

FULLER®



ONLINE RELIABILITY SERVICES

FOR FUELFLEX® PYROLYZERS

MONITORING AND EXPERTISE TO IMPROVE FUELFLEX PYROLYZER PERFORMANCE AND AVOID UNPLANNED DOWNTIME

The FUELFLEX Pyrolyzer is our latest innovation, supporting high fuel substitution rates (up to 100%) in the calciner. It's a unique concept developed for the cement industry, ensuring efficient, complete alternative fuel combustion, NOX control, and process stability. Ensuring your pyrolyzer operates as it should, our online reliability services (ORS) enable you to promptly identify and address any issues before they become a problem. It's peace of mind as you take the next step on your alternative fuels journey.

Our Online Reliability Service for FUELFLEX pyrolyzers enables early identification of potential issues before they escalate. Multiple sensors installed on your pyrolyzer transmit real-time data to our Global Remote Service Centre, where specialists continuously monitor the equipment for process abnormalities, component failures, and other operational deviations. By applying early-warning analysis techniques, including Rule Based methods, Condition Based monitoring, Artificial Intelligence and Machine Learning (AI/ML), and custom-created models, we identify when equipment failures may occur and recommend the appropriate corrective actions to optimize your pyrolyzer's performance.

KEY BENEFITS

01

Increase uptime and output.

02

Gain fuel and power savings.

03

Lower labor costs by transforming unplanned shutdowns into planned ones.

04

Extend equipment lifespan with improved preventive maintenance.

05

Reduce premium costs and services by having the right spares on site at the right time.

06

Return of investment: 3 months

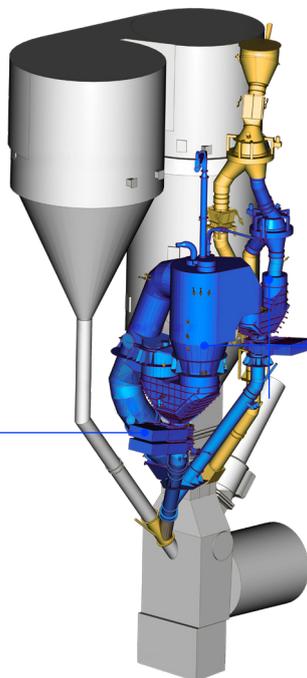
FUELFLEX PYROLYZER

Aeration Panel

- Insufficient aeration
- Fouled aeration panels
- Air dryer fault

Drain Gate

- Blocked pyrolyzer drain



Process

- Unstable operation

Thermocouple Sensor

- SIS thermocouple failure
- Process thermocouple failure

The OEM expert advantage

Many providers offer to monitor your equipment, but do they truly understand your FUELFLEX pyrolyzer? As a new technology, the chances are that they don't. Only we – as the developer and OEM – can offer that insight and knowledge. We have integrated that insight into our ORS. So, while others might be able to tell you to worry, we can tell you how to solve recurring problems and enhance reliability. This includes extensive root cause analysis to prevent minor issues from escalating into major problems.

After all, your success is our success. Our OEM expert advisors support and coach your maintenance personnel to achieve excellence, delivering optimised maintenance planning and effective maintenance procedures.

