

HPCL Improves Operator Effectiveness with Honeywell Hand-held Devices



“HPCL is committed to safe and reliable operations, adopting best practices to achieve sustainable operational excellence. Honeywell has proven to be a worthy partner and its hand-held computers have helped us improve product quality, machinery availability and increase profits.

Sateesh Kumar, Operations Manager, HPCL, Mumbai Refinery

Benefits

Like any other conventional refinery, Hindustan Petroleum Corporation Limited (HPCL) had been collecting non-DCS instrumented data from the field using a conventional manual log book system. Management at the Mumbai, India, refinery felt the need for an Operator Driven Reliability (ODR) program to standardize and ensure the authenticity of field data. The company chose Honeywell to be a partner in its ODR program and this helped HPCL realize the following benefits:

- Reduction in the number of emergency work orders
- Involvement of top management in monitoring field data
- Increased MTBF and lower maintenance costs as a result of early detection of problems
- Close monitoring of equipment health, as these tasks are now being owned by the operations group
- Reduction in paperwork and the time required for data collection
- Improved operator understanding and effectiveness
- Procedural effectiveness and standardization
- Availability of authenticated and quality data from the field
- Value realization from field data

Background

HPCL is a Fortune 500 Company, with a strong market infrastructure in India and an annual turnover of Rs. 1,08,599 Crores during FY 2009-10.

HPCL operates two major refineries producing a wide variety of petroleum fuels and specialties, one in Mumbai (West Coast) with a 6.5 Million Metric Tonnes Per Annum

(MMTPA) capacity, and the other in Vishakapatnam, (East Coast) with a capacity of 8.3 MMTPA.

HPCL also owns and operates the largest lube refinery in India, producing lube base oils of international standards with a capacity of 335 TMT. This lube refinery accounts for over 40% of the country's total lube base oil production. Presently, HPCL produces over 300+ grades of lubes, specialties and greases.

Challenge

HPCL had a lot of field instrumented data that needed to be monitored and recorded by field operations. However, the manual collection methods made it difficult to collect standard and authentic data. The company, realizing the importance of the data for process and plant reliability, decided to implement the ODR program.

The ODR program was initially started in the DHDS complex and is being extended to other process units. Before introduction of ODR, data was collected in the DHDS unit using log sheets hand written by the operator.

Solution

HPCL decided to use Honeywell's Automated Field Data Collection System to ensure reliability and enhance productivity of operators in the field. The system was not only able to provide real-time analysis of field data to operators and senior personnel, but also facilitated multipoint information sharing and standardization of field rounds and compliance to procedures.

Following implementation of the Automated Field Data Collection System, the following improvements were possible:

Data Authentication: Honeywell's ODR solution includes a Radio Frequency Identification Detector (RFID), which identified clearly the area of plant where the reading was taken, along with a time stamp. This helped HPCL to ensure that the field data was collected from the right equipment at the right time, which is not possible with a conventional system.

Operator Support: The solution assisted operators during the data collection stage through its menu-driven system. The easy-to-use device not only helped effortless data collection, but also alerted and guided the operator in case any value was out of pre-specified limit.

Standardization and Procedure Compliance: The solution enabled HPCL to standardize its field activities and ensure compliance with procedures, as checklists and reference documents were available to the operator at all times.

Improved Decision Making: The real-time availability of data to supervisors and other concerned persons clearly highlighting the exceptions, made proactive monitoring possible and greatly improved reliability.

Multifunctional Utilization: Not only can the same setup be utilized by different functional groups for safety monitoring and audits, environment and HSE checks, equipment health checks, instrumentation checks, fugitive emission, etc., all the data is also available to the concerned department at the same time. The ODR solution is being extensively used for a safety survey in HPCL.

"The real-time availability of data has helped us respond quickly and proactively to situations, clearly improving our asset availability and reliability quotient," said Sateesh Kumar, Operations Manager at HPCL, Mumbai.

More Information

For more information on Honeywell's Operator Effectiveness Solutions or any of Honeywell's Products, Services, or Solutions, visit our website at www.honeywell.com/ps, or contact your Honeywell account manager.

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