

COOLING TOWER FANS

MACHINE HEALTH SOLUTION FOR METALS



THE PROBLEM:

Many mills use steam turbines to power their processes. That makes cooling tower fans a critical asset that benefits from continuous monitoring.

Continuous monitoring of these large overhung cooling fans can improve plant efficiency while limiting downtime and performing good maintenance practices.



COST OF ASSET DOWNTIME

Although cooling towers are a simple asset, their downtime can be detrimental to production efficiency. Loss of a cooling tower results in **hours of unnecessary unplanned downtime.**

PREVENTABLE FAILURE MODES

Continuous monitoring can prevent unplanned downtime and expensive repairs caused by **imbalance, structural looseness, fan blade wear and buildup, misalignment, and improper repairs.**

ASSET BLIND SPOTS:

There are several inherent challenges related to monitoring Cooling Tower Fans:



Challenge #1: Based on location and the operation of moving along a track, it can be difficult to routinely check up on Cooling Tower motors and fans.

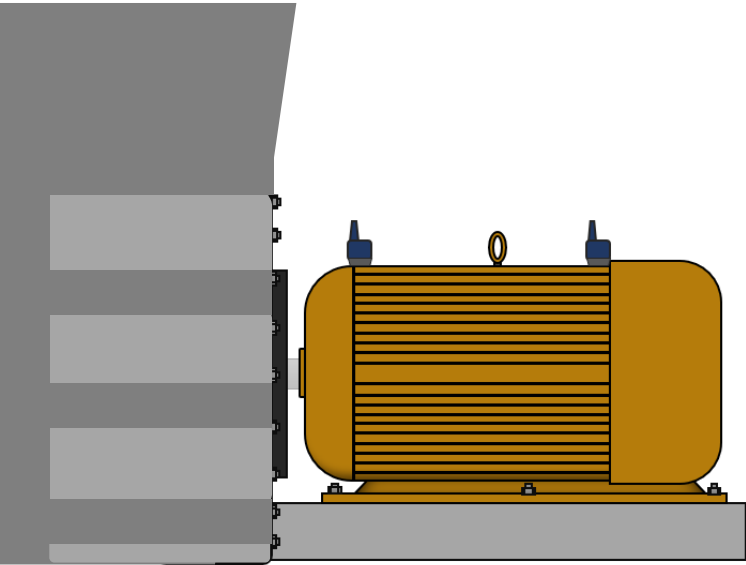


Challenge #2: Continuous monitoring provides the ability to monitor the equipment's entire progression to failure.



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

A NEW APPROACH TO MONITORING COOLING TOWER FANS



CURRENT REALITY:

Routes are often time consuming due to the equipment location on-site, which prevents the collection of continuous data. Without continuous data, bearing faults, balance/alignment issues, and motors faults often remain undetected. The time-consuming nature of routes makes them an inefficient way to monitor and optimize Cooling Tower maintenance.

NEW SOLUTION:

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



HARDWARE

- 2 Motor Vibration/Temperature Sensors
- 1 Motor Voltage Sensor
- 1 Motor Current Sensor
- 1 Tachometer for the Motor (or data integration from a PLC)
- 2 Fan Bearing Vibration Sensors*

**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
 - Running Speed
 - VFD Settings
 - Belt ratios
 - Oil Quality
 - Ultrasonic



TRAINING

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

CONTACT US!

Call **814-867-4097** or email sales@kcftech.com for information.

