

Steam Trap Wireless Monitoring Solution for Steam Leak Detection



Finding hazardous leaks and fugitive emissions in a refinery or chemical plant is challenging but critical to ensuring regulatory compliance, safety, and to preventing costly fines. Each plant can have over 35,000 valves and as many as 200,000 monitoring points. Both refineries and chemical plants have seen the cost of their leak detection and repair (LDAR) programs skyrocket as the number of monitoring points increases.

Industrial plants use large quantities of steam in various operations. Significant loss of steam from the boiler costs plants millions of dollars annually. Studies of this problem reveal the loss originates primarily from steam traps used to remove condensate from the steam lines between the boiler and the various points of use.

A calculation of the magnitude shows probable loss between \$100,000 and \$150,000 worth of energy per year for a typical industrial plant. Since it is expensive to conduct leak detection monitoring manually, plant engineers typically look for a method of automatically identifying leaks in the steam traps. Signal wiring, however, for an automatic warning system would greatly exceed the cost of the transducers.

Solution: OneWireless Steam Leak Detection

Honeywell XYR 5000 Wireless Acoustic Transmitters are available for steam leak monitoring applications. The unit operates through the use of an acoustic sensor combined with a radio frequency transceiver. Steam leaks typically generate high frequency waves that closely match the response of the wireless acoustic sensor.

Honeywell Acoustic Transmitters meet all the technical requirements of the leak detection application while conforming to budgetary constraints. Honeywell XYR 5000 wireless transmitters provide reliable leak detection without the need for costly tray/conduit wiring. Honeywell not only provides best in class field instrument, but also offers economical, reliable solutions to meet different application needs and budgetary needs. These solutions include pressure, temperature and analog measurements using wireless technology for other monitoring applications.

Honeywell XYR transmitters are the ideal solution and feature:

- Operating savings of \$10 to \$40 per foot in wiring installation. For savings of \$30/foot, total savings of up to 2000ft x \$30/ft = \$60,000 are possible (for 2000 ft distance).
- Reliable and secure performance using Frequency Hopping Spread Spectrum (FHSS) and encryption technology.
- Self test capability with failsafe diagnostics.
- Powered by C size 3.6 VDC Lithium battery with expected life of up to 5 years.

Benefits

The use of Honeywell industrial wireless transmitters increases profitability in the following ways:

- Improved plant performance through affordable process and asset data.
- Decreased maintenance costs through higher reliability and stability with self-diagnostics
- Lower installation costs with simple mounting and no additional installation or wiring costs.
- Easy configuration with integrated push buttons and local display
- Excellent service through the extensive Honeywell sales and service network
- 0.1% accuracy suited for most applications

XYR 5000 Transmitter Features

Self-Diagnostics

- Low battery alarm indicates the need to replace the battery
- Contains extensive self-checking software and hardware that continuously monitors the operation. Any sensor or device parameter out of spec is identified and reported

Broad Operating Temperature Range

- -40° to 185°F (-40° to 85°C)

Rugged Construction

- 316 L, 316 or 17-4 pH wetted parts
- GE Lexan housing (passes UL 746C "Outdoor Weatherability Specification")

More Information

For more information on Honeywell's OneWireless solutions, visit our website www.honeywell.com/ps/wireless, or contact your Honeywell account manager.

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