

Applications

MIG welding of low carbon 18%Cr-8%Ni steel for chemical industries such as oil, medical, fertilizer and textile industries and for nuclear reactors.

Characteristics on Usage

Though SM-308L is austenitic type stainless steel wire, the weld metal contains ferrite and resistance to crack is extremely good. The usability, such as arc stability and assimilability of welds to base metal is extremely good.

Resistance to corrosion and the mechanical properties of the weld metal are good.

Typical Chemical Composition of Wire (%)

C	Si	Mn	Cr	Ni
0.02	0.35	1.60	19.9	10.1

Typical Mechanical Properties of All-Weld Metal

TS MPa(lbs/in ²)	EL (%)	Temp. °C (°F)	CVN-Impact Value J (ft · lbs)
560 (81,300)	42	0 (32)	90 (66)
		-20 (-4)	50 (37)

Typical Welding Conditions (DC+)

Size mm(in)	A	V	Speed (cm/min.)	Gas Flow (ℓ /min.)	Remarks
1.2 (.045)	260	27	30	25	Shielding gas
1.6 (1/16)	300	29	34	25	100%Ar or Ar+2%O ₂