

HPCL Bagru Jaipur Terminal Achieves Pump Protection and Increased Safety with Wireless Level Switch

RESULTS

- Reduced unplanned shutdown and maintenance cost with pump protection
- Improved safety of equipment for longer life
- Increased equipment availability
- Saved on Operations and Maintenance costs



APPLICATION

Pump Protection

APPLICATION CHARACTERISTICS

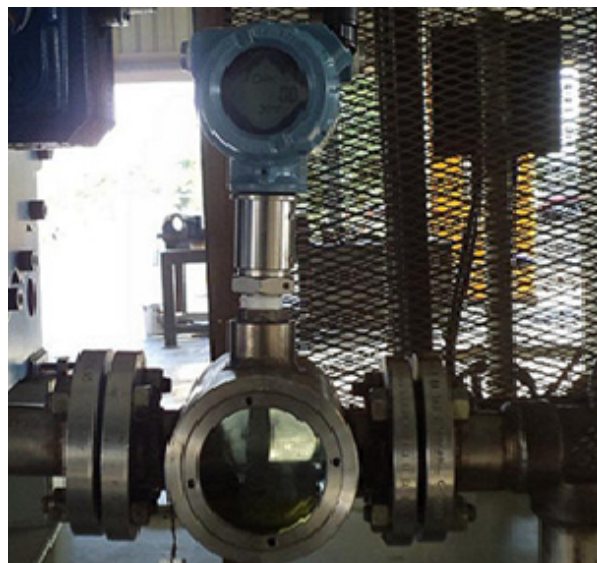
A variety of petroleum products.

CUSTOMER

HPCL Bagru Jaipur Terminal - India's major integrated oil refining and marketing company.

CHALLENGE

This oil refining and marketing company uses multiple pipe line division pumps which continually pump fluids from the refinery to the terminals for sale and must be kept running constantly in order to maintain production. Any mechanical damage to the equipment will result in an emergency breakdown at the pumping station. To protect the pumps, each one has a supply of lubrication oil that passes through the bearing housing and returns back to the lube oil reservoir. To monitor this, a sight glass on the flow line provides visual indication of the fluid levels. However the fluid level would vary depending on whether the circulation was on or off. Trying to keep track of the lube oil supply at each pump was a very manual process in both reading the levels at the right time and keeping records of the supply. It was proving to be an impossible task for the customer. All they really needed to know was when the reservoir level dropped to a defined low point.



The Rosemount 2160 wireless switch replaced the gauge and provided low level alarms to a central location via the Emerson 1420 gateway.

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SOLUTION

Rosemount 2160 Wireless Point Level Switches were installed on each of the reservoirs. The 2160's were all connected wirelessly to the Emerson 1420 Wireless Gateway. The Gateway provided a Modbus connection to the host system. This combination allowed the Rosemount 2160's to monitor the reservoir levels and to alarm when critical low points were reached. Reservoirs needing additional supply of lube oil can now be immediately identified.

Instead of relying on manual checks of the sight glasses, the Rosemount wireless switch and Emerson gateway system provides real time data to the operators. Since the process information is now available over the network and visible in the control room, manual collection of data is eliminated and the status of the reservoirs is known without going into the plant. This resulted in a reduction in operating costs while increasing protection of the pumps from mechanical breakdown. This in turn created an increased availability of the pumps to run the pipelines.

RESOURCES

Emerson Process Management Petroleum Refining Industry

<http://www2.emersonprocess.com/en-US/industries/refining/Pages/index.aspx>

Rosemount 2160 Wireless Level Switch

<http://www2.emersonprocess.com/en-US/brands/rosemount/Level/2100-Series-Level-Switches/2160-Level-Switches/Pages/index.aspx>



This sight glass and gauge needed to be read and manually recorded at the correct times.

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