

Classifications

EN ISO 17632-A

T 46 4 P M 1 H5

T 46 2 P C 1 H5

AWS A5.36 / SFA-5.36

E71T1-M21A4-CS1-DH4

E71T1-C1A2-CS1-DH4

Characteristics and typical fields of application

Seamless rutile flux cored wire for single- or multilayer welding of Carbon, Carbon-Manganese steels and similar types of steels including fine grain steels with Argon-CO₂ shielding gas or pure CO₂. Main features: excellent weldability in all positions with high performance welding speed, very low spatter losses, good bead appearance, fast freezing and easy to remove slag. This wire is especially suitable for ship building, structural steel work or wherever good bead appearance is required. D1.8 Seismic Supplement approved. Typical hydrogen value 2.5 – 3.5ml/100g weld metal.

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

ship 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 the wire

	Gas	C	Si	Mn
wt.-%	M21	0.06	0.40	1.45
wt.-%	C1	0.04	0.35	1.25

Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength R _e MPa	Tensile strength R _m MPa	Elongation A (L ₀ =5d ₀) %	Impact values ISO-V KV J	
				-20°C	-40°C
u	500 (≥ 460)	590 (550–660)	26 (≥ 20)	100 (≥ 47)	70 (≥ 47)
u1	470 (≥ 460)	560 (550–660)	28 (≥ 20)	80 (≥ 47)	

u untreated, as welded – shielding gas M21

u1 untreated, as welded – shielding gas C1

Operating data

	Polarity	DC+	Dimension mm
	Shielding gas (EN ISO 14175)	M21 , C1	1.0
			1.2
			1.4
			1.6

Welding with standard GMAW-facilities possible

Approvals

TÜV, DB, DNV GL, DNV, ABS, LR, BV, RINA, RS, CE; D1.8 seismic supplement;