SM-309L

SMAW ELECTRODE - STAINLESS STEEL

CLASSIFICATIONS :

AWS A5.4	**E309L-16**
ASME SFA A5.4	**E309L-16**
JIS Z3221	**ES309L-16**
BS EN ISO 1600	**E 23 12 L R 1 2**

DESCRIPTION

SM-309L is a titanic electrode suitable for welding of 22Cr-12%Ni steel, dissimilar-metal joint, dissimilar - metal joint and surfacing of mild steel.

FEATURES

Smoother arc transfer, Easier slag removal, Less Spatter.
Excellent usability in all positions welding including vertical down.
Suitable for butt and fillet welding of thin plates/sheets.
Smooth and bright weld seams, Smoother with a finer ripple bead surface.
Stable arc on AC and DC.

APPLICATIONS

Typical applications include stainless steel piping in refineries and chemical plants. Corrosion resistance overlay on carbon steel, welding of carbon steel of poor weldability.

CHEMICAL COMPOSITION

	%C	%Mn	%Si	%P	%S
Requirements	0.04 max	0.5 - 2.5	1 max	0.04 max	0.03 max
Typical Results	0.032	1.26	0.65	0.028	0.012
	%Ni	**%Cr**	**%Mo**	**%Cu**	**Nb (Cb) Plus Ta**
Requirements	12.0 - 14.0	22.0 - 25.0	0.75 max	0.75 max	-
Typical Results	13.44	24.12			

MECHANICAL PROPERTIES

	Tensile Strength, Mpa	Yield Strength, Mpa	Elongation, %
Requirements	520 min	-	30 min
Typical Results	608		36

OPERATING PROCEDURES

	Current (Amps)				
Polarity	Ø2.0 mm	Ø2.6 mm	Ø3.2 mm	Ø4.0 mm	Ø5.0 mm
AC	50 - 80	75 - 115	110 - 140	160 - 200	205 - 260
DC ±	45 - 75	70 - 105	100 - 135	145 - 180	185 - 235

WELDING POSITION

NOTE

1. Rebake the electrodes at 250 ~ 300°C for 1 hour and keep it at 100 ~ 150°C prior to use.
2. Use stainless steel wire brush for cleaning of slags
3. Follow the recommended welding parameters to achieve good sound welds
4. Use lower current for dissimilar-metal joint.