

Digital Services

An overview and examples of our digital monitoring services

First for Steam Solutions

EXPERTISE | SOLUTIONS | SUSTAINABILITY

spirax sarco

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Digital Services

> *TURNING DATA INTO INSIGHTS AND INSIGHTS INTO ACTION*

Spirax Sarco has been a trusted steam specialist for over a century. Building on our extensive expertise in steam products and processes, we have expanded our offering into digital monitoring and data analytics. Our digital solutions include IoT technology that leverages wireless communication to deliver a real-time view of your steam system's performance. This enables you to monitor the condition of your steam plant equipment proactively to improve reliability and save energy.

Why digital is the new norm

In an industrial environment where reliability, safety and energy efficiency are crucial, monitoring your steam system plays a key role in optimising processes and maximising sustainability benefits.

Spirax Sarco has been active in the field of digital for steam systems for a number of years. Our extensive expertise in steam technology and processes, makes us the ideal partner to guide you through your optimisation projects, with solutions tailored to your needs.

What can digital monitoring do for you?

We offer a comprehensive suite of **digital solutions**, supported by **expert analysis and proactive service**. Our approach enables you to concentrate on your core business activities while we provide the monitoring, insight and optimisation needed to enhance performance and efficiency.

Digital monitoring makes it possible to **detect unusual behaviour at an early stage**. Examples include:



- ✓ Energy losses, leaks or control deviations;
- ✓ Blockages and contamination that reduce efficiency;
- ✓ Unsafe conditions that are normally only detected when consequential damage or downtime occurs.

Insights are generated from **data, collected using sensors** that in many cases can be installed non-intrusively, i.e. without modifications to your existing installation and without impacting production downtime.

By correctly analysing and interpreting this data, it becomes possible to move from reactive maintenance to **condition-based maintenance**. The risk of unplanned downtime is minimised and energy losses can be identified proactively. In short, digitising your steam system means: more insight, more control, more profit.



> *MORE INSIGHT MORE CONTROL MORE PROFIT*

How can digital monitoring help?

- ✓ Identify the root cause of unplanned downtime to maintain system reliability;
- ✓ Reduce high water and energy costs through improved system efficiency;
- ✓ Gain insight into your steam system to enhance decision making;
- ✓ Receive alerts in case of unusual behaviour to enable faster responses to changes in condition;
- ✓ Enable condition-based maintenance to prevent failures before they happen;
- ✓ Lower CO_2 emissions to achieve your Net Zero targets;
- ✓ Prioritise where to invest for maximum impact, ensuring optimal performance and ROI.

Digital monitoring can help you achieve your business objectives, such as:

Energy Savings & Sustainability

Energy and water savings, leak detection, reduced ROI, reduced $C0_2$ emissions, net zero targets, etc.

Safety

Highlight unsafe conditions and prevent them occurring.

System Reliability

Reduce the risk of unplanned downtime, optimise maintenance and reliability and improve quality.

This brochure showcases a range of practical examples demonstrating how we can help you reduce energy consumption while enhancing reliability and safety.



“MONITORING ENERGY CONSUMPTION ALWAYS LEADS TO COST SAVINGS”





How does it work?

Our digital monitoring solutions are designed to be **quickly deployed** without impacting your production process or IT infrastructure. By placing **wireless sensors** at strategic points within your steam installation, it becomes possible to **continuously** collect valuable data.

These measurements are often **non-intrusive**, so no mechanical adjustments or downtime are required. The data is transmitted directly via an **independent 4G network**, leaving your internal IT network unaffected.



Connect & Collect Data

Sensors & Smart Products | **Gateways**

Wireless sensors are placed on critical components (such as steam traps, heat exchangers, boilers, etc.) The various solutions are explained in detail below.

Real-time data transmission to our secure online platform via LoRaWAN and 4G.

Analysing & Visualising Data

Eng. Expertise & Algorithms | **Dashboard & Reports**

Our platform is built with algorithms based on our own expertise to support analysis on data from the steam system.

Each application has a standard dashboard, but customised dashboards tailored to your needs are also possible.

Recommendations & Action

Maintenance & Repair | **Solutions**

Notifications and alarms for unusual behaviour are set based on threshold values according to your needs and our baseline analysis.

