

Inweld 312-16

AWS A5.4 E312-16

Chemical Composition of Inweld 312-16

Fe	C	Cr	Ni	Mo	Mn	Si	P	S	N	Cu
Balance	0.15	28.0	8.0	0.75	0.5-2.5	0.90	0.04	0.03	---	0.75
		-32.0	-10.5							

Single values are maximum unless otherwise specified.

Description and Applications

The most versatile All-Position stainless steel electrode. Excellent choice on difficult-to-weld steels such as air-hardening steel, medium and high carbon steels. The perfect electrode to use where the base metal is an unknown grade of steel. Suitable for many dissimilar applications involving manganese-hardening steel, armor steel, rail steel, nickel clad steel, tool and die steel and aircraft steel. Commonly used as a wear-resistant build-up and "buffer" layer in hard-facing applications. Work hardens up to 200 Brinell. The microstructure of the weld deposit is 29% Chrome - 9% Nickel with 30% ferrite in an austenitic matrix. This "two-phase" deposit makes it highly resistant to hot fissuring and cold cracking. Weld deposits are very ductile. Has the highest tensile and yield strength of the standard stainless steel coated electrodes (duplex stainless not included). Other uses include repair of earth moving equipment, modification of dies, repair of broken machinery, joining wear plates and repairing unknown steel components.

Typical Weld Metal Properties

	<u>AWS Spec</u>
Tensile Strength:	120,000 psi
Yield Strength:	90,000 psi
Elongation:	22%

Recommended Parameters

SMAW (DCEP – Electrode+)

<u>Wire Diameter</u>	<u>Voltage</u>	<u>Amperage</u>
3/32"		50-80
1/8"		70-110
5/32"		100-140

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