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Market: Pulp and Paper

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CUSTOMER

The Weyerhaeuser Co.'s bleached pulp facility in New Bern, North Carolina.

PROBLEM

The facility was dissatisfied with inaccurate readings from a level-indicating cable used inside its 260-ton hot lime tank. "The previous measurement device wasn't satisfactory at all times," says Phil Smith, senior process engineer at the New Bern plant. "When the product was filling into the tank, sometimes the cable would get hung up on the sides, so it would give us a reading of a false bottom. It'd tell us the tank was full, when it really wasn't." Engineers wanted a better way to monitor the tank.

APPLICATION

Smith heard about another company plant that was using Kistler-Morse Bolt-On Microcell Sensors. He decided to give them a try. Sixteen sensors (four per leg) were mounted on 35-foot steel girders supporting the tank. The tank itself measures 24 feet tall by 22 feet in diameter. Re-burn lime from the lime kiln enters the tank at 1,500 degrees F. The lime exits through a 12-inch opening and into a screw trough conveyor, which runs it to a slaker. Once there, it is mixed with green liquor to make white liquor.

BENEFIT

Bolt-On Microcell Sensors are accurate within 5% of the tank's holding weight, Smith says, "which I feel is very accurate. It guides our operators on shutdown or startup of the kiln. It's critical to know the tank's capacity, because that dictates the run rate." Maximum velocity of the screw trough conveyor that feeds from the tank to the flaker is nine tons per hour. "It's a major production process, and you want to avoid having to make adjustments in the middle of a run," Smith says.

CONCLUSION

In the four years that they've had the sensors, only one of them has failed. "And when that happened, we just called up Kistler-Morse and they helped our guys troubleshoot it quickly. They found the problem and got it up and running." But the most surprising thing about the devices, Smith says, is that the operators and instrument mechanics like the system and trust the indication. "Hey, anytime you get operators and instrument guys who like a certain instrument the way they like those strain gages, then you've really got something."