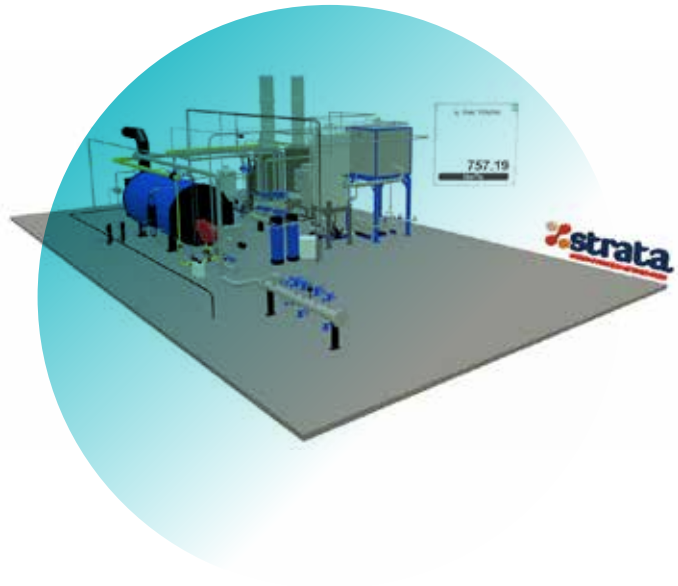
Our experts analyse and monitor the data, providing recommendations tailored to your process. This allows you to proactively plan maintenance and implement solutions that lead to efficiency improvements you can measure.

"FROM SENSOR TO ACTION PLAN: MEASURE, UNDERSTAND AND IMPROVE WITHOUT SHUTTING DOWN YOUR PROCESS"



Smart solutions for your steam system

You have a production environment where every kilogram of steam counts. Yet today, losses remain hidden: leaks, downtime, inefficient controls or contamination. These are small deviations that have a significant impact on energy, costs and safety without being noticed. Digital monitoring of your steam installation allows you to identify these hidden losses and monitor them remotely, in real time. Each solution in this overview brings you one step closer to complete control, maximum efficiency and a safe process. Let your steam system speak, and we will ensure that you understand what it is saying.



	Energy Savings & Sustainability	Safety	System Reliability
Steam Trap Monitoring	x	x	x
Condensate Pump Cycle Counter			x
CRU Monitoring			x
Heat Exchanger Monitoring	x		x
Condensate Contamination Detection		x	x
Flowmeter Monitoring	x		x
Safety Valve Monitoring	x	x	x
Boiler Carryover Detection		x	x
Boiler House Monitoring	x	x	x
Deaerator Oxygen Measurement		x	
Pump Cavitation Monitoring		x	x
Clean Steam Generator monitoring			x
Steam Loss Quantifier	x		
Temporary Non-intrusive Metering		x	x
Customised Diagnosis	x	x	x

Temporary Measurements

We also offer measuring equipment that we can temporarily deploy in your system, this allows us to investigate the cause of existing problems. Analysing the data over a short period of time can help find the root cause of your problem. You avoid unnecessary replacement of components and proceed directly to repair or optimisation. A short-term measurement is recommended to measure the load demands of a system for the sizing of new heat exchangers.

What are the benefits?

First and foremost, our digital solutions provide you with a clear overview of how your steam system is operating. Thanks to continuous monitoring, deviations in trends are quickly detected, supported by smart alarm functions. This enables you to intervene efficiently, as soon as changes occur.

This proactive detection gives you control over your process control settings, leading to better regulation and increased energy efficiency. It also enables condition-based maintenance, allowing maintenance interventions to be better planned and unexpected downtime to be largely avoided.

Proper monitoring of your system's performance contributes to a more sustainable and safer process. Energy losses, leaks and unsafe conditions become visible at an early stage.

By avoiding production losses and damage to components, the cost savings more than offset the investment in digital monitoring.





How we support our customer

At Spirax Sarco, you don't just get individual products, but a comprehensive service for your digital monitoring. We take care of installation, monitoring, follow-up and analysis. And you retain an overview and control of your installation. Our approach is based on years of practical experience in industrial processes. You don't receive a standard solution, but **a service tailored to your process, infrastructure and objectives**.

Our service does not stop at start-up. After installation, **we remain available** for adjustments, expansion or reconfiguration of the system – for example, in the event of process changes or additional optimisation objectives. This ensures that your digital monitoring remains relevant and up to date.

1. On-site Scoping Survey

An experienced engineer will visit your site for a thorough system assessment. Based on your process flow and infrastructure, we determine which sensors are useful and where they should be installed. This visit forms the basis for an efficient and cost-effective customised solution.

2. Installation

We install the necessary sensors and gateway(s). We coordinate the technical selection and configuration with the application. The correct parameters and tags are entered during onboarding in the cloud to create a digital record of the installation.

3. Digital Platform

You will have access to a personal online dashboard, giving you 24/7 visibility of the status of your assets and system. The data is transmitted wirelessly via an independent 4G network to our data platform, so that your internal IT infrastructure remains completely unaffected.

4. Notifications & Alarm

You will receive a notification as soon as a threshold is breached. The alarm thresholds are carefully tailored to your process conditions and are continuously reviewed. You can decide for yourself who, and how many people within your organisation receive these notifications.