A comprehensive monitoring package

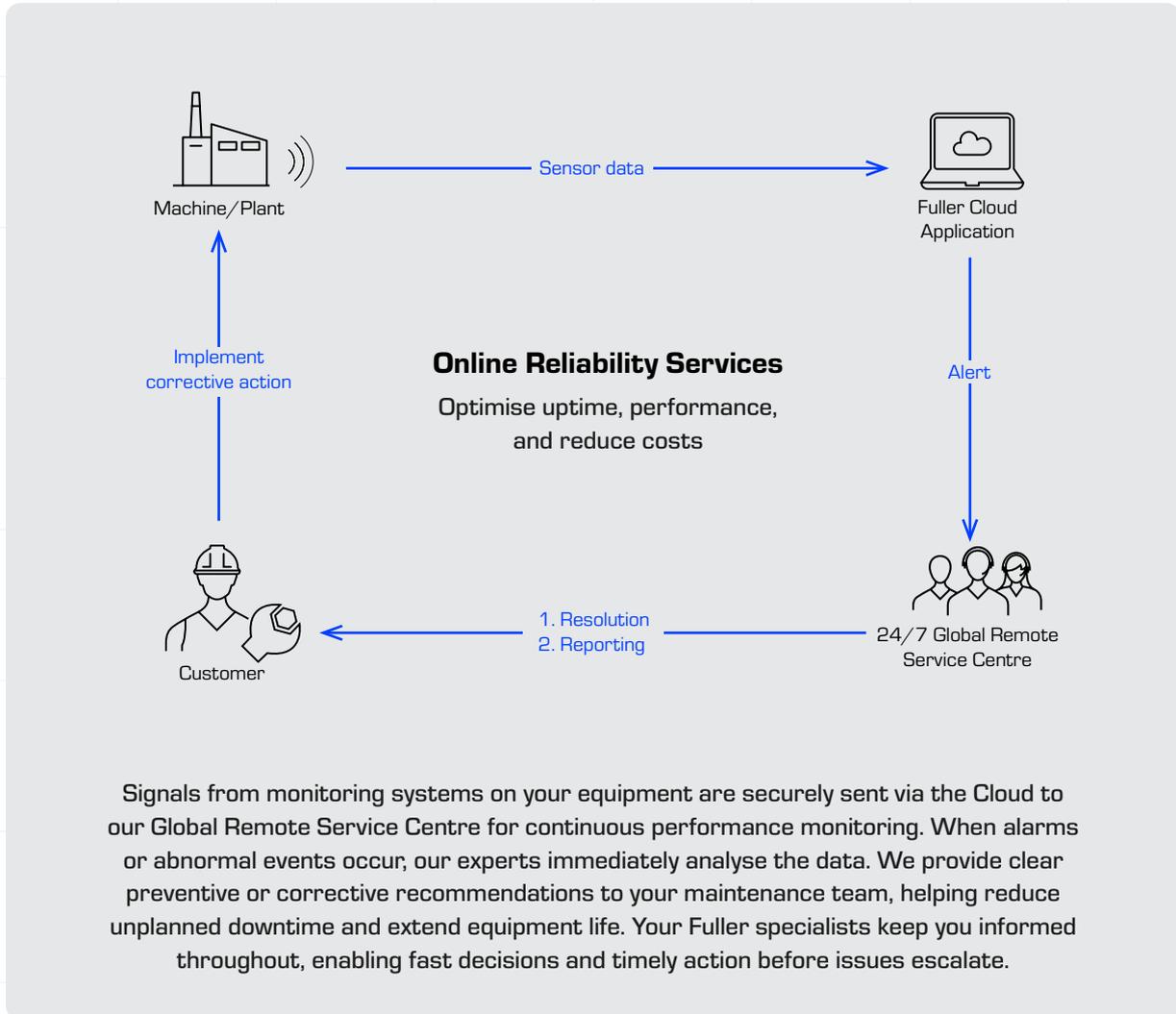
Our ORS use existing control system signals to detect a range of abnormal conditions and component failures, delivering continuous insight

into your pyrolyzer's status. Your ORS journey is supported by a dedicated service account manager, whose job is to be your maintenance department's best friend: the person they go to when they need help. They will initiate and drive your ORS to deliver your KPIs, ensuring you receive optimal value.

Implementing ORS

A Fuller project manager will oversee the delivery of any hardware required to provide the service. Your maintenance team will usually be able to install the sensors themselves; however, we can offer installation as an optional extra. After the Health and Usage Monitoring System (HUMS) is installed, we will come to you and commission the systems. Once commissioning is complete, the project manager will hand over to a dedicated service account manager, whose job is to support your maintenance department as their go-to contact whenever assistance is needed. The service account manager will initiate and drive the service to deliver on your KPIs, ensuring that you receive optimal value.

HOW DOES ORS WORK?



Signals from monitoring systems on your equipment are securely sent via the Cloud to our Global Remote Service Centre for continuous performance monitoring. When alarms or abnormal events occur, our experts immediately analyse the data. We provide clear preventive or corrective recommendations to your maintenance team, helping reduce unplanned downtime and extend equipment life. Your Fuller specialists keep you informed throughout, enabling fast decisions and timely action before issues escalate.