

UNILUBE Uses UPC for Expansion of Lube Oil Plant

Case Study

“With the Honeywell Universal Process Cabinet (UPC), we could successfully commission a new lube oil plant in a short period within a tight turnaround schedule with reduced CAPEX.”

United Lube Oil Company (UNILUBE) is a petroleum refinery with modern technologies in their facility to produce high quality base oil. The plant is situated in Jubail Industrial City, Kingdom of Saudi Arabia. The facility produces lubricants, specialty lube oils, custom lube blends, greases and other refinery products. The facility had a combination of Yokogawa CS3000 and Honeywell Experion PKS control systems. The firm decided to enhance lube oil quality with new technology in 2015.



United Lube Oil Company, Jubail Refinery, Kingdom of Saudi Arabia

Challenge

The expansion project involved 700 I/O devices and was to be completed within a two-week turnaround time in early 2017. The expansion plans turned out to be a bigger challenge as the company wanted to also replace the existing Yokogawa control system with Experion PKS during the same turnaround period.

So, in effect we had three tasks to focus on during the narrow window of two weeks – ensuring regular refinery turnaround activities; migration of Yokogawa CS3000 system; and the new expansion plant commissioning.

To meet the demanding needs of the entire project, the company was searching for a technological design that could help in faster construction and commissioning of the new expansion plant with minimal personnel involvement. In addition, the customer did not want to construct a new big control room for the expansion project and preferred to use the existing control room with limited number of additional cabinets. With this being a brownfield expansion, there were limitations due to the control room space and multicore cable laying and routing within the facility.

Solution

UNILUBE chose Honeywell for the plant expansion to help optimize the project works. The Honeywell team supplied modular remote Universal Process Cabinets (UPCs), minimizing the engineering design, testing and commissioning times with a standard design; replacing expensive long run multicore cables and cable ducts with fiber optic cables; and utilizing the breakthrough UIO technology for a lean project design and execution.

Today's Oil and Gas industry needs control and I/O design that can reduce engineering and project schedules and optimize projects with a lean execution cycle.

About Universal Process Cabinet

Honeywell's Universal Process Cabinets are an off-the-shelf standard solution that reduces engineering, construction and commissioning costs and reduces the project schedule.

The new C300 controller for the expansion plant was installed in a system cabinet and marshalling of the 700 new I/O devices was shifted to field with the Class1 Div2/Z2 Universal Process Cabinets. This helped in avoiding expensive control room expansion and reduced the CAPEX and OPEX for UNILUBE.

14 UPC cabinets were used for the expansion plant communicating to the control room over single mode fiber optic cables.



Universal Process Cabinet

For More Information

Learn more about Honeywell Products and Solutions - visit www.honeywellprocess.com or contact your Honeywell Account Manager, Distributor or System Integrator.

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The UIO modules in the UPCs catered to all the signal conditioning needs of the plant and reduced the overall spare requirement. Daisy chaining of up to three UPCs with a pair of redundant AC power feeds helped in reducing the electrical cable runs in the site.

Shorter cabinet delivery cycle lent a helping hand to meet the tight project schedules which involved reduced Factory Acceptance Test (FAT) times. As the UPCs were mounted in the field, the I/O loop check and commissioning could be reduced as the number of test points were reduced from five terminal junctions to just a single terminal. The modular cabinet design of the UPC helped in simultaneous commissioning of I/O loops from different process areas.

The UPC, an off-the-shelf standard cabinet that reduces engineering, construction and commissioning efforts, time, and costs played a major role in completing the United Lube Oil expansion project within the constrained turnaround time.

Summary

Honeywell has been a pioneer in the oil and gas industry for many years. The company has extensive offerings ranging from integrated control and safety systems to Supervisory Control and Data Acquisition (SCADA) and RTU platforms, field instrumentation, and more.

In this case, Honeywell technology enhanced the ability of a leading petroleum refiner-marketer to expand its lube oil production while adhering to a short project execution time. Over the last one year since commissioning, the Honeywell UPC solution has not experienced a single issue resulting in system downtime.

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