

Classifications

EN ISO 16834-A	EN ISO 16834-B	AWS A5.28	AWS A5.28M
W 69 6 I1 Mn3Ni2.5CrMo	W 76A 6 I1 N5M3	ER110S-G	ER76S-G

Characteristics and typical fields of application

GTAW rod for joint welding of high- strength fine- grained constructional steels with stringent requirement on low-temperature toughness down to -60°C. e.g in marine engineering for the manufacture of LPG tankers.

Base materials

Quenched and tempered fine-grained steels with high requirements for low-temperature toughness S620Q, S620QL, S690Q, S690QL, S620QL1-S690QL1, alform plate 620 M, 700 M, aldur 620 Q, 620 QL, 620 QL1, aldur 700 Q, 700 QL, 700 QL1

ASTM A 514 Gr. F, H, Q ; A 709 Gr. 100 Type B, E, F, H, Q ; A 709 Gr. HPS 100W

Typical analysis of the TIG rods (wt.-%)

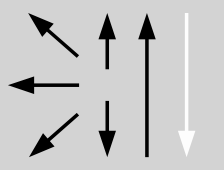
	C	Si	Mn	Cr	Ni	Mo
wt.-%	0.08	0.6	1.4	0.3	2.5	0.4

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	-40 °C	-60 °C
u	750 (≥ 690)	830 (770 – 960)	22 (≥17)	160	80	≥ 47

u untreated, as-welded – shielding gas Argon

Operating data

	Polarity: DC (-)	Shielding gas: 100 % Argon	Rod marking: front: ✦ W NiCrMo2.5 back: ER110S-G	ø (mm) 2.4
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Preheating and interpass temperature as required by the base metal.