

KCF Technologies Asset Case Studies

Homogenizer Motor

It's not enough to simply know that an asset is failing. Our team of engineers, vibration analysts, and industry experts with decades of manufacturing experience use cutting edge predictive maintenance technology to partner with you to solve your asset problems permanently and reach peak performance.

The Problem:

Severe imbalance and structural looseness with a bearing fault (fluting).

Inconsistent operation of the Homogenizer C motor DE bearing, with heightened Peak Accel readings was identified. The main problems were increased vibration and indications of looseness, primarily at the non-drive end compounded with bearing fault frequencies associated with fluting.



Ready to Take the Next Step in
Your Machine Health Journey?
Let's Get in Touch.

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How We Solved It:

A change in sensor position was performed to gather more accurate data. Following continued abnormal readings, the NDR bearing was replaced on August 5, with temporarily reduced the peak accel. Additionally, adjustments to the pulley and belts were made and a soft foot check was conducted. A speed study suggested the opportunity to lower the operating frequency (Hz) of the motor. On August 18, variable frequency drive wiring was replaced due to fluting found in the recently replaced non-drive end bearing. Despite these measures, vibrations continued to rise. This prompted the recommendation to replace the entire motor with one equipped with ceramic bearings to mitigate electrical issues and better manage the operational demands.

Savings:

\$15,000

Capital Expenditure

6 hours

Downtime Avoided