

# SM-309

22%Cr-12%Ni steel, 18%Cr-8%Ni clad steel, STS-CrMo, STS-Carbon steel

## Conformances

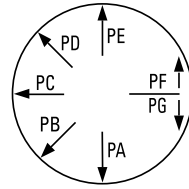
AWS A5.9/ ASME SFA5.9 ER309

JIS Z3321 YS309

EN ISO 14343-A G 23 12

ABS AWS A5.9 ER309

## Welding Position



## Current

DC +

## Shielding Gas

Ar / Ar + O<sub>2</sub>

## Applications

- Steel Structures - Oil, Textile industries, Nuclear reactor

## Features

- Resistance to crack
- High Efficiency
- Excellent resistance to heat

## Diameter / Packaging

Diameter	Spool			Ball Pac		
	12.5kg (28lbs)	15kg (33 lbs)	20kg (44lbs)	150kg (330lbs)	200kg (440lbs)	250kg (551lbs)
mm (in)						
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	Cr	Ni
0.09	0.39	1.60	23.5	12.8

### Typical Mechanical Properties of All-Weld Metal

TS MPa(lbs/in <sup>2</sup> )	EL (%)
660 (95,700)	36

### Typical Welding Parameters

Diameter, Polarity Shielding Gas	CTWD mm(in)	Wire Feed Speed m/min (in/min)	Amp. (A)	Volt. (V)	Deposition Rate kg/hr (lb/hr)
<b>1.0mm (0.040 in), DC +</b>					
100% Ar Gas	15~20 (0.59~0.78)	6.0 (236)	140	24	2.1 (4.6)
		7.1 (280)	160	24	2.5 (5.5)
		9.2 (362)	190	24	3.2 (7.1)
Mixed Gas (Ar + 2% O <sub>2</sub> )	15~20 (0.59~0.78)	5.2 (204)	160	26	1.8 (4.0)
		7.0 (276)	190	26	2.4 (5.3)
		8.3 (327)	220	26	2.9 (6.4)
<b>1.2mm (0.045 in), DC +</b>					
100% Ar Gas	15~20 (0.59~0.78)	9.2 (362)	190	27	4.6 (10.1)
		11.9 (469)	220	27	6.0 (13.2)
		15.5 (610)	260	27	7.8 (17.2)
Mixed Gas (Ar + 2% O <sub>2</sub> )	15~20 (0.59~0.78)	7.7 (303)	200	28	3.9 (8.6)
		8.6 (339)	230	28	4.3 (9.5)
		10.1 (398)	260	28	5.1 (11.2)

SMAW

SAW

GMAW

GTAW

FCAW

Non-FERROUS

APPENDIX