



Raw Water Intake Vertical Column Pump Rebuild & Installation

OVERVIEW

Dubbo Regional Councils essential town drinking water was serviced by a raw water intake Vertical Column Pump. This pump had suffered a critical failure due to a snapped shaft and considerable wear to the casing and impellers, caused by the constant ingress of river sand. On inspection, it was found pump 2 of 3 had failed.

Integrity Pumps orchestrated removal of the pump from site, a major overhaul and then successfully completed the delivery and re-installation.





Dubbo Case Study

Objectives

To diagnose the cause of pump failure and facilitate the safe removal, overhaul and re-installation in an efficient manner without causing any disruptions to the towns essential drinking water. As always, the team at Integrity endeavoured to meet all timeframes and needs while maintaining clear communication channels with all parties involved.

Challenges

The pump station operates 24/7, drawing from a river and discharging to a water treatment plant. The 220KW Column pump had a total of 10 sections totalling a 20m column and shaft length. There was a major drop in Q flow performance and a large rise in power consumption due to the wear on the impeller and snapped shaft.

Solutions

Integrity Pumps managed and coordinated the appropriate crane and truck to provide safe removal and transportation of the pump. A major overhaul was completed in our workshop located in Unanderra NSW. On completion, the re-installation on the pump was completed successfully. The performance and efficiency of the pump has now increased resulting in reduced power consumption and reliable operations.

