

There's something new  
in steam trapping.

No, really.



*SteamEye*®



**Armstrong**®

Intelligent System Solutions™

STEAM • AIR • HOT WATER



## SteamEye® saves energy and money.

Show us a steam trap blowing through (losing steam), and we'll show you potential for huge savings in the dollars spent for energy to generate steam in the first place. Besides, less energy consumed means less waste, fewer emissions and a healthier environment.

A little steam leak can truly be the start of something big. A single trap with a 1/8-inch orifice can squander more than \$4,000 a year. Failed steam traps cost you money. Big money. But that was then. Now there's SteamEye®.

## SteamEye saves time and maintenance dollars.

Maintenance sta s everywhere seem to be shrinking. Have you joined the ranks of those who are expected to do more with less? SteamEye can be a valuable partner in making the impossible a reality.

*Every year we test all our steam traps, but we still average a high failure rate. I have looked into purchasing one of those trap-testing devices, but we only have time to test once a year. I wish I didn't have to allocate labor to this effort, and I wish traps could tell me when they fail.*

*– Plant Manager*

## SteamEye protects critical production processes and promotes personnel safety.

Anyone responsible for steam trap operation wants to know the moment a trap fails – especially closed – on any critical process. SteamEye literally keeps an eye on steam traps that drain process equipment, alerting you to a temperature reduction due to condensate backing up. This could signal a process or product at risk.

If you're struggling to maintain your steam trap population, and experience process loss due to trap failures, SteamEye can be a cost-effective solution. SteamEye is ideal for industrial process and high-pressure (up to 600 psi) applications. SteamEye is also ideal for facilities with hard-to-reach trap locations, miles of steam tunnels, and unsafe, confined spaces.

*My guys spend a lot of time chasing steam system problems related to failed traps. If it isn't water hammer, it's a frozen coil. If it's not a frozen coil, it's a failed condensate pump. The list goes on. I need a way to manage our steam trap population without having maintenance constantly putting out fires.*

*– Utilities Manager*

## SteamEye – the new standard for steam trap best practice.

If you were to describe your vision for steam trap best practice, what would it look like? It would probably include the ability to constantly monitor your steam trap population without allocating labor, and to receive instant notification of steam trap failure. It would also probably include a reporting system that tracks, measures and analyzes ROI, and then communicates that information throughout your company. Introducing SteamEye, the new standard for steam trap best practice.

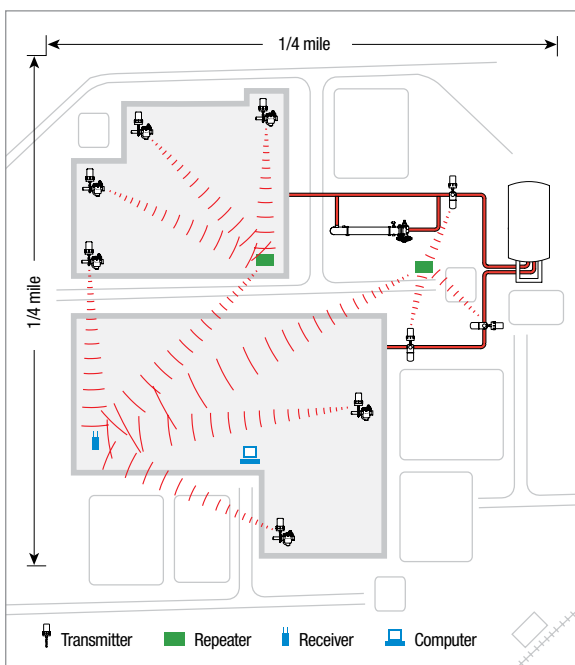
## How SteamEye® works.

SteamEye® uses a radio frequency (RF) wireless transmitter mounted at the inlet of any type of steam trap to detect temperature and ultrasonic fluctuations in steam flow. A central receiver then alerts system operators of trap failure.

SteamEye technology is constantly on – constantly reporting the status of your steam traps for optimum energy system management and savings. It can be installed on traps in service without shutting off the steam, and its remote, wireless operation addresses the labor costs and safety issues associated with manual monitoring.

The typical range of the RF signal is approximately 1,200 feet in outdoor applications where the transmitter is located within the receiver's line of sight. In facilities where the signal must travel through walls or floors, the range varies. The typical range of the signal is approximately 300 feet. If the receiver is out of range of a transmitter, repeaters can be placed between the transmitter and the receiver to "repeat" the signal from one device to the next.

