

Specialty Chemicals Manufacturer Decreases Maintenance Costs and Increases Throughput with Non-Contacting Radar Technology

RESULTS

- Decreased maintenance and operating costs
- Increased throughput
- Reduced environmental and safety risks



APPLICATION

Acetal reactor level measurement

Application Characteristic: Sticky, coating, viscous substance, and agitation.

CUSTOMER

Chemical plant in North America

CHALLENGE

This specialty chemicals manufacturer makes a chemical compound which is a resin used in glass manufacturing for the auto and housing industries. They were having difficulties optimizing the performance of two acetal reactors due to substantial coating from the intermediate chemical. The reactors would need to be taken offline for third party cleaning every other month.

Because of the sticky and viscous nature of the reactor content, the diaphragm of the previous DP level transmitter frequently got coated. The transmitter accuracy deteriorated and the level measurement was no longer reliable. To avoid spillage, the reactor had to routinely be shutdown for high pressure water and chemical cleaning.

The inability to obtain a reliable level measurement within the reactor caused several negative business results. Maintenance and operating costs increased due to routine cleaning by a third party. Each cleaning required the batch facility to be shutdown, resulting in several days of lost production. Also, the unreliable level measurement caused safety and environmental risks to increase because of the constant threat of spillage.

The high powered signal of the Rosemount 5600 ensured a reliable level measurement in the 50-ft. (15 m) reactor.



Rosemount 5600 with Process Seal

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SOLUTION

The Rosemount 5600 Series Radar Level Transmitter was used to solve this customer's problem. The non-contacting radar was fitted with a process seal antenna and was unaffected by the sticky chemical. The high powered signal of the Rosemount 5600 ensured a reliable level measurement in the 50-ft. (15 m) reactor. Emerson's Instruments and Valve Services, combined with Rosemount Radar Master software simplified the installation and field commissioning of the radar level transmitters for this difficult application. Installation of the Rosemount 5600 Transmitter has significantly improved business operations. There was a significant reduction in maintenance and operating costs due to less frequent third party cleaning. Throughput of this production facility has also increased because it is possible to process more batches each year. This has represented tens of thousands of dollars in savings each year. Finally, optimized level control significantly reduced environmental and safety risks by eliminating spillage.

RESOURCES

Rosemount 5600

<http://www.emersonprocess.com/rosemount/products/level/m5600.html>

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