



## HYDRO MAINTENANCE: WELD-LESS SURFACE REPAIRS

### Coating Characteristics

EIC's weld-less surface repairs replace common repair options when the following characteristics are important:

- *Tough*
- *Thick buildups--up to 0.3"*
- *Corrosion resistant—including chloride corrosion*
- *Abrasion & erosion resistant*
- *Very high bond strength*
- *Machinable*
- *Proven in many critical applications*

These characteristics make our weld-less repairs excellent replacements for several common repair methods, including:

- *Welding and brazing*
- *Nickel plating*
- *Chrome plating*
- *Ceramic coating*
- *Cold spray*

### Typical Applications

**Cast iron surface repair.** Repairs of cast iron surfaces via welding can be particularly thorny, as cast iron tends to become brittle and crack when welded. The toughness, erosion and corrosion resistance, thick buildup capabilities, and very high bond strength make EIC's weld-less repairs an excellent choice for cast iron surface damage.

**Bearing journal and roller bearing surfaces.** Works very well with bronze, brass, and composite bearings. Work hardens in service and does not cause micro-fretting of hardened inner bearing races. Very high compressive loading capability.

**Register surfaces.** Excellent machinability allows repairs of very large diameter register surfaces without welding-induced warpage or cracking.

**Seal and packing surfaces.** Works very well with rubber, fluoroelastomer, and composite seals and packing. Easily machined to typical required surface finishes. High

corrosion resistance and work hardening capability enhance performance in seal surface applications.

### Typical Substrates

- *Carbon and alloy steels*
- *Stainless steels (austenitic, martensitic, PH, and duplex)*
- *Brass and bronze*
- *Cast iron*
- *Aluminum*

### Overlay Alloys

- *Super-nickel and cobalt*
- *Aluminum*
- *Nickel-aluminum bronze*
- *Amorphous*

### To Contact Technical Sales

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### About EIC

EIC has specialized in manufacturing and repairing severe duty machine parts—including over 100 critical hydro components—since 2003.



*Horizontal Kaplan cast iron distributor. Repaired with over 600 pounds of machinable super-nickel overlay applied without welding.*