

Orchid Chemicals & Pharmaceuticals Improves Batch Automation with Experion PKS



“Complete automation in batch operations is always a challenge. Our plant has even more challenges with unique requirements for multi-product production and safety. We have been able to overcome these challenges because of our strong in-house project capabilities supported with a superior technical solution from Honeywell. Honeywell met our expectations of the highest level of safety which in turn has led us to a stable, safe and reliable manufacturing process.”

V.S. Padalkar, Vice President, Projects and Engineering, Orchid Chemicals & Pharmaceuticals Ltd.

Benefits

Orchid Chemicals & Pharmaceuticals Ltd. needed to build a new multi-product pharmaceutical plant at its site in Aurangabad, India. Responsible for the production of several products, this pharmaceutical plant required state-of-the-art automation technology matched with strong project execution skills, scalability and compliance with guidelines to meet its automation challenges and aggressive timetable. All of those factors were met with the installation of Honeywell's Experion® Process Knowledge System (PKS). Benefits included:

- Fast commissioning and startup of the facility supported by enhanced diagnostic features
- Support paperless plant operation and data collection and storage, secure system access, QVCS, electronic signatures and a full, real-time integration of plant processes
- Scalable system architecture from small applications to huge manufacturing plants while maintaining high system performance
- Easy configuration of continuous and batch control to add new products and newer technology units to the plant
- Fast application development and verification supported by extended simulation features of the system



Experion provides leading automation technology for Orchid's multi-product pharmaceutical plant in Aurangabad, India.

Background

Orchid Chemicals & Pharmaceuticals Ltd. was established in 1992 as a 100 percent export oriented unit. Commencing operations in 1994, Orchid has achieved amazing and consistent growth to emerge among the top 15 companies in the Indian pharmaceutical industry with more than 3,700 employees.

Orchid is a globally recognized, integrated pharmaceutical company with core competencies in the development and manufacture of active pharmaceutical ingredients (APIs) and finished dosage forms as well as in drug discovery. From the very inception, Orchid has been investing aggressively in establishing modern research and manufacturing facilities aimed at global markets, thus emerging as a world-class pharmaceutical company covering the entire value chain from discovery to delivery.

Orchid has an established end-to-end connected infrastructure for drug discovery and development which are channeled through its two subsidiaries, Orchid Research Laboratories in Chennai and Bexel Pharmaceuticals in the U.S. Through superior infrastructure and by adopting a judicious blend of structure-based drug design approach, Orchid has been able to simultaneously work on six therapeutic programs with several lead compounds in advanced stages of trials.

Challenge

Orchid's multi-site API complex in Aurangabad near Mumbai provides multi-therapeutic product offerings comprising high-end betalactams, carbapenems and non-penicillin, non-cephalosporin APIs. Spanning 100,000 square meters, this facility is a world-class manufacturing complex which can handle complex synthesis and reactions with the highest levels of safety and productivity.

Orchid needed a control system to monitor and manage all production processes, from product batch to individual processes like solvent addition, pH addition and distillation, as well as all necessary utility and HVAC systems.

"We have 46 reactors and 15 different types of solvents, so the big challenge was adding specific solvent to a specific reactor," said Mr. R. P. Ratolikar, Senior Manager, Instrumentation at Orchid. "We had to find a way to overcome a variety of automation challenges including complex logic implementation, which requires high controller memory, less execution time for critical functions and running the plants 24-7 through the control system with high levels of safety and reliability."

Orchid was faced with very stringent requirements and factors

such as application complexity and an aggressive timetable to gain production capacity. In order to meet these challenges, Orchid turned to Honeywell's Experion system

Solution

Orchid selected Experion C300 for its advanced technology, robust software and monitoring, built-in redundancy, ability to integrate with MES systems, full validation support, competitive price and Honeywell's project execution skills. Another key requirement was a control system with large memory capacity and competitive scan time for implementation of the process control application.

"Our decision to go with Experion was based on finding a solution that could meet specific automation requirements such as complex execution, high availability, data collection and preservation that met manufacturing and other requirements, but at the same time let us get products out in time," said Mr. Padalkar, Vice President, Projects and Engineering at Orchid. "We selected Honeywell because it was a better technical solution and because of its strong project execution skills and support."

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More Information

For more information on Honeywell's Experion Process Knowledge System (PKS), visit www.honeywell.com/ps or contact your Honeywell account manager.

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