

**Classifications**

AWS A5.28-05	: ER80S-G
JIS Z 3317 : 2013	: W 55-1CM3

**Description**

- For butt and fillet welding of power plant, heat exchanger and oil refineries such as 1.25%Cr-0.5%Mo heat-resistant steel.
- Excellent mechanical and toughness properties after PWHT.
- Proper tungsten electrode extension from the tip of torch is 4-6mm in general.
- Preheat at 100°C to 200°C and post weld heat treatment at 620? to 720? is necessary according to the plate thickness, type of steels, shape of base metals or under high restriction.

**Typical chemical composition of rod (%)**

C	Si	Mn	P	S	Cr	Mo
0.10	0.55	0.90	0.010	0.003	1.29	0.49

**Typical mechanical properties of all-weld-metal**

	Y.S (MPa)	T.S (MPa)	El. (%)	IV (J) 20°C	Remarks
AWS A5.28	-	min. 550	-	-	PWHT, Ar
EN 16834-B	min. 355	min. 510	20	47	PWHT, Ar
JIS Z 3317	min. 470	min. 530	17	-	PWHT, Ar
Example	630	540	28	270	PWHT, Ar

\* PWHT : 690°Cx1Hr

**Operating data**

Dia.(mm)	Voltage	Ampere
0.9	10~12	50~70
1.2	10~12	70~100
1.6	12~15	100~125
2.4	15~20	125~175
3.2	15~20	175~200

**Polarity and Shielding gas**

- DCEN (DC-)
- Ar : 100%Ar (15~25ℓ/min.)