BÖHLER Q E 7018

Stick electrode, unalloyed, basic coated

Classifications

EN ISO 2560-A	AWS A5.1 / SFA-5.1
E 42 4 B 4 2 H5	E7018 H4 R

Characteristics and typical fields of application

Basic coated electrode engineered for high-quality welds. Excellent strength and toughness properties down to –40ºC. Also suitable for welding steels with low purity and high carbon content. Metal recovery about 115%. Good weldability in out-of-position work except for vertical-down. Suitable for welding in steel construction, boiler and container fabrication, vehicle construction, shipbuilding, and machine construction as well as for buffer layers when building up on high carbon steels. Deposit has very low hydrogen content (according to AWS condition HD < 4ml/100g weld metal).

Base materials

steels up to a yield strength of 420 MPa (60ksi)
S235JR-E335, S235J2G3-S355J2G3, C22, C35, P235T1-P355T1, P235T2, P355T2, L210-L360NB L290MB-L32MB, P235G1TH, P255G1TH, P235GH, P265GH, P295GH, S235JRS1-S235J4S, S355G1S-S355G3S, S255N-S355N, P255NH-P355NH, S255NL-S355NL, GE200-GE260, GE300 ASTM A 27 u. A36 Gr. all; A214; A 242 Gr.1-5; A266 Gr. 1, 2, 4; A283 Gr. A, B, C, D; A285 Gr. A, B, C; A299 Gr. A, B; A328; A366; A515 Gr. 60, 65, 70; A516 Gr. 55; 60, 65, 70; A570 Gr. 30, 33, 36, 40, 45; A 572 Gr. 42, 50; A606 Gr. all A607 Gr. 45; A656 Gr. 50, 60; A668 Gr. A, B; A907 Gr. 30, 33, 36, 40; A841; A851 Gr. 1, 2; A935 Gr.45; A936 Gr. 50; API 5 L Gr. B, X42, X52

Typical analysis

	C	Si	Mn
wt.-%	0.07	0.5	1.1

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	-20°C	-40°C
u	490 (≥ 420)	560 (500 – 640)	27 (≥20)	150	130	≥47
s	430	520	29	170	150	≥47

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

Operating data

Polarity	DC +
Electrode identification	Q E 7018 / 7018 / E 42 4 B
Redrying	300 – 350°C / min. 2 h

Dimension mm	Current A
2.0 × 300	50 - 70
2.5 × 350	80 - 110
3.2 × 350	100 - 140
3.2 × 450	100 - 140
4.0 × 450	130 - 180
5.0 × 450	180 - 230

Approvals

TÜV (19742.), DB (10.014.103), DNV, CE