



**CANADIAN METAL-AD
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Shaft is selectively masked and copper is plated only on the low and pitted areas.



Our skilled technicians hand-dressed the built up copper and blend with the shaft.



Copper is left in the affected area. The surface is now ready for a hard nickel coating.

SERVICE BULLETIN

PHT Motor Shaft Repair

A more conventional repair on non-contaminated parts in power stations can make perfect applications for our Brush Plating process. Large components, such as this PHT motor, are easily repaired by CMC's Technicians. The Brush Plating process is completely mobile, and therefore, can be taken to almost any job site.

Disassembly of large components can be avoided and repairs can be made right on-site. Below is a PHT motor shaft that has sustained severe corrosion and fretting damages (causing an unacceptable amount of vibration) at one of the Bruce Nuclear Power Plant reactor units. The removal and replacement of the motor would have been very labour intensive, time consuming, and possibly delayed the re-start of the unit. The corrosion was filled with copper and the shaft was re-sized using a hard nickel coating. The repair took our two technicians a total of three days to complete and only required the removal of the coupling.

CMC has been involved in the Nuclear Industry since 1990. Over the decades, numerous projects have been completed - ranging from general maintenance repairs to critical planned outage overhauls. CMC's Brush Plating process has been approved for pressure boundary repairs on critical parts. Components of the Fueling Machine, Grayloc Seals areas, and Fuel Tube End Fittings have all been repaired using our Brush Plating process.

CMC has certified Orange Badges, Security Clearance, and fully trained Technicians.



Severe fretting and pitting damages under the coupling caused vibrations to the pump at high speeds.



A final coating of nickel is deposited over the shaft to protect both the copper-filled and the softer base metal.