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HORN NEWS

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HORN
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DEAR READERS,

A turbulent year lies behind us all. The Russia-Ukraine war and the associated sanctions against Russia, the energy crisis, rising gas prices and the turbulences on the world market, not least triggered by the Corona pandemic. The hope that the war will end soon is unfortunately giving way to any reality again. Therefore, we will have to prepare ourselves for burdens and restrictions due to the tense situation, especially this winter and beyond. At the same time, however, it is important to look ahead to what the future holds and how we can shape it.

This year there were two significant occasions that gave us reason to rejoice. The first significant event was the declaration of 2022 as the International Year of Glass (IYOG2022) by the United Nations. It is thus entirely under the sign of the transparent material. With IYOG2022, we have a unique platform to show that glass can be found in many applications in everyday life and will also play a decisive role in many future topics, for example climate protection and CO₂ reduction. The second extremely pleasing event was our participation in glasstec 2022 in Düsseldorf. After four years, we were finally able to welcome our valued customers, business partners and suppliers here in Germany personally at our newly designed trade fair stand. HORN presented the customers and trade visitors not only future-oriented technologies but also the competence and service in the project planning of turn-key plants in the field of hollow glass and float glass plants, together with our subsidiary company,



JSJ Jodeit GmbH, a premium supplier for speciality glass furnaces.

HORN received several major orders in 2022. Based on a large number of new orders placed with us by our valued customers, we are looking forward to a busy, but on the other hand also promising future. We show you a list of current projects in this news.

The new orders for turn-key plants and glass melting furnaces also require more personnel. Here we have reacted quickly and hired new, competent staff. Our increase in new staff also confirms healthy growth.

HORN is prepared and offers its customers the best possible technology to be able to produce glass cost-effectively and in an environmentally friendly way in all areas of the glass industry in the future. This is also proven by our participation in two new research projects: Zero CO₂ and GreenGlass4.0.

I would like to take this opportunity to send you, your colleagues and your family best wishes and a happy and healthy New Year.

We appreciate your support and look forward to continuing our successful partnership in 2023 with HORN employees and our valued partners, customers and suppliers.

A handwritten signature in black ink, appearing to read 'Stephan Meindl', written in a cursive style.

Yours, Stephan Meindl

HORN TO CONSTRUCT THIRD GLASS MANUFACTURING FACILITY FOR AMBEV

Ambev is part of Anheuser-Busch Inbev, known as AB Inbev, which was born from the union between Ambev’s pioneering spirit, Interbrew’s Belgian quality and Anheuser-Busch’s tradition. The portfolio of Ambev comprises more than 30 brands of drinks produced and bottled carefully with a presence in 19 countries.

Ambev has contracted HORN to supply the third furnace to Ambev. HORN will build the new container glass plant in Carambeí, Paraná state in Brazil. The new container glass furnace will be the most technological and environmentally friendly glass melting furnace in the region. This furnace order is of great importance to HORN in order to secure its prime position in South America as a furnace supplier.

The 400 tpd regenerative furnace with 3 forehearths will produce container bottles in colours flint, amber and green. This furnace is particularly designed to produce the maximum pull in all three colours for both, 6% electrical share and even up to 20% electrical share by HORN E-Fusion-Power Boosting.

HORN was appointed as a turn-key supplier for all refractory material, steel construction, E-Fusion-Power Boosting, auxiliary equipment, supervision, manpow-

er and tools for installation and finally commissioning. The contract even includes a theoretical and practical training as well as production support for 60 days after commissioning.

Furthermore, the latest forehearth design of the HORN GCS® 301-advanced system will be applied to produce the bottles.



EXHIBITIONS 2023

Next year, HORN Glass Industries AG will again be present at various trade fairs all over the world.

Save the following dates.

EXHIBITION	DATES	STAND NO.
Glassman Europe	8 - 9 February 2023	F10
Glassman Asia	20 - 21 September 2023	D06
Conference on Glass Problems	30 October - 2 November 2023	tba.

HORN SETS NEW STANDARDS FOR THE GLASS INDUSTRY IN ENERGY CONSUMPTION

State-of-the-art technologies, innovative spirit and technological leadership - all these attributes stand for both HORN Glass Industries AG and Wiegand-Glas. The two companies are led by a fascination for technology and driven by innovative strength. Driven by this shared passion, the glass manufacturing process is optimised energetically, technically, technologically and continuously.

Wiegand-Glas is the solution provider for glass bottles, jars, PET bottles as well as integrated services and looks back on 450 years of glassmaking tradition. With plenty of experience in development and production, Wiegand-Glas has become one of the most successful container glass manufacturers in Europe. HORN's high level of expertise is based on more than 135 years of experience. Since the company was founded in 1884 as an artisan furnace construction company, HORN has developed over generations into today's internationally leading company for the planning and construction of most modern glass production plants.

