Inweld 505-16

AWS A5.4 E505-16

Chemical Composition of Inweld 505-16

Fe	C	Cr	Ni	Mo	Mn	Si	P	S	N	Cu
Balance	0.10	8.0-10.0	0.40	0.85-1.20	1.0	0.90	0.04	0.03	---	0.75

Single values are maximum unless otherwise specified.

Description and Applications

For welding Chrome-Moly P-91 pipes and tubing. The weld deposits are air-hardening, so preheat and post-heat is required to obtain maximum results. This will relieve stress and "temper" the weld deposit as well as the adjacent heat-affected zone. This also increases ductility and notch toughness. Commonly used for case-hardening steels containing 7-9% Chromium in oil refineries, chemical plants, power generation facilities or wherever high temperature resistance to corrosion and oxidation is required. Preheat at 500-650°F and post-heat at 1350 -1450°F for approximately 2 hours, then allow to air cool.

Typical Weld Metal Properties

	AWS Spec
Tensile Strength:	70,000psi
Yield Strength:	50,000 psi
Elongation:	20%

Recommended Parameters

SMAW (DCEP – Electrode+)

Wire Diameter	Voltage	Flat Amperage	Vertical & Overhead Amperage
3/32"	24-28	70-85	65-75
1/8"	26-30	85-110	80-90
5/32"	28-32	110-140	100-120
3/16"	28-32	120-160	110-130