SM-100

Conformances

AWS A5.28 ER100S-G

Applications

- 0.3Cr-1.7Ni-0.25Mo-alloyed, High strength steel

Welding Position

1G (PA) 2F (PB)

Features

- Good TS and impact value at low temperature
- Stable arc with high-current
- Low spatter

Current

DC +

Shielding Gas

Ar + 20~25% CO_2

Diameter / Packaging

Diameter	Spool			Pac		
mm (in)	5kg (11lbs)	15kg (33lbs)	20kg (44lbs)	250kg (551lbs)	300kg (661lbs)	350kg (771lbs)
0.8 (0.033)	√	√	√	√	√	√
0.9 (0.035)	√	√	√	√	√	√
1.0 (0.040)	√	√	√	√	√	√
1.2 (0.045)	√	√	√	√	√	√
1.4 (0.052)	√	√	√	√	√	√
1.6 (1/16)	√	√	√	√	√	√

Typical Chemical Composition of the Wire(%)

C	Si	Mn	P	S	Cr	Ni	Mo
0.081	0.48	1.76	0.013	0.012	0.28	1.76	0.23

Typical Mechanical Properties of All-Weld Metal

	YS Mpa(lbs/in²)	TS Mpa(lbs/in²)	EL (%)	Temp °C(°F)	CVN-Impact Value J (ft·lbs)
As welded with 80% Ar + CO_2	711 (103,100)	756 (109,600)	20.4	-20 (-4) -40 (-40)	114 (84) 83 (61)
As welded with 90% Ar + CO_2	724 (105,000)	766 (111,100)	18.9	-20 (-4) -40 (-40)	106 (79) 78 (57)

Typical Operating Procedures

Diameter, Polarity Shielding Gas	CTWD mm(in)	Wire Feed Speed m/min (in/min)	Voltage (volts)	Approx. Current (amps)	Melt-Off Rate kg/hr (lb/hr)
1.2mm (0.045in), DC +					
Mixed Gas (Ar + CO_2)	20 (3/4)	11.2 (440)	30	280	5.6 (12.3)
		12.8 (503)	33	320	6.5 (14.3)
		14.0 (551)	36	350	7.1 (15.7)
1.4mm (0.052in), DC +					
Mixed Gas (Ar + CO_2)	20 (3/4)	8.7 (343)	32	300	6.0 (13.2)
		9.5 (374)	34	340	6.6 (14.5)
		10.0 (394)	35	360	6.9 (15.3)
1.6mm (1/16in), DC +					
Mixed Gas (Ar + CO_2)	20 (3/4)	6.6 (260)	34	340	6.0 (13.2)
		8.2 (322)	38	390	7.4 (16.3)
		8.6 (339)	38	400	7.8 (17.2)