

Reliability REPORT

ON SITE TESTING AND DIAGNOSTIC SERVICES

APRIL 2016



HYDRO RELIABILITY SERVICES PUMP HYDRAULIC & MECHANIC HEALTH AUDIT Power Plant Boiler Feed Pumps

On site pump testing was required to determine the mechanical and hydraulic condition of four boiler feed pumps operating in a power plant. Hydro Reliability Services performed a Health Audit on all four pumps (A & B pumps in 2 units) and provided recommendations based on the test results.

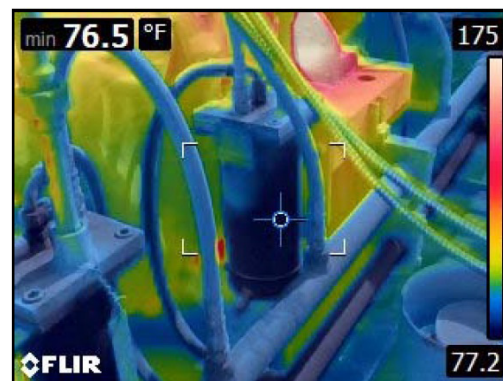
Pump operational data was gathered using Hydro Reliability Services state of the art testing and monitoring equipment. Operational parameters such as: Discharge, suction, balance line, IP drum take off flows, suction and discharge pressures, pump speed, vibration signatures, motor voltage and amperes were reviewed, Thermographic images, maintenance and operational records were also analyzed.

In field performance testing was conducted on both the pump and motor under typical operating conditions. In two of the four units audited, vibration data showed mechanical problems possibly related to pump alignment, soft foot, and/or excessive axial rotor movement.

In addition, the pump total developed head (TDH) of 5653 (FT) on one of the pumps was found to be .39 percentage points lower than anticipated at the flow rate of 849 (GPM). Efficiency of 66.5% was found to be 5.5 percentage points lower than the rated efficiency at this flow. Correcting these issues represents a potential energy saving opportunity of \$48,000 per year, clearly demonstrating the value of a health audit.

Sometimes it's what doesn't happen that matters most.

INDUSTRY	Power Utilities
APPLICATION	Boiler Feed Service
MANUFACTURER	Weir
TYPE	Horizontal Multistage radially split ring section
MODEL	8FT34A
SIZE	6x8
STAGES	8
IMP. DIA. (IN.)	N/D



RR-1604

