HOW ULTRASOUND TECHNOLOGY HELPED HOLLAND BOARD OF PUBLIC WORKS ELECTRIC PRODUCTION FACILITY AVOID $30K IN UNPLANNED DOWNTIME

ABOUT HOLLAND BOARD OF PUBLIC WORKS

The Holland Board of Public works (Holland BPW) is a municipal utility company located in Holland, Michigan. Established in 1893, it has been providing competitive, reliable, and innovative public utility solutions such as electricity, drinking water, and wastewater treatment to the greater Holland area in a socially, environmentally, and financially responsible manner. As part of their commitment to improving their operations, Holland BPW was transitioning from time-based maintenance to condition-based maintenance to detect faults before they turned catastrophic and costly.

THE PROBLEM

Most notably, Holland BPW was experiencing issues with a boiler feed pump bearing – 3465 RPM, 1000 psi. Two of the issues were excess grease consumption and improper lubrication, both of which led to costly unplanned downtime. Since time-based maintenance wasn't providing Holland BPW with a consistent and reliable solution to these issues, they wanted to upgrade their reliability program to condition-based maintenance, allowing them to establish a proper baseline to detect decibel (dB) increases in their bearings to find faults before they turned catastrophic and expensive.

THE SOLUTION

To address this issue, Holland BPW decided to use an instrument compatible with their new approach of condition-based maintenance, the Ultraprobe 9000. This instrument combines the best of both worlds by scanning as quickly as analog instruments while also using digital information to store and trend data with the push of a button. Additionally, the Ultraprobe 9000 allowed Holland BPW to set baseline readings for their bearings and accurately monitor the changes in dB levels, ultimately leading to a significant performance improvement. Moving away from time-based lubrication to condition-based lubrication resulted in decreasing total grease consumption, improved lubrication practices, less unplanned downtime, and the peace of mind knowing their equipment was running healthier. In fact, using the Ultraprobe 9000, they were able to locate a defective bearing in the boiler feed pump, which helped them plan repairs during a scheduled outage, saving the company roughly $30,000 in unplanned downtime costs.

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THE RESULTS

In just 6 months, Holland BPW noticed significant benefits in switching to condition-based maintenance. The Ultraprobe 9000 allowed them to successfully detect faults before they became catastrophic, which resulted in both cost-savings and improved equipment performance. Moving forward, they intend to upgrade from the Ultraprobe 9000 to the Ultraprobe 15,000, while also adding more remote access sensors (RAS) throughout their facility to continue improving their maintenance practices.

SUMMARY

- Holland BPW was experiencing issues with a boiler feed pump bearing not performing up to standards. Excess grease consumption and improper lubrication led to costly unplanned downtime.
- They decided it was time to switch from time-based maintenance to condition-based maintenance, so they purchased an Ultraprobe 9000.
- Using the Ultraprobe 9000, they were able to accurately monitor decibel (dB) levels, ultimately leading to a significant performance improvement.
- They identified a defective bearing in the boiler feed pump before it turned catastrophic, allowing them to plan repairs during a scheduled outage, saving them roughly $30,000 in unplanned downtime costs.
- In just 6 months, they were able to notice the significant benefits of switching to condition-based maintenance using the Ultraprobe 9000 and intend on upgrading their facility by purchasing a new Ultraprobe 15,000 and adding more RAS sensors.

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