BÖHLER Q 70 MC

METAL CORED WIRE

Metal-cored all positional high efficiency wire for shipbuilding and general construction applications for welding of unalloyed steels using Argon-CO_2 shielding gas.

BÖHLER Q 70 MC from Böhler Welding offers an ideal wire for extremely clean manufacturing processes, enables multi pass welding without the need of inter-run cleaning. The BÖHLER Q 70 MC is characterized by minimum oxide residue, minimal spatter formation and low hydrogen content. This filler material is ideal for horizontal and flat fillet welds and ensures a time efficient welding process with remarkably less weld cleaning.

Product features	Product benefits	User benefits
» **Designed chemistry**	» Can be use under mixed M21-M20 (Ar + 5-25%CO_2) » For semi-automatic and fully automatic joint welding of unalloyed and fine-grained constructional steels with service temperatures to -30°C » Good penetration » High resistance to porosity » Good wetting behaviour » Can be used for steel grades up to yield strength of 460 MPa	» Flexibility in production » Ideal for horizontal and flat fillet welds
» **Extremely clean manufacturing process**	» Steady spray arc-like droplet transfer with minimal spatter formation » Low hydrogen contents (≤ 5 ml/100 g deposit) » Minimum oxide residues	» Less post weld cleaning » Time saving process » Permits the welding of multi passes without the need for inter-run cleaning

Typical applications

» General steel construction
» Shipbuilding

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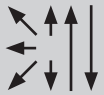
Classifications			Operating data		
EN ISO 17632-A	AWS A5.36		Welding positions	Polarity	Shielding gas
T46 3 M M21 1 H5	E71T15-M21A4-CS1-H4 E71T15-M20A4-CS1-H4			DC+	M21-M20

Typical chemical composition, all weld metal, wt. %

Shielding gas	C	Si	Mn
M21	0.07	0.7	1.5

Mechanical properties, all weld metal (single values typical)

Shielding gas	Condition	Yield strength $R_{p0.2\%}$ MPa	Tensile strength R_m MPa	Elongation A ($L_0 = 5d_0$) %	CVN Impact toughness ISO-V KV J -30 °C	-40 °C
M21-M20	As welded	490 (≥ 460)	590 (550 – 660)	25 (≥ 22)	90 (≥ 47)	47 (≥ 27)

Steels to be welded

EN	Shipbuilding Steel	ASTM
S235JR-S355JR, S235JO-S355JO, S450JO, S235J2-S355J2, S275N-S460N, S275M-S460M, P235GH-P355GH, P275NL1-P460NL1, P215NL, P265NL, P355N, P285NH-P460NH, P195TR1-P265TR1, P195TR2-P265TR2, P195GH-P265GH, L245NB-L415NB, L450QB, L245MB-L450MB, GE200-GE240,	A, B, D, E, AH32 - EH36	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 513 Gr. 1018; A 516 G.r 55, 60, 65, 70; A 573 Gr. 58, 65, 70; A 588 Gr. A, B; A 633 Gr. C, E; A 662 Gr. B; A 711 Gr. 1013; A 841 Gr. A

Approvals

TÜV, DB, ABS, LR, DNV GL, BV, CWB, CE

Overview spool types

Plastic spool S200

Precision layer wound

Dimensions:
Ø external 200 mm
Ø internal 52 mm
Width 47 mm

Available spool weight: 5 kg

Available diameters: 1.2 mm

Wire basket spool BS300

Precision layer wound

Dimensions:
Ø external 300 mm
Ø internal 52 mm
Width 100 mm

Available spool weight: 16 kg

Available diameters: 1.2 mm