

Gas Provider Improves Capacity with Customized Inventory Management and Safety Solution

Results

- Level and pressure management plus overfill prevention utilizing just one tank opening
- 275% increase in storage capacity
- Automated system with inventory management capabilities
- Communication redundancy for critical measurements
- Quick and cost-efficient installation, no re-design of tanks

Application

Automatic tank gauging system for LPG storage.

Customer

LPG terminal in Mexico with eight-bullet shaped LPG tanks, each having 450000 l (2380BBL) storage capacity.

Challenge

The customer was not able to keep up with the growing demand of gas. In addition, inventory insight and overfill prevention compliance requirements were among some of the challenges with this installation.

The limited number of nozzles on the bullet shaped tanks complicated the task, since it was not easy to have both level measurements and overfill prevention measurements using a traditional system solution without adding tank openings and doing welding work.

Solution

To meet increasing demands, the customer decided to build 18 new tanks, identical to the old ones. To improve safety and efficiency, all 26 tanks were included in the upgrade project.

Each tank was equipped with one Rosemount™ 5900S 2-in-1 Radar Level Gauge with an LPG antenna specifically designed for the application. This level gauge was also integrated with a Rosemount 2051 Pressure Transmitter to measure vapor space pressure. The new instrumentation setup enabled our customer to include both level and pressure measurements, along with overfill prevention, thus utilizing just one tank opening. In addition, a Rosemount 3051S Pressure Transmitter was installed to measure pressure at the tank bottom.

The customer also introduced communication redundancy for measurement data. Wireless communication was added to the already existing wired system.



With increased capacity, and inventory insight and control, the customer can operate safely and more efficiently.



SIL certified API 2350 safety compliance.

Rosemount TankMaster™ Inventory Management Software was integrated in the updated system to handle inventory calculations.

In addition to increased tank capacity, due to higher storage volume and better inventory control, the new configuration allowed for communication redundancy for level, temperature, and pressure data. Installation and commissioning was quick and cost-efficient since no mechanical re-work was needed, and multiple functionalities could be facilitated in one device.

Resources

Emerson Automation Solutions Industries
[Emerson.com/Oil-Gas](https://www.emerson.com/Oil-Gas)

Rosemount 5900S Radar Level Gauge
[Emerson.com/Rosemount5900S](https://www.emerson.com/Rosemount5900S)

Rosemount 2410 Tank Hub
[Emerson.com/Rosemount2410](https://www.emerson.com/Rosemount2410)

Rosemount TankMaster Inventory Management Software
[Emerson.com/RosemountTankMaster](https://www.emerson.com/RosemountTankMaster)

System Data Sheet
[Rosemount Tank Gauging System](#)

Brochure
[Rosemount Tank Gauging System](#)

Flyer
[2-in-1 Overfill Prevention Technology](#)

Video
[Get Better Overfill Prevention with Emerson's unique 2-in-1 Technology](#)

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00830-1000-5100, Rev AA

Increased capacity by 275%.



Data from each tank is sent over both the wired and wireless networks to the control room. This enables a very robust communication solution with built-in redundancy.

Consider It Solved.

Emerson Automation Solutions supports you with innovative technologies and expertise to address your toughest challenges.

For more information,
visit [Emerson.com/Rosemount-TankGauging](https://www.emerson.com/Rosemount-TankGauging)