

BÖHLER FOX EV 50

Stick electrode, mild steel, basic coated



Classifications

EN ISO 2560-A
E 42 5 B 4 2 H5

AWS A5.1 / SFA-5.1
E7018-1 H4 R

Characteristics and typical fields of application

Basic coated electrode engineered for high-quality welds. Excellent strength and toughness properties down to -50°C. Metal recovery approximately 110%. Good weldability in all position except for vertical-down. Very low hydrogen content (acc. AWS condition HD < 4 ml/100g weld metal). Suitable for welding steels with low purity and high carbon content. Welding in steel construction, boiler and tank manufacture, vehicle construction, shipbuilding, and machine construction as well as for buffer layers on build ups on high carbon steels. Especially suitable for off-shore construction, CTOD tested at -10 °C. BÖHLER FOX EV 50 can be used in sour gas applications (HIC-Test acc. NACE TM-02-84). Test values for SSC-test are available too.

Base materials

Steels up to a yield strength of 420 MPa (60 ksi)

S235JR-S355JR, S235JO-S355JO, S235J2-S355J2, S275N-S420N, S275M-S420M, S275NLS420NL, S275ML-S420ML, P235GH-P355GH, P275NL1-P355NL1, P275NL2-P355NL2, P215NL, P265NL, P355N, P285NH-P420NH, P195TR1-P265TR1, P195TR2-P265TR2, P195GH-P265GH, L245NB-L415NB, L245MB-L415MB, GE200-GE240, GE300

Ship building steels: A, B, D, E, A 32-F 36, A 40-F 40

ASTM A 106 Gr. A, B, C; A 181 Gr. 60, 70; A 283 Gr. A, C; A 285 Gr. A, B, C; A 350 Gr. LF1, LF2; A 414 Gr. A, B, C, D, E, F, G; A 501 Gr. B; A 513 Gr. 1018; A 516 Gr. 55, 60, 65, 70; A 573 Gr 58, 65, 70; A 588 Gr. A, B; A 633 Gr. A, C, D, E; A 662 Gr. A, B, C; A 707 Gr. L1, L2, L3; A 711 Gr. 1013; A 841 Gr. A, B, C; API 5 L Gr. B, X42, X52, X56, X60

Typical analysis of all-weld metal

wt.-%	C	Si	Mn
	0.08	0.4	1.2

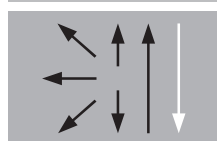
Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength R _e MPa	Tensile strength R _m MPa	Elongation A (L ₀ =5d ₀) %	Impact values ISO-V KV J		
				20°C	-20°C	-50°C
u	460 (≥ 420)	570 (500 – 640)	30 (≥ 20)	190	160	70 (≥ 47)
s	430	520	32	200		90

u untreated, as welded

s stress relieved 600°C/2h / furnace down to 300°C / air

Operating data



Polarity	DC+
Electrode identification	FOX EV 50 7018-1 E 42 5 B
Redrying	300-350°C/2h

Dimension mm	Current A
2.5 × 250	80 – 110
2.5 × 350	80 – 110
3.2 × 350	100 – 140
3.2 × 450	100 – 140
4.0 × 350	130 – 180
4.0 × 450	130 – 180
5.0 × 450	180 – 230

Approvals

TÜV (00426), DB (10.014.02), ABS, BV, DNV GL, LR, RMR, RINA, CWB (Ø3,2-6,0 mm), CE