

Palm Oil Producer Improves Inventory Control Across 14 Sites with the Rosemount Tank Gauging System

Results

- 522 tanks equipped with the Rosemount™ Tank Gauging System that complies with all application requirements
- Greater accuracy of inventory and reduced manual rounds during operation
- Customer satisfied with the project execution throughout the seven years of testing



Application

Palm oil storage tanks

Customer

Singaporean Fortune 500 company

Challenge

The Singaporean food processing and investment holding company with more than 300 subsidiary companies, has international business activities which include palm oil cultivation, edible oils refining and oilseeds crushing, to name a few.

The customer faced challenges with their palm oil storage tanks due to heavy vapor during filling, level disturbance caused by bubbles at the surface and solidification of the oil. Additionally, the customer felt it was important to be able to measure below the heating coils in the bottom of the tank, since this would increase tank utilization.

Solution

Emerson initially delivered a high accuracy tank gauging system to install on two tanks for trial and to compare with a competitor's system. Evaluation focused on accuracy, reliability in challenging conditions such as vapor, and the ability to measure below heating coils. After a thorough trial, Emerson was the selected supplier based on superior accuracy and performance.

The Rosemount Tank Gauging System was installed on 522 tanks across 14 different sites. It included the Rosemount 5900S Radar Level Gauge for oil storage tanks and the Rosemount 5408 Level Transmitter for chemical and water tanks. Also included in the system were the Rosemount 2240S Multi-input Temperature Transmitter, the Rosemount 765 Multiple Spot Temperature and Water Level Sensor, the Rosemount 2230 Graphical Field Display, the Rosemount 2410 Tank Hub, the Rosemount 2460 System Hub as well as the Rosemount TankMaster Inventory Management Software.

After a thorough trial the Rosemount Tank Gauging System was successfully rolled out across 14 sites with over 500 tanks.



Rosemount 5900S Radar Level Gauge

Rosemount TankMaster collects real-time tank gauging data such as level, temperature and pressure and then calculates volumes and mass for any type of tank. It also provides field device configurations, proof-testing, alarm handling and other safety related functions.

In this installation, Rosemount TankMaster enables the customer's full network architecture by providing it with OPC data. It has a built in OPC Server, which makes it possible for the Distributed Control System (DCS) to read OPC data, which then goes to the site's data collector. Each site's data collector sends the data to a centralized database which is connected to the cloud, combining and giving their users access to data from all 14 sites.

The integrated system solution which includes tank instrumentation, communication infrastructure, and control room software led to improved accuracy and control of inventory. It also improved efficiency since the frequency of manual rounds during operation could be reduced.

Resources

Emerson Automation Solutions Industries
[Emerson.com/FoodandBeverage](https://emerson.com/foodandbeverage)

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

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

Rosemount 5408 Level Transmitter – Non-Contacting Radar
[Emerson.com/Rosemount5408](https://emerson.com/Rosemount5408)

Rosemount 2240S Multi-input Temperature Transmitter
[Emerson.com/Rosemount2240S](https://emerson.com/Rosemount2240S)

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

The Emerson logo is a trademark and service mark of Emerson Electric Co.
Brand logotype are registered trademarks of one of the Emerson family of companies.
All other marks are the property of their respective owners.
©2022 Emerson Electric Co. All rights reserved.

00830-1400-5100 Rev AA

The flexibility of the Rosemount Tank Gauging System allowed the solution to be tailored to fit both large and small tanks.



The ability to measure below the heating coils was a decisive advantage of the Rosemount 5900S Radar Level Gauge.



Rosemount 2240S Multi-input Temperature Transmitter

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://emerson.com/Rosemount-TankGauging)