

Classifications

EN ISO 3580-A	EN ISO 3580-B	AWS A5.5	AWS A5.5M
E CrMo2 B 4 2 H5	E6218-2C1M H5	E9018-B3H4R	E6218-B3H4R

Characteristics and typical fields of application

Basic electrode for 2.25 % Cr 1 % Mo alloyed boiler, plate and tube steels. Approved in long-term condition up to +600 °C service temperature. Core wire alloyed electrode which will provide reliable creep rupture properties for the whole service life of a boiler plant. Crack resistant and ductile deposit, high creep rupture strength, low hydrogen content (acc. AWS condition HD < 4 ml/100 g). Good weldability in all positions except vertical down. Deposit is nitridable and heat treatable. Metal recovery approx. 115 %. *For step cooling applications we can offer a special product program.

Base Materials

high temperature steels and similar alloyed cast steels, QT-steels similar alloyed up to 980 N/mm² tensile strength, similar alloyed case hardening steels, nitriding steels

1.7380 10CrMo9-10, 1.7276 10CrMo11, 1.7281 16CrMo9-3, 1.7383 11CrMo9-10, 1.7379 G17CrMo9-10, 1.7382 G19CrMo9-10

ASTM A 182 Gr. F22; A 213 Gr. T22; A 234 Gr. WP22; 335 Gr. P22; A 336 Gr. F22; A 426 Gr. CP22

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

	C	Si	Mn	Cr	Mo	P	As	Sb	Sn
wt-%	0.08	0.3	0.6	2.2	1.0	≤ 0.010	≤ 0.005	≤ 0.005	≤ 0.006

Mechanical properties of all-weld metal

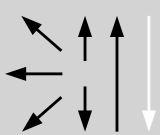
Condition	Yield strength R _{p0.2}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact work ISO-V KV J
	MPa	MPa	%	+20 °C
u	510 (≥ 400)	600 (≥ 500)	20 (≥ 18)	120 (≥ 47)
a1	≥ 510	≥ 620	≥ 15	
v	480	620	21	180

a annealed, 720 °C/2h / furnace down to 300 °C / air

a1 annealed, 700 °C/1h / furnace down to 200 °C / air

v quenched/tempered 930 °C/0.5 h/oil 730 °C/0.5 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 CM 2 Kb	2.5	250	80 – 110
			9018-B3 E	3.2	350	100 – 140
			CrMo2 B	4.0	350/450	130 – 180
				5.0	450	180 – 230

Preheating and interpass temperatures 200 – 350 °C. Post weld annealing at 700 – 750 °C at least 1 hour followed by cooling in furnace down to 300 °C and still air.

Approvals

TÜV (0722.), DB (10.014.30), ABS (E 9018-B3), DNV (NV 2,25Cr 1Mo), GL (10 CrMo 9 10), SEPROZ, CE, NAKS (ø 3.2; ø 4.0 mm)