



STAPS ISA100 Wireless Steam Trap Monitoring



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The need to monitor steam traps

- Steam leaks from traps are costly in both a financial and environmental sense and therefore need prompt attention to ensure that a steam system is working at its optimum efficiency. With the reduction in upstream investment many end users are now investigating ways to improve process efficiency downstream.
- A global focus on carbon emissions has resulted in many organisations being more proactive in reducing their energy usage as part of a wider environmental policy.
- A far more significant concern is the loss of production time. Blocked or failed-closed steam traps, if ignored, can lead to the eventual failure of the entire asset damaging equipment or pipeline infrastructure.
- In some cases, blocked steam traps have caused the solidification of entire product lines, such as sulphur or bitumen transfer lines. In this case the whole affected section may require removal and replacement; shutting down the process for significant lengths of time at huge cost in terms of lost production output.

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- In many companies, steam traps are checked manually by a specially trained engineer listening to each trap individually on an annual basis.
- Due to the large trap population on many oil and gas facilities there is a potential that failed traps could go unnoticed for an extended period of time.
- This increases the potential for unexpected equipment or pipeline failure leading to significant energy loss or more importantly lengthy process downtime.



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- A continuous trap monitoring system allows you to take proactive and preventative action to replace or repair traps as soon as a problem is reported.
- A steam trap which is reported as failed or passing steam above acceptable levels can quickly be identified and replaced before any detrimental effects occur.
- Intelligent monitoring also allows maintenance to prioritise critical steam traps during scheduled downtime ensuring high priority processes are protected from potentially avoidable interruptions.
- Removes the need to send manpower in to potentially hazardous process areas.

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- Wired devices can be costly to install, restrict access to certain parts of the process and increase the burden on already stretched maintenance resources. Wired devices also require long periods of downtime to install and commission, often involving off-site personal having access to an entire site.
- Many manufacturers have found wireless communications and devices to be more convenient, flexible, and easy to use than their wired counterparts. Wireless networks enable a cost effective installation and future expansion of field instrumentation devices to monitor a wide range of process variables.

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Why ISA100



- Most refineries can often have large steam trap populations with numbers exceeding 1000 devices. The scalability and Duocast features that ISA100 provides ensures that steam trap monitoring can easily be installed in all areas of the plant providing a robust wireless network.
- Cyber security is now a high priority for our customers. Two layer AES128 cryptography within the ISA100.11a protocol provides our customers with peace of mind that their wireless networks are safe and secure.
- Compliance to ETSI300.328 and IEC62734 as standard removes the need for costly re-compliance and further development time.

Introducing STAPS ISA100 Wireless



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Features

Head assembly

- Including ISA100 approved 2.4Ghz wireless communication
- Long-life Lithium Battery
- Copper free aluminium housing
- NEMA 4X rated housing
- Stainless Steel Glands
- External antenna

Sensor assembly

- Including vibro-acoustic sensor, temperature sensor

Clamp assembly

- For mounting to condensate lines up to 4"



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Benefits

- Accurate and rapid leak detection – no need for manual inspection, saving you time and money.
- Accurate diagnostic algorithm provides users with trap performance information and steam loss data
- All data is sent directly to the DCS removing the need for costly IT equipment and third party licensed software
- Lower installation costs than a wired solution
- Long-life battery – trap requires little maintenance.
- Robust construction to meet the requirements of the oil and gas industry
- Supports both IR and over air provisioning methods



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Yokogawa ISA100 network testing - No Leakage



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Yokogawa ISA100 network testing – Steam Leak



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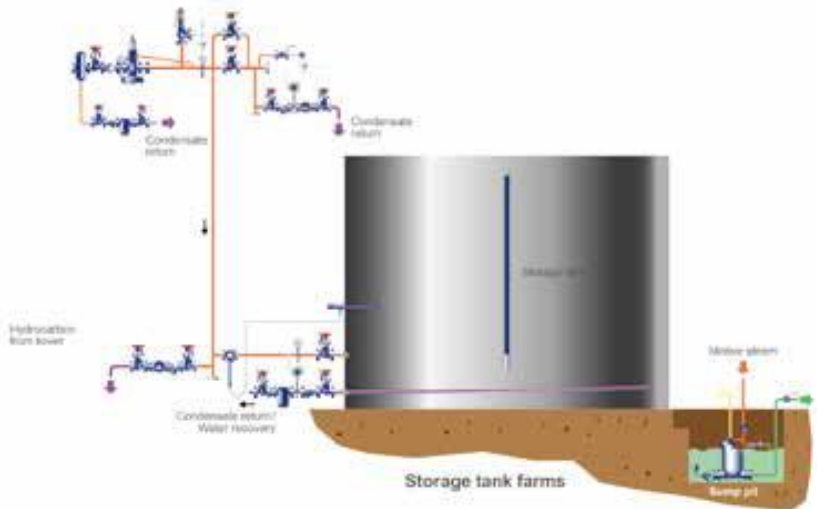
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Honeywell ISA100 network testing



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Applications – Tank Farms



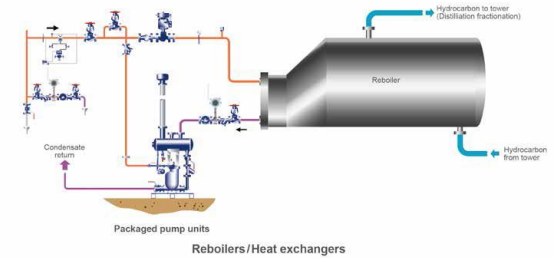
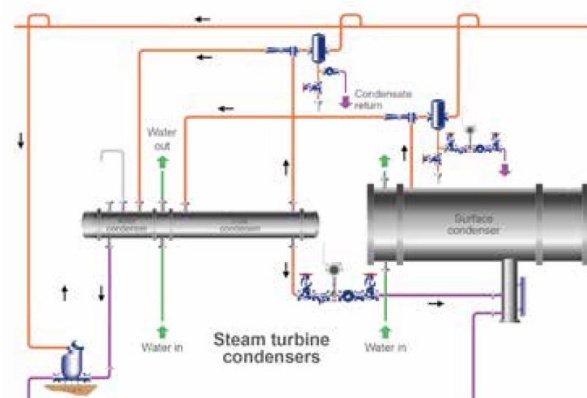
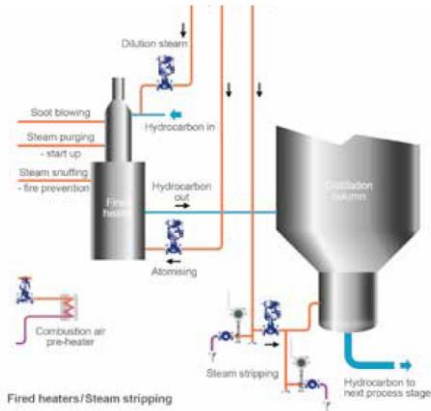
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Applications



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STAPS Wireless Installation List

Country	Industry	QTY
Italy	Pharma	46
France	Institutions	70
France	Oil and Gas	5
Canada	Healthcare	15
Canada	Automotive	25
New Zealand	Food & Beverage	7
UK	Healthcare	12
UK	Nuclear	24
USA	Institutions	116
China	Food & Bev	91
Portugal	Food & Bev	86
USA	Institutions	20
Canada	Healthcare	10
USA	Pharma	3
Portugal	Rubber	58
Hungary	Pharma	10
Canada	Food & Beverage	10

Thank you for listening

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