High-End Software Solution:
Production Control at Premium Glass Processor SEMCOGLAS

May 2009: In Nordhorn / Germany, Semcoglas Glastechnik are producing toughened and laminated glass of the utmost production depth. The new, ultra modern processing machinery is meant for the produc¬tion of safety glass units of up to 2,80 x 6 metres in size. Optimum quality combined with high-est de¬livery capacity – the machinery is meant for the job, the staff is highly qualified.

Still, the processes of this sophisticated production have to be controlled with utmost precision to ensure that the production machinery work in tune, down times are avoided, and all processes of this multi-step production are perfectly synchronised. Branch manager 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."

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, Technical branch manager Stefan 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 the production machinery shall be controlled online: According to the information philosophy defined by Stefan Herrmann, all necessary product and processing information shall be available online, displayed on monitors at all pre-processing machines, silk screening and coating lines, toughening furnaces, and laminated glass production.

After a thorough check of all available options, the decision was made for ALBAT + WIRSAM's pro-duction planning and control system ALCIM. ALBAT+WIRSAM is the Software division of Glaston Corporation. Parallel with the production software, the ERP system ALFAK shall be implemented for administration and order processing, thus ensuring a smooth and reliable flow of information between administration and the shop floor.

Time is running out because the high-tech production shall run as soon as possible at full throttle. Together with the A+W partners, Semcoglas decided to embark on a demanding ‚lightning project': Within just three months, the complete ALCIM system including the information system ToolTV on all terminals and an overall capture of production data shall be implemented. In October, Semcoglas Glastechnik shall be working with only one type of production papers, with just a few exceptions: the label. Based on barcode registration, the sheet shape, layers, necessary processing steps – simply all necessary information will be clearly displayed at the terminal monitors.

Overseeing the ALBAT+WIRSAM IT project for Semcoglas: Stefan Herrmann (left), Technical Plant Manager, and IT manager Stefan Bruns.

Overall barcoding: This means also that by means of barcode-based sheet tracking, a sheet's processing state and whereabouts will be known at all times. The flow of goods and material is highly complex: It may take two to fifteen days (in extreme cases) for a sheet to pass all processing steps at Semcoglas Glastechnik. Customers asking ‚Where is my sheet?' have to get precise answers, every time they ask – customers can expect this service. Since Semcoglas Glastechnik registers every single proc¬essing step, this information is available all the time, even to the order entry staff.

October 2009: With a joint effort, Semcoglas and ALBAT+WIRSAM have made a precision landing. „On 1 October", Stefan Herrmann states, „ the system went online, and we have cut the first sheets with the help of the new software. It has been hard work up

Left: The cutting control system XOPT-ON permits flexible intervention even with already optimised jobs, e.g. in case of rush orders and remakes, and automatically controls the automatic residue plate management. Right: Silk screening for sophisticated projects – one of the core competences of Semcoglas Glastechnik

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.

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."

Today, more than half a year into live operation, the branch manager of SEMCO Glastechnik recapitulates: „Except for minor details, 95% of the t project have been implemented. The interaction and the ambitious implementation have paid off, and was even quite enjoyable."

IT manager Stefan Bruns, close to the action at all times and in constant dialogue with software part¬ner ALBAT+WIRSAM: „We are close to the optimum! The cooperation is excellent. We have had no trouble at all. The communication is perfect. We are intensive and constant contact with ALBAT+WIRSAM to make sure that the defined processes are actually being implemented and realised."

Order processing with the ALFAK ERP system. One aim of the networking project has been the integration of the production and administration software. The connection between ALCIM and ALFAK is perfect: rush orders from ALFAK for instance can even be integrated into already optimised production jobs. On the other hand, status information from production are available all the time to the order entry staff.

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Laminated glass production is comprehensively networked. Left: a user scans the individual sheets that go to the clean room and removes the labels. In the clean room (centre), the ALCIM control unit ToolTV shows the parameters of the current pair of sheets, its structure, and the film layer(s) to be applied. Before the sheets are passed on to laminating, the user reports them complete by scanning their barcodes, and triggers the printing of labels. Right: Autoclave for the bigger tasks - like all machines at Semcoglas Glastechnik, it can handle sheets of up to 6,00 x 2,80 m.