

### THE PROBLEM:

Induced & Forced Draft Fans are crucial to the Power Generation process. Failures on these assets can be costly as it can take a considerable amount of manpower to replace. Unexpected downtime from an Induced and/or a Force Draft Air Fan can get expensive, very fast.



#### COST OF ASSET FAILURES

**\$250,000**  
per Failure  
Event in  
Equipment  
Costs

#### SAVINGS POTENTIAL

Reduce Maintenance Routes by  
**50%**

**Up to \$20,000** per Hour of  
Unplanned Downtime, Depending  
on Unit Output

Upwards of **\$300,000** in Total Cost  
Savings for One Failure Avoidance

### ASSET BLIND SPOTS:



**Challenge #1: Forced / Induced Draft Fans are generally larger in size which puts relatively small data anomalies low on the priority list without continuous monitoring.**



**Challenge #2: Diagnosing fault types without precision can result in unnecessary work & increase the already costly Mean Time Between Failure (MTBF).**



**Challenge #3: Time-based protocols do not provide the insight necessary for full maintenance & process optimization.**

# A NEW APPROACH TO Monitor Cooling Towers



Image 2: 250 HP Induced Draft Fan

## 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 ID/FD Fan maintenance.

## New Solution:

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



### HARDWARE

- 2 Motor Vibration Sensors
- 2 Fan Vibration Sensors
- 1 Motor Voltage Sensor\*
- 1 Motor Current Sensor\*
- Integrate Other Relevant Data Available (Dampener Position, Load, etc.)

\*Continuous MCSA Coming Soon!



### 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!

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

