

NickelRod 55 & 99 Comparison

For Cast Iron



| | Nickel Rod 99 | Nickel Rod 55 |
|-------------------------------------|---|--|
| General Description | High nickel, extruded electrode for production and repair of cast iron. Fabrication and repair. Pump housings, valves, castings, cast and malleable fittings. | Lower nickel content electrode for production, salvage and repair of all cast irons. Fabrication and repair. Pump housings, valves, castings, cast and malleable fittings. |
| Weld Deposit | Good machinability. Very hard weld deposit -- predominantly nickel. | More easily machineable. High strength. |
| Build Up, Fill holes, Repair Cracks | In all types of cast iron | Gray or alloyed cast irons |
| Out of Position Characteristics | Very good | Good |
| Requires Dismantling of Parts | Often not required | Often required |
| Color Match | Close color match to cast irons | Close color match to cast irons |
| Tensile Strength | Up to 50,000 PSI | Up to 70,000 PSI |
| AWS A5.15 | ENiCl | EniFeCl |
| Pre-Heating | Not necessary, although for large parts, suggest pre-heating to 350F. min. | Min. pre-heat of 350 F required. |
| Weld fusion zone | Broader. Larger HAZ. | More narrow. Reduces hard areas of HAZ to a minimum |
| Cost | Higher because of high nickel content. | More economical because lower nickel content. |

Suggested welding procedure:

- Use AC or DC reverse polarity.
- Vee out cracks with Aufhauser Groovees Cutting and Gouging Electrode or by grinding.
- Pre-heat heavy castings to 350 F min. for best results with Nickel Rod 55. Only necessary for large parts with Nickel Rod 99.
- Direct the arc on deposited metal with the electrode at a slight angle in the direction of travel
- With Nickel Rod 99, use a short arc; use stringer beads; skip or back-step weld and peen to relieve stresses; cool casting slowly
- With Nickel Rod 55, peen lightly between passes and use a skip or back-step welding technique
- Cool casting slowly with either rod