5. Reporting & Follow-up

Our unique approach also includes proactive follow-up. Our specialists periodically analyse your data and propose targeted improvements. You receive clear reports on the condition of your assets and system. At least once a year, the operation of the sensors and the settings of the dashboard are evaluated and validated.

> *"LET YOUR SYSTEM SPEAK AND WE WILL MAKE SURE YOU UNDERSTAND WHAT IT IS SAYING"*

Wireless Steam Trap Monitoring (WSTM)

Detecting leaking steam traps

Leaking steam traps can quickly increase energy costs. In addition, this leads to an increase in water consumption and higher back pressure in the condensate network, which makes it challenging for other applications to drain condensate.

An annual inspection is the minimum requirement, but some steam traps may not be active or accessible at that time, meaning that the inspection only provides a partial picture of the actual status of the entire steam trap population. With an annual inspection, a steam trap can leak for an average of six months before it is noticed, causing costs to mount up.



Solution

Digital monitoring provides continuous, real-time insight into the condition of the steam traps, enabling preventive maintenance and minimising energy losses.

In practice

The payback period for the investment in digital monitoring at this customer was less than three years, based on the energy losses and the following data:*

- ✓ 100 steam traps
- ✓ 10% leaking steam traps per year
- ✓ 1 steam trap inspection per year
- ✓ €50/tonne of steam excluding CO_2 taxes
- ✓ 7 bar effective steam pressure
- ✓ 80% condensate return



* In this example, we do not take into account exceptional costs due to wear and tear, defects, production losses etc. caused by defective steam traps.

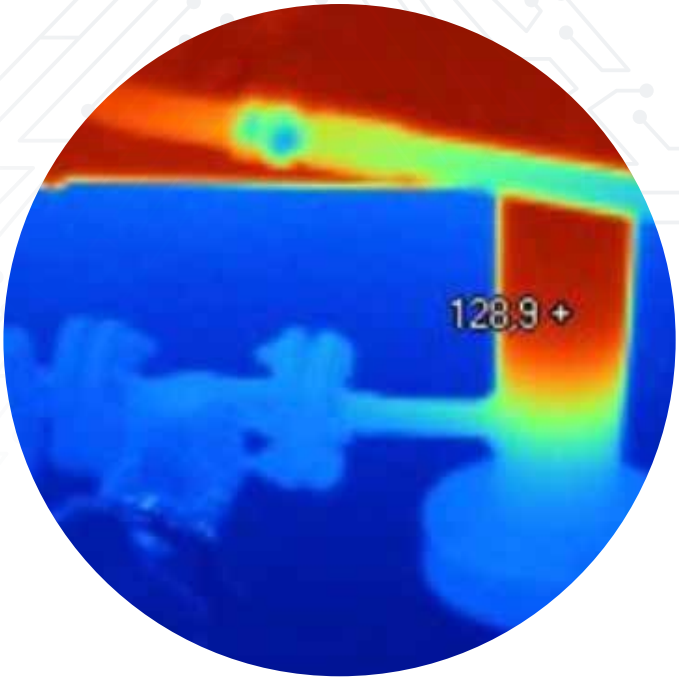


What are the benefits?

- ✓ Early detection of energy losses from steam trap leaks
- ✓ Visibility of the operation of all connected steam traps
- ✓ Fewer unexpected downtimes due to proactive replacement
- ✓ Maximise savings from replacing leaking steam traps

Detecting blocked steam traps

A steam trap that remains stuck in the closed position no longer discharges condensate. The result: accumulating condensate, poor heat transfer, wet steam and in the worst case, water hammer or unplanned downtime. In many applications, this can go unnoticed for long periods of time.



Solution

Targeted monitoring allows you to automatically detect in real time when a steam trap is not draining condensate while there is steam pressure. This allows you to intervene quickly before damage to exchangers, pipes or products occurs. Especially in installations with many heat exchangers or rapidly changing loads, this form of monitoring is essential for process reliability.





What are the benefits?

- ✓ Real-time detection of blocked steam traps
- ✓ Prevention of downtime due to water hammer
- ✓ Optimised heat transfer
- ✓ Reduced risk of corrosion or wet steam
- ✓ Reduction in maintenance costs through targeted intervention

Condensate Pump Cycle Counter

Condensate pumps play a crucial role in the safe and efficient removal of condensate from applications where gravity is insufficient. Faulty or overactive pumps are rarely noticed until failure becomes apparent through steam losses, downtime or damage.



Solution

The digital cycle counter easily measures how often a condensate pump performs a cycle. By combining this with the known stroke volume of the pump, you get an accurate picture of the actual volume of condensate pumped.

The sensor is compact, wireless and suitable for existing pumps (MFP14). Installation is quick and requires no mechanical modifications to the system.



What are the benefits?

