

# CASE STUDY

PHARMACEUTICAL MANUFACTURING COMPANY



India



Tablet Manufacturing



200,000ft<sup>2</sup>  
Facility



12 Maintenance  
Staff



40 Critical  
Machines



## ELIMINATE UNPLANNED DOWNTIME AND HIGH BREAKDOWN REPAIR COST

Get Real Time Insights From Presage's Predictive Maintenance solution and decrease overall maintenance cost and increase productivity

- **Reduced downtime**

Lost hours and recovery overtime

- **Repair cost saving**

Labor and new motor cost

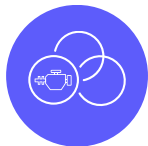
When the maintenance and reliability teams of the customer contacted Presage, they were incorporating some Predictive Maintenance (PdM) into their maintenance program to reduce unplanned downtime and unexpected repair costs related to their critical utility pumps

They originally implemented PdM using a traditional method of collecting data with a wired tablet and outsourcing a CBM service provider to analyze the data and provide a diagnostic report.

There were several challenges that were identified with this early PdM program:



Long turnaround time for diagnostics



The cost was not scalable



Lack of site-wide machine health view



Lack of a continuous diagnostic solution for critical machines

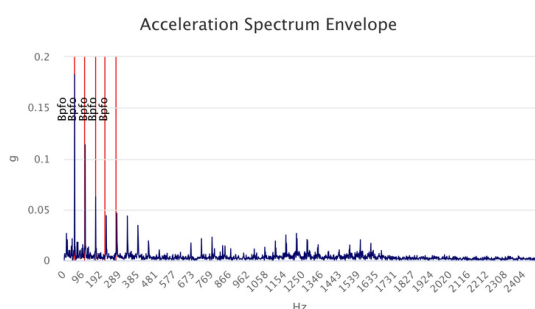


By integrating Presage's continuous diagnostics solutions throughout their facility, the customer successfully tackled various operational hurdles. Central to Presage's automated machine diagnostics is its utilization of exclusive machine learning algorithms, drawing from a vast repository of vibration data. This enables the provision of instantaneous insights into machine health. Thanks to the adept diagnostics offered by Presage, the customer's team swiftly pinpointed numerous critical issues within the initial week of deployment.

## AVOIDING CATASTROPHIC FAILURE: DETECTING AN EARLY STAGE PUMP FAULT

An immediate identification and diagnosis of an early stage machine malfunction.

Presage's wireless AI powered Diagnostics solution was used to monitor critical pumps in the facility. Unexpected malfunctions on these assets would compromise their production.



Upon the implementation of Presage's solution onsite, an early stage motor bearing outer race defect was identified on one of the pump.

Acceleration Time Waveform

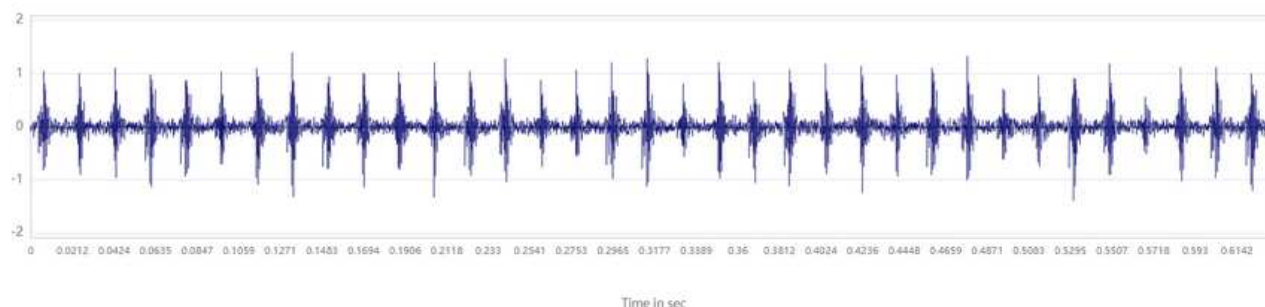


Figure 1: Pre-repair waveform and envelope spectral data indicates the presence of a severe motor bearing defect. Vibrations associated with the defect are marked with the cursors.

Gathering and processing real-time data on vibration, ultrasound, and magnetic signals from the machine enabled the prompt identification and diagnosis of an incipient machinery issue. This particular malfunction had eluded detection during routine preventive maintenance checks or when employing alternative predictive maintenance technologies. Detecting the fault at its nascent stage allowed customer to proactively intervene, thus averting a potentially disastrous breakdown. Subsequent to detection, Presage's technology continued to monitor the flaw, facilitating the scheduling of repairs at an optimal juncture. Moreover, ongoing surveillance ensured prompt action in the event of any abnormal deviations that might have necessitated an immediate shutdown.

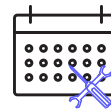
## REPAIR AND RESULTS



Reduced repair costs



Avoided unexpected downtime



Planned and controlled repair

Within a few days of identifying the fault, the motor was replaced for \$2000. Had the machine issue gone unnoticed for a few more weeks, the cost would have skyrocketed.

The discovery and continuous monitoring of this pump issue by Presage's solution resulted in customer's ability to make informed maintenance decisions that maximized equipment uptime and plan for a repair during a time that minimized impact to production.

"By anticipating maintenance needs in equipment before it malfunctions, we have successfully prevented significant issues and minimized downtime in our manufacturing processes. Additionally, ongoing vibration monitoring is enhancing our knowledge and comprehension of the condition of our crucial equipment."

DGM Maintenance