Crystal-Clear Choice
Freelance breaks into glassmaking business with Ardagh Glass upgrade

To sustain production levels and remain competitive, packaging player Ardagh Glass embarked on upgrading the system that controls its glassmaking processes. ABB, together with Ardagh Glass personnel, collaborated on upgrading the batch control system of Ardagh Glass.

Leveraging the ABB Life Cycle index, and our deep experience in the glass vertical, ABB paved the way to a clear choice for Ardagh Glass: Freelance – ABB's leading distributed control system for process applications.

In an industry that goes by strict production levels and delivery schedules, any disruption or downtime in the process have dire dollars-and-cents consequences. For Nienburg-based Ardagh Glass, it has seen first-hand how malfunctions in the plant equipment have led to complete standstills. The system was so complex, largely due to the heterogeneous mix of third-party components, that staff were unable to troubleshoot the control system.

A change was due. Ardagh Glass' Alexander Jochim and Marc Klussmeyer, the heads of batch processing and of automation engineering respectively, spearheaded the upgrade exercise.

Ardagh Glass' process produces over three million glass containers a day, targeted for use in the food and beverages industry. Using recipe control, the batch control system controls the mixing and melting of ingredients to make glass.

A clearly defined plan of action
A team of experts from ABB and Ardagh Glass was formed to conduct an appraisal of the control assets. The Competence Center Glass of ABB Automation, under the leadership of Fred Kruse, worked closely with Ardagh Glass in crafting the control solution that will result in efficiencies while ensuring that the design specifications cover all phases of the process. The new system must be designed accurately to reproduce the process control.

ABB was undaunted as it has developed special functional blocks for applications in the glass industry. Further, it has provided customers with coordinated recipe and raw materials management with corresponding reports.

Once the survey was completed, a detailed functional design specification was created.

Ardagh Glass produces more than three million glass containers a day using ABB automation systems.

Freelance was identified as the ideal solution for the batch control system upgrade of Ardagh Glass. Freelance provides ease of engineering with Control Builder F – the one tool needed for hardware and software configuration. For Ardagh Glass, this means its existing I/O channels that contain modules from a third-party manufacturer are retained.

With the DigiVis technology for operator stations, Freelance provides Ardagh Glass staff the visualization and intervention capabilities to track and operate the entire system. This lessens the likelihood of faults as the full sequence flows are visible and accessible to Ardagh Glass plant operators. Another feature of Freelance is the use of one software setup for the entire system, including Engineering Station, Operator Station and Controller Emulator. Freelance is therefore easy for Ardagh Glass to install, learn and, ultimately, master.

Asset management across many years
Using the Life Cycle Index, ABB was able to identify the weak points in the installed control system. According to Marius Franken, the head of technical service, Ardagh Glass was keen to achieve optimum performance from its control assets over the years. For this purpose, ABB created a multi-year asset management system that tracks the lifecycle of assets – thereby ensuring proper maximum ROI on all Ardagh Glass assets.

Ardagh Group
Ardagh Group, a leading packaging business in the areas of metal and glass technology, operates 88 facilities in 25 countries. With 14,100 staff, Ardagh Glass produces approximately 25 billion containers a year. It currently ranks among the world's top manufacturers in the glassmaking industry.

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