

Classifications

EN ISO 3580-A	EN ISO 3580-B	AWS A5.5 / SFA-5.5	AWS A5.5M
E CrMo1 R 1 2	E5513-1CM	E8013-G	E5513-G
		E8013-B2 (mod.)	E5513-B2 (mod.)

Characteristics and typical fields of application

BÖHLER FOX DCMS Ti is a core wire alloyed covered electrode with rutile coating. The 1Cr-0.5Mo type weld metal exhibits a bainitic micro structure with favorable mechanical properties. Under certain conditions applications in the as welded condition is possible. The range of application covers joint welding of similar alloyed creep resistant steel and steel casting. Preferred for welding wall thicknesses up to 30 mm and root pass welding. BÖHLER FOX DCMS Ti is approved for application under creep condition at design temperatures up to 570 °C. The coating ensures an excellent slag detach-ability and can be welded on direct and alternating current.

Base materials

Creep resistant steels and similar alloyed cast steels like

1.7335 13CrMo4-5, 1.7262 15CrMo5, 1.7728 16CrMoV4, 1.7218 25CrMo4, 1.7225 42CrMo4, 1.7258 24CrMo5, 1.7354 G22CrMo5-4, 1.7357 G17CrMo5-5 ASTM A 182 Gr. F12; A 193 Gr. B7; A 213 Gr. T12; A 217 Gr. WC6; A 234 Gr. WP11; A335 Gr. P11, P12; A 336 Gr. F11, F12; A 426 Gr. CP12

Typical analysis


	C	Si	Mn	Cr	Mo
wt.-%	0.1	0.35	0.7	1.0	0.5

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	510 (≥ 460)	610 (≥ 550)	21 (≥ 20)	100 (≥ 47)

T: tempered (680 °C / 8 h)

Operating data

	Polarity	DC - / AC	Dimension mm	Current A
	Electrode identification	FOX DCMS Ti / E CrMo1 R / E8013-G	2.5 × 250	80 – 110
			3.2 × 350	110 – 140
			4.0 × 350	140 – 180

Preheating, interpass temperature, and post-weld heat treatment as required by the base metal. Preheating can normally be recommended being in a range of 200 to 300 °C depending on the wall thickness. Common post weld heat treatments are carried out between 600 and 700 °C.

Approvals

TÜV (00764.), DB (10.014.89), DNV, CE