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Case Study :: Northern Ireland SSA

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CUSTOMER SUCCESS STORY :: Northern Ireland SSA

GE'S SUPPORTING SERVICES TEAM REMOTELY DIAGNOSES A CUSTOMER'S STEAM TURBINE WITH GE'S SYSTEM 1*CONDITION MONITORING AND DIAGNOSTICS SOLUTION.



A Northern Ireland-based power plant used the Supporting Services team to remotely diagnose excessive vibration in its main power generation unit. Using System 1 and expertise in rotor dynamics, GE's Bently Nevada* Supporting Services team resolved the customer's problem quickly and efficiently, saving them an estimated \$900k USD.

PROBLEM

A large power plant in Northern Ireland called GE's Bently Nevada Supporting Services team when one of its main power generation units had been shut down due to excessive vibration amplitude on both LP steam turbine bearings. The customer had System 1 data available, and asked the Supporting Services team to review the data to determine the cause of the high amplitudes and assess any possible resulting damage.

SOLUTION

The Supporting Services team remotely connected to the customer's System 1 to gather data and determined that the unit experienced a fluid-induced instability. It was noted that at full-speed with no load, the issue relented and showed no abnormalities.

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The unit was restarted with the Supporting Services team monitoring the data, and the site team ready to respond to any advice from them. The unit was successfully restarted and loaded with no indication of the previous instability.

Further analysis of the process data from the Supporting Services team revealed an issue with the gland seal temperature and control during the instability.

PAYBACK

System 1 provided dynamic data to diagnose and remedy the steam turbine remotely. Without System 1, the customer would have been required to open the unit, inspect the bearings and then restart the unit, resulting in a downtime of approximately seven days.

The team provided immense customer value to this solution. They were connected within four hours of the initial request, and their expertise in rotor dynamics enabled a prompt and accurate response.

BENEFITS

- Accurate and timely diagnosis. The Supporting Services team responded to the request quickly and effectively.
- Avoided costly downtime. The customer saved an estimated \$900k USD from reduced downtime and the avoidance of a reactive site visit from GE Microwave Data Systems engineers.
- Higher confidence in machinery protection integrity. System 1 provided the customer with the ability to remotely manage and diagnose the issue confidently.

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