

Preventing costly future plant failures

Location: Toronto, Canada



The problem

After experiencing repeated failures at their twelve-year-old power generation facility, a 875MW Combined Cycle Power Plant wanted to protect their assets from future failure.

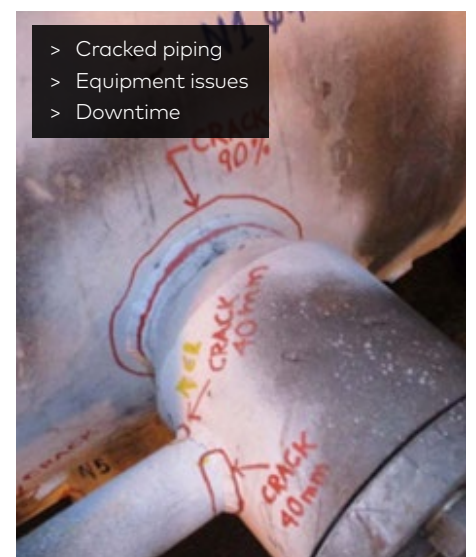
The facility had experienced cracked piping and equipment issues in relation to the Hot Reheat Bypass to Condenser, causing significant failures, equipment replacements, and downtime.

The Hot Reheat Bypass to Condenser protects the plant in the event of a steam turbine trip or failure. It is also used during every start-up of the plant.

A complete failure doesn't allow the plant to start, leading to the loss of hundreds of thousands of dollars each day.

Any failure is considered an emergency that needs immediate repairs to avoid downtime and financial losses. A failure also presents serious safety concerns, as it is possible for high-pressure steam to exit to the atmosphere.

The plant wanted to ensure that past failures were not duplicated. Most importantly, they needed to learn why the failures happened and what measures needed to be put in place to stop them from happening in the future.



The solution

As an existing customer with many IMI Critical Engineering valves installed, the power plant asked for IMI Valve Doctor® engineering expertise to review their current operating and equipment conditions.

The IMI Insynt digitally based, end-to-end prescriptive engineering service was implemented to analyze historical data from the plants Distributed Control System (DCS). The digital plant walkdown evaluates operations and identifies maintenance requirements, control logic changes, and possible equipment issues. The Insynt output provides corrective actions to prevent problems before they happen, protecting the plants process.

The highly experienced IMI engineering team began investigations to find the root cause of plant issues by identifying the operating modes that were leading to failure.

Initial data analysis showed that plant information wasn't being

captured at the level of detail the plant had originally thought. Additionally, the plant did not have sufficient personnel to spend time evaluating the data. This lack of detail and analysis was causing problems to be missed until they became serious issues.

IMI Insynt was able to significantly improve their operation by improving the quality of the data captured and analyzed. The historical data quickly revealed several major issues that required immediate attention to keep the plant operational and safe.

Before the final report was even issued to the plant, many of the suggested fixes provided by IMI Insynt were implemented.

Thanks to Insynt, the plant was able to extend the life of their equipment, increase the length of maintenance intervals, and have a better understanding of their own processes and equipment.

John
Plant Manager

"The Insynt process was extremely helpful and identified some major issues that needed fixing. We look forward to further conversations and meetings with IMI to help improve our system and process."



> IMI Insynt digitally analyzed data from the plant's Distributed Control System (DCS)

→ go.imi-critical.com/insynt

→ insynt@imi-critical.com