



Level



Pressure



Flow



Temperature



Liquid
Analysis



Registration



Systems
Components



Services



Solutions

FMP 40 and Ecograph T RSG 30 Tracking Fuel Usage- Gas/Oil

FMP 40 and Ecograph T provide real time data for tracking fuel tank level and usage for inventory control



Refilling fuel tank



Levelflex M radar sensor and Ecograph T data manager



Dispensing fuel

High fuel cost have caused many companies to take more control over usage, and to better monitor inventory levels in order to cut their own transportation costs.

Customer profile

A company in Oklahoma provides various services for the oil industry; including down hole tools, coiled tubing services, pipeline service and specialty chemical services in selected geographic markets

Application description

Monitor a diesel fuel tank for usage and to track when and how much fuel to order. This customer has a large fleet of diesel fueled trucks. The fuel is used by all the trucks at this facility, and is serviced by a single tank. The information needs to be accessible to the facility operators who dispense the fuel, to the yard managers and to the facilities engineer.

Application challenges

The fuel tank is remote from the main offices, about 300 feet, without any cables or conduit between the tank and the building. The area is Class I, division 2.

Solution

The local Endress+Hauser representative worked with the facilities engineer and

provided the following solution:

1. An FMP40 Levelflex (guided wave radar) with a coax probe for actual level measurement in the horizontal tank. (sensor was provided pre-calibrated by representative)
2. An RSG30 (Ecograph T) Data Manager with Embedded Web Server to receive the level information, display, alarm and record levels and usage, and to provide LAN access to all users.
3. A Phoenix Contact Spread Spectrum Frequency Hopping Radio with Class I div 2 ratings, for reliable remote data transmission in the operating yard where truck radios operate constantly.

The FMP40 is installed through the fuel tank vent piping on the top of the tank (see back page). The RSG30 is installed in a NEMA 4 enclosure at the fuel tank operators building.

Instrument description

The Levelflex M FMP40 is a top mounted compact level transmitter that transmits micro impulse radar signals on a rod or cable. The pulses are reflected by the product surface, received by the electronics, evaluated and converted into level information. Fluctuations in density, temperature or foam do not affect the measurement.

The Ecograph T data manager is a multi-channel display with an embedded web server and paperless recording capability. Up to 6 inputs can be displayed simultaneously. The Ecograph T with its innovative features, ease of configuration and space-saving design delivers unparalleled price to performance ratio.

The Ecograph T is a compact unit with reduced panel depth, saving space and panel costs. Locale access to Compact Flash card and USB port prevents tampering of data and unauthorized configuration changes. The data manager has Ethernet capability, USB, RS232/485 ports, embedded web server/OPC server; which allows direct integration into data systems and networks, plus worldwide data accessibility.

Results

The facilities engineer installed all components, assigned an IP address on the LAN to the RSG30, and the system has worked as planned. During a recent company wide meeting in Texas, the Oklahoma center displayed the tank level readings (live over the WEB) to all present. Consideration is being given to use this arrangement as a standard configuration in all service facilities.



Ecograph T mounted in cabinet inside operators building



Levellflex FMP40 mounted in vent pipe on top of cylindrical fuel tank. Coax probe does not interfere with venting capabilities.



Lockable access panel prevents data tampering and unauthorized configuration changes.



Removable Compact Flash card for data storage and USB port for connection to laptop computer or other compatible device.



Compact unit with reduced panel depth to save space and reduce panel mounting costs.

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