Cooling Towers
MACHINE HEALTH SOLUTION

KCF technologies

THE PROBLEM:

Cooling Towers are used to dissipate excess heat generated by processes as **quickly and efficiently as possible.**

Failures on these assets can be costly as it can shut down other processes in the facility. Equipment modifications and replacements can be time consuming, prolonging periods of unplanned downtime.

COST OF ASSET FAILURES

$50,000
per Failure Event in Equipment Costs

SAVINGS POTENTIAL

Reduce Maintenance Routes by **50%**

$1,000 per Hour of Unplanned Downtime

Upwards of **$100,000** in Total Cost Savings for One Failure Avoidance

ASSET BLIND SPOTS:

Challenge #1: Cooling Tower Fans are in a hard-to-reach area that are difficult to monitor without continuous monitoring which makes it challenging for maintenance personnel to detect developing issues.

Challenge #2: Continuous monitoring provides the ability to monitor the equipment's entire progression to failure.

Challenge #3: Time-based protocols do not capture actual inflicted damage.

A NEW APPROACH TO Monitor Cooling Towers

Image 2: Cooling Tower Motor

Current Reality:

Routes are often time consuming due to the equipment location on-site, making time and route-based monitoring to detect bearing faults, balance/alignment issues, and motor faults not an efficient way to monitor and optimize Cooling Tower maintenance.

New Solution:

Implement a condition-based maintenance program by installing vibration nodes to key monitoring points on the motor and gearbox to detect issues in the asset the moment they occur.

HARDWARE

- 2 Motor Vibration Sensors
- 1 Motor Voltage Sensor
- 1 Motor Current Sensor
- 2 Gearbox Vibration Sensors*
- 1 Gearbox Oil Quality Sensor*

*If Applicable

SOFTWARE

- 24/7 Continuous Monitoring
- Warning and Alarm Threshold Settings
- Custom Built Indicators
- Dashboards
- Monthly Reports

REAL-TIME DATA

- Comprehensive Machine Health
  - Vibration
  - Temperature
  - Current and Voltage ranges
  - Running Speed
  - VFD Settings
  - Gearbox ratios
  - Oil Quality

TRAINING

- Sentry
  - Site visits: 2 times/year
  - In-person training
- Academy
- Customer training/handbooks
- Asset playbook

CONTACT US!

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