BÖHLER HL 51 T-MC

Metal cored wire, seamless, unalloyed

Classifications

EN ISO 17632-A	EN ISO 17632-B	AWS A5.36	AWS A5.36M
T46 6 M M 1 H5	T556T15-1MA-H5	E70T15-M21A8-CS1-H4	E490T15-M21A6-CS1-H4
T42 5 M C 1 H5	T495T15-1CA-H5	E70T15-C1A6-CS1-H4	E490T15-C1A5-CS1-H4

Characteristics and typical fields of application

Seamless metal cored wire for single- or multilayer welding of Carbon, Carbon-Manganese and similar types of steels, including fine grain steels with Argon-CO_2 or pure CO_2 shielding gas.
Features include: high yield, good weldability, excellent bead appearance, very low spatter losses and exceptional mechanical properties at low temperatures (-60°C) in as welded conditions as well with post weld heat treatment. This wire is especially suitable for automated-robotized applications and for root pass welding for piping and butt-joints. This wire is CTOD-tested.

Base materials

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
Shipp building steels: 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 350 Gr. LF1; 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. C, E; 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.-%)

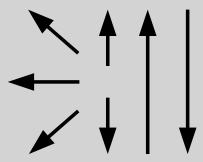
	Gas	C	Si	Mn
wt-%	M21	0,06	0,80	1,60
wt-%	C1	0,05	0,60	1,50

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	%	-40°C	-50°C	-60°C
u	**500** (≥460)	**600** (550-660)	**29** (≥20)	**90**		**60** (>47)
u1	**460** (≥420)	**560** (530-640)	**30** (≥20)	**80**	**60** (>47)	
s	**420**	**510**	**24**	**90**		

u untreated, as welded – shielding gas M21
u1 untreated, as welded – shielding gas C1
s stress relieved 620°C / 2h – shielding gas M21

Operating data



Polarity:	Shielding gases:	ø (mm)
DC (+)	(EN ISO 14175) M21; C1	1.0
		1.2
DC (–)		1.4
in PG-Position		1.6

Welding with standard GMAW-facilities possible

Approvals

TÜV (12580), DB (42.014.49), GL (4YH5S/ C1; 5Y46H5S/ M21), DNV (5Y46MS(H5)/M21; 4Y46MS(H5)/C1), ABS (4YSAH5), LR, BV (SA4YM/ M21+C1), RINA (4YSH5/ M21+C1), CWB, CE

All information provided is based upon careful investigation and intensive research.
However, we do not assume any liability for correctness and information is subject to change without notice.