## Typical facility layout



Monitor any trap, anytime, anywhere, with SteamEye wireless technology.

## Typical applications



Critical process traps



High-pressure traps  
(up to 600 psi)



Hard-to-reach light-duty traps



Indoor/Outdoor drip traps

## Additional applications

- Tunnels/Vaults
- Confined spaces
- Intrinsically safe/hazardous areas

## SteamEye® and SteamStar™ – a profitable combination.

SteamEye® automatically updates SteamStar™, Armstrong's Web-based application, providing instant validation for continuous trap monitoring. If manual trap surveys are more feasible in certain areas, use SteamStar as a stand-alone application. Either way validates the cost.

SteamStar is the only Web-based application that can demonstrate savings while showcasing energy-reduction efforts to multiple organizational levels. It lets an organization evaluate energy savings locally, as well as at sites around the world. The data is safe, secure and accessible – any place, anytime, anywhere.



Instant notification of steam trap failure and a sustained (24/7) monitoring process.

*“I wish my steam trap spreadsheet could calculate steam loss and generate graphical reports. With these features, I could show management our efforts are paying off!”*

*– Maintenance Supervisor*

### How can SteamStar help?

- Accurately shows losses in steam, fuel, money and emissions, based on formulas approved by the United Nations Technical Committee.
- Lets you easily compare and view data from local, regional or global locations.
- Provides ROI prioritization through failed steam trap work order reports.
- Fourteen user-defined fields allow customization.
- Displays real-time trap failures from SteamEye, and instantly reports losses.
- Survey data from Microsoft Excel, third-party software or handheld testing devices can easily be uploaded.
- Eliminates the need for expensive software maintenance, training, upgrades and licensing fees.
- Numerous reporting capabilities include benchmarking and trend analysis.
- Reports in multiple languages, measurements and currency values.



Company-wide awareness and measurement of steam trap performance for ROI decision making.



The SteamStar Web-based application can generate a variety of reports, including executive summaries, prioritized work orders, trend analysis and company benchmarking.

## Armstrong SteamEye® and SteamStar™ can eliminate traditional trap monitoring and management problems from your system for good.

Together, these two Armstrong innovations will revolutionize monitoring for the steam traps in your system. For more information, including a free trial offer or an on-site demonstration, visit [www.armstronginternational.com/se](http://www.armstronginternational.com/se) or call Armstrong International at 269-273-1415.

Ultrasonic Constant Pressure Transmitter



Ultrasonic On/O Pressure Transmitter

### SteamEye – proven technology

Transmitter – Series 4700	
Battery	Duracell®#DL123A 3 VDC; 2/3 A size; LiMnO2
Battery Life	5 years (typical)
Operating Frequency	902-928 MHz
Transmission Bandwidth	200 KHz
Communications	Proprietary spread spectrum format
Ambient Temperature*	-50°F to 125°F at or above 30 psi, -46°C to 52°C at or above 2 bar
Intrinsically Safe	Class I, Groups C, D; Class II Groups E, G
Output Power	60 mW (milliwatts)
Web-Enabled Receiver – Series 4000N	
Power Requirement	12 VDC-20 VDC (120 VAC adapter provided), 500 mA
Power Consumption	400 mA
Receiver Type	Narrow-band spread spectrum
Frequency	902-928 MHz
Bandwidth	100 KHz
Ambient Temperature	32°F to 125°F (indoor use); 0°C to 52°C
Computer Connection	Ethernet
Repeater – Series 4000	
Power Requirements	12 VDC-20 VDC (120 VAC adapter provided), 100 mA
Power Consumption	70 mA (typical)
Receiver Type	Narrow-band spread spectrum
Frequency	902-928 MHz
Bandwidth	100 KHz
Output Power	250 mW
Ambient Temperature	32°F to 125°F (indoor/outdoor); 0°C to 52°C
Repeat Signals	Limit of 10 repeaters in series
Computer Requirements	
SteamEye Web-Enabled Receiver for Use With SteamStar	Static TCP/IP address, Internet routable address, and mail server name with LAN connection
Custom building automation integration available.	

\*At lower ambient temperatures, Armstrong recommends optional insulation sleeve. Consult factory for details.

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Armstrong Steam and Condensate Group

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