- ✓ Insight into the actual condensate flow rate per pump
- ✓ Detection of overload or standstill
- ✓ Fast diagnosis of condensate problems
- ✓ Better dimensioning of pumps and return systems
- ✓ Supports a preventive maintenance strategy

CRU monitoring

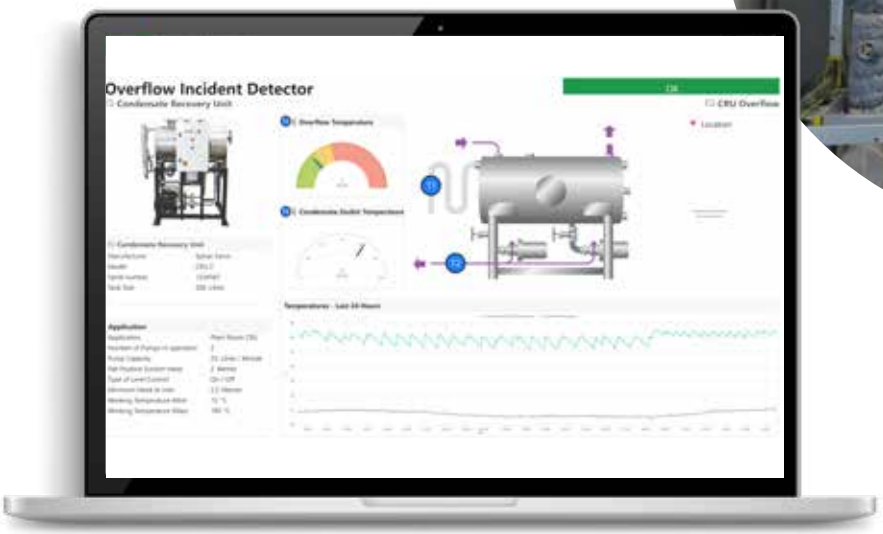
Condensate pumps play a crucial role in the safe and efficient removal of condensate from installations where gravity is insufficient.

Faulty or overactive pumps are rarely noticed until failure becomes apparent through steam losses, downtime or damage.



Solution

Monitoring a CRU (Condensate Recovery Unit) helps to gain insight into the condition of the installation and its performance.



- ✓ By monitoring your CRU, you gain insight into the moments when too much condensate returns to the tank, resulting in energy and water loss.
- ✓ You gain insight into the temperature of the returning condensate. This can help you detect when there is a problem in the processes, such as leaky steam traps.
- ✓ You maintain control over the operation, stability and quality of your recovery circuit, thus preventing losses or damage to the rest of the steam system.



What are the benefits?

- ✓ Early detection of water and energy loss
- ✓ Fast detection of leaking steam traps
- ✓ Detection of overload or shutdown
- ✓ Quality control of condensate circuits

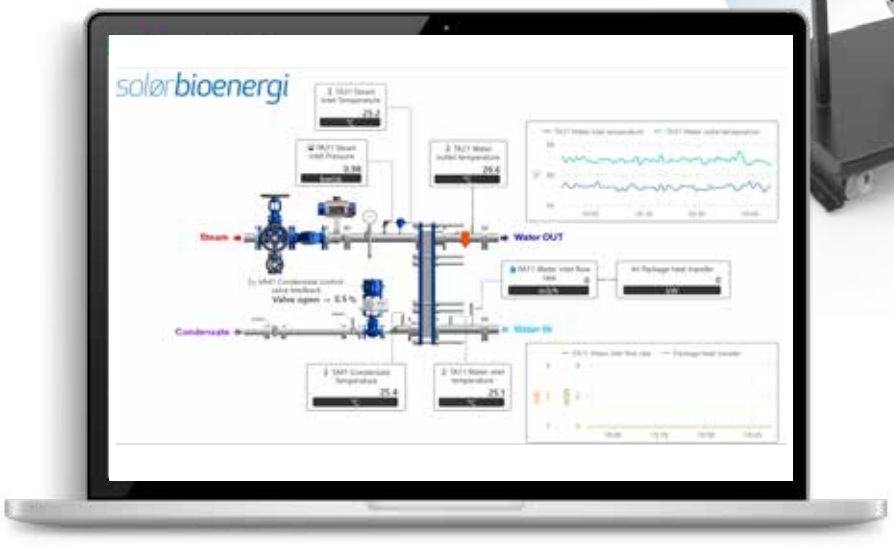
Heat Exchanger Monitoring

Heat exchangers are crucial components in a steam system. Their performance has a direct impact on energy consumption, process quality and reliability. However, deviations such as contamination, poor condensate drainage, leaks or inefficient control often go unnoticed for a long time, resulting in energy loss, quality problems and unplanned downtime.



