

Classifications

EN ISO 3580-A	EN ISO 3580-B	AWS A5.5	AWS A5.5M
E CrMo5 B 4 2 H5	E5518-5CM H5	E8018-B6H4R	E5518-B6H4R

Characteristics and typical fields of application

Basic core wire alloyed electrode for creep resistant steels and steels for hot hydrogen service. Preferably used for X12CrMo5 (5 Cr 0.5 Mo) steels. Approved in long-term condition up to +650 °C service temperature. High crack resistance, very low hydrogen content (acc. AWS condition HD < 4 ml/100 g). Good weldability in all positions except vertical down. The deposit is heat treatable. Metal recovery approx. 115 %.

Base materials

Creep resistant steels and similar alloyed cast steels, QT-steels similar alloyed up to 1180 MPa tensile strength

1.7362 X12CrMo5

ASTM A 182 Gr. F5; A 193 Gr. B5; A 213 Gr. T5; A217 Gr. C5; A 234 Gr. WP5; A 314 Gr. 501; A335 Gr. P5 u. P5c; A 369 Gr. FB 5; A 387 Gr. 5; A 426 Gr. CP5

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

	C	Si	Mn	Cr	Mo
wt-%	0.08	0.3	0.8	5.0	0.6

Mechanical properties of all-weld metal

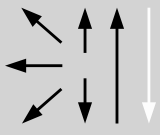
Condition	Yield strength R _{p0,2}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact work ISO-V KV J
	MPa	MPa	%	+20 °C
a	520 (≥ 460)	620 (≥ 590)	21 (≥ 17)	90 (≥47)
a2	≥ 460	≥ 590	≥ 17	
v	440	580	26	110

a annealed, 730 °C/2h / furnace down to 300 °C / air

a2 annealed, 760 °C/1h/ furnace down to 200 °C / air

v quenched/tempered 960 °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 5 Kb	2.5	250	70 – 90
			8018-B6 E	3.2	350	110 – 130
			CrMo 5 B	4.0	350	140 – 170

Preheat and interpass temperatures 300 – 350 °C. Post weld annealing at 730 – 760 °C for at least 1 hour followed by cooling in furnace down to 300 °C and still air.

Approvals

TÜV (0725.), LTSS, SEPROZ, CE