

Applications

All position welding of Industrial machine tools, pressure vessels, boiler structures and ocean structures.

Characteristics on Usage

- ① MIG welding for boiler steam pipe of Steam power generation and 1.0~1.25%Cr-0.5%Mo heat resisting steel using for refining oil & chemical industrial machine tool.
- ② Excellent TS and Impact value in a high temperature after heat treatment.

Typical Chemical Composition of Wire (%)

C	Si	Mn	Cr	Mo
0.09	0.67	1.02	1.19	0.45

Typical Mechanical Properties of All-Weld Metal

Type	TS MPa(lbs/in ²)	EL (%)	CVN-Impact Value J (ft · lbs)		PWHT
			0°C (32°F)	-20°C (-4°F)	
SM-80CM	630 (91,500)	27	140 (103)	120 (88)	690°C - 1Hr
ST-80CM	630 (91,500)	28	290 (215)	280 (207)	

Typical Welding Conditions (GMAW: DC+(Pulse), GTAW: DC -)

Type	Dia (mm)	Amp (A)	Vol (V)	Speed (cm/min)	Gas Flow (ℓ /min)	Shielding Gas
SM-80CM	1.2	250	26	30	25	100% Ar or Ar +2% O ₂
	1.6	300	29	35		

Type	Dia mm (in)	Tungsten (mm)	Amp (A)	Gas Flow (ℓ /min)	Shielding Gas
ST-80CM	1.0 (.039) ~ 2.0 (5/64)	1.4	50~100	25	Ar
	1.6 (1/16) ~ 3.2 (1/8)	2.4	100~200		
	2.4 (3/32) ~ 3.2 (1/8)	3.2	200~300		
	3.2 (1/8)	4.0	300~400		