

FRERICHS GLAS

Visions in Glass – Skilfully Accomplished

Only those who introduce new ideas to the market will be successful – this, in a nutshell, is the business credo of Reinhard Cordes, third-generation Managing Director of Frerichs Glas. It does not simply take an innovative product but also requires ingenious realization: This is the basis of the success of a company which is constantly renewing itself – even internationally of late. This does not only call for state-of-the-art machinery and thoroughly software-controlled processes throughout the company but most of all a business culture into which every single employee is integrated.

160 employees in Verden and Lüneburg process 40 tons of basic glass every day, resulting in a turnover far beyond the 20 million mark. Apart from the entire range of modern UNIGLAS® functional IG, this includes the processing and toughened glass section creaglas®. This is where highly innovative glass products are made, since 2008 in the 'glass factory', an attractive and functional glass hall flooded with light, which impressively underlines the company's product philosophy – self-publicity at its best.

The product range is enormous and requires detailed, software-controlled planning and control. Corner-, edge-, and surface processing as well as drilling is effected in the ultra-modern, spotless grinding department, many of the processing steps on one of the two

CNC processing centres. Surfaces are processed by sandblasting, etching, engraving, and silk screening – attractive glass doors, showers, all-glass doors, and designer mirrors are some examples of the top-quality product range, crowned on the sanitary sector by ShowerGuard® shower glass, product of the successful cooperation with Guardian. ShowerGuard® is no coating but a completely new glass type. It is the only glass on the market which is permanently resistant against corrosion besides being extremely easy to clean. An aesthetic highlight in the field of creaglas® are the LightCubes®. These light cubes are interesting, architecturally neutral objets d'art, constantly changing and bathing their surrounding in a mysterious atmosphere of light. At the same time, the LightCubes are pieces of furniture, an invitation to sit down and communicate.



Reinhard Cordes, Managing Partner of Frerichs Glas, and Gabriele Riebel, Sales Consultant of ALBAT+WIRSAM. For more than two decades, Frerichs Glas has been trusting in ALBAT + WIRSAM as a software partner.

What cannot be achieved with glass, Frerichs Glas creates from transparent plastic with their creacryl® range. The production range includes the entire Perspex and Macrolon processing, from cutting via CNC milling up to complex, glued protective coating based on individual drawings, frequently with curved and convex elements.

High-Tech Cutting

Reinhard Cordes and his team are among the first glass processors to realise the enormous performance and saving potential of an A+W software-controlled cutting environment in connection with HEGLA Remaster technology. At Frerichs Glas, a gantry crane supplies a high-per-



Left: The Glass Factory' which includes the sectors creaglas®, creacryl® and logistics, was opened in 2008.



Right: Cutting has constantly been adapted to the rising demands, a recent example being the float Remaster extension.



Left: The brand-new, five-axe CNC processing centre. A vertical grinding-, drilling- and milling centre completes the high-tech processing equipment.

Right: By starting toughened glass production in 2008, Frerichs Glas have made the final step towards a full-range producer in the high-end quality segment.



formance float cutting line with automatic X/Y breakout and a laminated glass cutting line A-46 Twin with upstream edger. The special feature: Both cutting lines are equipped with ReMaster residue plate storers which keep the precious plates right at the spot and, controlled by the

ALBAT+WIRSAM's XOPT-ON control server, permit to add them swiftly to the ongoing optimisation process. Thanks to the Remaster technology, this requires no manual work, making the process fast, economical, and material-saving. The residue plates are still available in the pro-

duction line instead of waiting in some obscure corner for – more or less accidental – utilisation, just to be thrown into the cullet box at the end of the day.

A+W's cutting control software integrates the residue plates from the Remasters real-time in the running cutting process. XOPT-ON permits to change jobs even after the optimisation process is finished: The XOPT-ON control server can link jobs, split up and rearrange large jobs. Rush orders and breakage are integrated without problems.

The saving and performance potential of this cutting ensemble is fascinating: Where prior to the optimisation of the cutting area, three workers produced 40 cut sizes in eight hours, 1.5 workers now produce 100 cut sizes in the same time!

