

# SM-110

High tensile steels

## Conformances

AWS A5.28/ ASME SFA5.28 ER110S-G

## Applications

- 0.3Cr-1.9Ni-0.5Mo-alloyed, High strength steel

## Features

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

## Welding Position



1G 2F  
(PA) (PB)

## Current

DC +

## Shielding Gas

Ar + 20~25% CO<sub>2</sub>

## Diameter / Packaging

Diameter mm (in)	Spool			Pac		
	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
0.089	0.75	1.83	0.011	0.012	0.30	1.9	0.52

### Typical Mechanical Properties of All-Weld Metal

	YS MPa(lbs/in <sup>2</sup> )	TS MPa(lbs/in <sup>2</sup> )	EL (%)	Temp °C(°F)	CVN-Impact Value J (ft.-lbs)
As welded with 80% Ar + CO <sub>2</sub>	700 (103,000)	858 (124,400)	19.4	-40 (-40)	82 (60)
				60 (-76)	69 (51)
As welded with 90% Ar + CO <sub>2</sub>	725 (105,100)	871 (126,300)	17.2	-40 (-40)	71 (53)
				60 (-76)	60 (45)

### 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)
<b>1.2mm (0.045in), DC +</b>					
Mixed Gas (Ar + CO <sub>2</sub> )	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)
<b>1.4mm (0.052in), DC +</b>					
Mixed Gas (Ar + CO <sub>2</sub> )	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)
<b>1.6mm (1/16in), DC +</b>					
Mixed Gas (Ar + CO <sub>2</sub> )	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)

SMAW

SAW

GMAW

GTAW

FCAW

Non-FERROUS

APPENDIX