

Case Study

Micro Inks Limited Saves on Costs without Compromise



“Turning to Honeywell to automate its resins and varnishes plant, Micro Inks Limited in India secured capital savings of 15 per cent but also found a solution that gave it leading-edge control and safety.”

Benefits

Through its plants in Gujarat, India, Micro Inks Limited (MIL) supplies almost 70 per cent of the ink required for India's newspaper industry, the world's largest by sales.

Most of these plants have long been automated with systems from other providers, but when Micro Inks came to upgrade its plant in Vapi, which remained manually operated, it enlisted its systems integrator M/s Artee Flow Control Pvt Limited, a Honeywell channel partner.

M/s Artee's proposed solution, based on Honeywell's HC900 controller and Experion® HS with eServer, resulted in 15 per cent lower capital costs than competitors' solutions, and it did so while meeting all of MIL's requirements for reliability, safety, efficiency and scalability:

- The solution significantly streamlined the process while ensuring consistency and quality in the finished product
- HC900 offered critical failure analysis to guarantee correct timing and sequencing in the process
- The controller's features were similar to those of the DCS, reducing the work of engineering and maintenance staff
- As a modular system, future expansions involve just adding the hardware
- Management can view the manufacturing information system (MIS) online, with access to alarm reports and key data to drive quality, safety and reliability improvements.

The project delivered the performance that MIL was looking for, despite costing significantly less than solutions offered by its competitors. As a result of the project's success, the manufacturer has gone on to award an order for a second system at the plant, work on which is ongoing.

Background



MIL has grown swiftly since incorporation in 1991 to become the leading supplier of ink to the press in a country that accounts for one in every five daily newspapers sold in the world. The Indian newspaper industry is estimated to be worth \$3.58 billion, and unlike in many Western countries, continues to grow.

With several plants in Gujarat, MIL has invested heavily in the printing industry. In the process it has achieved certifications under ISO 9001 for its quality management systems and ISO 14001 for environmental management. At the same time, it remains committed to manufacturing key raw materials such as pigments, resins, varnishes and additives, and is one of the few ink companies in the world to offer such a significant degree of backward integration.

Previously highlighted as one of BT's 20 Companies to Watch, its success was recognized by Germany's Huber Group, one of the World's largest family-run printing ink manufactures, which purchased MIL in 2005. Today, as a Huber Group subsidiary, it continues supplying the Indian industry, as well as international markets. Its plant in Vapi is entirely dedicated to exports.

Challenge

With previous investments in the region, the majority of MIL's Gujarat plants were already automated with systems from Siemens, Schneider and Allen-Bradley.

However, its plant at Vapi, Southern Gujarat, a key production site for resins and varnishes, was still manually operated, leading it to fall short of the safety standards and efficiency MIL sought.

The company enlisted Artee Flow Control to undertake the plant's automation, with a remit to boost efficiency and reliability while maintaining an uncompromising approach to process safety.

In seeking to control an exothermic process, it required a system that would allow precise control of the process. It also required a solution that was scalable to allow for future expansion. Finally, it wanted a web-based solution that would allow users throughout the business to view key information on different applications.

Despite previous projects relying on competitors' solutions, MIL agreed to Artee Flow Control's proposal of a Honeywell system for the project.

Solution

The system proposed was based on Honeywell's HC900 Hybrid Controller, its advanced process and logic solution; Experion® HS, Honeywell's solution based on its Experion PKS DCS tailored to the needs of small to medium-sized automation systems; and eServer, which uses distributed system architecture (DSA) to provide web-based access to the Experion system.

Because HC900 is available in three rack sizes and three CPU performance levels, it can handle a wide range of automation requirements, so users at Vapi were able to install a system to meet the plant's requirements, while ensuring it remained scalable, ready for future expansion. While facilitating precise control of the exothermic process, meanwhile, its features mirror those of the DCS, making it easy to use for operators, engineers and maintenance crews.

eServer, meanwhile, gives selected users secure, view-only access to real-time and historical process data from the control room, providing valuable insight while safeguarding the process from disruption. As a web-based solution, management and other business users can access information at any time, wherever they are.

"The solution has meant that not only is the process now accurately and safely controlled, but our people have access to the information they need to really drive performance," explained Jitendra Thakor, Instrument & Control Manager at MIL.

While meeting all of the plant's requirements, the total capital cost of the project came in 15 per cent lower than competitor's alternatives.

The success of this project has led MIL to purchase another system based on HC900 and Experion HS with more I/Os for a second unit at the plant. The new system will be integrated with the existing eServer, to realize further capital savings.

"The cost savings of this approach have been excellent, but it would mean nothing if the system didn't deliver. This does, giving us the confidence we need in our performance and safety," concluded Thakor.

For More Information

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