

Press Release

High-performance, intelligent, low-maintenance Coating

Supplier of complete lines for coating technology including upstream and downstream processes, Grenzebach keeps improving equipment efficiency. At the glasstec, in Düsseldorf in October, visitors receive an insight into the new technology and will be able to see the options made possible by the IIoT platform from Grenzebach in the area of coating technology.

Manufacturers of high-tech glass with highest requirements to architectural aesthetics and energy efficiency want to surprise their customers with innovations and therefore need coating equipment which allows for flexibility in their portfolio. As a supplier of complete system lines, Grenzebach takes this fact into consideration as well as the running optimization of productivity, energy efficiency and availability of systems. From the raw substrate feeding down to the removal of coated glass and towards the unloading: The solution package comes from a single source; and the Coating experts are also involved in the upstream and downstream processes. „Globally leading glass manufacturers appreciate the wide range - when it comes to the supply of new equipment as well as the upgrade of existing production technology. We are partners for difficult questions about the complete value-added chain“, says Dr. Jens Ellrich, Head of Coating Technology at Grenzebach. The company shows details at the world's leading trade fair glasstec in Düsseldorf from Oct. 23 to 26, booth 15D23 in hall 15.

New and upgraded features

Visitors will be able to see a chain of detail improvements on the Coating equipment from Grenzebach. This helps to achieve a modular **shield and drive system** and a higher productivity due to lower maintenance time. The focus is on reduction of downtime and permits higher productivity. A whole series of optimizations contribute to this benefit:

- » **Gas bar segmentation:** Adjustable gas bar segmentation ensures an optimum adaptation to the respective requirements. This leads to a better process control and thus increased productivity.
- » **Process gas management:** The inlet of the process gas directly into the area, where it is needed - at the glass surface in the plasma - in combination with process pumps directly on the cathode lids guarantees highest process stability and optimum reproducibility for lowest possible gas cost.
- » **Gas separating tunnel:** The automatic adaptation of the height of the gas separating tunnel allows a constant gas separating factor for different glass thicknesses, improving process stability, allowing the use of shorter coaters.

To be as flexible as possible with their product lines for the market is an important factor of success for our customers", says Dr. Jens Ellrich. For special-purpose applications as they are needed in solar industry or special coatings, the heating of the substrates to 225 degrees Celsius is possible, achieving higher variability in the product portfolio.

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In the case of glass gaps of 30 millimeters or less, the coating technology now works even more solidly and reliably. This helps to produce longer campaigns and to reduce the maintenance effort and productivity rises.

The Grenzbach coating equipment is optimized to the **lowest floor load** possible. For the installation we only need minimum floor reinforcements without special requirements to the foundation. Effect: reduced overall costs.

From the foundations to the finesse of **equipment configuration**: These have an **auto-configuring** design. The system automatically identifies the equipment control system, the assignment of pumps, cathodes or empty positions; multi-couplings allow automatic connection to the vacuum, water, current and control system connections.

Consequent use of the data

“Digital Glass Production – Your Future Success“ – With this slogan Grenzbach presents at the glasstec the quantum leaps which the glass producers can make thanks to the intelligent handling of data. In the coating process up to 20 single layers are applied onto the substrate. This means an abundance of data with respect to the exact use of resources. "The consequent analysis of the data helps to reduce the work for the operator with manual coater control", says Ellrich. Besides, the upstream and downstream processes can be optimized based on the respective data. This is how the Grenzbach expert sees the future: The measuring values, which are gathered by means of the sensors in the coater, allow an automatic process control which allows a complete evenness of the layers over a complete campaign. The optical properties of the high-tech glass are at any time during production of high-tech glass at 100%. How does RFID technology in the integrated Grenzbach overall concept as another module of traceability contribute already today to product and process improvement? At the glasstec, the visitors will get answers to this question - and can in addition have a closer look at the options with the Grenzbach Application Server of the IIoT platform developed in-house.

The glasstec is the platform to get a closer insight into the further developed Coating system from Grenzbach. For more details, please visit our in-house laboratory equipment at the headquarters of our company in the Bavarian village of Hamlar at any time. The laboratory is constantly being improved to find solutions for individual customer requirements, to hold trainings and to test new hardware components.

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Powerful, intelligent, easy-care: Grenzebach has once more refined the coating lines.

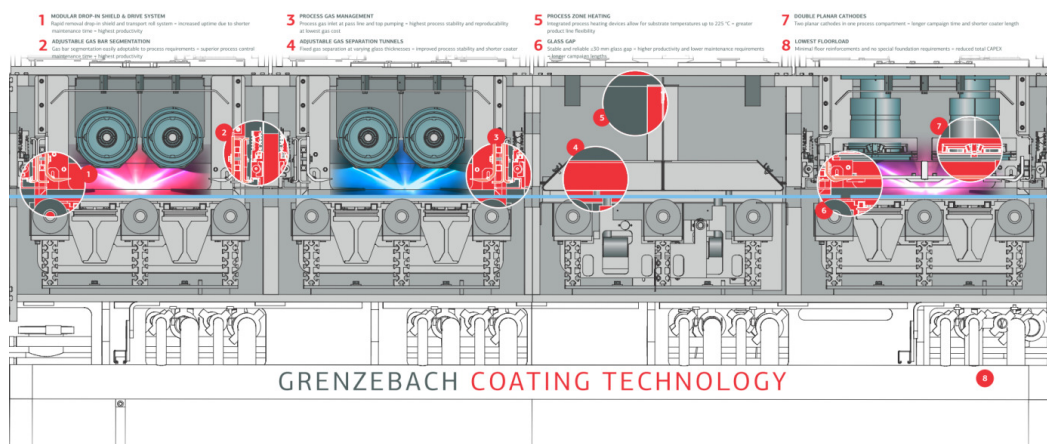
Source: Grenzebach



Look into the chamber of the coating line of the current generation.

Source: Grenzebach

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Coating technology with continuous innovations. At the glasstec, the visitors will get a direct insight into the equipment.

Source: Grenzebach

Grenzebach is a world-wide leader specializing in the automation of industrial production lines. By providing services encompassing the entire life cycle of a project, Grenzebach's tailor-made automation solutions have a positive impact globally in glass and building material manufacturing as well as intralogistics. Many years of experience, continuous development, and sustainable support services are what makes Grenzebach one of the most preferred partners world-wide. 3000 installed lines in 55 countries prove that the Grenzebach name stands for quality and reliability. Amazingly, 90 percent of Grenzebach's products are for export which reflects that the medium sized family-owned company from Hamlar is a global player in the industrial automation.