

MODERNIZING A LUMBER PRODUCTION ENVIRONMENT WITH HONEYWELL SLATE AND THERMAL IQ SOLUTIONS

Case Study



Honeywell

Honeywell and channel partner Martin Control & Equipment Company helps a leading U.S. lumber company upgrade its 30-year-old kiln to satisfy sold-out demand and avoid over \$200K in lost production.

BACKGROUND

When a well-known U.S. producer of lumber products wanted to modernize its primary production driver — the wood drying kiln at its sawmill — it turned to Honeywell channel partner Martin Control & Equipment Company for assistance.

CHALLENGE

With control systems, burners and other equipment dating back to the 1990s, the lumber producer's kiln began to experience an increasing number of performance issues that disrupted production or brought it to a halt altogether. The burner would trip and bring the dryer down, sometimes momentarily or sometimes for days at a time. On other occasions, the kiln would overheat, putting production loads at risk.

Because of the age of the system, little information was available to mill operators about what was triggering the intermittent breakdowns. And because there was no one person responsible for looking after the kiln room specifically, issues and breakdowns took even longer to detect. Exacerbating the issue was the sheer noisiness of the production facility: Mill operators could simply not hear if the kiln was running or not unless they were standing right beside it.

With a shortage of lumber products affecting the worldwide market, every disrupted or lost production load represented tens of thousands of dollars of lost revenue for the mill operator. Not surprisingly, the uptime and reliability issues were a growing concern for the lumber company's management team.



SOLUTION

To resolve the problem, Martin Control & Equipment Company was brought in to upgrade the kiln with the latest thermal control technologies.

Martin Control's plans included the design and installation of state-of-the-art Honeywell equipment, including SLATE™ burner management and burner control systems. The systems provide intuitive diagnostics via simple, easy-to-understand messages to enable real-time platform monitoring for timely, informed decision-making. The HMI touchscreen provides rich graphical content to highlight the annunciations for alarm detection. The centerpiece of the solution was Honeywell's Thermal IQ™ remote monitoring platform.

Consisting of wireless connectivity, a mobile application and an enterprise-view dashboard, the Thermal IQ platform securely connects combustion equipment to the cloud, making critical thermal process data that is normally trapped at the equipment level available anytime, anywhere, on any smart device or desktop. Thus, while the Honeywell thermal control technologies would power a more robust and reliable wood drying process, SLATE and Thermal IQ would enable the mill operators to manage production and mitigate risks efficiently and remotely for the first time.

During the kiln's weekend start-up and commissioning phase, a failing scanner caused the furnace burner to trip, triggering sudden temperature drops that put production at risk.

The Martin Control & Equipment Company team began to receive Thermal IQ push notifications about the downward trend of the failing scanner as it strayed outside normal limits. They used the Thermal IQ mobile app to look at other thermal processes information in real time such as temperature, burner status, burner run state, fan status and burner demand without being present at their facility.

Alerted to the issue, the Martin Control & Equipment Company team, who were located approximately two hours away, diagnosed the issue and immediately dispatched a service technician to resolve it. In the meantime, the team advised the mill operators via phone how to keep the furnace up and running manually.

Because the Martin Control team knew exactly what the problem was by comparing data in the Thermal IQ historian and remotely logging into SLATE, their service technician brought the correct tools and parts for a first-time fix, including a more robust Honeywell Industrial Flame Monitoring (IFM) scanner. This was a critical advantage given the two-hour transit time and the amount of revenue potentially lost if the problem was not rectified right away.

Arriving at the site, the service technician quickly swapped out the failing scanner, stabilized the furnace temperature, and restored the kiln operations back to normal — with no loss to production.

Thermal IQ platform provides real-time information and historical data to support troubleshooting.



BENEFITS

Today, with SLATE and Thermal IQ insights at their fingertips, the lumber company's operators can visualize production 24 hours per day, seven days a week, from their central operations center adjacent to wherever they may be working inside or outside the wider facility.

SLATE and Thermal IQ provides them with a spectrum of alerts and data intelligence, from notification of system trips or stoppages and the root cause of annunciator failures to data relating to temperature, flame signal, burner status and run rate, fan status and burner demand.

The increased visibility led to improved production uptime and throughput at the mill, enabling all orders (production at the time was sold out) to be fulfilled. Looking at the situation in another way, with every batch of lumber valued between \$40,000 to \$50,000 and processed over the course of three days, the SLATE and Thermal IQ solutions potentially saved the mill over \$200K in lost production.

In addition, with less troubleshooting to perform, the mill operators can spend more time ensuring the quality of customer orders and custom builds.

Delighted with the business benefits of the Honeywell upgrade, the lumber company has tasked Martin Control & Equipment Company with additional system refinements as well as installing SLATE and Thermal IQ on other assets overall to improve reliability.



Real-time monitoring and alerts drove visibility to the remote Martin Control team.

The teams were able to compare operating parameters to better understand what was occurring prior to and after the lockout for enhanced troubleshooting.

For more information

<https://process.honeywell.com/us/en/industries/construction/building-materials>

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