



COMBUSTION FANS

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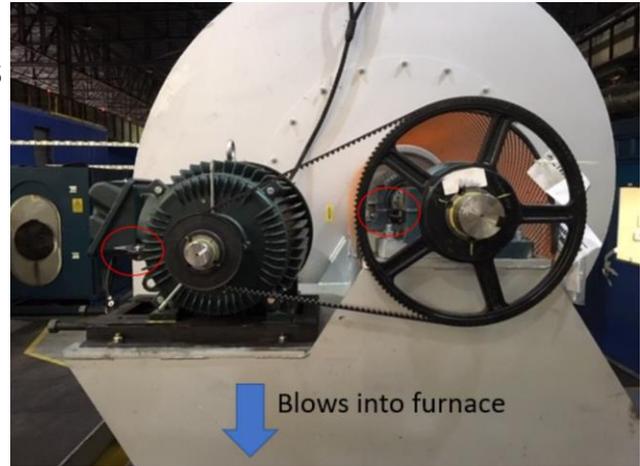
MACHINE HEALTH SOLUTION FOR METALS



THE PROBLEM:

Combustion fans are critical for many processes which include combustion systems for furnaces, fans for cooling of drive machinery, pickling exhaust and furnaces in forge shops, and exhaust systems on quench lines.

An unexpected failure can cause an excessive amount of downtime and production loss. Unexpected fan wheel failures, belt/sheave/alignment failures, bearing and others can be prevented through continuous monitoring and analysis.



COST OF ASSET FAILURES

\$6,000/hour
Downtime Cost

12 hours/Month
Downtime

\$70,000
Replacement

INDUSTRY SAVINGS POTENTIAL

\$72,000/asset/month

ASSET BLIND SPOTS:

There are several inherent challenges related to monitoring Combustion Fans:



Improper alignment of belts/sheaves can create excessive vibration leading to early belt wear, bearing defects, and structural damage.



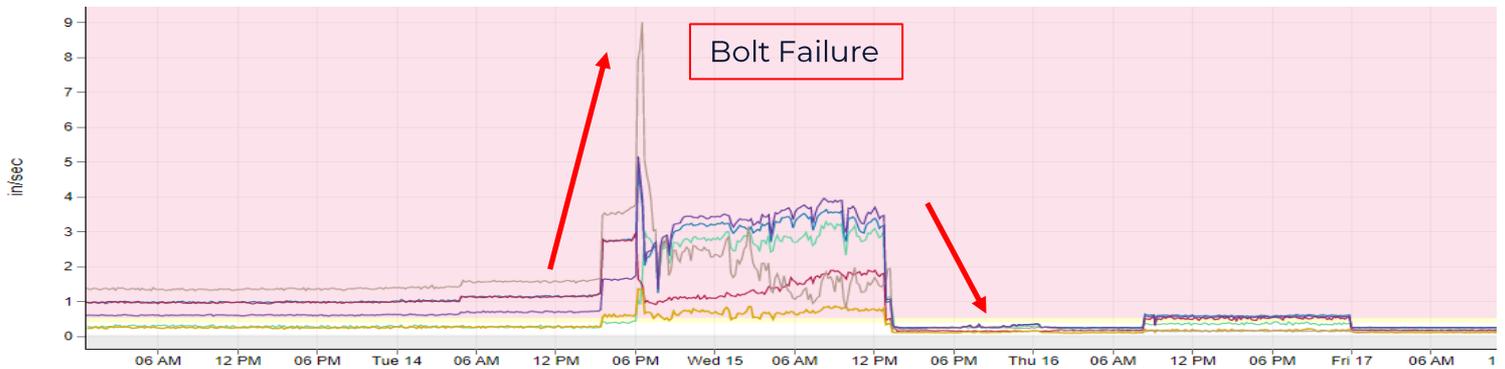
Vibration sensors allow us to bring these issues to the forefront that would otherwise be blind to our customers



Continuous monitoring gives us the ability to correlate process changes with real solutions.

A NEW APPROACH TO COMBUSTION FANS

On this furnace fan, five of the base bolts suddenly broke from fatigue. Continuous monitoring provided for quick response to the issue without excessive downtime. Through additional analysis, it was discovered that the impact was being driven by a rotational imbalance on the fan wheel. The initial symptoms of the problem was mitigated by replacing the base bolts, which allowed time to plan and schedule the adjustment to the fan wheel balance issue.



HARDWARE

- V3 Bi-Axial vibration sensors
- V3 vibration sensors to measure biaxial vibration in each of the motor, gearbox and pump bearings.
- BS4 base stations to remotely send the collected data to the cloud for analysis.
- Flow sensors connected to a GIN



SOFTWARE

- SMARTDiagnostics monitoring
 - Continuous vibration readings
 - Individualized alarm thresholds
 - Sentry data analysis
- Data dashboard - Callout reporting



REAL-TIME DATA

- V3 vibration sensor data and analytics
- Lubrication, Thermography, and Motor Current data
- Customer process data & asset details
 - Schematics/drawings of equipment
 - Run speed
 - Bearing make and models
 - Gear ratios
 - Product and shift-specific metadata



TRAINING

- Sentry
- Academy
- KCF Academy
- Customer training/handbooks

CONTACT US!

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





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