

SAIW 309LT1-1

GB/T 17853 E309LT1-1
AWS A5.22 E309LT1-1

Characteristics: SAIW 309LT1-1 is a kind of austenitic stainless steel flux-cored wire with nominal composition of 23.5% Cr-13% Ni. The deposited structure is austenitic and contains a small amount of ferrite structure, suitable for welding of 304 stainless steel and carbon steel or low alloy steel. However, embrittlement or cracks may occur when the welded joints require heat treatment at a temperature higher than 379 C. It is suitable for all position welding, with excellent welding performance, stable arc, low spatter and beautiful bead shape and profile.

Scope: Suitable for welding of the same type of stainless steel, stainless steel lining, dissimilar steel (such as 06Cr19Ni10 and low carbon steel, low alloy steel) and high Cr, high Mn steel.

Chemical composition of deposited metal



Element (wt%)	C	Cr	Ni	Mo	Mn	Si	Cu	S	P
Standard value	0.04	22.0-25.0	12.0-14.0	0.5	0.5-2.5	1.0	0.5	0.03	0.04
Typical value	0.026	22.93	12.38	0.02	1.33	0.36	0.02	0.003	0.019
Ferrite	--			Equivalent value of pitting resistance			--		

Note: the content of Mo and CU is required $\leq 0.75\%$ by AWS A5.22 and $\leq 0.5\%$ by GB/T 17853.

Mechanical properties of deposited metal

Testing status	Testing temperature(°C)	Tensile strength (MPa)	Yield strength (MPa)	Elongation(%)
Standard value	room temperature	≥ 520	--	≥ 30
As-Welded condition	room temperature	590	--	36

Shielding gases, polarity and welding position

Gas composition	Power polarity	Welding position
100%CO ₂	 DCEP	 PA PB PC PD PE PF PG

Recommended welding specifications

Wire diameter (mm)	Arc voltage (V)	Welding current (A)	Wire stick-out (mm)	Welding speed (cm/min)	Gas flow rate (L/min)
1.0	23-31	50-160	15-20	20-30	15-25
1.2	26-31	160-220	15-20	25-40	
1.6	26-33	200-300	15-20	30-45	