

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-B3 H4	E6218-B3 H4

Characteristics and typical fields of application

Basic covered stick electrode for welding 2.25 % Cr 1 % Mo alloyed steels. Approved in long-term condition up to +600 °C service temperature. Applicable for welds in refineries, boiler construction, and thermal power plants. Core wire alloyed electrode which will provide reliable creep rupture properties. 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 nitride-able and heat treatable. Metal recovery approx. 110 %.

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

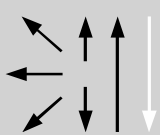
	C	Si	Mn	Cr	Mo	P	As	Sb	Sn
wt.-%	0.08	0.3	0.7	2.2	1.0	≤ 0.010	≤ 0.005	≤ 0.005	≤ 0.006

Mechanical properties of all-weld metal – typical values (min. values)

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
a1	580 (≥ 400)	680 (≥ 500)	19 (≥ 18)	150 (≥ 47)
a2	530 (≥ 400)	630 (≥ 500)	20 (≥ 18)	180
v	490 (≥ 400)	600 (≥ 500)	21	180

a1 annealed, 720 °C/1h / furnace 300 °C / air
a2 annealed, 720 °C/2h / furnace 200 °C / air
v quenched/tempered 930 °C/0.5 h/ air + 680 °C/15 h / 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 9018-B3 E CrMo2 B	2.5	250	80 – 110
				3.2	350	100 – 140
				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 (10.014.81), ABS, DNV GL, NAKS (ø 3.2; ø 4.0 mm), CE