

SM-317L

SMAW ELECTRODE - STAINLESS STEEL

CLASSIFICATIONS :

AWS A5.4 E317L-16
ASME SFA A5.4 E317L-16
JIS Z3221 ES317L-16
BS EN ISO 1600 E 19 13 4 N L R 1 2

DESCRIPTION

SM-317L is a rutile electrode. It has increased molybdenum content for good corrosion resistibility in deoxidizing atmosphere containing nitroxide and sulfide. It also has higher tensile strength, better corrosion resistance and improved high-temperature creep strength than 316-type electrodes.

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 and vessels in oil and gas industry, refineries, chemical plants.

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	0.03	0.85	0.52	0.02	0.02
	%Ni	%Cr	%Mo	%Cu	Nb (Cb) Plus Ta
Requirements	12.0 - 14.0	18.0 - 21.0	3.0 - 4.0	0.75 max	-
Typical Results	13.1	18.3	3.65	0.09	0.03

MECHANICAL PROPERTIES

	Tensile Strength, Mpa	Yield Strength, Mpa	Elongation, %
Requirements	520 min	-	30 min
Typical Results	597		39

OPERATING PROCEDURES

Polarity	Current (Amps)				
	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