High-tech software solution optimises processing

A collaboration in Germany between toughened and laminated glass producer Semcoglas Glastechnik and software specialist Albat + Wirsam has resulted in a project to install a universal information system at Semcoglas' Nordhorn production facility, whereby with barcode-based tracking, a sheet's processing state and whereabouts can be known at all times. Albat + Wirsam reports.

In Nordhorn, Germany, Semcoglas Glastechnik is producing toughened and laminated glass of the utmost production depth. The ultra-modern processing machinery is designed for the production of safety glass units of up to 2.8 x 6 metres in size. Optimum quality is combined with a high delivery capacity – the machinery is tailored for the job, while the staff is highly qualified.

The processes of this sophisticated production have to be controlled with the utmost precision to ensure that the production machinery works in tune, downtime is avoided, and all processes of this multi-step production are perfectly synchronised. Branch Manager at Semcoglas Glastechnik, Stefan Herrmann, says: "The workers are not supposed to run all over the place looking for information but shall be able to get the information they need for the present step right at their workplace."

Software requirements

In the spring of 2009 it became clear that the software Semcoglas were using at that time could not cope with these requirements. The Semcoglas management team, Branch Manager Mr Herrmann and IT Manager Stefan Bruns, decided to make a radical cut: Semcoglas Glastechnik will introduce a software system for production planning and control that permits to establish a slim yet quick information network.

In the fully networked environment, not only will the production machinery be controlled online: According to the philosophy defined by Mr Herrmann, all necessary product and processing information will be available online, displayed on monitors at all pre-processing machines, silk screening and coating lines, toughening furnaces and laminated glass production.

Project parameters

After a thorough check of all available options, the decision was made to use Albat+Wirsam's production planning and control system, Alcim. Albat+Wirsam is the software division of Glaston Corporation. In parallel with the production software, the ERP system, Alfak, will be implemented for administration and order processing, thus ensuring a smooth and reliable flow of information between administration and the shop floor.

Time is of the essence, as the high-tech production needs to run as soon as possible at full throttle. Together with the Albat+Wirsam partners, Semcoglas decided to embark on a demanding 'lightning project': Within three months, the complete Alcim system, including the information system ToolTV on all terminals and an overall capture of production data, will be implemented.

In October 2010, Semcoglas Glastechnik will work with only one type of production paper, with only a few exceptions: The label. Based on barcode registration, the sheet shape, layers, necessary processing steps – all necessary information will be clearly displayed at the terminal monitors. Overall barcoding means that by way of barcode-based sheet tracking, a sheet's processing state and whereabouts will be known at all times.

▲ Laminated glass production is comprehensively networked. The Autoclave is used for bigger tasks - like all machines at Semcoglas Glastechnik, it can handle sheets of up to 6 x 2.8m.

The flow of goods and material is highly complex: It may take two to 15 days (in extreme cases) for a sheet to pass all processing steps at Semcoglas Glastechnik. Customers asking the whereabouts of their sheets need to receive precise answers. Since Semcoglas Glastechnik registers every single

continued »

▸ The cutting control system XOPT-ON permits flexible intervention even with already optimised jobs, eg in case of rush orders and remakes, and automatically controls the automatic residue plate management.

▸ With just a few exceptions, this is the only production paper at Semcoglas Glastechnik: the label. It contains all information for identifying the sheet and track its way on the shop floor.

▸ Barcode registration at the exit of the grinding/drilling/milling line is used to report processing of the sheets complete, and assign them to the next technology.

processing step, this information is available all the time; even to the order entry staff.

With their joint effort, Semcoglas and Albat+Wirsam have developed a precise solution. "On 1 October," says Mr Herrmann, "The system went online, and we have cut the first sheets with the help of the new software.

"It has been hard work up to that point, but from day one on we have been able to work. We have been able to cut glass and control all machines so that we could go on supplying our customers with sheets. In the months after that, we have fine-tuned the system and trained the users," he continues.

Operating to satisfaction

Today, more than six months into live operation, the Branch Manager of Semcoglas Glastechnik reports that, "Except for minor details, 95% of the the project has been implemented."

IT Manager Mr Bruns, who remained close to the project implementation at all times and was in constant dialogue with Albat+Wirsam, concludes: "The co-operation is excellent. We are in intensive and constant contact with Albat+Wirsam to make sure that the defined processes are actually being implemented and realised." ■

Albat + Wirsam Software, Germany.
Website: www.a-w.de
Semcoglas Glastechnik, Germany.
Website: www.semcoglas.com