Original Equipment Manufacturer (OEM) Prevented Spills With Vibrating Fork Level Switch

RESULTS

- Provides overfill protection
- Minimal fork protrusion prevents contact with blades
- Eliminates false alarms due to splashing
- Operational stability

APPLICATION

Ink pigment level monitoring

Application Characteristics: High-level alarm for inks and dyes in vertical steel cylinders

CUSTOMER

Original Equipment Manufacturer (OEM) of tanks for the printing industry.

CHALLENGE

A mixing process is usually performed in the early phase of manufacturing inks and dyes where pigments are introduced into the fluid. Many batch type processes employ header tanks connected to a pump that is controlled to maintain levels between set points. Level monitoring prevents mixture overflow and eliminates costly waste of products.

Three ink tanks are combined on a skid which is integrated into the printer's production line. The tank manufacturer uses stirrer blades inside each tank. Blade configuration may vary depending on each tank's mixing and flow capabilities. Therefore, a minimal intrusion by the level instrument is essential to suit every design.

SOLUTION

The Rosemount 2110 Vibrating Fork Level Switch offers short fork technology, allowing minimum intrusion into the tank. The level switch is mounted via taper threaded connection into stainless steel vessels.

The tanks have agitators, but this does not affect the level switch, as splashes on the forks do not cause spurious alarms. For a change in the level switch's output to occur, in this case the high level alarm, the fork must be partially immersed in the product. Each unit is factory calibrated to switch at $^1/_2$-in. (13 mm) up the fork (horizontally or vertically mounted)

The Vibrating Fork Level Switch is mounted at the high setpoint in each tank.

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in water. If the liquid is more dense, the switchpoint will be slightly lower than 1/2-in. (13 mm) and if the liquid is less dense the switchpoint will be slightly higher than 1/2-in. (13 mm).

The Rosemount 2110 switching time is set to one second wet to dry or dry to wet. This means the unit must be immersed in the liquid for one second (dry to wet) before the output will change.

RESOURCES

Rosemount 2110

http://www.emersonprocess.com/rosemount/products/level/m2110.html

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