

# WearShield Case Study

## Copper Mine Damaged Pump Housing Repair

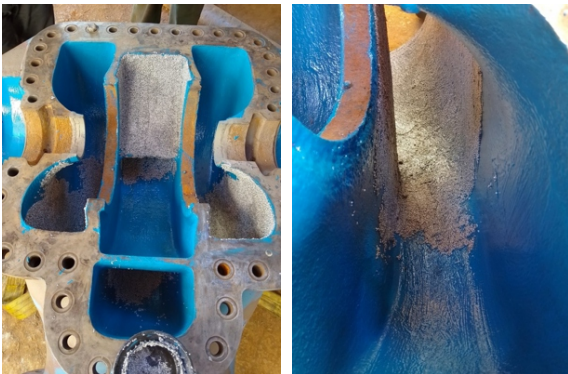
Pump housing at a copper mine left damaged by years of river water extraction undergoes repair after replacement was deemed too expensive



The pump housing was heavily damaged by years of extracting water containing silt, sand and other debris



WearShield created a 30mm thick alumina-reinforced protective shell over the pump housing



Top coating WearShield with Ceramic Brushable left an ultra-smooth, low-friction finish to the repair

### Defect

The pump housing was part of a system which extracted water containing sand, silt, dirt, stones and other debris from a river for use across the mine.

Years of exposure to this water had left the pump housing with heavy corrosion, abrasion and wear damage.

After receiving quotes for fabrication and installation of a new part, replacement was deemed too expensive. The mine instead sought a repair method.

### Solution

The pump housing was taken apart and cleaned to remove as much rust, dirt and grime as possible before repair with **WearShield Epoxy Paste** and **Ceramic Brushable Epoxy Coating**.

An initial coating of Cermaic Brushable sealed the metalwork. WearShield was applied on top of the Ceramic Brushable, forming a 30mm thick alumina-reinforced protective shell all over the pump housing.

Because the dense alumina bead structure of WearShield makes the cured material rough, it was top coated with more Ceramic Brushable.

This gave the repair an ultra-smooth, low-friction finish to improve flow through the pump housing, making it more efficient when put back into service.

### Result

Completing the repair took just two days and saved the mine a considerable amount of money.

The pump housing will remain in service for many more years thanks to the significant protection provided by WearShield and Ceramic Brushable.