

**Classifications**

EN ISO 636-A	EN ISO 636-A	AWS A5.18 / SFA-5.18
W 4Si1	W 46 4 4Si1	ER70S-6

**Characteristics and typical fields of application**

TIG rod of W 4Si / ER70S-6 suited for joints in boiler and vessel fabrication as well as in structural steel engineering with higher strength requirements.

**Base materials**

Steels with a yield strength < 460 MPa (67 ksi)

S235JR-S355JR, S235J0-S355J0, S450J0, 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,  
 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**

	C	Si	Mn
wt.-%	0.1	1.0	1.8


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

Condition	Yield strength $R_{p0.2}$	Yield strength $R_e$	Elongation A ( $L_0=5d_0$ )	Impact energy ISO-V KV J
	MPa		%	-40°C
u	470 ( $\geq 460$ )	600 ( $\geq 530 - 680$ )	26 ( $\geq 20$ )	50 ( $\geq 47$ )
s	420 ( $\geq 355$ )	530 ( $\geq 440 - 570$ )	28 ( $\geq 22$ )	80 ( $\geq 47$ )

u untreated, as welded – shielding gas 100 % Ar

s stress relieved, 600 °C/2h – shielding gas 100 % Ar

**Operating data**

	<b>Polarity</b>	DC-	<b>Dimension mm</b>
	<b>Shielding gas (EN ISO 14175)</b>	l1	2.4 × 1000
	<b>Rod marking</b>	+ W 4Si1 / ER70S-6	3.2 × 1000

**Approvals**

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