BÖHLER HL 46-MC

Metal cored wire, unalloyed

Classifications

EN ISO 17632-A	EN ISO 17632-B	AWS A5.18	AWS A5.18M
T 46 2 M M 1 H5	T552T15-1MA-H5	E70C-6MH4	E48C-6MH4

Characteristics and typical fields of application

Metal-cored high-efficiency wire for semi-automatic and fully automatic joint welding of unalloyed and fine-grained constructional steels and service temperatures from -20°C to +450°C. Very high metal recovery between 93 and 97% and deposition rate up to 9 kg/hr. Steady spray arc-like droplet transfer with minimal spatter formation. Good penetration, high resistance to porosity, good wetting behaviour as well as low hydrogen contents (≤ 5 ml/100 g deposit) are further quality features of this flux cored wire. 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 without the need for inter-run cleaning.

Base materials

Steels up to a yield strength of 460 MPa (67 ksi)

S235JR-S355JR, S235JO-S355JO, S450JO, 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 steel: A, B, D, E,

A 32-E 36

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 of all-weld metal (wt.-%)

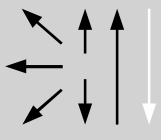
	C	Si	Mn
wt.-%	0.07	0.7	1.5

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
u	**490** (≥ 460)	**590** (550 – 740)	**25** (≥ 20)	**110**	**50** (≥ 47)

u untreated, as welded – shielding gas Ar + 15 – 25% CO_2

Operating data



Polarity:	Redrying	Shielding gases:	ø (mm)
DC (+)	not necessary	Argon + 15 – 25% CO_2	1.2 1.4 1.6

Welding with standard GMAW power source possible.

Approvals

TÜV (12542.), DB (42.014.43), DNV, GL, LR, BV (ø 1.2 mm), ABS, CE