

Ultrasonic Detection of Gas Leaks in Natural Gas Lines Protects Property and Prevents Business Interruptions

RESULTS

- Early warning safety solution for potential gas leaks
- Increased safety for personnel and property
- Reduced need for maintenance
- Saved money by detecting and rectifying escaping gas



Ultrasonic gas leak detection improves safety for a paper manufacturer in its natural gas lines.

APPLICATION

Natural gas supply lines.

CUSTOMER

A major international paper mill facility in the United States.

CHALLENGE

A paper mill in the United States has large incoming and outgoing sources of natural gas. These sources are located at the edge of its property, making it difficult to send a signal back to the control room. Pressurized piping systems located in extreme conditions are susceptible to gas leaks due to corrosion or other environmental-related wear.

It was important to monitor for gas leaks at the paper mill, since gas releases are not only hazardous, but also an expensive waste of resources.

Protecting large manifolds in open spaces may require the deployment of several point and open path gas detectors – often at a considerable expense. The end user desired a gas detection solution that is cost-effective, detects leaks efficiently and with high response speed, and can be installed quickly.

SOLUTION

The Incus was mounted on the fence line to monitor all regulators and valves on either side of the fence. This application worked well for the Incus as the pressure is consistently high enough for the device to work properly. Because of the low level of background noise at the site, the Incus was able to pick up releases of over 100 psi. And since it is unaffected by wind direction and velocity, rain, sleet, or snow, it detects pressurized gas escapes reliably in the open space.

Since the end user had basic power for lighting and other equipment, it was easily able to supply power to the Incus. Additionally, the paper



mill integrated the Incus to a network by using a THUM adapter and leveraging a wireless gateway it already had installed. Last, to notify in the event of faults or alarms, it interfaced the Incus with a horn and strobes through internal relays.

There are several advantages to the arrangement at the paper mill. First, using internal relays to communicate faults and alarms is a simple operation. No logic solver is required. The set-up can also be deployed within a few hours and the cost of cabling is minimized, resulting in a design that can be implemented in remote corners of the plant.

After installation, the Incus provided early warning of a gas release, averting escalation of an accident and loss of natural gas.

RESOURCES

Incus Ultrasonic Gas Leak Detector

Emerson.com/Incus



The horn and strobe are mounted on the pole with the Incus.




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