

Terminal Gets Live Tank Data from Large Geographical Area Using Wireless Technology

RESULTS

- Coverage of tanks spread over a large geographical area into one integrated system
- Real-time data based automated system
- €30K savings in installation and cabling
- Improved tank utilization without jeopardizing safety

APPLICATION

Inventory measurements in bulk liquid storage tanks.

CUSTOMER

Tank Opslag Verbeke, located in Hemiksem (Belgium), operates 97 continuously monitored storage tanks with a total volume of 112.000 m³ on a daily basis, and around the clock.

This facility handles storage and blending of chemical and petrochemical products. It has dedicated access to seaways via the international port, and inland connection to railways and highways.

CHALLENGE

Verbeke wanted to create a platform enabling their personnel to have constant access to live data in order to obtain complete control and overview of all stored products and transfers. Their primary requirement was to transition to a wireless solution. Installation of proper cabling over the large geographical area – including newly built tanks – would be very costly.

SOLUTION

After comprehensive market research, Verbeke selected Emerson™ and DCM EMBA for the turnkey project, supplying 11 tanks with radar level gauges and temperature instrumentation.

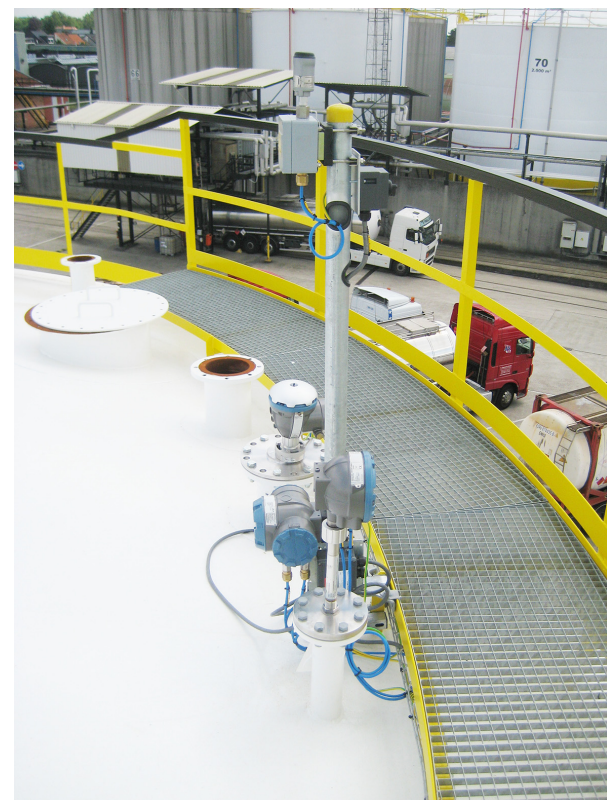
The wireless system now includes 79 tanks. Each tank is equipped with a radar level gauge, typically a Rosemount 5900S Radar Level Gauge, and some also have a Rosemount 2240S Temperature Transmitter with a Rosemount 765 Temperature and Water Level Sensor.

Tank devices are connected to one Rosemount 2410 Tank Hub, which provides power and a wireless communication interface. The tank hub is directly connected to the Emerson Wireless 775 THUM™ Adapter, which transmits tank data over the wireless network via the Emerson Wireless 1420 Gateway to the Rosemount TankMaster™ Inventory



“The daily transfer of large volumes requires a reliable level and temperature measurement system.”

*Mr. Ryan Verbeke
CEO, Tank Opslag Verbeke*



Wireless transmission of tank measurement data.

Management Software. Rosemount TankMaster has an OPC interface to a DCS system.

The wireless network is also enforced with an additional gateway and a Rosemount 702 Wireless Discrete Transmitter as a repeater. One gateway serves up to 35 tanks. In addition, the wireless system is built with redundancy, so each gateway, repeater, and TankMaster server is duplicated.

The customer is very satisfied with the solution provided by Emerson, and plans to expand the wireless measurement solution over 25 more tanks.

RESOURCES

Wireless Tank Gauging Brochure

<http://www.emerson.com/documents/automation/104478.pdf>

Rosemount Tank Gauging System Data Sheet

<http://www.emerson.com/documents/automation/104590.pdf>

Rosemount 5900S Product Data Sheets

<http://www.emerson.com/documents/automation/104522.pdf>

Rosemount 2410 Product Data Sheet

<http://www.emerson.com/documents/automation/104516.pdf>

“With the Wireless Rosemount Tank Gauging System, we can now operate in a much more efficient and safe way.”



A wireless system is perfect since tanks are built in clusters and spread over a large area in the terminal, separated by roads and other structures. The red circle indicates one repeater position and the blue is where one of the gateways is installed.

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