Solution

Digital monitoring of heat exchangers tracks parameters such as pressure, temperature, and flow to indicate energy consumption, fouling and other relevant insights. This means that:



- ✓ A loss of quality in the process can be immediately identified.
- ✓ Contamination, wear or control problems can be detected more quickly, which would otherwise lead to significant energy losses.
- ✓ Maintenance can be planned predictively to avoid unplanned downtime.

All of this can help to increase the efficiency and reliability of heat transfer solutions.



What are the benefits?

- ✓ Detection of contamination or deposits
- ✓ Early warning if the temperature is not reached
- ✓ Detection of wear on the gaskets
- ✓ Monitoring of energy consumption
- ✓ Monitoring of legionella risk

Condensate Contamination Detection (CCD)

A general conductivity measurement in the boiler room is of little use if you want to know whether a single heat exchanger is leaking. The contamination from that local leak is diluted in the rest of the returning condensate, which means that the overall value rarely exceeds an alarm threshold. That is why targeted digital monitoring of condensate contamination detection offers a much more powerful solution.



Solution

Digital monitoring ensures that measurements are taken specifically under a heat exchanger. This allows you to detect leaks or product seepage immediately, before they cause damage to pipes, the boiler or the end product. Digital monitoring gives you the opportunity to intervene at an early stage and avoid hidden corrosion, contamination or system inefficiency.

In practice

In a dairy factory, a heat exchanger was used to heat milk with steam. A CCD sensor was placed under this exchanger to measure the conductivity of the discharged condensate. After a few months, the sensor showed a sudden increase in conductivity to > 800 µS/cm.

Analysis revealed that a small leak in the heat exchanger caused milk to seep through to the condensate side. The contamination was detected at an early stage, sparing the steam boiler from the consequences and avoiding production downtime.





What are the benefits?

- ✓ Identify the root cause of condensate contamination
- ✓ Less use of water treatment chemicals
- ✓ Faster diagnosis of quality problems
- ✓ Conserve water and save energy

Connected Metering

Solution

Metering and monitoring flow rates is essential for the efficient and reliable operation of industrial steam systems. Continuous insight into consumption allows deviations or leaks to be detected at an early stage, which helps to prevent damage and downtime. Analysing trends makes it possible to optimise processes and reduce energy consumption and monitoring historical flow data supports predictive maintenance, helping to avoid unplanned breakdowns.



In practice

The ETSU Good Practice Guide 18 ‘Reducing Energy Costs by Steam Metering’ states that experience with recording measurements has shown that fuel costs can be reduced by 5-10%, without additional costs beyond the purchase and installation of flow meters.



What are the benefits?

- ✓ Seeing correlations between steam consumption and production figures
- ✓ Visibility of the minimum load (baseload)
- ✓ Insight into nominal load and peak load and improved coordination
- ✓ Faster detection of irregularities

Safety Valve Monitoring

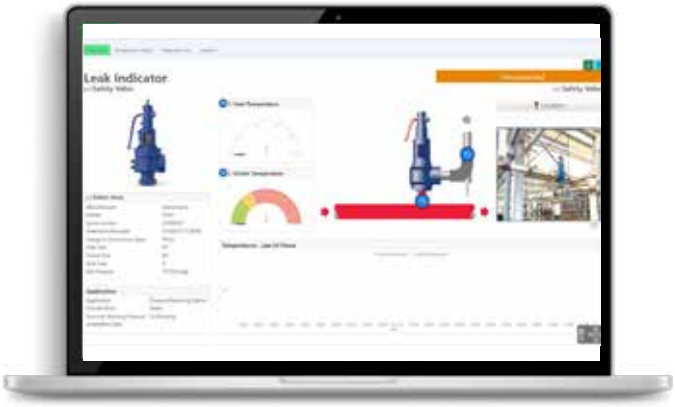
A safety valve will usually vent to a safe place such as the roof of the building. As a result, the status of a safety valve is often not immediately visible.

Most safety valve applications are not subject to annual inspections, which means that they are usually only overhauled in the event of major visible leakage – sometimes as part of an annual maintenance plan. Once a safety valve starts to leak, the leakage loss increases due to further wear of the valve seat. As a result, energy losses continue to mount. Between the moment of initial failure, then detection and finally action, thousands of pounds could be released into the atmosphere unknowingly.

Solution

Digital monitoring of safety valves focuses on identifying leaks. The cause of a leak may be due to problems with steam pressure controls.

By monitoring whether and when the safety valve is open, in combination with the working pressure, a leaking valve seat can be detected as soon as it occurs. A malfunction in the system can also be detected quicker by monitoring when and how often the safety valve operates.





In practice

In a production facility operating during daytime hours, the safety valve on the deaerator appeared at first glance to open only “occasionally”. After installing a digital monitoring solution, we discovered that this valve was venting continuously every night. This had been going on unnoticed for years.

