

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.

Specifications

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

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
Stress Relieved 1 hour(s) 732 °C	655 MPa	787 MPa	20 %
Stress Relieved 1 hour(s) 746 °C	704 MPa	821 MPa	19 %
Stress Relieved 1 hour(s) 760 °C	593 MPa	731 MPa	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	X-bar	AR
0.04	< 15 ppm	<0.01

Deposition Data

Diameter	Current	Deposition Efficiency (%)	Optimal Amps	Deposition Rate
2.4 mm	70-100 A	66.3 %	90 A	0.8 kg/h
3.2 mm	90-160 A	71.6 %	120 A	1.2 kg/h
3.2 mm	90-160 A	70.9 %	140 A	1.2 kg/h
4.0 mm	130-220 A	75 %	140 A	1.1 kg/h
4.0 mm	130-220 A	73.5 %	170 A	1.7 kg/h
4.8 mm	200-300 A	76.4 %	200 A	2.2 kg/h
4.8 mm	200-300 A	74.6 %	250 A	2.4 kg/h