Inweld 308LSi

AWS A5.9 ER308LSi

Chemical Composition of Inweld 308LSi

Fe	C	Cr	Ni	Mo	Mn	Si	P	S	N	Cu
Balance	0.03	19.5-22.0	9.0-11.0	0.75	1.0-2.5	0.65-1.00	0.03	0.03	---	0.75

Single values are maximum unless otherwise specified.

Description and Applications

Inweld 308LSI is used for welding austenitic stainless steel types such as AISI 301, 302, 304, 305, 308, as well as the low carbon versions of these grades. In certain, less critical applications it can also be used on 321 and 347. The lower carbon content of Inweld 308LSI reduces the possibility of inter-granular carbide precipitation. The higher silicon content allows for faster welding speeds than 308 or 308L due to greater wetting out of the weld metal. Weld deposits have a smoother bead appearance. Inweld 308LSi is suitable for use in many cryogenic applications.

Typical Weld Metal Properties

	AWS Spec
Tensile Strength:	86,500 psi
Yield Strength:	59,000 psi
Elongation:	41%

Recommended Parameters

GMAW (DCEP – Electrod +) 98% Argon / 2% CO_2 Mixture for Solid Wire, Trimix 90% He / 7.5% Ar / 2.5% CO_2 Mixture for Spray

Wire Diameter	Voltage	Amperage	Wire Feed IPM
0.023”	14-19	30-85	
0.030”	15-20	45-125	150-430
0.035”	16-22	60-150	120-400
0.045”	17-22	90-210	100-240
0.030” (Spray)	24-28	160-220	440-650
0.035” (Spray)	23-29	170-295	430-500
0.045” (Spray)	24-30	195-360	220-400
1/16” (Spray)	25-31	210-380	110-210

GTAW (DCEN – Electrode -) 100% Ar 2% Thoriated, 2% Ceriated or Lanthanum Tungsten Electrode

Material	2% Thoriated	Filler Wire Size	Amperage	Argon (CFH)
1/16”	1/16”	1/16”	80-120	20
3/32”	1/16”	1/16”	100-130	20
1/8”	3/32”	1/16”	120-150	20
3/16”	3/32”	3/32”	150-250	25
¼”	1/8”	1/8”	200-350	25