

**Customer** Electricity Supplier, North West  
**Sector** Power Generation  
**Date** January 2012  
**Ref no.** 20021

## APPLICATION EXAMPLE

# Repairs to cooling water pump bearing seats and coating

## Situation

This pump was allowed to run dry and overheated to such an extent the casing cracked and the bearings seized and slipped in the bearing seats. The customer was considering a new replacement unit but decided that a repair attempt was feasible and potentially far more cost effective.

## Implication

With the casing damaged to such an extent the only other option was a new replacement pump, the cost and lead time were prohibitive, and one standby spare is needed at all times.

## Solution

The works were carried out in conjunction with our "Partner Contractor" Pumtpec Engineering Services Ltd. Following initial blast cleaning the extent of the cracks became more evident, and we enlisted the assistance of Metalock Engineering Services to terminate the same. The bearing seats were blasted to SA2.5 whilst fabricated steel plates protected the rest of the casing and faces. The seats were rebuilt using Resimac metal repair paste and the bearings (with release agent applied) lowered in place to get an exact profile. Upon removal the bearing seats were dressed and the cast weld area was skimmed with metal repair paste. Once cured and dressed back a top coat of ceramic repair fluid was applied to complete the repair.

## Facts

The customer made the decision not to scrap the pump and allow a repair and rebuild of the unit as the cost of a new unit was over £40,000. Once the repairs were underway the customer gained faith that the job could be done and was delighted when the finished pump was presented to them. The techniques used in this repair shows how a near scrap pump can be brought back to life and save the customer many £1000's. Thanks to Metalock and Pumtpec.

