

Reliance Refinery Improves Safety with Integrated Fire and Gas and CCTV Systems



It was not possible for either Honeywell or Reliance to complete this project single-handedly considering the timeline. Attributes like team spirit and a common mission made it possible.

Benefits

Honeywell supplied fire and gas and CCTV systems for the Reliance Industries Limited Jamnagar complex in Gujarat, India, including engineering, manufacturing, supply, training, installation and commissioning. The Honeywell team and Reliance achieved the completion of the system before the plants were ready to take the hydrocarbon feed which was the customer's primary requirement.

Benefits experienced at the refinery with the Honeywell solutions include:

- Increased reliability and improved safety with Honeywell's Safety Manager
- Early detection of unwanted events
- Timely completion of project paid off the investment
- The timely completion of the safety system to its designed scale has helped to monitor the adversity during the startup and stabilization phase of refinery
- Virtue of technological advancements as a whole has changed the performance of the system considerably

Background

The Reliance Industries Limited Jamnagar complex in Gujarat is the largest refinery complex ever built from the ground up. Reliance wanted to further expand the capacity to create the world's largest single location oil refining operation.

The Jamnagar Export Refinery Project was started in 2006 with the objective of adding 600,000 barrels of refining capacity per day. The site is spread over an area of over 25 square kilometers.

Challenge

Toxic or combustible gases are part of an industrial process but can have severe negative impact on people, property and productivity. To provide early warnings of fire or gas release, Reliance needed a partner to provide integrated fire and gas detection, CCTV systems and strong execution capability to work on an aggressive schedule. Reliance also wanted systems that work with the entire gamut of detection devices like combustible gas detectors, toxic gas detectors, smoke detectors, heat detectors, fire alarm panels, fire suppression systems and manual call points.

Solution

Honeywell offered the full spectrum of gas sensing technologies (electrochemical, catalytic bead, open-path and point Infrared). Honeywell fire alarm panels supporting XP95 protocol that could talk to third-party manual call points, Honeywell Digital Video Manager that brings streaming data from CCTV to a single location and dual redundant Honeywell Safety Manager integrated into Honeywell's Experion® Process Knowledge System (PKS) offered a one-stop solution to bring all the alarms together.

These technology offerings backed by the strong execution capabilities and capacity of Honeywell Automation India Limited have saved significant revenue and resources in terms of material and manpower for Reliance.

The products, services and offerings installed by Honeywell include the following:

Offering	Function
Safety Manager	F&G PLC system
Delta DA	Addressable control panel
Experion server (Redundant)	Engineering and database
Fault Tolerant Ethernet (FTE)	SCADA communication network
DVM server – database	Digital Video Manager server
Camera server for DVM	Video storage server
Experion Workstations	Operator stations across units
Honeywell Analytics	Fire and gas detectors

Honeywell formed a diversified team with domain knowledge in fire and gas, CCTV and network to fulfill the project needs. The execution team members established harmonic coordination with the Reliance team and various technocrats with specific skills have contributed to system readiness.

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Reliance believes that Honeywell has set an example of how such a large system can be made available for monitoring before plants are ready to take hydrocarbon.

Honeywell supported Reliance with material and solutions to meet its challenges until the end of the project. The corrective and preventive maintenance for the project is also being handled by Honeywell.

Honeywell products are being used for the first time by Reliance at its Jamnagar complex and the performance of these products is under testing.

More Information

For more information on Honeywell solutions, visit www.honeywell.com/ps or contact your Honeywell account manager.

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