However, the problem was quickly resolved by making a small adjustment to the pressure control of the deaerator. The customer was losing £5,000 per year due to this error in the pressure control of the deaerator. Therefore the investment in the digital measurement was returned in less than two months.



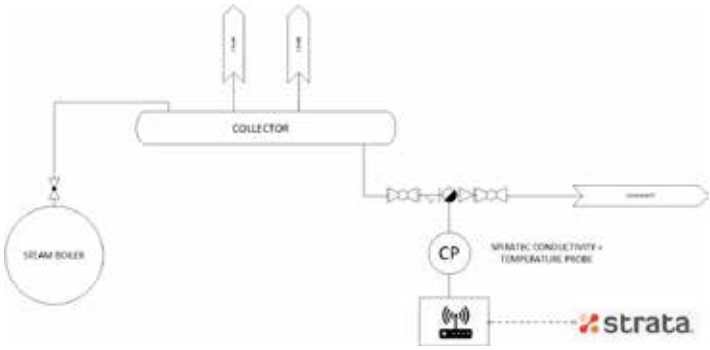
What are the benefits?

- ✓ Less time needed for maintenance of your installation
- ✓ Immediate visibility of when and where energy losses occur
- ✓ Identification of unsafe situations
- ✓ Estimation of the expected service life of your safety valves

Boiler Carryover Detection

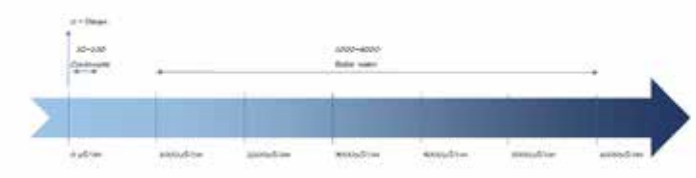
Boiler carryover occurs when water and foam are carried along with the steam from the boiler into the steam network. This can lead to serious problems such as water hammer, corrosion, reduced heat transfer and loss of quality in production processes.

The cause of carryover must therefore be addressed as quickly as possible, either chemically through water treatment or mechanically by adjusting the behaviour of the steam boiler in relation to the heat demand of the production process. Digital monitoring makes it possible to detect carryover.



Solution

With digital monitoring, we install a sensor to monitor when the steam becomes “wetter”, meaning that boiler water is being carried into the steam network. These warnings can yield high profits if they enable proactive measures to be taken to address the causes.



In practice

A chemical company noticed a recurring quality problem in their process where steam comes into direct contact with the product. A digital sensor was installed to detect wet steam (carryover) at the boiler outlet. Analysis of the data showed that at peak demand, water was being carried into the steam network (invisible), but had a major impact on product quality.

Based on the data we collected from the pressure controller in the boiler house and the conductivity drain, the behaviour of the boiler could be better aligned with the demand, preventing losses and corrosion from poor quality steam.





What are the benefits?

- ✓ Quality and productivity improvements
- ✓ Energy efficiency and savings on raw material costs
- ✓ Supports a preventive maintenance strategy
- ✓ Reduces emissions
- ✓ Enhances compliance with environmental regulations
- ✓ Reduces safety risks

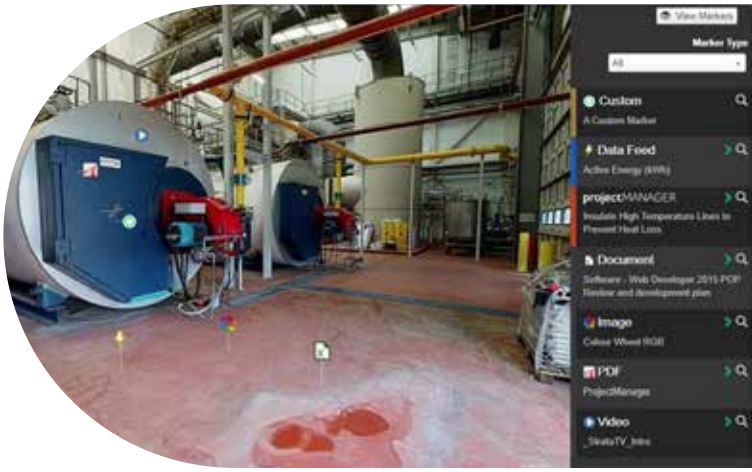
Boiler House Monitoring

The boiler house is the heart of steam production. Energy losses and risks of downtime due to defects can sometimes be hidden. For example, the efficiency of the boiler can drop by several percent when a 1 mm deposit has accumulated on the flame tubes. This rapidly increases the risk of leaks and cracks, and if you discover this during annual maintenance and the boiler needs to be repaired this can lead to additional maintenance costs and unplanned production downtime.

