

## Rotary Valve Repair

### **Pump: Rotary Valves**

### **Industry: Power**

### **Medium: Effluent**

PSRG has recently undertaken the repair of several rotary valves on behalf of a power station on effluent application. On receipt the unit was stripped to component form and inspected, heavy wear due to erosion had taken place to body and excessive clearance was now apparent against the rotor. Deflection was also found in the shaft along with heavy wear across all seal and bearing landings



Rotary valve



Rotor Body



Wear to body

In order to bring back the of the unit the following scope of work was carried out

The body was under grit blasted to SA 2 ½ @ 75 microns

The body was then rebuilt with Belzona 1311 ceramic R metal and machined using a diamond tipped tool. The rotor outer diameter was then machined so correct clearance was established against the rotor.

The rotor was grit blasted to SA 2 ½ @ 75 microns prior to a two cat application of Belzona 1341 super glide. The valve was then rebuilt with new manufactured shaft, bearings and gland packing prior to being given a mechanical run in our test cell



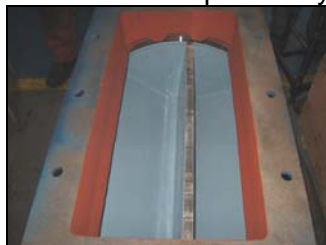
Rotor and end coated with Belzona1341



Body being rebuilt and machined with Belzona 1311



The Belzona 1311 and 1321 ceramic coating system is based on corrosion resistant ceramic steel particles held in chemically reacting liquid polymer, Belzona 1311/1321 ceramic provides outstanding protection against impingement, entrapment, cavitation and bi-metallic corrosion. Using Belzona 1341 wear by abrasion is minimised by its encapsulated blend of lubricating and abrasion resistant fillers. When applied to fluid flow equipment, Belzona 1341 can reduce power consumption, increase efficiency; lower maintenance cost and improves hydro-dynamic performance.



Rotary valve assembled

**Belzona 1341 also improves the fluid handling capacity of the unit by reducing friction between product and substrate reducing “product hanging” in the unit**

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