

Classifications

EN ISO 17632-A	EN ISO 17632-B	EN ISO 17634-A	EN ISO 17634-B
T46 6 Mo B M21 3 H5	T556T5-0M21-2M3-H5	T Mo B M21 3 H5	T55T5-0M21-2M3-H5
AWS A5.36/SFA-5.36		AWS A5.36M/SFA-5.36M	
E80T5-M21P8-A1-H4		E550T5-M21P6-A1-H4	

Characteristics and typical fields of application

Seamless, Molybdenum alloyed, basic wire for single- or multilayer welding in boiler, pressure vessel, pipeline and steel construction, preferably for creep resistant steel qualities with 0.5% Mo up to 500°C with Ar-CO₂ shielding gas.

Features include: excellent impact values at low temperatures (-60°C) in as welded conditions and after long post weld heat treatments (620°C / 15h) with low spatter losses. Wire with very low amount of diffusible hydrogen in weld metal (<1.5ml/100g) that reduces the risk of cracks.

Base materials

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.-%)

	Gas	C	Si	Mn	Mo
wt-%	M21	0.08	0.35	1.00	0.50

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		
				+20°C	-40°C	-60°C
u	520 (≥470)	600 (550–680)	24 (≥22)	210	150	130 (≥47)
s	490 (≥470)	580 (550–680)	26 (≥22)	190	140	120 (≥47)

u untreated, as welded – shielding gas M21

s stress relieved 620°C / 3h – shielding gas M21

Operating data

	Polarity: DC (+)	Shielding gas: (EN ISO 14175) M21	ø (mm) 1.2 1.4 1.6
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Welding with standard GMAW power source possible

Preheating, interpass temperature and post weld heat treatment as required by the base metal. For heavy walled components an interpass temperature to a min. 150°C recommended. Final PWHT should be carried out between 560°C to 620°C for a minimum of 1 hour.

Approvals

TÜV, CE