

Classifications

EN ISO 3580-A	AWS A5.5M	AWS A5.5 / SFA-5.5
E Z CrMoV1 B 4 2 H5	E6218-G	E9018-G

Characteristics and typical fields of application

BÖHLER FOX DCMV is a covered electrode with basic coating for shielded metal arc welding. The 1.25Cr-1Mo-0.25V type weld metal exhibits a bainitic microstructure with favorable mechanical properties in tempered and quenched and tempered condition. The range of application covers joint welding of similar alloyed creep resistant steel and steel casting like G17CrMoV5-10 for thermal power industry. BÖHLER FOX DCMV is approved for application under creep condition at design temperatures up to 600 °C. The optimized coating guarantees low level of diffusible hydrogen in the weld metal and a metal recovery of 115 %.

Base materials

Similar alloyed creep resistant steels and cast steels like

1.7706 G17CrMoV5-10, 1.8070 21CrMoV5-11, 1.7745 15CrMoV5-10, ASTM A 389 grade C24, ASTM A356 grade 9

Typical analysis

	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 - typical values (min. values)

Condition	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A ($L_0=5d_0$)	Impact energy ISO-V KV J
	MPa	MPa	%	20°C
T	680 (≥ 530)	770 (≥ 620)	19 (≥ 17)	90 (≥ 47)
QT	500	630	20	155

T: tempered (680 °C / 8h)

QT: quenched and tempered (940 °C/0.5 h / oil + 720 °C / 12 h)

Operating data

	Polarity	DC +	Dimension mm	Current A
	Electrode identification	FOX DCMV 9018-G E Z CrMoV1 B	3.2 × 350	90 – 140
		4.0 × 450	130 – 180	
		5.0 × 450	180 – 230	

Preheating, interpass temperature, and post-weld heat treatment as required by the base metal. Preheating and interpass temperature for steel castings can normally be recommended being in a range of 300 to 350 °C. Common post weld heat treatments are carried out between 670 and 720 °C.

Approvals

TÜV (06077), LTSS, CE