BÖHLER Q 70 MC

Metal-cored wire, mild steel

Classifications

EN ISO 17632-A	EN ISO 17632-B	AWS A5.18 / SFA-5.18
T 46 3 M M21 1 H5	T 49 3 T15-1M21A-UH5	E70C-6M H4

Characteristics and typical fields of application

Metal-cored all positional high-efficiency wire for semi-automatic and fully automatic joint welding of unalloyed and fine-grained constructional steels and service temperatures from -40ºC (≥ 27J) to +450ºC when using mixed gas M20 and M21 according to EN ISO 14175.
Steady spray arc-like droplet transfer with minimal spatter formation from 200 A (1,2mm); good penetration; high resistance to porosity; good wetting behaviour; ideal for horizontal and flat fillet welds. Compared to solid wires 20% higher productivity can be achieved.
This wire is designed for minimum oxide residues permit the welding of multi passes with minimum needs for inter-run cleaning.

Base materials

Steels up to a yield strength of 460 MPa
S235JR-S355JR, S235J0-S355J0, S450J0, S235J2-S355J2, S275N-S460N, S275M-S460M, P235GH-P355GH, P355N, P285NH-P460NH, P195TR1-P265TR1, P195TR2-P265TR2, P195GH- P265GH, L245NB-L415NB, L450QB, L245MB-L450MB, GE200-GE240,
Ship building steels: A, B, D, E, AH 32 - EH 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 414 Gr. A, B, C, D, E, F, G; A 501 Gr. B; A 516 Gr. 55, 65, 70; A 573 Gr. 58, 65, 70; A 588 Gr. A, B; A 633 Gr. C; A 662 Gr. B; A 711 Gr. 1013; A 841 Gr. A; API 5 L Gr. B, X42, X52, X56, X60, X65

Typical analysis

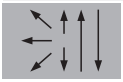
	C	Si	Mn
wt.-%	0.07	0.7	1.5

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

Condition	Yield strength R_e	Tensile strength R_m	Elongation A (L_0=5d_0)	Impact energy ISO-V KV J	
	MPa	MPa	%	-30°C	-40°C
u	490 (≥ 460)	590 (550 - 660)	25 (≥ 22)	90 (≥ 47)	47 (≥ 27)

untreated, as welded – shielding gas M21, M20

Operating data



Polarity	DC+
Shielding gas (EN ISO 14175)	M20, M21 (EN ISO 14175), Ar + 5 - 25 % CO2

Dimension mm
1.2
1.4
1.6

Welding with conventional or pulsed power sources using DC+

Approvals

TÜV (12542), DB (42.014.65), DNV, LR, BV, ABS, CWB, CE