CASE STUDY

PHT Motor Shaft Repair

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

The shaft is selectively masked and copper is plated only on the low and pitted areas.

Skilled technicians hand dress the built up copper and blend with the shaft.

The copper is left in the affected area and surface is now ready a hard nickel coating.

FRETTING AND PITTING DAMAGE OCCURED UNDER THE COUPLING CAUSING VIBRATION IN THE PUMP AT HIGHT SPEEDS

Disassembly of large components can be avoided and repairs can be made in place. Here a PHT motor shaft had sustained severe corrosion and fretting damage and was causing an unacceptable amount of vibration at one of the Bruce Nuclear plant reactor units. The removal and replacement of the motor would have been very labour intensive, taken numerous amounts of man-hours and possibly delayed the re-start of the unit. The corrosion was filled with copper and the shaft was resized using a Hard Nickel coating. The repair took two technicians three days to complete and only required the removal of the coupling.

A FINAL COATING OF NICKEL IS DEPOSITED OVER THE SHAFT TO PROTECT BOTH COPPER AND THE SOFTER BASE METAL

CMC has been involved in the Nuclear Industry since 1990. Over that time numerous projects ranging from general maintenance repairs to critical planned outage overhauls have been completed. CMC and the 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 the Brush plating process. CMC has orange badge certified and security cleared fully trained technicians available.

CANADIAN METAL-AD

CORPORATIONATION

140 Advance Blvd. Unit 2
Brampton, On. Canada L6T 4Z8
Phone: 905-459-6457, Fax: 905-459-6457
www.metalad.ca; info@metalad.ca