

Mangalore Chemical and Fertilizers Improves Accuracy, Precision Control and Versatility while Reducing Costs with Honeywell’s MasterLogic Programmable Logic Controller



“We chose to work with Honeywell and its MasterLogic PLC because of the proven precision control and versatility. With a process that is extremely dynamic, Honeywell was easy to work with and had incredibly fast, yet accurate response times, which helped reduce time-to-market for our client.”

Trinetra Bajpai, Chairman and Managing Director, Anshula Technologies

Benefits

Mangalore Chemicals and Fertilizers Limited (MCFL) has many plants that manufacture various fertilizers such as Urea, Sulphuric Acid, Ammonia BiCarbonate and others. At one of the plants, Anshula Technologies, an engineering consulting firm located in Mumbai, India, was helping the company with a turnkey project and wanted to install a new automation system meeting fit the plant’s expanded criteria of accuracy, precision control, flexibility and versatility.

Anshula turned to Honeywell, a leader in next-generation control systems, to help meet their needs. Honeywell supplied its Experion HS software platform for Human Machine Interface (HMI) applications along with its MasterLogic Programmable Logic Controller (PLC), a small and compact controller that installs conveniently into a confined space and delivers the needed power and performance for a control application. At the Sulphonated Naphthalene Formaldehyde plant, MCFL required solutions purposely-built for a small to medium sized application and the scalability, compact size, and speed and power of the Honeywell MasterLogic PLC and Experion HS met those demands.

Working with Anshula, Honeywell supplied its MasterLogic PLC to help reduce costs, improve precision and control, and achieve the flexibility and sustainability necessary for future growth.

Specific benefits recognized at the MCFL plant include:

- Reduced costs by 20 percent
- Improved precision control and accuracy as the process needed accurate control with very low span where margin of error is 0.001 percent
- Flexible and scalable solution for future expansions
- Complex instructions executed at a high speed of 42 ns/step
- Dedicated I/O bus controller supplemented the main processor in I/O refresh to achieve high speed scanning
- Open standards support provided enhanced interoperability
- Eliminated all single points of failure in the system architecture to ensure high availability and redundancy
- Seamless integration with Experion HS eliminated need for any intermediate gateway equipment



Mangalore Chemicals and Fertilizers worked with Anshula Technologies to improve precision control, reduce costs and increase flexibility at its plant in India.

Background

Mangalore Chemicals and Fertilizers Ltd is part of The UB Group, a large and diversified business house. The group is one of the foremost multinational organizations based in the sub-continent with operations in many world markets. MCFL is a Rs.2,100 Crore fertilizers manufacturing company located in the state of Karnataka, India. With its wide range of products that include Urea, Di-Ammonium Phosphate, muriate of Potash, Granulated Fertilizers, Micronutrients, Soil Conditioners and Speciality Fertilizers, the company touches and enriches the lives of farmers across Southern India.

Working as the overall EPC, Anshula Technologies (ATEC) specializes in identification of industrial projects suited to specific requirements of its clients. ATEC has developed a data bank of various viable projects to suit a variety of industrial applications in the form of pre-investment studies, which can be made available to interested entrepreneurs at competitive prices. ATEC is also fully geared up to carry out pre-investment studies for specific projects contemplated by enterprising clients.

Challenge

MCFL's Karnataka, India, plant needed a way to improve control systems and install an automation solution that would help increase accuracy, reliability and prepare for future growth and expansion. Partnering with Anshula Technologies as the main EPC, the company defined certain criteria to meet its overall quality, sustainability and commissioning objectives with record time duration.

"We had to find a partner to work with MCFL that provided the accuracy they needed in a sustainable, compact and cost-efficient package," said Trinetra Bajpai, Chairman and Managing Director, Anshula Technologies.

More Information

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

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Process Solutions
Honeywell

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Solution

After investigating several suppliers, Anshula selected the Experion HS solution from Honeywell along with the MasterLogic PLC to install at the MCFL plant. Honeywell's MasterLogic PLC is a compact controller that delivers all the power and performance needed for control of Sulphonation, Condensation, Dryer, Cooling Tower, Filter Press, Filtration, and Lime Slurry. Combined with the Experion HS, a powerful software platform that incorporates innovative applications for HMI and supervisory control and data acquisition, Honeywell provided MCFL with an affordable, yet powerful solution for smaller unit operations. "Honeywell's solution is by far the most accurate system available," continued Bajpai. "It is priced very competitively and the value we were able to achieve with the solution was unprecedented."

Honeywell's MasterLogic PLCs are modular, scalable and rack-based. The PLC can be either stand-alone or distributed with peer-to-peer connections. The CPUs, power supplies and rack sizes are also available in various models to best fit to a particular application.

The process at MCFL was very dynamic and required an exceptionally fast response time, which, in turn, could help enable a faster time to market. "The Honeywell team was very interactive and their overall project coordination and excellent engineering work made plant start-up and running incredibly successful," said Bajpai.

Anshula worked with Honeywell to help install and train personnel as needed. "The manuals were elaborate and very helpful, and the training was explained in detail to the extent we required," noted Bajpai.

The equipment installed at MCFL resulted in a cost savings of 20 percent at the plant. "We were so impressed with not only the cost savings, but also the other intrinsic benefits provided by Honeywell, that we plan to buy additional equipment from them," Bajpai said. "The inspection they completed was excellent and their team was very proactive and hands-on – we look forward to working with the team again for our next project."