



Union I 52

TIG rod, unalloyed

Classifications

EN ISO 636-A	EN ISO 636-B	AWS A5.18
W 42 5 W3Si1	W 49A 5 W6	ER70S-6

Characteristics and typical fields of application

GTAW solid rod and wire for the welding with argon. Typical fields of use: boiler, tank and pipeline constructions and apparatus engineering.

Base materials

Unalloyed structural steels up to a yield strength of 420 MPa (60 ksi)

S235JR-S355JR, S235JO-S355JO, S235J2-S355J2, S275N-S420N, S275M-S420M, S275NL-S420NL, S275ML-S420ML, P235GH-P355GH, P275NL1-P420NL1, P215NL, P265NL, P355N, P285NH-P420NH, P195TR1-P265TR1, P195TR2-P265TR2, P195GH-P265GH, L245NB-L415NB, L245MB-L415MB, GE200-GE240

ASTM A 106 Gr. A, B, C; A 181 Gr. 60, 70; A 283 Gr. A, B, C, D; A 285 Gr. A, B, C; A 350 Gr. LF1, LF2; A 414 Gr. A, B, C, D, E, F, G; A 501 Gr. B; A 513 Gr. 1018; A 515 Gr. 60, 65, 70; A 516 Gr. 55, 60, 65, 70; A 570 Gr. 30, 33, 36, 40, 45; A 572 Gr. 42, 50, 55; A 573 Gr. 58, 65, 70; A 588 Gr. A, B; A 607 Gr. 45; A 633 Gr. C, E; A 662 Gr. B; A 668 Gr. A, B, C; A 707 Gr. L1, L2, L3; A 711 Gr. 1013; A 841 Gr. A; API 5 L Gr. B, X42, X52, X56, X60

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

	C	Si	Mn
wt.-%	0.08	0.85	1.50

Mechanical properties of all-weld metal

Heat-treatment	Shielding gas	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	-50 °C
U	I1	440	560	25	130	50

Operating data

	Polarity:	Shielding gas:	Marks:	Ø mm	L mm
	DC (-)	(EN ISO 14175) I 1-3	✦ W 3 Si 1 / ER70S-6	1.6	1000
				2.0	1000
				2.4	1000
				3.2	1000

Approvals

TÜV (01656), DB (42.132.119), DNV, CE