

Classifications

AWS A5.18 / SFA-5.18

ER70S-2

Characteristics and typical fields of application

ER70S-2 GTAW rods contain Al, Ti and Zr, which are strong deoxidizers, in combination with Mn and Si, these rods are referred to as triple deoxidized. This has advantages when welding rimmed or semi-killed mild steels, or where joint preparations are rusty or contaminated. Böhler ER 70 S-2 is primarily used for single pass welding. For applications involving single and multipass GTAW and/or low temperature toughness requirements down to -110°F we recommend our GTAW rod Böhler EML 5 (ER70S-3). Böhler ER 70 S-2 can be used in sour gas applications.

Base materials

S235JR-S355JR, S235JO-S355JO, S235J2-S355J2, S275N-S420N, S275M-S420M, P235GH-P355GH, P355N, P285NH-P355NH, 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, C; A 285 Gr. A, B, C; 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. A, C, E; A 711 Gr. 1013; API 5 L Gr. B, X42, X52, X56, X60

Typical analysis

	C	Si	Mn	Ti	Al	Zr
wt.-%	0.05	0.5	1.2	+	+	+

Mechanical properties of all-weld metal - typical values

Condition	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A ($L_0=5d_0$)	Impact energy (ft.lbf)	Impact energy (ft.lbf)	Impact energy (ft.lbf)
	ksi	ksi	%	68°F	-20°F	-60°F
u	61	75	23	133	89	59
u - untreated, as welded – shielding gas 100 % Argon						

Operating data

	Polarity	DC-	Dimension
	Shielding gas (EN ISO 14175)	I1	1/16" × 39"
	Rod marking	+ER70S-2	5/64" × 39"
			3/32" × 39"
			1/8" × 39"

Shielding gas: Ar

Approvals

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