, 1.7262 15CrMo5, 1.7728 16CrMoV4, 1.7218 25CrMo4,

1.7258 24CrMo5, 1.7354 G22CrMo5-4, 1.7357 G17CrMo5-5

ASTM A193 Gr. B7, A335 Gr. P11 u. P12, A217 Gr. WC6

Approvals and Certificates

TÜV-D (0728.), DB (10.014.32), ÖBB, TÜV-A (14), ABS (E 8018-B2), DNV (NV 1Cr 0,5Mo), GL (13 CrMo 44), LTSS, VUZ, SEPROZ, CE, NAKS (Ø3,2 mm; Ø4,0 mm)

Same Alloy Filler Metals

SMAW stick electrode:	FOX DCMS Ti	SAW combination:	EMS 2 CrMo/BB 24
GTAW rod:	DCMS-IG		EMS 2 CrMo/BB 24 SC
GMAW solid wire:	DCMS-IG		EMS 2 CrMo/BB 25
Gas welding rod:	DCMS	Flux cored wire:	DCMS Ti-FD