As the world's leading supplier of sustainable glass production technologies, HORN received its fourth consecutive order from Wiegand-Glas in spring 2021. HORN was commissioned to significantly optimise the new end fired furnace with three forehearth lines and a melting capacity of 350 tonnes per day at the Großbreitenbach plant. After the successful commissioning last year, it turned out that the specific energy values were only slightly higher than the theoretically required energy demand of 3 GJ/t glass and thus the guaranteed values were already exceeded. For this reason, Wiegand-Glas and HORN agreed to carry out further optimisation of the melting furnace. The aim was to reproducibly fall below the value of 3 GJ/t glass over a longer period of time.

The melting furnace is characterised by the use of HORN E-Fusion-Power Boosting with an input of 15% electrical energy and the technological know-how from the HORN R&D activities. During the production of olive green, the value was permanently below 3 GJ/t for the first time in the world over a period of one week with a cullet content greater than 85%. This 3 GJ/t furnace is another flagship of HORN on the way to technological leadership.

We would like to sincerely thank Wiegand-Glas for the trust they have placed in us, for the cooperation which has always been based on partnership, and wish them a long furnace journey.



FURNACE REDESIGN AND CONSTRUCTION FOR STOELZLE GLASS GROUP

Glass manufacturer Stoelzle has been producing high-quality packaging glass at seven locations for over 200 years. HORN has now successfully commissioned the new construction of furnace 02 at the Köflach plant in Austria.

Under the responsibility of HORN, the demolition and new construction of the completely redesigned furnace took place. Equipped with the latest technology for heating and control from HORN, the furnace and its seven forehearths are now in operation. We thank Stoelzle for the confidence and wish a successful furnace journey.



HOT REPAIR AT HEINZ-GLAS IN PIESAU

With a family glassmaking tradition dating back to 1523, the HEINZ-GLAS company is today one of the world's leading manufacturers and finishers of glass flacons and caps for the perfume and cosmetics industry.

HORN Bau & Service GmbH, a subsidiary of HORN Glass Industries AG, was contracted for the hot repair of the glass melting furnace at HEINZ-GLAS in Piesau. Here, the entire 250 t/d glass melting furnace was drained to carry out repairs at the doghouse and the throat.

To avoid consequential damage, the furnace temperature was kept at 1200°C. At these temperatures, our service experts started to remove the remaining doghouse palisades and plating in this area as well as in the throat.

As a next step, new doghouse palisades and corners were replaced and various critical areas were re-plated. Continuous endoscopies were carried out during the repair process to assess the extent of the repair and to ensure HORN's own quality standards.

After fill up by HORN, the furnace was successfully put back into operation after a few days. Parallel to this work, the complete colouring forehearth was reinstalled and heated up by HORN.

We wish good glass at all times and look forward to further projects.

We would like to thank all the subcontractors involved, as well as HEINZ-GLAS in particular, for the always very pleasant collaboration and cooperation!



HORN BATCH CHARGER HVR® 600F PERFORMS IN TEST OF CONVEYOR CAPACITY

For our customer Bastürk Cam we are constructing a 560 t/d end fired furnace with a melting surface of 185.4 m² in their plant in Malatya, Turkey. The new furnace is designed with six forehearth for the production of container glass.

HORN's scope of supply for this project includes two new HORN batch chargers HVR® 600F. The HVR® is still the most popular and reliable batch charger for glass plants and, as a true classic, the most successful batch charging machine of HORN Glass Industries AG on the market.

The two HORN batch chargers HVR® 600F were subjected to a test with regard to conveyor capacity. Each batch charger must have a conveyor capacity of 700 tonnes per day, so that each machine itself can handle the entire capacity of the furnace. With the test on an original batch consisting of 25% cullet and 75% raw materials, HORN was able to prove this performance under real conditions without any problems and thus meet the high requirements for the batch chargers.



WIEGAND-GLAS IN SCHLEUSINGEN PUTS FURNACE 2 INTO OPERATION

Wiegand-Glas, a family-run business group, is committed to innovative packaging concepts made of glass and PET. With a history that goes back some 450 years and plenty of experience in development and production, Wiegand-Glas has become one of

the most successful container glass manufacturers in Europe.

In October 2020, HORN was commissioned with the construction of furnace 2 in the new glass plant

in Schleusingen (Thuringia). The new end fired furnace, which produces container glass in the colours amber and green, was finally successfully commissioned at the end of the first quarter of 2022 despite the postponement of the production start at the end of 2021. Exploding prices for energy and raw materials were the main drivers for this.

The project included the complete refractory and steel planning as well as its delivery, the combustion system, the tank and throat cooling, the measuring

and control equipment, the boosting system, the reversing system, the stirring system, the HORN drainage system VARI-DRAIN® as well as the installation of the batch charging machine HVR® 700 S-2P.