PERFECT SCHEDULING

Especially the enormous production depth on the creaglas® sector requires the use of a highly specialised production planning and control system which has been supplied by software partner A+W and configured to meet the requirements of Frerichs Glas. This has changed the scheduling processes at Frerichs Glas completely. Since the production times vary a good deal even within one and the same order, the delivery date is no longer the decisive date. Based on backward scheduling, the order items go their own ways depending on their production depth. This means that, depending on the required production start date, orders are strung out, thus being anonymised. Production jobs consist of items for different customers and are reunited only in the shipping department. Detailed barcode production labels guide the sheets through production while consistent shop floor data collection allows the exact tracing of sheets and status updates which are reported directly to the database. This way, the whereabouts of every single sheet are known at all times, including the processing steps which have already been completed and the next production steps. The scheduling office is located at the centre of the new glass factory (photo bottom left). From there, the experienced production scheduling team organises and plans the entire order volume entered in the A+W ERP system, from cutting via all production steps to shipping.

Thanks to exhaustive barcode tracing, the workers on the shop floor know the whereabouts of every single sheet at all times; the processing status is reported to the A+W ERP system so that enquiries from customers can be answered on the spot: Transparency through thoroughly networked software, throughout the company.



LED DISPLAYS INTEGRATED IN IG: THE ONLYGLASS MEDIAFACADE

A digital media façade that does not project images to surfaces of a building but is integrated into the architecture itself: This does not only change the view of the house front but also, as the photo brings out very nicely, the view from inside the building. The ONLYGLASS MEDIAFACADE is the first transparent and coloured media house front in the world that can be directly integrated in the building's facade. Since the LEDs are integrated in the IG, the glass element of the display can be treated like common IG, and can be fitted into the house front. The architecture is not changed in any way; the system is a fully functional element of the building. The insulating glass fulfils its manifold functions, and the users inside the building are not disturbed at all by the LED display. The ONLYGLASS MEDIAFACADE replaces conventional glazing systems, uniting the functions of LED monitor and IG glazing in one, new medium. In connection with the approximately 1 billion of displayable colours (10 bit) this creates a most powerful display: As a full-size display covering the entire house front or as a shop window, it serves as a presentation surface for movies, logos and moving screens, pictures, and lighting installations. Depending on the selected pixel distance (from 20 mm upwards, adjustable in 10 mm steps), the translucency is between 80 and 95%. The view from inside out is not hampered in any way. The mega display is a combination of individual IG sheets of a maximum size of 3500 x 2700 mm. There is no limit to the number of modules that can be interlinked.



The Media Facade has been developed under the auspices of Frerichs Glas and is inspired by their enthusiasm for glass as a central element of inventive architecture. Decades of experience in the production of IG for curtain walling guarantee that the ONLYGLASS MEDIAFACADE meets all requirements of certified IG, and is armed against all weathers.

135 years of innovation

Starting out as a wholesale and retail trade for colours, wallpaper, and flat glass, Frerichs Glas has developed during its 135 years of history into one of the leading flat glass and service companies in Germany. "We love glass", explains Reinhard Cordes who is convinced that glass is the most versatile and sustainable material architects and developers can lay their hands on. Frerichs Glas' wealth of innovative products proves this, every day.

In long-term cycles of 30 years, the company has time and again been adapted to the changing situation on the market – always with the focus on increasing the advantages and benefits for the customers. One of the main switches to be set was surely the early decision to control business and production processes by means of information technology. Reinhard Cordes confesses to be 'IT-minded', and a closer look at the

management and process control of the Frerichs Glas enterprise with its A+W 'software backbone' reveals the truth behind this statement. Like the entire company, the software has been circumspectly adapted to the changes on the market in the past decades, the integration of the toughened glass production and the comprehensive IT control of the creaglas® sector being the latest but surely not the last steps on this highly innovative way. ■

Bystronic high-performance IG line with quality scanner. Presently, Frerichs Glas are discussing with A+W the integration of the scanner into A+W's production control; among other things, this would permit the automatic release of remakes should breakage or damaged sheets be detected. This line produces approx. 1400 UNIGLAS® functional IG sheets per day. At spacer assembly, the A+W monitoring system ToolTV shows the workers the sheet structure, layer position, and reference edge – this prevents expensive production errors.



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