

Smart Wireless Solution Increases Throughput of Rotating Kiln

BENEFITS

- Wireless devices reliably and cost-effectively measure temperature on rotating lime kiln
- Installation took less than one day to complete
- Operation of Lime Kiln accounts for increased throughput by 5%



CHALLENGE

A pulp and paper mill struggled to properly control calcining in a lime kiln. To do this the customer needed to measure the internal temperature on a rotating lime kiln. Due to the restrictions of wiring, this measurement was inferred, decreasing throughput of the kiln.

SOLUTION

The customer purchased two Rosemount 648 Wireless Temperature transmitters with thermocouples and a Smart Wireless Gateway. The customer requested shipment as soon as possible, and all items were on site in a matter of days. The sensors were installed on opposite sides of the kiln's mid-zone, 180 degrees apart. The temperature transmitters were mounted on a pipe that extends away from the kiln. This installation took less than one day to complete. Temperature updates are sent to the control room through the gateway.

RESULTS

Since the installation, the mill is enjoying improvement of throughput with this kiln. The inferred temperatures were found to be off by 350° F. The Smart Wireless solution circumvented the constraints of the rotating kiln and made the measurements possible.

“Four days after the order was placed we could see minute-by-minute mid-zone temperatures trending on the control system ... Since the wireless system has been installed, we can tell if there’s build-up of lime in the mid-zone area. Overall, we have improved operation of the lime kiln, and increased throughput by 5%.”

Pulp Mill Leader