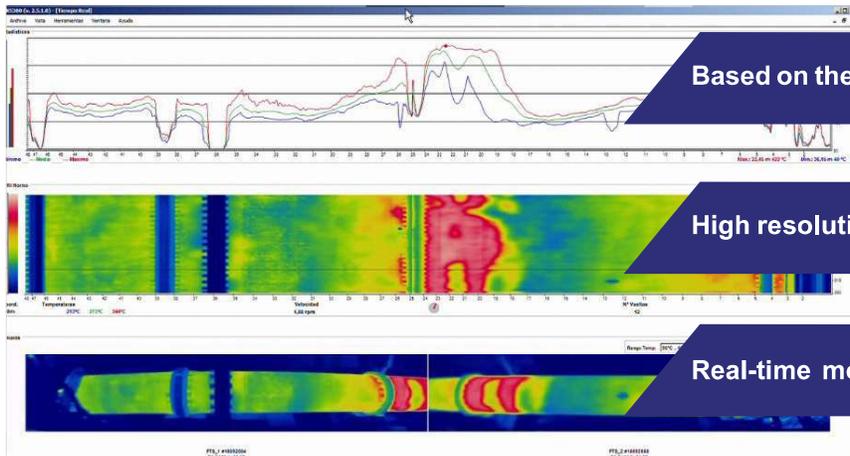


RKS300

Rotary Kiln Monitoring System



Based on thermographic cameras

High resolution and accuracy

Real-time monitoring and analysis

RKS300 monitors the temperature in the furnace surface, providing real-time inspection of the entire furnace shell.

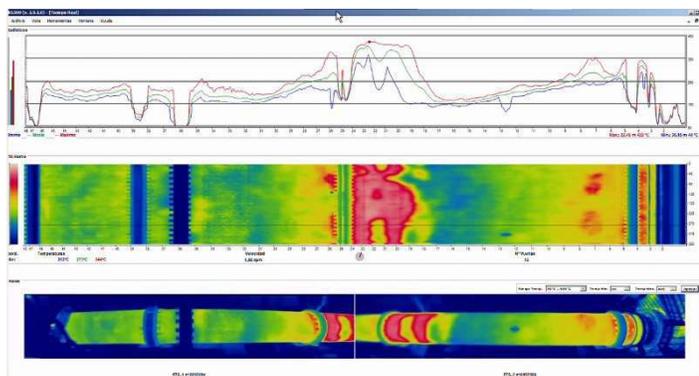
It integrates hardware and software as a solution, allowing the detection and measurement of all hot spots in the furnace shell, even at an early stage.

With real-time inspection at the highest resolution, the main objective of the RKS300 system is to ensure the safety and durability of the furnace shell surface, optimize furnace shell efficiency and reduce maintenance costs due to damage or unscheduled shutdowns.

In order to withstand the harshest environments, the RKS300 thermal imaging system features stainless steel enclosures that withstand the harshest conditions thanks to its air purge system and an internal temperature control device. Thanks to this, our thermal imaging system remains clean and at a constant ambient temperature.



RKS300 system operating in cement plant



Real-time inspection of the furnace shell



Monitoring of tire slip displacement - Furnace view



RKS300 Software

The RKS300 software displays in real time the thermographic images obtained by the cameras, as well as the reconstruction of the furnace profile, allowing easy analysis and real-time detection of all hot spots. Additionally, it provides access to all temperature points, referenced by their coordinates on the furnace surface with high accuracy. Analyzing trends, saving historical data, detecting ring formation and optimally scheduling maintenance are some of its main advantages.

The RKS300 software incorporates:

Automatic fan control

Prevents furnace shell deformation by automatically controlling the actuation of up to 16 fan zones through independent activation signals.

Tire Slip displacement

It monitors the relative displacement or desynchronization of up to 6 slip rings with respect to the furnace shell.

Shadow monitoring

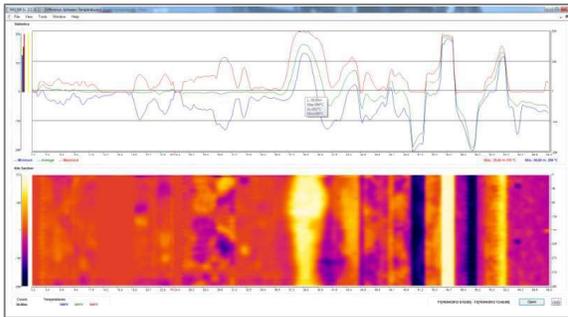
Monitors up to 8 shadow zones by integrating pyrometers designed to withstand high temperatures.

Integration

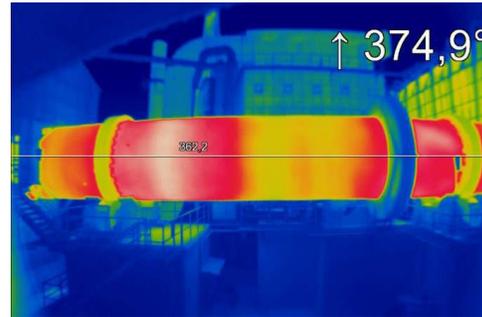
OPC communication between RKS300 and plant control system.

Main Features

- **Real-time inspection.** Thermographic images of the entire furnace surface in real time.
- **High thermal sensitivity** to identify any temperature change, no matter how small.
- **8 independent zones** with configurable pre-alarms temperature alarms.
- **Control of up to 16 fan zones**
- **Oven rotation speed monitoring**
- **Fiber optic communication**
- **Accurate data analysis**
- **Analysis of the evolution of historical data**
- **Alarm recording for hot spots**



RKS300 Software - Temperature difference view



Real-time thermographic video of the furnace exterior

Benefits

- **Optimizes furnace maintenance**
- **Detection and measurement of all hot spots** due to refractory deterioration
- **Extends refractory and furnace service life**
- **Reduction of unscheduled shutdowns** and maintenance costs
- **Real-time thermographic video monitoring** of the furnace exterior as opposed to traditional scanner-based systems
- **Easy integration and communication** of all data to the plant control system
- **Pre-wiring and pre-testing** for easy installation
- **Technical assistance and training** during start-up commissioning

Technical Specifications

Temperature range: 20°C - 900 °C
 Resolution: From 382 to 2560 pixels/line
 Accuracy: +/- 2% or +/- 2°C
 Sampling frequency: up to 80 Hz
 Temperature alarms: up to 8 zones
 Automatic fan control: up to 16 zones
 Slip ring displacement: up to 6 slip rings
 Shadow zone monitoring: up to 8 zones
 Refractory library: up to 20 zones



Integration and communication of data from the RKS300 System to the plant control system