



Intelligent Sensing Anywhere

Case Study

Summary

Project:

Remote monitorization of liquid fuel tanks

Industry:

Oil industry

Challenge:

To know remotely the tank level in order to assure an efficient management of liquid fuel stocks

Solution:

iLoggerOil – Autonomous system for oil and fuel remote management

Benefits:

- Remote management via SMS
- Scheduled information on tank levels
- Stock control and deliveries' prevision
- Optimization of distribution routes
- Backoffice web based software with several specific reports available

Business situation:

Installation phase concluded.
Solution in full exploration with proven logistic gains.

Requisites/Specifications:

- GSM / GPRS Modem
- Runs on long lifetime batteries
- 4 analog inputs, 4 digital inputs and 2 state LEDs
- Configurable reading frequency
- Support for three current output pressure sensors: 4-20 mA

Remote Monitoring of Oil and Fuel Tanks

Managing product stocks, avoiding ruptures and reducing logistic costs inherent to distribution constitute a considerable weight in the liquid fuel market. Therefore, companies have been showing an increasing persistence in the real time monitorization of their assets. To achieve the intended optimization, the largest fuel distributors worldwide have been investing in technology M2M (Machine-to-Machine), which will enable them to manage stocks in an autonomous and efficient way.

ISA iLoggerOil appears as a reliable, robust, innovative solution. It is ATEX-certified, for installations in potentially explosive areas and it can be battery-powered.

The system proposed by ISA is based on the concentration of data measured by sensors in an intelligent data logger. At fixed time instants or based on alarm levels, iLoggerOil transmits the recorded numbers, allowing the distributor to know each tank's level remotely.



Figura 1 - iLoggerOil: Solution for the remote monitorization of liquid fuel tank levels.

Case Study Oil and Fuel Telemetry



Detected Necessities

Repsol's main purpose is to avoid tank stock ruptures, since high consumption requires frequent supplies. For that reason, it is necessary to know the exact level of each container in fueling stations. ISA iLoggerOil emerges as the best response to the client's needs, since it allows remote real-time information on tank levels, enabling the optimization of the necessary resources.

Implementation

ISA installed the iLoggerOil in about a hundred *Repsol* service stations all over Spain. The same equipment may monitor up to 10 fuel tanks. Before installing, the technician examines and selects the most suitable place for the equipment. After defining the best location, the installation is an easy process that enables equipment to be working rapidly.

Conclusions/Future Developments

The implementation of this solution in service stations owned by *Repsol* has already provided a significant decrease in logistic costs. In the future it is desirable that ISA and *Repsol* unite efforts in order to automatize the coordination of telemetry information with *Repsol's* internal methodologies and backoffice data managing applications



Intelligent Sensing Anywhere

ISA is an award-winning global company specialized in Telemetry and M2M (Machine to Machine) Communications. ISA is a global leader in different market segments such as: Remote Management for Utilities, including telemetry and remote metering solutions for gas, fuel, electricity and water. The products, solutions, and services offered by ISA are based on its own technology and know-how in the fields of electronics, software development, telemetry and control, which have been accumulated over the past 20 years. The ability to develop and launch innovative products into the market in a very short time is the key to ISA's international success. Among many awards received, ISA was distinguished in the course of Metering Europe 2006 in Copenhagen with the Innovation Award of the European Utility Awards. This award cited ISA's iEyeMeter – an innovative solution which enables wireless multi-utility remote metering without the need to exchange legacy meters.



REPSOL YPF

Repsol YPF is an international integrated oil and gas company, operating in over 30 countries. It is the leader in Spain and Argentina, one of the ten largest private oil companies in the world and the largest private energy company in Latin America in terms of assets. The company has always considered innovation as a competitive advantage. Repsol YPF's technology activities include both the research on and development of new products and production processes.

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