

Pump: Metso Slurry

Industry: Power

Medium: Slurry/Fly Ash Product

Our Coating Centre has recently undertaken a job to rebuild a Metso Slurry Pump for a major Scottish Power Site. Once the pump unit was stripped to component form, the main areas of damage were the suction impeller and the volute casing showing severe erosion to casing.



The pump unit is used for pumping slurry/fly ash product at the Power Station which is highly abrasive. The worn pump components are in excess of 500 Brinell hardness but still eroded.

The impeller had approximately 10-15mm missing from the leading edge and the volute had cavities approximately 20mm depth.

The components were rebuilt with Belzona 1121 Super XL metal back to original OEM profile then machined with diamond cutting tips



Machine Outer Edge



Rebuild Outer Edge



Rebuild Back Vanes

The impeller and volute case were then coated with 3mm to 6mm in areas with Belzona 1812 material which is a highly specialised composite combining extremely hard closely packing abrasion resistant materials in a polymeric binder to resist future abrasive attack.



Re-build Impeller with Belzona 1121 Super XL Material



Rebuild Flange Face

Rebuild Impeller Blade

1812 Surface Profile



Inlet Port Coating

Rebuild Inlet Flange

Standard of 1812 Coating

The total cost of this repair is a fraction of the cost of a new replacement; we also believe that this material gives better protection against erosion than the original alloy used.

Pump Group are repairing many other items with Belzona 1812 material such as cyclones, hoppers, centrifuge bowls, where severe abrasion takes place.

Another example of Belzona/Pump Group Partnership working for industry solutions.

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