

Classifications

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

Characteristics and typical fields of application

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.

Base Materials

Creep resistant 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 MPa, steels resistant to caustic cracking

1.7335 13CrMo4-5, 1.7262 15CrMo5, 1.7728 16CrMoV4, 1.7218 25CrMo4, 1.7225 42CrMo4, 1.7258 24CrMo5, 1.7354 G22CrMo5-4, 1.7357 G17CrMo5-5

ASTM A 182 Gr. F12; A 193 Gr. B7; A 213 Gr. T12; A 217 Gr. WC6; A 234 Gr. WP11; A335 Gr. P11, P12; A 336 Gr. F11, F12; A 426 Gr. CP12

Typical analysis of all-weld metal (wt.-%)

	C	Si	Mn	Cr	Mo	P	As	Sb	Sn
wt.-%	0.08	0.25	0.8	1.1	0.5	≤ 0.010	≤ 0.005	≤ 0.005	≤ 0.005

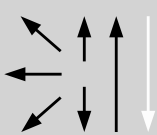
Mechanical properties of all-weld metal

Condition	Yield strength R _{p0,2}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact work ISO-V KV J
	MPa	MPa	%	+20 °C
a	480 (≥ 460)	580 (≥ 550)	23 (≥ 20)	160 (≥ 47)
v	380	520	28	190

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

	Polarity:	Redrying if necessary:	Electrode identification:	ø (mm)	L mm	Amps A
	DC (+)	300 – 350 °C, min. 2 h	FOX DCMS Kb 8018-B2 E CrMo1 B	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 acc. to the requirements of the base material

Approvals

TÜV (0728.), DB (10.014.32), ABS (E 8018-B2), DNV (NV 1Cr 0,5Mo), GL (13 CrMo 44), LTSS, SEPROZ, CE, NAKS (ø 3.2 mm; ø 4.0 mm)