



Atom Arc 9015-B9

Atom Arc 9015-B9 is designed to weld the modified 9% Cr & 1% Mo steels known by the designations T91, P91 or Grade 91. These steels are designed to provide improved creep strength, fatigue, oxidation, and corrosion resistance at elevated temperatures.

Classifications	AWS A5.5 : E9015-B9 H4R ASME SFA 5.5
Industry	Petrochemical Pipeline Power Generation

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
Stress Relieved 1hr 732°C (1350°F)	655 MPa (95 ksi)	787 MPa (114 ksi)	20 %
Stress Relieved 1hr 746°C (1375°F)	704 MPa (102 ksi)	821 MPa (119 ksi)	19 %
Stress Relieved 1hr 760°C (1400°F)	593 MPa (86 ksi)	731 MPa (106 ksi)	23 %

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Cr	Mo	V	Cu	N
0.10	0.85	0.19	0.009	0.009	8.60	1.00	0.21	0.05	0.04

Typical Weld Metal Analysis %

Nb	AR	X-bar
0.04	<0.01	< 15

Deposition Data

Diameter	Optimal Amps	Current	Deposition Rate	Deposition Efficiency %
2.4 mm (3/32 in.)	90 A	70-100 A	0.8 kg/h (1.7 lb/h)	66.3 %
3.2 mm (1/8 in.)	120 A	90-160 A	1.2 kg/h (2.6 lb/h)	71.6 %
3.2 mm (1/8 in.)	140 A	90-160 A	1.2 kg/h (2.7 lb/h)	70.9 %
4.0 mm (5/32 in.)	140 A	130-220 A	1.1 kg/h (3.1 lb/h)	75 %
4.0 mm (5/32 in.)	170 A	130-220 A	1.7 kg/h (3.8 lb/h)	73.5 %
4.8 mm (3/16 in.)	200 A	200-300 A	2.2 kg/h (4.9 lb/h)	76.4 %
4.8 mm (3/16 in.)	250 A	200-300 A	2.4 kg/h (5.4 lb/h)	74.6 %