

Oil Terminal Enhances Safety using Rosemount™ Wireless Switches for Critical Overfill Alarms

RESULTS

- Compliance with environmental regulations
- Increased measurement security and plant safety
- Overfill system added without disruption of tank operations



Emerson's Smart Wireless solution solved the challenges of the project, without disruption of operation and with minimal investment.

APPLICATION

Wireless level alarm detection system for a crude oil storage terminal

CUSTOMER

Marine Terminal in Tabasco, Mexico.

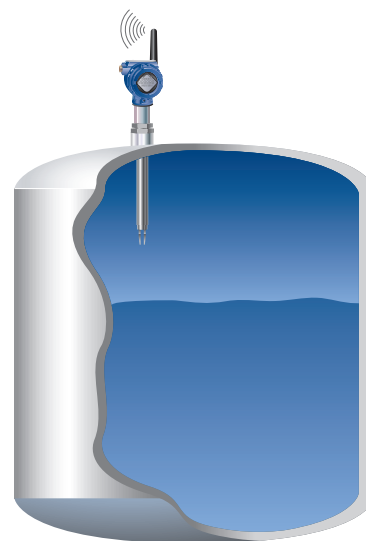
CHALLENGE

The customer needed to install an overfill protection system to meet environmental and insurance requirements. There were a number of technical challenges to overcome. A key requirement was to ensure the timely detection of tank levels so that appropriate steps could be taken to prevent an overfill. The customer wanted to accomplish this quickly, cost effectively, and without disrupting the daily operations of the terminal. In addition, the tanks covered a wide area and the information from the devices needed to get to the control system quickly and reliably.

Overfill detection on the tanks was very important in order to optimize tank operation, increase safety and to ensure renewal of the insurance policy and save on additional premiums. The customer also needed to increase security in the system management to improve the terminal's risk rating and meet environmental regulations for the prevention of oil spills.

SOLUTION

Rosemount 2160 Wireless Vibrating Fork Level Switches were installed on each of the 20 tanks. Each switch was manufactured with 4-meter extended length forks to reach the desired level in each tank.



Extended length Rosemount 2160 Wireless Vibrating Fork Level Switches were installed on each tank.

When the product in the tank reaches the vibrating fork switch, a Hi-Hi level wireless signal is produced and sent via an Emerson™ 1420 Gateway to the DeltaV™ control system, where the alarm is displayed and the operator can take immediate action. With the wireless mesh network, the signals from a wide area can be integrated and reliably transmitted to the control system for high level detection. Emerson's installation, commissioning and start-up services were utilized to ensure the project was completed in a very short time with no interruption to the day to day operations of the plant.

RESULTS

The company was able to implement an overflow protection system to meet environmental and insurance requirements. By adding level alarms, the increased security of the level system improved overall plant safety and improved the terminal's risk rating. The upgrade of all the tanks in the terminal was completed in a short space of time without disrupting the daily operations.

RESOURCES

Rosemount 2160 Series

<http://www2.emersonprocess.com/en-us/brands/rosemount/level/2100-series-level-switches/2160-level-switches/pages/index.aspx>

Emerson Process Management Oil & Gas Industry

<http://www2.emersonprocess.com/en-US/industries/oil-gas/Pages/OilandGas.aspx>



Rosemount 2160 Wireless Vibrating Fork Level Switch, extended length.

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00830-0400-4160, Rev. AA