Case Study

Vibration Monitoring – Pumping Station

United Kingdom



- ✓ Improved network efficiency
- ✓ Reliable data + frequent transmission
- ✓ Cost effective solution
- ✓ Pro-active maintenance
- ✓ Easy to implement





Overview

In a recent project, a vibration sensor was deployed at a wastewater pumping station. Although the gearbox and shaft bearings had been replaced two years earlier, the pump's performance had noticeably declined.

The sensor was installed on the pump housing and monitored over a week, capturing an upward trend in vibration data, signalling potential anomalies and motor wear. Site engineers were alerted and replaced the pump belts, which inadvertently caused the vibration levels to rise further. A follow-up site visit revealed that the belts needed tightening. After this adjustment, a sharp vibration spike occurred, traced to the incorrect reinstallation of the belt cover. Once refitted properly, the pump's vibration stabilised, returning to near-normal levels.

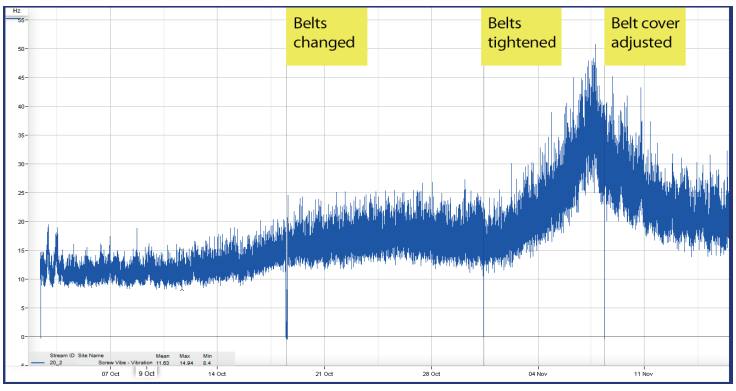
This case underscores the critical role of combining advanced tools like vibration sensors and the Cello 4s to safeguard equipment. By delivering real-time insights, these technologies enable early detection of potential issues, ensuring prompt action to prevent downtime and extend the lifespan of essential assets.

Key Elements

- Need for reduced downtime and real-time data
- Operating/repair costs budgeting
- Improved safety for employees working on-site
- Maintenance updates to be applied on WaterCore platform
- Trend patterns help pre-empt possible failure

Key Outcomes

- Preventative maintenance reduced costly site visits
- Enables efficient and targeted deployment of resources
- Vibration sensor can be used as a warning system for breakdowns
- Reduced downtime of pumping station
- Alarms sent directly to field engineers



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