

Inweld 312

AWS A5.9 ER312

Chemical Composition of Inweld 312

Fe	C	Cr	Ni	Mo	Mn	Si	P	S	N	Cu
Balance	0.15	28.0- 32.0	8.0- 10.5	0.75	1.0- 2.5	0.30- 0.65	0.03	0.03	---	0.75

Single values are maximum unless otherwise specified.

Description and Applications

Inweld 312 is used on “difficult-to-weld” steels such as air-hardening, medium and high carbon steels, manganese-hard steel, armor steel, spring steel, rail steel, nickel clad steel, tool & die steel and aircraft steel. Inweld 312 is often used as a wear resistant build-up and “buffer” layer in hardfacing applications. When welding similar resistant build-up and “buffer” layer in hardfacing applications. When welding similar cast alloys be sure to limit the weld deposit to only two or three layers. The perfect steel wire to use where the base metal is an unknown grade of steel.

Typical Weld Metal Properties

	<u>AWS Spec</u>
Tensile Strength:	120,000 psi
Yield Strength:	85,000 psi
Elongation:	45%

Recommended Parameters

GMAW (DCEP – Electrode +) 99% Argon / 1% CO₂ Mixture or 97% Argon / 3% CO₂ Mixture

<u>Wire Diameter</u>	<u>Voltage</u>	<u>Amperage</u>	<u>Wire Feed IPM</u>
0.030”	24-28	140-180	150-430
0.035”	26-29	160-210	120-400
0.045”	28-32	180-250	100-240
1/16”	29-33	200-280	

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

<u>Wire Diameter</u>	<u>Voltage</u>	<u>Amperage</u>
0.035”	12-15	60-90
0.045”	13-16	80-110
1/16”	14-18	90-130
3/32”	15-20	120-175
1/8”	15-20	150-220

INWELDCORPORATION.COM

Pennsylvania
3962 Portland Street
Coplay, PA 18037

North Carolina
1029 S. Marietta St.
Gastonia, NC 28054

Texas
9300 Lawndale St.
Houston, TX 77012

California
6201 Coliseum Way, Unit A
Oakland, CA 94621