

Classifications

EN ISO 21952-A	EN ISO 21952-B	AWS A5.28 / SFA-5.28
W CrMo1	W 1CM	ER80S-B2

Characteristics and typical fields of application

TIG rod for 1.25% Cr – 0.5% Mo alloyed boiler, plate and tube steels. Approved for long-term service up to 600°C service temperature.

Base materials

Creep resisting steels and similar alloyed cast steels and case hardening steels
 ASTM A182 Gr. F12 Cl. 1+2 – K11562+K11564 – 1.7335 – 13 CrMo4-5;
 ASTM A213 Gr. T2, T12 – K11547, K11562
 ASTM A217 Gr. WC6 – J12072 – 1.7357 – G17CrMo5-5
 ASTM A217 Gr. WC11 – J11872; ASTM A234 Gr. WP12 Cl. 1+2 – K12062
 ASTM A250 Gr. T2, T12 – K11547, K11562
 ASTM A335 Gr. P2, P11, P12 – K11547, K11597, K11562

Typical analysis

	C	Si	Mn	Cr	Mo
wt.-%	0.10	0.55	0.60	1.30	0.50

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

Condition	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A ($L_0=5d_0$)	Impact energy ISO-V KV J	
	MPa	MPa	%	20 °C	- 29 °C
s	560 (≥ 470)	670 (≥ 550)	26 (≥ 19)	250 (≥ 54)	120 (≥ 54)

s heat treated 620 °C / 1 h

Operating data

	Polarity	DC -	Dimension mm
	Shielding gas (EN ISO 14175)	I1-I3	1.6 × 1000
	Rod marking	ER80S-B2	2.0 × 1000
			2.4 × 1000
			3.2 × 1000

Preheating, interpass temperature, and post-weld heat treatment as required by the base metal. Preheating can normally be recommended being in a range of 200 to 350°C depending on the wall thickness. Common post weld heat treatments are carried out between 600 and 750°C.

Approvals

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