

K-81TB2SM

For heat-resisting steel (1.25%Cr-0.5% Mo)

Classifications

EN ISO 17634-A:2008	: T (CrMo 1) P M 1	AWS A5.29-10	: E81T1-B2M
EN ISO 17634-B:2008	: T55 T1-1M-1CM	AWS A5.36-12	: E81T1-M21P0-B2
JIS Z 3318	: T55 T1-1M-1CM	KS D 7121	: YF1CM-G

Description

- It is designed for welding of 560MPa 1.25%Cr-0.5% Mo steels used for high pressure vessels, oil refining industries, steam pipes of boilers etc (ASTM A182 Gr. F2, F11, F12, A193 Gr. B7, A234 Gr. WP11, WP12, A250 Gr. T11, A336 Gr. F11, F12 A356 Gr. 5, 6, 8, 9; A387 Gr. 2, 11, 12, A389 Gr. C23, A672 Gr. H75, 80)
- The weld metal contain about 1.25%Cr, 0.5%Mo and has good crack and heat resistance
- Wire is a titania type of flux cored wire for all-position welding
- It has excellent creep rupture strength and good impact value at low temperatures(-20℃)

Welding positions



Polarity & shielding gas

- Mix: Ar+20%CO₂ (15~25ℓ/min)
- DCEP (DC+)

Typical chemical composition of all-weld metal (%)

Shielding gas	C	Si	Mn	P	S	Cr	Mo
Mix	0.06	0.24	1.03	0.010	0.007	1.42	0.52

Typical mechanical properties of all-weld metal

	Y.S (MPa)	T.S (MPa)	El. (%)	IV (J)		PWHT
				0℃	-20℃	
AWS A5.29	min. 470	550~690	min. 19			
EN ISO 17634-B	min. 460	550~740	min. 17			
Example (Mix)	556	628	27	109	36	690℃×1Hr

Notes on usage and welding condition

- Refer to page 211~213 for more information on usage
- Preheat at 160~190℃ and PWHT at 690℃

Package

Dia. (mm)	1.2	1.4	1.6
Spool (kg)	5, 12.5, 15, 20		
Pailpack (kg)	100 ~ 300		