

SAIW 316LT1-1

GB/T 17853 E316LT1-1
AWS A5.22 E316LT1-1

Characteristics: SAIW 316LT1-1 is a CO₂ gas-shielded austenitic stainless steel flux-cored wire with nominal composition of 18.5%Cr-12.5%Ni-2.5%Mo. The deposited structure is austenite and contains a small amount of ferrite. Due to the inclusion of Mo element, the weld metal has high resistance to high temperature creep and has good corrosion resistance to acetic acid, sulfurous acid, phosphoric acid and salts. It is suitable for all position welding, with excellent welding performance, stable arc, low spatter and beautiful bead shape and profile.

Application: Applicable to petrochemical equipment, offshore engineering equipment, etc., such as the welding of 022Cr17Ni12Mo2 (316L) .

Chemical composition of deposited metal



Element (wt%)	C	Cr	Ni	Mo	Mn	Si	S	P	Cu
Standard value	0.04	17.0-20.0	11.0-14.0	2.0-3.0	0.5-2.5	1.0	0.03	0.04	0.5
Typical value	0.03	18.73	12.24	2.31	1.32	0.47	0.015	0.018	0.12
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 mperature(°C)	Tensile strength(MPa)	Yield strength(MPa)	Elongation(%)
Standard value	room temperature	≥ 520	--	≥ 30
As-Welded condition	room temperature	584	--	41.3

Shielding gases, polarity and welding position

Gas composition	Power polarity	Welding position
100%CO ₂	 DCEP	

Recommended welding specifications

Wire diameter (mm)	Arc voltage (V)	Welding current (A)	Wire stick-out (mm)	Welding speed (cm/mm)	Gas flow rate (L/min)
1.0	23-31	50-160	15-20	20-80	15-25
1.2	26-31	160-220	15-20	20-60	
1.6	26-33	200-300	15-20	20-60	