WELDWIRE COMPANY, INC. **Technical Information**

Nickel Alloys

Alloy: WWAlloy A Conforms to Certification: AWS A5.11
Class: ENiCrFe-2 ASME SFA A5.11

Alloy: ENiCrFe-2 (Alloy A)
Weld Process: Shielded Metal Arc Weld Process (SMAW)

AWS Chemical Composition Requirements

C = 0.10 max	Cu = 0.50 max
Mn = 1.0 – 3.5	Ni = 62.0 min
Fe = 12.0 max	Co = 0.12 max
P = 0.03 max	Cr = 13.0 – 17.0
S = 0.02 max	Cb/Ta = 0.5 – 3.0
Si = 0.75 max	Mo = 0.50 – 2.50

Deposited Chemical Composition % (Typical)

C = 0.04	Mn = 1.75	Si = 0.32
Cr = 15.5	Mo = 1.5	Cb/Ta = 1.25
Fe = 8.5	S = 0.006	P = 0.009
Ni = 71.15		

Deposited All Weld Metal Properties % (AW)

Tensile Strength	89,000psi
Yield Strength	72,000psi
Elongation	36%

Deposited Charpy-V-Notch Impact Properties %

Not applicable

Recommended Weld Parameters Amperage (A)

Diameter of Wire	Voltage (V)	Flat	Vertical and Overhead
3/32 inches (2.4mm)	24 – 28	70 – 85	65 – 75
1/8 inches (3.2mm)	26 – 30	85 – 110	80 – 90
5/32 inches (4.0)	28 – 32	110 – 140	100 – 120
3/16 inches (4.8)	28 – 32	120 – 160	110 – 130

Application

ENiCrFe-2 (Alloy A) electrodes are used for welding of nickel-chromium-iron alloys to themselves, as well as for dissimilar welding between various nickel alloys and carbon or stainless steel. There is a large range of applications from cryogenic temperature up to 1500ºF.