Rosemount® SIL2 Level Switch Provides High and Low Level Alarms in Safety-Critical Application

RESULTS
- Overfill prevention and environmental protection
- Reduced costs and easier operation
- Pumps protected from running dry

APPLICATION
Pump protection and high/low level alarms in toxic chemical storage tanks

CUSTOMER
A chemical company in Jiangsu Province, China

CHALLENGE
The customer uses Rosemount non-contacting radar to measure and control their tank levels, but needed critical high level alarms for their agrochemical storage tanks at their new production and recovery site. The tanks contain product that is toxic and could cause environmental damage if an overfill occurred. This is a new site using SIS systems and the customer required SIL-certified equipment. They also needed to ensure the presence of liquid in their pipes to prevent pumps from running dry. Reliability was a key concern.

Due to the corrosive nature of the product, the customer required switches with special non-corrosive coating. In addition, stainless steel housings were needed to combat environmental corrosion.

SOLUTION
The customer chose Rosemount 2130 Series Vibrating Fork Level Switches. The switches are SIL2 certified to IEC61508 and this additional level of reliability gave them the peace of mind needed. The switches were supplied with stainless steel housings and ECTFE/PFA coated forks.
If the tank contents reach a critical level - either too high or too low - the level switch will change state and indicate a high or low level alarm. Similarly, for pump protection, if the switch detects that no liquid is present, the output can be used to disable the pump and prevent it from overheating.

Compared with the alternative switches that were evaluated, the customer found the Rosemount switches easier to operate, stable, and reliable.

RESOURCES

Rosemount 2130 Series

Emerson Process Management Chemical Industry
www2.emersonprocess.com/en-US/industries/Chemical/Pages/index.aspx