

Problem

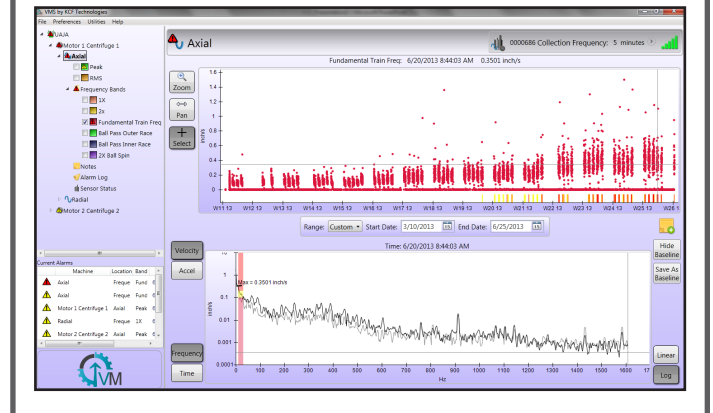
A wastewater treatment plant in central Pennsylvania has two large dewatering centrifuges. The bearings wear rapidly, due to the inherent imbalance. The opportunity was identified for a system to monitor the condition of the bearings and centrifuge system, to provide predictive information. The goal is to reduce unnecessary maintenance and avoid sudden unexpected failures.

Solution

Leveraging the low-cost and simple solution, SmartDiagnostics® sensors were installed on the axial and radial bearing points of both centrifuges. The system was installed rapidly and was set up for monitoring by the facility operator. After three months of operation, an axial sensor point identified a developing machine behavior that could have otherwise gone unnoticed.



Top: The location of two SmartDiagnostics® vibration sensors on a dewatering centrifuge at a wastewater treatment plant. **Bottom:** A screen capture of the data coming from a dewatering centrifuge showing increasing vibration levels and potential failure.



Success Factors	Customer Value
Cloud-based data flow	Monitoring outside the plant
Installation in under 20 minutes	Zero disruptions of plant operations
Continuous health tracking	Machine trends are apparent with 1,000 times more data
Identification of developing failure mode	Savings through reduced PM and downtime avoidance



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