

HARD SURFACE 180 ELECTRODE

A unique electrode combining unsurpassed weldability, plus super impact and abrasion resistance and high hardness. It is the ideal alloy combination where hardness and toughness are required on carbon and alloy steels, manganese steels and cast iron. This product can be used for carbon and manganese steel, dipper teeth and lips, roll crushers, hammermill parts, impactors, plow shares and cultivator shoes.

FEATURES:

- Hardness as deposited - RC 57 to 61
- High deposition rate - Magnetic

PROCEDURES:

- AC or DC reverse or straight polarity
- Run stringer beads or weave
- On manganese steels, use short stringer beads
- Deposit thickness, 1/4" max.



| PART NUMBER | SIZE | PKG | CURRENT AMPS |
|-------------|-------|---------|--------------|
| 00180500POP | 3/32" | 1EA PKG | 120-155 |
| 00180600POP | 1/8" | 1EA PKG | 140-175 |



A LINCOLN ELECTRIC COMPANY

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MAINTENANCE & REPAIR PRODUCTS

NICKEL 65 ELECTRODE

Premium nickel-iron electrode (AC-DC). For gray and alloyed cast iron. For the repair of all types of cast iron. It yields dense, strong, and machinable deposits. Ideal for the repair of "Meehanite", "Ni-Resist", ductile iron and for the joining of cast iron to steel. Typical applications embody the repair of castings, housings, gear teeth, motor, machine bases, etc.

FEATURES:

- Tensile strength - Up to 72,000 psi
- Close color match
- Spatter free, high-density, ductile deposits
- Thick sections
- Good machinability - BHN 190-220
- Multiple passes
- Cast iron to steel
- Multiple passes
- Welding under restraint - First choice

PROCEDURES:

- Use AC or DC reverse polarity with a short arc
- Prepare the weld joint by cleaning and beveling as required
- Use HARRIS CHAMFER ARC for grooving. Tack weld cracks and drill small holes at each end of cracks to stop further cracking
- Generally, preheating is not necessary, particularly on thin sections; however, preheat of 400° F - 500° F is suggested in the welding of heavier castings
- Skip or back-step weld. Short deposits no longer than 1-1/2"

| PART NUMBER | SIZE | PKG | CURRENT AMPS |
|-------------|-------|---------|--------------|
| 00065500POP | 3/32" | 1EA PKG | 30-70 |
| 00065600POP | 1/8" | 1EA PKG | 50-100 |



NIC-L-WELD 99 ELECTRODE (AC-DC)

A general purpose, high nickel electrode for production and repair of cast iron. NIC-L-WELD 99 is for building up, joining, filling holes, breaks and cracks in all types of cast iron. It has very good out-of-position welding characteristics. Parts are frequently repaired without dismantling.

FEATURES:

- Conforms to AWS A5.15, ENIC1
- Close color match
- Excellent machinability

PROCEDURES:

- Use AC or DC reverse or straight polarity
- Clean the weld area
- Bevel breaks and cracks deep enough so the first pass ties in the bottom of the crack
- In most cases, preheating is not necessary, but heavy sections should be preheated to approximately 400° F
- Use a short arc - Stringer beads are recommended
- Skip or back-step weld and peen to relieve stresses
- Allow the casting to cool slowly

| PART NUMBER | SIZE | PKG | CURRENT AMPS |
|-------------|-------|---------|--------------|
| NLW99500POP | 3/32" | 1EA PKG | 30-70 |
| NLW99600POP | 1/8" | 1EA PKG | 70-110 |



E7018 MILD STEEL ELECTRODE

A high deposition electrode for low and medium carbon steels. It is an efficient, iron powder, low hydrogen electrode with excellent mechanical properties; crack resistance; and X-ray quality welds. This electrode offers a quiet, stable, low penetration, spatter-free arc. The moderately heavy slag is easy to remove, revealing a bead with distinct ripples. Operator appeal is a plus factor. Applications: Ship hull construction, pressure vessels, boilers, piping, heavy duty equipment, general maintenance or production fabrication.

