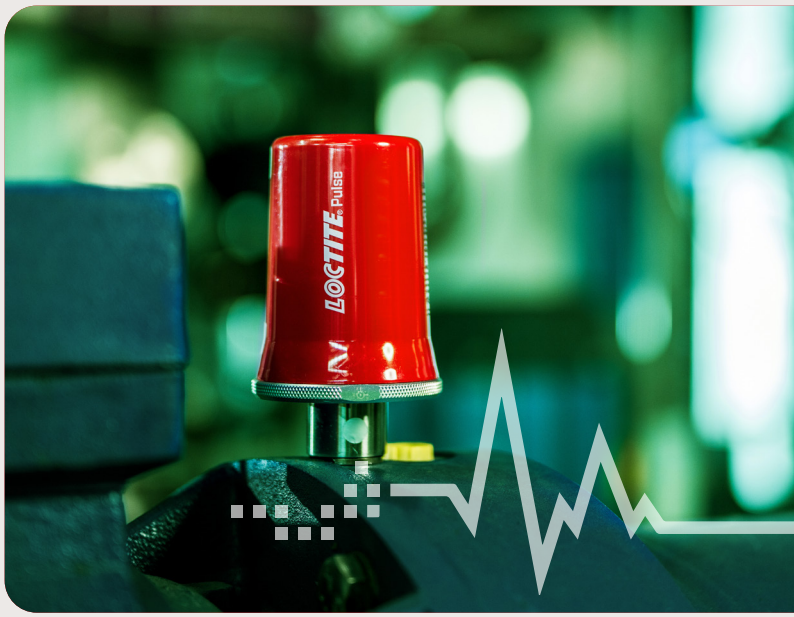
Customer Case Study

SMART TURBINE MONITORING

OIL & GAS INDUSTRY



AT A GLANCE

Smart Rotating Equipment (SRE) monitoring has delivered over $1 million in realized value for one Texas Oil and Gas Refinery by detecting early-stage faults from bearing wear in turbines.

CHALLENGES

01. Oil and Gas refinery operations depend on steam turbines to meet their power needs. Spare turbines were not an option, so turbine reliability is critical to maintaining the integrity of refinery operations.

02. Turbine failures directly lead to costly downtime.

03. Turbine bearings are subject to extreme forces that create wear which can lead to turbine failure.

04. Monitoring bearings for wear is a major challenge, especially where assets are located in harsh and hard to reach environments.

KEY METRICS

$210k USD p/y

Up to $210k energy savings per year achieved from better louver positioning.

$500k to Millions

From $500k to Millions of dollars savings per day in unplanned downtime avoidance.

The data provided is based on customer feedback regarding the use of our IIoT solution in specific scenarios. While we strive for accuracy, results may vary based on individual circumstances.

SOLUTION

- Smart Rotating Equipment sensors were deployed on turbine and fan drive and non-drive ends, as well as gearbox inputs and outputs.
- Self-contained, wireless sensors with magnetic bases eliminate the need for costly wiring and make installation easier.
- Hazardous zone certified versions of the sensors enabled installation in harsh environments.
- The system detects anomalies using Artificial Intelligence to diagnose faults and predict “remaining useful life” accurately.

BENEFITS

Continuous 24/7 equipment fault monitoring.

AI-powered fault detection and recommendations via push notifications.

Fully wireless “Plug and Play” sensors with Cellular LTE connectivity to the cloud.

Enhanced safety and reduced labor costs through fewer manual inspections.