



CATCH OF THE WEEK

Increased vibration detected on a combustion turbine at a combined-cycle plant



Customer Success Story from
GE's Industrial Performance & Reliability Center

What did GE's analytics software find?

In December, the Proficy SmartSignal software detected bearing 1 and 2 vibration spikes increasing in amplitude from 20 to 81 $\mu\text{m pp}$ (0.78 to 3.1 mils) and from 4 to 10.8 mm/s (0.15 to 0.43 in/s). These increases tracked $\sim 70 \mu\text{m pp}$ (2.76 mils) and $\sim 8 \text{mm/s}$ (0.32 in/s) higher than model estimates and occurred at changes in load and at extreme ambient temperatures. GE's [Industrial Performance & Reliability Center](#) (Industrial PRC) sent a notification to the customer and discussed these changes with the customer on the regular weekly calls.

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What was the underlying cause?

Upon inspection, the customer verified that there was a vibration-related issue on the combustion turbine. Although the exact root cause of the vibration is still being investigated, the customer took the maintenance action of greasing the trunions and performing an evaluation of the casing clearance.

What was the value to the customer?

The customer received early warning of the increased vibrations and was able to communicate with the site to schedule downtime to address. The customer was able to perform a scheduled preventative-maintenance action that reduced the vibration that the turbine was exposed to, which allowed for continued operation while minimizing production losses.

MEET GE'S EXPERTS

WHAT THEY SAW



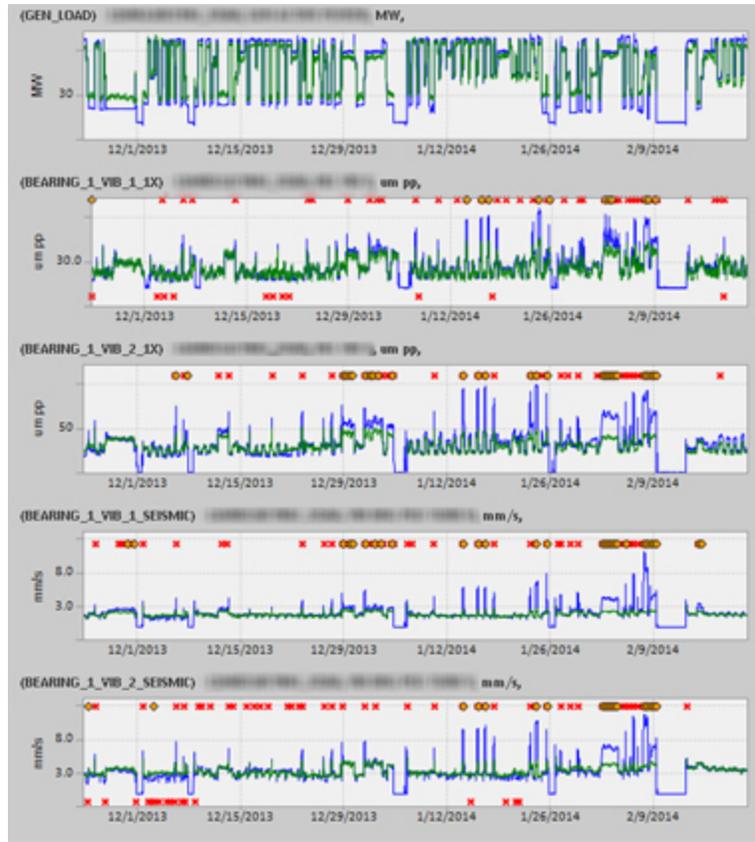
Justin Whitty
Customer Reliability Engineer



Matt Kramer
Customer Reliability Engineer



David Saad
Customer Reliability Engineer



The customer received early warning of the increased vibrations and was able to communicate with the site to schedule downtime to address. The customer recommended greasing the trunions and evaluating the casing clearance. When the unit was next available to be taken offline, changes were made to manage the issue, in spite of no root cause being determined. Vibration levels improved on restart.

GE's Industrial Performance & Reliability Center, using Proficy SmartSignal software, provides comprehensive predictive monitoring across all critical rotating and non-rotating equipment plus key balance-of-plant equipment. The Catch of the Week highlights some of the critical catches detected every day.
Real customers, real stories.

What if you have small, undetected issues that might lead to big problems? We can help you find out.

CONTACT ME