FEATURES:

- Tensile strength - up to 79,900 psi
- Yield strength - 67,700 psi
- Elongation in 2" - 29.4% minimum
- All position
- Conforms to ANSI/AWS A5.1 & ASME SFA 5.1 E7018

| PART NUMBER | SIZE | PKG | CURRENT FLAT | CURRENT VERTICAL / OVERHEAD |
|-------------|-------|---------|--------------|-----------------------------|
| 7018500POP | 3/32" | 1EA PKG | 65-85 | 50-80 |
| 7018600POP | 1/8" | 1EA PKG | 90-130 | 85-120 |



NIC-L-WELD 59 ELECTRODE (AC-DC)

Nickel-Iron electrode (AC-DC). A general purpose, nickel-iron electrode for production, salvage and repair of all cast irons.

APPLICATION:

Suited to joining, filling and buildup of gray and alloyed cast irons. It can be used for fabrication and repair of pump housings, valves, castings, cast and malleable fittings, and for general repair of all cast irons. Deposits are machinable and have high strength

FEATURES:

- Conforms to AWS A5.15, ENiFeCl
- Close color match
- Good machinability

PROCEDURES:

- Use AC or DC reverse polarity
- V out cracks
- Preheat heavy castings to approximately 400° F for best results
- Direct the arc upon deposited metal with the electrode at a slight angle in the direction of travel
- Lightly peen between passes and use a skip or back-step welding technique. Allow casting to cool slowly

| PART NUMBER | SIZE | PKG | CURRENT AMPS |
|-------------|-------|---------|--------------|
| NLW59500POP | 3/32" | 1EA PKG | 30-70 |
| NLW59600POP | 1/8" | 1EA PKG | 70-110 |



ALUMINUM 26 ELECTRODE

Alloy 26 features a precise combination of core wire and coating, providing high speed deposition of dense, machinable welds. Fabrication and repair of cast and wrought aluminum. Foundry defects, machining errors, and salvage work. It is widely used on sheets, tubes and extrusions. Also suited for torch applications.

FEATURES:

- Tensile strength - Up to 34,000 psi
- Good electrical conductivity
- Good color match
- Machinable
- Good corrosion resistance

- Clean weld area
- Bevel sections greater than 1/4"
- Preheat - 500° F is recommended on sections greater than 1/8"
- DC - reverse polarity
- Hold electrode in a vertical position
- Remove flux between passes
- Clean with hot water; add 10% sulfuric acid to water if additional cleaning is required

| PART NUMBER | SIZE | PKG | CURRENT AMPS |
|-------------|-------|---------|--------------|
| 00026500POP | 3/32" | 1EA PKG | 50-85 |
| 00026600POP | 1/8" | 1EA PKG | 80-135 |



SUPER MISSLEWELD (Dissimilar Stainless)

The ultimate electrode for welding steels, highest strength and maximum ductility (AC/DC) Assures non-cracking welds on "problem" steels such as high carbon steels, tool steels, stainless steels, spring steels, manganese steels, and dissimilar steels.

FEATURES:

- Tensile strength - 120,000 psi
- Yield strength - 85,000 psi
- Reduction of area - 30%
- Charp V notch - 75 ft / lbs @ room temperature
- Rockwell B hardness - 93 - 102 HRB
- Brinell hardness - 200 - 300 HB
- Elongation - 22%
- Frictional resistance - Excellent
- Abrasive resistance - Mild
- Will not respond to heat treatment

- Use either AC or DC reverse polarity
- Clean weld area
- Bevel heavy sections
- For high carbon steels, a preheat of 400° F is recommended
- Hold a short arc
- Run stringer beads
- Peening will help relieve stresses
- Let each pass cool and slag will peel off easily

| PART NUMBER | SIZE | PKG | CURRENT AMPS |
|-------------|-------|---------|--------------|
| 00SMW500POP | 3/32" | 1EA PKG | 40-80 |
| 00SMW600POP | 1/8" | 1EA PKG | 70-110 |

