DeltaV™ System, FOUNDATION fieldbus Meets Product Measurement, Movement Challenges for Castrol NV Belgium

RESULTS

- Improved measurement accuracy
- 75% reduced termination & panel space
- 60% commissioning savings
- 50% home run wiring reduction
- 15% reduced labor cost
- Reduced start-up time

APPLICATION

Petroleum products tank farm

CUSTOMER

Castrol NV of Antwerp, Belgium, produces and delivers oils and lubricants used in the automotive and chemical industries, as well as other applications. Base and end products are stored in tank farms.

CHALLENGE

To respond quickly and efficiently to market demands, Castrol needed accurate information about tank contents and product transactions. They also needed to ensure compliance with a number of environmental regulations.

SOLUTION

Castrol therefore decided to computerize and modernize its tank farm. The company sought an automation solution that would provide: rapid, trouble-free installation and startup; an easy-to-use operator interface; on-line diagnostics; leak detection and overfill protection; density correction in the control system (to avoid repeated re-adjustments of transmitters in the field).

Emerson's PlantWeb™ field-based architecture with FOUNDATION fieldbus—including a DeltaV™ automation system, 67 Rosemount™ pressure transmitters and Asset Management Solutions (AMS) software —quickly emerged as the solution that could meet Castrol's challenge.

DELTAV™

For more information:
www.EmersonProcess.com/DeltaV

EMERSON™
Process Management

AMS uses bi-directional communication between the intelligent field devices and the process control system. This communication makes it possible to change on-line parameters, to configure transmitters, and to archive documentation and diagnostic information. These capabilities help Castrol meet ISO certification requirements, obtain online diagnostics, and carry out predictive maintenance.

Due to the advanced diagnostics, the number of metering devices could also be reduced to one at each measuring point. For example, Castrol uses only one transmitter per tank for level measurement as well as leak detection and overfill protection. The measurements are also more accurate because digital technology, which eliminates the typical analog instrument accuracy loss of 0.2% - 1% when converting the measurement range.

The project had a quick startup—less than 2 days! More than 65 hydrostatic level measurements were linked to the DeltaV system using only 5 FOUNDATION fieldbus segments—greatly reducing wiring and labor costs. In addition, the Rosemount transmitters on these segments are polarity insensitive and, like the cable, were delivered complete with factory installed fieldbus connectors. This meant that the actual transmitter connection time was minimal.

The DeltaV system's "auto-sensing" feature also ensured that all the connected transmitters reported automatically to the system without any manual intervention, eliminating duplicate addressing. Each device had its own icon and tag so that it could be easily recognized in the system's familiar Microsoft Explorer-like software.

Both the device and cabling were diagnosed simultaneously. The "drag-and-drop" feature also allowed the technicians to assign all transmitters automatically to the DeltaV system, without the need for time-consuming programming or configuration.

DELTAV™

Emerson Process Management
12301 Research Blvd.
Research Park Plaza, Building III
Austin, TX 78759

www.EmersonProcess.com/DeltaV

EMERSON™
Process Management