BÖHLER FOX EV 50

Basic stick electrode, unalloyed

Classifications

EN ISO 2560-A	EN ISO 2560-B	AWS A5.1	AWS A5.1M
E 42 5 B 4 2 H5	E 4918-1 A U H5	E7018-1H4R	E4918-1H4R

Characteristics and typical fields of application

Basic electrode engineered for high-quality welds. Excellent strength and toughness properties down to –50 °C. Metal recovery approx. 110 %. Good weld ability 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, S275NL-S420NL, 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
wt.-%	0.08	0.4	1.2

Mechanical properties of all-weld metal

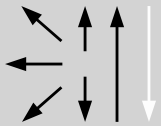
Condition	Yield strength R_e	Tensile strength R_m	Elongation A (L_0=5d_0)	Impact work ISO-V KV J		
	MPa	MPa	%	+20 °C	–20 °C	–50 °C
u	**460** (≥ 420)	**560** (500 – 640)	**27** (≥ 20)	**190**	**160**	**70** (≥ 47)
s	**430**	**520**	**28**	**200**		**90**

u untreated, as welded
s stress relieved 600 °C/2h / furnace down to 300 °C / air

BÖHLER FOX EV 50

Basic stick electrode, unalloyed

Operating data



Polarity:	Redrying if necessary:	Electrode identification:	ø (mm)	L mm	Amps A
DC (+)	300 – 350 °C, min. 2 h	FOX EV 50 7018-1 E 42 5 B	2.0	250	50 – 70
			2.5	250/350	80 – 110
			3.2	350/450	100 – 140
			4.0	450	130 – 180
			5.0	450	180 – 230
			6.0	450	240 – 290

Approvals

TÜV (0426.), DB (10.014.02), ABS (3H5, 4Y), BV (3YHHH), DNV (3YH10), GL (4Y40H15), LR (3, 3YH5), RMR (3YHH), RINA (4YH5 / 4H5), LTSS, VUZ, SEPROZ, PDO, CRS (3YH5), CE, NAKS