Power Plant Reduces Safety Risks with Direct Switch Technology

RESULTS

- Reduced safety risks
- Lowered operations and maintenance costs
- Minimized the risk of overfill

The Rosemount 5300 provided a convenient and reliable means to directly monitor fly ash level from the control room.

APPLICATION

Fly ash level measurement

Application Characteristics: 44-ft. (13 m) high dusty silo, heavy, and has low dielectric

CUSTOMER

Coal fired power plant in the United States

CHALLENGE

This coal fired power plant had a problem monitoring the levels of fly ash in their storage silo. The monitoring is used to prevent overfill of their fly ash silo and the rail cars that distribute this by-product to users.

This customer used a mechanical drop weight level indicator to get the measurement three times a day. This mechanical measurement required frequent repair work due to malfunctioning moving parts. When the mechanical measurement failed, operators had to take manual measurements.

This measurement method exposed the operator to fly ash inhalation and safety risks related to climbing the silo. It required valuable operations time while only providing a measurement two to three times daily. Additionally, this customer experienced increased risk associated with overfilling and the clean-up costs.

The customer also tried a non-contacting radar transmitter. This measurement did not provide a sufficient signal return due to the slope of the fly ash surface.

SOLUTION

The Rosemount 5303 Guided Wave Radar with a single flex probe was installed. The measurement quality of the Rosemount 5300 series is not affected by dusty environments, long distances, and low dielectric because it has patented Direct Switch Technology. Also, the long stud option on the flexible probe helped minimize the influence of the nozzle at the top of the tank.

The Rosemount 5300 Guided Wave Radar with a Flexible Lead Probe.

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Operators can now monitor the fly ash level from the control room without having to climb the silo, which eliminated the safety risks associated with manual measurements and reduced operations and maintenance costs. Continuous and reliable measurement from the Rosemount 5300 also minimized the risk of overfill and clean up costs.

RESOURCES

Rosemount 5300
http://www.emersonprocess.com/rosemount/products/level/m5300b.html

Rosemount 5300 Technical Note
http://www.emersonprocess.com/rosemount/document/notes/00830-2300-4811.pdf

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