

# KC-90SB9W

For 9%Cr-0.5%Mo-Nb-V-W heat-resistant steel

## Classifications

AWS A5.28-05 : ER90S-B9 (mod.)

## Description

- For butt and fillet welding of power plant, heat exchanger and oil refineries such as 9%Cr-0.5%Mo-Nb-V-W heat-resistant steel.
- Excellent Creep strength, toughness, fatigue life, and corrosion resistance at elevated temperatures.
- Preheat at 150°C to 300°C and post weld heat treatment at 740°C to 780°C is necessary according to the plate thickness, type of steels, shape of base metals or under high restriction.

## Typical chemical composition of wire (%)

C	Si	Mn	P	S	Cr	Mo
0.10	0.24	0.54	0.007	0.003	8.88	0.43

## Typical mechanical properties of all-weld metal

	Y.S (MPa)	T.S (MPa)	El. (%)	Remarks
AWS A5.28	-	min. 620	-	-
Example	780 670	870 785	17 18	PWHT, Ar+5% CO <sub>2</sub> PWHT, Ar+10% CO <sub>2</sub>

\* PWHT : 760°Cx2Hr

## Operating data

	Dia.(mm)	1.2	1.4
Current (Amp.)	Flat (PA/1G)	120 ~ 350	150 ~ 400
	Vertical (PF/3G)	80 ~ 180	100 ~ 250
	Overhead (PE/4G)	80 ~ 180	100 ~ 250

## Polarity and Shielding gas

- DCEN (DC+)
- Ar+5% CO<sub>2</sub> (15~25ℓ/min.)
- Ar+10% CO<sub>2</sub> (15~25ℓ/min.)