BÖHLER DMO Ti-FD

Flux cored wire, low-alloyed, creep resistant

Classifications

EN ISO 17634-A	EN ISO 17634-B	AWS A5.36	AWS A5.36M
T MoL P M 1 H10	T55T1-1M-2M3-H10	E81T1-M21PY-A1H8	E551T1-M21PY-A1H8

Characteristics and typical fields of application

Rutile flux-cored wire which provides easy all-position weld ability, primarily designed for the welding of 0,5% Mo alloyed base metals, that are used for the fabrication of vessels, high-pressure storage tanks, pipe systems as well as for structural steel applications.

Due to the fast freezing slag system this flux-cored wire provides excellent positional welding characteristics and allows fast travel speeds to be used. It can be operated in spray arc mode in all positions and offers a controllable spatter free arc. Easy slag detachability with smooth, good profile, clean weld beads are further features of this wire.

Base materials

Creep resistant steels and similar alloyed cast steels,

16Mo3, S235JR-S355JR, P195TR1-P265TR1, L245NB-L415NB, L450QB, L245MB-L450MB, GE200-GE300

ASTM A 29 Gr, 1016; A 106 Gr. A, B; A 182 Gr. F1; A 234 Gr. WP1; A 283 Gr., C, D; A 335 Gr. P1; A 501 Gr. B; A 510 Gr. 1013; A 512 Gr. 1021, 1026; A 513 Gr. 1021, 1026; A 711 Gr. 1013; API 5 L B, X42, X52, X60, X65

Typical analysis of all weld metal (wt.-%)

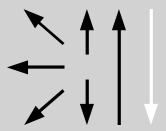
	C	Si	Mn	Mo
wt.-%	0.04	0.25	0.75	0.5

Mechanical properties of all-weld metal

Condition	Yield strength $R_{p0,2}$	Tensile strength R_m	Elongation A (L_0=5d_0)	Impact work ISO-V KV J
	MPa	MPa	%	+20°C
u	**540** (≥ 470)	**600** (550 - 690)	**23** (≥ 22)	**120** (≥ 47)
a	**510** (≥ 470)	**570** (550 - 690)	**23** (≥ 22)	**140** (≥ 47)

u untreated, as welded – shielding gas Ar + 18% CO_2
a annealed, 620°C/1h / furnace down to 300°C / air – shielding gas Ar + 18% CO_2

Operating data



Polarity:	Shielding gases:	Redrying:	ø (mm)	Amps A	Voltage V
DC (+)	Argon + 15 – 25% CO_2	possible 150°C/24 h	1.2	150 – 330	23 – 37

Welding with standard welding facilities. When using 100% CO_2 lower tensile properties can be expected.

Preheating, interpass temperature and post weld heat treatment as required by the base metal. For heavy walled components preheating to a min. 150°C is recommended.

Slightly trailing torch position (angel appr. 80°), slight weaving is recommended for positional welding

Final PWHT should be carried out between 600°C and 630°C for a minimum of 1 hour.

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Approvals

TÜV (11120.), CE