

Classifications

EN ISO 3580-A	AWS A5.5	AWS A5.5M
E ZCrMoV1 B 4 2 H5	E9018-G	E6218-G

Characteristics and typical fields of application

Basic electrode for highly stressed joint and production welds on GS-17 CrMoV5-10 type high temperature cast steel used in the construction of steam turbines and valve casings. Approved in long-term condition up to +600 °C service temperature.

High creep rupture strength thanks to the C, Cr, Mo and V-content. High fracture toughness, low hydrogen content, good welding characteristics. The deposit is heat treatable. Metal recovery approx. 115 %.

Base materials

Similar alloyed creep resistant steels and cast steels
1.7706 G17CrMoV5-10

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

	C	Si	Mn	Cr	Mo	V
wt.-%	0.12	0.30	0.9	1.2	1.0	0.22

Mechanical properties of all-weld metal

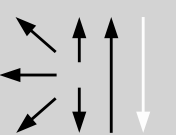
Condition	Yield strength R _{p0,2}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact work ISO-V KV J
	MPa	MPa	%	+20 °C
u	720	1000	12	22
a	680 (≥ 530)	770 (≥ 620)	19 (≥ 17)	90 (≥ 47)
v	500	630	20	155

u untreated, as welded

a annealed, 680°C/8 h / furnace down to 300 °C / air

v quenched/tempered 940 °C/0.5 h / oil 720 °C/12 h / furnace down to 300 °C / air

Operating data

	Polarity: DC (+)	Redrying if necessary: 300 – 350 °C, min. 2 h	Electrode identification: FOX DCMV 9018- G E ZCrMoV1 B	ø (mm)	L mm	Amps A
				4.0 5.0	450 450	130 – 180 180 – 230

Preheat and interpass temperatures 300 – 350 °C, stress relieving > 20 °C below the tempering temperature of the cast steel, but not less than 680 °C.

Approvals

TÜV (6077.), LTSS, SEPROZ, CE