

MIDALLOY E9018-B91 H4 SMAW ELECTRODE

CLASSIFICATION

- AWS A5.5 / ASME SFA5.5 Classification E9018-B91 H4

DESCRIPTION

- **MIDALLOY E9018-B91 H4** is a basic coated low hydrogen SMAW electrode for the welding of Grade T/P91 martensitic creep resistant steels. It is manufactured with core wire and coating ingredients with low impurities to ensure clean weld deposits. **MIDALLOY E9018-B91 H4** has excellent all-position weldability with good slag removal resulting in X-Ray quality welds, along with excellent mechanical properties after long term exposure at elevated temperatures up to 650°C.

APPLICATIONS

- Specifically designed for the welding of Grade T/P91 steels
- Examples of components to be welded are headers, main steam piping, hot reheat piping, tubing, and turbine casings in fossil fuel power plants

TYPICAL CHEMICAL ANALYSIS

C	Mn	Si	P	S	Ni	Cr	Mo	V	Nb	N	Al	As	Sn	Sb
0.10	0.70	0.20	0.010	0.010	0.05	9.0	0.95	0.20	0.05	0.05	<0.20	<0.010	<0.010	<0.003

- Mn + Ni = 1.0% maximum
- N/Al Ratio = 4:1 minimum
- Mn/S Ratio = 50:1 minimum
- X-bar = (10P + 5Sb + 4Sn + As) / 100 = 10 ppm maximum

TYPICAL MECHANICAL PROPERTIES

(PWHT at 1400°F for 2 hours)

Tensile	107,320 psi
Yield	88,470 psi
Elongation	20%
Impacts @ +68°F	52 ft-lbs

WELDING PARAMETERS

Diameter (in)	Current (A)
3/32	60-110
1/8	90-140
5/32	130-190
3/16	170-240

STANDARD PACKAGING

- 5 lb hermetically sealed vacuum packs

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