

Servicing of Cold Water Extraction Pump

Customer: Collinsville Power Station

Location: Mackay, QLD

Case Study ID: CS-91

Date: November 2012

Overview

Collinsville Power Station engaged Dowdens Pumping and Water Treatment to service and examine all pumping and water treatment systems in their building.

The Problem

A cold water extraction pump from Collinsville Power Station required was stripped and assessed in the Dowdens Pumping and Water Treatment workshop and the following issues were found and recorded:

- The pump's wear rings were worn unevenly, indicating shaft run out
- Shaft centre supports and lower support bushes were worn beyond safe tolerance
- Gasket material was missing between the 1st and 2nd stage, revealing the pump housing had spread slightly in the centre

Head Office

9-15 Industrial St
Mackay QLD 4740
Ph: +61 7 4969 4949
Email: info@dowdens.com.au

Brisbane Office

24/140 Wecker Road
Mansfield QLD 4122
Ph: +61 7 3828 7000
Email: brisbane@dowdens.com.au

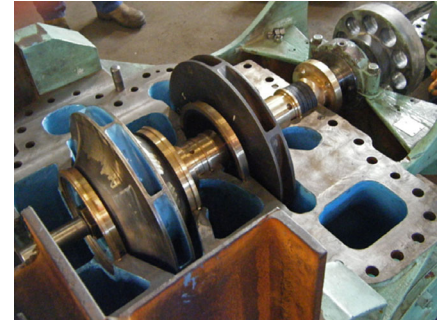
Rockhampton Office

4/415 Yaamba Road
Park Avenue QLD 4701
Ph: +61 7 4923 6969
Email: info@dowdens.com.au

Proserpine Office

2 Mann St
Proserpine QLD 4800
Ph: +61 7 4969 4940
Email: info@dowdens.com.au

- After the casing and cover survey was completed it was confirmed there was up to 0.028" hollow in the casing and 0.026" hollow in the cover – with an average 0.010"
- Impellers worn on ring landings and required machining to suit new wear rings
- The pump shaft had run out on the lower journal
- A foreign object was found in 1st stage impeller (plastic drink bottle)
- The 2nd stage impeller hub was severely damaged.



Our Solution

In House Service Undertaken:

- Impellers were machined, and new wear rings were made
- Damage hub was machined and fitted to 2nd stage impeller
- Pump casings were machined flat
- Wear ring and bush landings were 'horizontal bored'
- The entire internals of the pump were painted with a ceramic coating
- Impellers were balanced
- All bearings and shaft bushes were replaced
- The pump was pressure tested
- The pump was painted and detailed



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Web: dowdens.com.au

Brands used in this project



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