

# In-Situ Electroplating Salvages Worn Equipment Without Disassembly “On Site”

Lloyds Approved

Nicol & Andrew's **In-Situ Electroplating and In-situ Machining** is the answer with benefits such as corrosion protection and increased wear resistance.

Our in-situ electroplating and machining process, goes to the job site and eliminates a lot of equipment downtime. Your technicians are then free to make alternative choices for a variety of repairs. Our plating solutions can be deposited on most conductive substrates, with over 60 standard precious metals, non-precious metals, and a variety of alloys. Our process enables you to build up worn parts, it can increase conductivity of bus bars; it even provides corrosion protection and added wear resistance.

We will estimate your repair and send an experienced team of plating & machining engineers to restore your equipment to original specifications...and **guarantee** the repair.

Here are some typical repair problems that our **in-situ plating and machining** process can solve:

**AIRCRAFT:** Repair Cadmium and Chrome surfaces on landing gear to zinc on helicopter prop blades. Provides a solid film lubricant or bearing surface to areas where normal lubrication is impractical.

**BEARINGS:** Plate ID and/or OD for dimensional correction. Provides fretting and corrosion resistance with Nickel, Cobalt, Chrome, Cadmium or Tin.

**BEARING HOUSINGS:** Plate in place and to size. Copper, Nickel and Babbitt available.

**BUS BARS:** Plate in place Aluminium and Copper bus bars. Aluminium and Copper for bus bars, Silver and Tin for electrical switching gear.

**COMMUTATORS AND SLIP RINGS:** Plate for wear, as well as reduce RF interference, heat build, and current loss. Arcing solutions include Rhodium, Platinum and Gold.

**DIESEL ENGINES:** Plate block to reduce fretting and worn or damaged main bearing pockets to recover back to standard diameter with Copper and Nickel. Crank shaft repairs with Nickel, Copper or Cobalt.

**ELECTRIC MOTORS:** Repair journals. Resize end bells with Nickel or Tin.

**END BELLS:** Repair of worn and fretting bells to original specifications with Nickel or Tin solutions.

**FRETTING CORROSION:** Plate surfaces to repair fretting corrosion and help prevent recurrences.

Let us show you how the Nicol & Andrew in-situ plating and machining process can help prevent costly downtime and shipping headaches.



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**HYDRAULICS:** Ram and cylinder scores repaired without disassembly using Nickel, Copper, Cobalt or Chrome.

**O-RING GROOVES:** Repair pitted surfaces, or plating, to original surface specifications with Nickel, Copper or Chrome.

**PRINTING PRESSES:** Resize journals. Repair damages or scores in blanket cylinders. Repair worn Copper on offset inking drums.

**PRODUCTION EQUIPMENT:** Repair spindles and way beds to dimension and/or corrosion resistance with Nickel, Copper or Tin.

**PUMPS:** Repair housing or impeller shafts with Copper, Nickel or Cobalt.

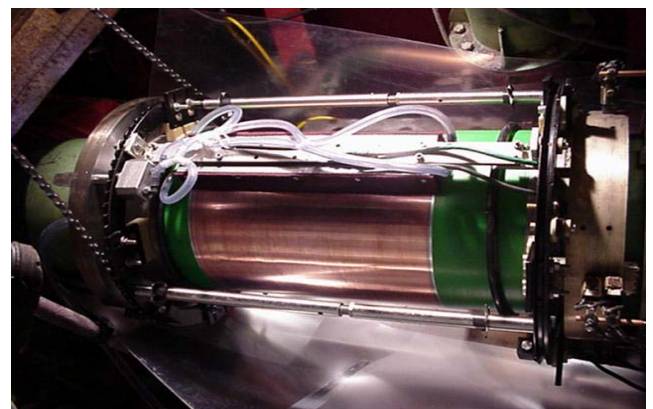
**REDUCTION GEARS:** Repair worn, grooved or fretted bores restoring original dimensions with Copper or Nickel.

**SHAFTS:** Repair worn or mismatched journals to original size with Nickel or Cobalt. **See Photo below.**

**SWITCHES:** Plate contacts and sliding faces for improved current flow using Silver, Gold or Rhodium.

**TURBINES:** Restore original shaft dimensions on bearing and seal surfaces. Repair steam cuts on horizontal joint seal surfaces with Silver.

**VALVES (High Pressure):** Repair steam cuts, correct dimensions, improve corrosion protection. Repair damaged stellite with Nickel, Copper or Cobalt. Silver plate seal rings.



Rotary electroplating of a 400mm Ø Tailshaft on board a frigate in Mobile Alabama

“If you can't move it, we'll plate it where it stands”