Solution

The insights gained from digital monitoring make it possible to intervene proactively before damage, downtime or energy loss occurs. The data also helps with planning maintenance and following up on measures relating to energy efficiency or emission reduction. Thanks to good monitoring of boiler efficiency, it is possible to detect an increase in the risk of defects.

When designing energy recovery systems, it is also useful to monitor capacities in the boiler room in order to apply the energy gains in the right application.





In practice

During annual maintenance at a customer with an 8 tonne per hour fire-tube boiler, deposits were found on the fire tubes, resulting in expensive chemical cleaning and unplanned production downtime. Sensors were subsequently installed to continuously monitor flue gas temperature and efficiency.

After just a few weeks, a gradual increase in temperature was detected, indicating new deposits. Thanks to the early warning, timely action could be taken through improved water treatment and without downtime. This prevented an annual energy loss of more than €9,000 and unforeseen production stoppage



What are the benefits?

- ✓ Improved boiler efficiency and lower energy costs
- ✓ Early detection of scale formation or reduced combustion
- ✓ Insight into water quality and risk of carryover
- ✓ Reduced unplanned downtime
- ✓ Better justification for investments or maintenance planning

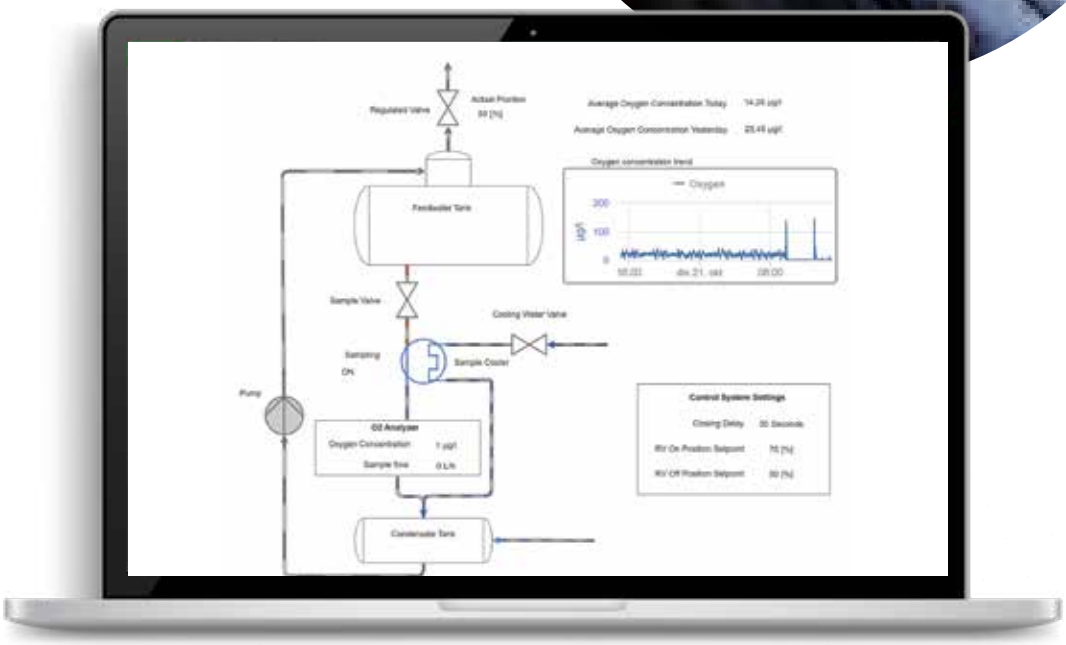
Deaerator Oxygen Measurement

The presence of oxygen in the boiler feed water can lead to serious corrosion in boilers and pipe networks.



Solution

Oxygen measurement on a deaerator is crucial for monitoring the efficiency of the deaeration process and preventing corrosion. By continuously monitoring the oxygen content, proactive action can be taken in the event of deviations from a baseline, thus preventing damage to steam plant equipment. Monitoring contributes to the stable operation of the steam system and extends the service life of the equipment and helps to optimise chemical dosing, complying with quality standards.



What are the benefits?

- ✓ Prevents damage and corrosion
- ✓ Supports the stable operation of the deaerator
- ✓ Extends the service life of equipment
- ✓ Optimises chemical dosing systems
- ✓ Ensures compliance with quality standards

Pump Cavitation Monitoring

Steam boilers are continuously fed with hot water from the feed tank or deaerator. The closer the water temperature is to boiling point, the higher the risk of cavitation in the feed pumps. This risk increases in the event of insufficient head pressure or in the event of deviations such as leaking steam traps or problems with steam injection.

Cavitation occurs when vapour bubbles form in the suction water and implode in the pump, leading to increased wear, reduced efficiency and mechanical damage. A damaged pump consumes more energy to pump the same amount of water, leading to energy losses. It also increases the risk of unplanned downtime, especially when only one feed pump is available.





