



APPLICATION SPOTLIGHT – Utilities



Improve
Efficiency



Reduce
Downtime



Improve
Safety

POWER GENERATION STEAM TURBINE

DECREASE DOWNTIME, REDUCE MAINTENANCE COSTS

THE CUSTOMER'S CHALLENGE

A steam turbine relies on Hydrogen to run, this is a very flammable gas. When it is time to perform maintenance on the system, the hydrogen gas is purged from the system and replaced by a noble gas, carbon dioxide (CO₂). The CO₂ now makes it safe to inspect for leaks. Locating carbon dioxide (CO₂) leaks on turbine generators can be time consuming when using traditional methods, especially when it requires you to shut down a unit for maintenance. A small leak left unnoticed can become a big, costly problem — as well as a serious safety concern. But these problems are not always visible to the naked eye, making you more vulnerable to undetected leaks and unexpected downtime. For instance, if a spray nozzle was installed facing the wrong direction, no one would know until something went wrong.

A SOLUTION

Regular CO₂ monitoring using an optical gas imaging camera can help you pinpoint the exact source of the emission. The FLIR GF343 allows you to visualize gas in real time, so you can localize small leaks, verify repairs, and avoid outages or costly regulatory fines. By introducing CO₂ as a tracer gas, the GF343 can see the leaks in difficult or impossible locations within the turbine generator.

FLIR thermal cameras, such as the E53, can be very useful in finding potential turbine generator problems that would not have been detected using a standard preventive maintenance plan. For example, thermal imaging can detect air in-leakage issues that commonly occur due to gasketing materials failing.

THE RESULTS

Unplanned outages are a costly, unnecessary burden to your facility. Using FLIR optical gas and thermal imaging cameras instead of traditional inspection methods, you can improve your work efficiency by visualizing CO₂ leaks and hot spots in real time. Optical gas and thermal imaging cameras give you the ability to spot leaks and thermal anomalies early, saving you money on the cost of maintenance and downtime. Catching potential hazards early can also save personnel from serious injury.

For more information about FLIR in electric power generation or to schedule a product demonstration visit: www.FLIR.com/power-generation

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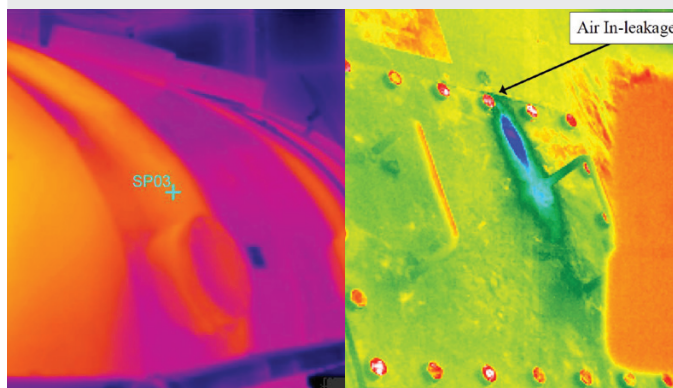
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Gas leaks are easy to miss using traditional inspection methods, increasing your risk of unexpected downtime



Optical gas imaging allows you to visualize gas in real time and helps you pinpoint the exact source of the emission



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