Solution

With digital pump cavitation monitoring, we continuously monitor the temperature of the boiler feed water. This allows us to detect an increased risk of cavitation at an early stage.

Monitoring gives you insight into the behaviour of the pump and allows you to take proactive action before damage occurs. This extends the service life of the pump, increases the reliability of your installation and reduces operating costs.



What are the benefits?

- ✓ Early detection of cavitation and consequential damage
- ✓ Extended pump service life
- ✓ Increased reliability of your assets and system
- ✓ Lower operating costs
- ✓ Avoidance of unnecessary energy consumption

Clean Steam Generator Monitoring

Clean steam is used in industries where absolute sterility is essential, including the pharmaceutical, food and biotech industries. A small deviation in pressure or temperature can lead to loss of quality, contamination or rejection of batches.



Solution

Digital measurements from your Clean Steam Generator continuously monitor the pressure and temperature at the inlet and outlet, allowing you to detect deviations before they impact the product or process.

The data is transmitted wirelessly to an online dashboard and alarm notifications for deviations from the baseline are set up.



What are the benefits?

- ✓ Alarm notifications in case of deviations from process parameters
- ✓ Continuous monitoring and visibility of pressure and temperature
- ✓ Detect deviations before they impact the product

Steam Loss Quantifier

If you see a steam plume, you should not ask yourself 'is there energy loss?', but rather 'how much is it and how long have I been losing energy?'. This impacts your costs and can therefore impact your company brand too. Before you can start reducing your energy loss, you need to have the right info.

Steam plumes can be measured manually any given moment given moment, but it is even better to use a digital monitoring device to monitor it over time.

Solution

By setting up a short-term measurement campaign, it is possible to calculate the extent of the energy loss and how much it costs. The peak losses are mapped so that they can be compared with certain production processes or standby processes.









In practice

At a food producer, digital measurements were taken over a period of 13 days and we saw losses of €7,500 in that short time. Based on the measurements, a solution was developed and dimensioned, namely a steam plume condenser. The customer then had a return on investment in just over 1 year.

In some cases, an additional monitoring period is necessary to identify the underlying causes of the steam plume, especially when the steam plume is extensive. These additional measurements can then reveal, for example, leaking steam traps and leaking control valves.



What are the benefits?

- ✓ Drastically reduce energy losses
- ✓ Reduce costs

Temporary Non-intrusive Metering

The specified capacity of a heat exchanger says little about the actual energy consumption during production. A heat exchanger can be structurally oversized, leading to reduced efficiency, condensation problems and unnecessary energy consumption.

Solution

The effective heat supply capacity of an installation is mapped over a realistic period of time and under actual process conditions.



This measurement is ideal for:

- ✓ Analysing the behaviour of an existing application;
- ✓ Assessing the operation of valves and controls;
- ✓ Correctly adjusting the dimensions of a new heat exchanger.

The data is collected and analysed wirelessly without interrupting the process. You receive clear insights and concrete recommendations for optimisation.

What are the benefits?

- ✓ Realistic picture of effective energy consumption
- ✓ Detection of overloading or underloading
- ✓ Objective basis for investment decisions
- ✓ Reduced risk of inefficiency due to incorrect dimensioning
- ✓ Insight into the operation of the control system

Steam Optimisation Audit with customised diagnostics

When a specific problem arises in a steam installation, it is not always immediately clear what the cause is. Many customers try to solve the problem by replacing components one by one, often without success. This leads to unnecessary costs, long lead times and frustration.

Solution

With our customised diagnosis, we offer a short-term measurement tailored to your specific situation. We temporarily place sensors at strategic points in your installation to collect data.

Our experts analyse the data and provide you with a clear report with recommendations on what to do next. This reveals the root cause of the problem, allowing you to take targeted action without unnecessary replacements and reactive troubleshooting.

> *“MEASURING BEFORE REPLACING SAVES TIME, MONEY AND ENERGY”*



In practice

A pharmaceutical company was experiencing problems during the sanitation process, as the desired temperature was not being reached.

The customer had already replaced several components, including the condensate pump, without success, and due to long delivery times, the problem had been dragging on for months.

Just before replacing the heat exchanger, Spirax Sarco was called in. Using digital monitoring, we discovered that there was insufficient steam flow before the control valve.

By shifting the measurement upstream, we found the cause: an autonomous pressure regulator that did not open fully.

Thanks to this targeted diagnosis, the problem was solved quickly and efficiently without further need for unnecessary replacements.

Notes



We deliver global solutions and local expertise through our network of operating companies, manufacturing sites, sales offices and distributors worldwide.

Discover how we can help you optimise your system and achieve your goals at spiraxsarco.com.

Driven by data, delivered by experts.

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