In March 2022, the time had come: The furnace was heated up by HORN and successfully put into operation. On 21 March we celebrated first glass.

To good glass all the time!



VETROPACK CONTRACTS HORN FOR FURNACE REPAIR

The Vetropack Group is one of the leading European manufacturers of glass packaging. It employs around 4,000 people in eight glass factories in Central and Eastern Europe.

Furnace 52 at the Moravia plant in the Czech Republic will be repaired in 2023. Furnace specialist HORN Glass Industries AG has now received the order for this.

As the general contractor, HORN is responsible for planning furnace refractories and steel, supplying the equipment, demolishing, constructing and commissioning of the plant.

Equipped with the latest technology from HORN in the areas of gas heating, electrical control and E-Fusion-Power Boosting, the furnace is expected to go into operation in November 2023.



GLASSTEC 2022: SUCCESSFUL PARTICIPATION IN THE WORLD'S LEADING GLASS TRADE FAIR

After four years, the international glass industry finally met again for its world-leading trade fair in Dusseldorf from 20 - 23 September 2022. After the pandemic induced break, the global glass industry was able to meet again at the presence trade fair and exchange ideas face-to-face. With 936 exhibitors from 47 countries, glasstec once again more than underscored its role as the largest and most important event for the glass industry. 30,000 visitors from 119 countries came together at the world's largest glass trade fair and were able to get a personal impression of the industry's capabilities. Anticipation was particularly high this time because 2022 is the "International Year of Glass".

HORN Glass Industries AG was able to record the trade fair as an enormous success after the pandemic and reports a very positive course of the glasstec trade fair. At the newly designed booth many interesting and promising discussions could be held personally with customers, suppliers and business partners. Here, it was particularly expressed that HORN is always a reliable and trustworthy partner for the glass industry.

At glasstec 2022, HORN had the opportunity to underline its role as an industry leader in the development of technological equipment and the realisation of turnkey plants. Visitors from all over the world could be convinced of the high quality of the products. HORN's competent team of experts was pleased to discuss with the visitors technical requirements for their plants and to inform them about our latest developments:

- HORN E-Fusion-Power Boosting
- Glass Plant Technology Department
- JSJ Jodeit GmbH - Premium supplier for speciality glass furnaces
- HORN HRD-BEAM - Contactless glass level measurement based on radar technology

The next glasstec will take place every two years from 22 - 25 October 2024 in Dusseldorf - of course again with the participation of the leading international supplier of glass melting technology: HORN Glass Industries AG.



MAXIMILIAN SOLLFRANK CELEBRATES 70TH BIRTHDAY

The family of the company HORN Glass Industries AG congratulated their former CEO Mr. Maximilian Sollfrank on his 70th birthday in February.

The representatives of the staff presented him with a wine box containing exquisite wines. Mr. Sollfrank was accompanied by his wife.

In 1966 Maximilian Sollfrank started his training at HORN as an architectural draughtsman. During his time at HORN he acquired competence, experience, courage and the ability to actively shape a company. This also enabled Sollfrank to later take over the HORN board of directors. He managed the business in this position until 2014.



NORTHERN UPPER PALATINATE CORPORATE RUN 2022

On Friday, 16 September 2022, it was finally time again - after a break due to Corona, the 11th "Nordoberpfälzer Firmenlauf NOFI" (Northern Upper Palatinate Corporate Run) took place in Tirschenreuth. A region on its feet - including the company HORN Glass Industries AG with a total of 47 men and women.

The district town of Tirschenreuth was the venue for the major sports event for the 3rd time. This year, more than 560 teams were registered and mastered the 6.5 km distance in rainy weather. However, this did not dampen the atmosphere and the almost 3,600 runners and hundreds of spectators took the showers in their stride. For the finish, the sun came out as ordered and a rainbow shone in the background.

It doesn't really matter how fast you ran. The fun of running together is the core of the NOFI run. This is one of the reasons why the HORN staff takes part. The NOFI run was a lot of fun again and the anticipation for the next corporate run is rising.



ELEVEN YOUNG PROFESSIONALS START THEIR TRAINING AT HORN GLASS INDUSTRIES AG

From the first day of training, they are looking forward to a secure professional future and an exciting, wide-ranging field of work: eleven new trainees who started their respective training careers at HORN Glass Industries AG on 1st September 2022.

The future specialists were warmly welcomed by Stephan Meindl, CEO of HORN Glass Industries AG together with Sabine Götz, Head of Human Resources, on the first working day of their new phase of life and received welcome gifts under the motto "Born for HORN". They wished the new trainees a lot of fun and success for their professional future.

In addition to organisational matters, the start of the training included an extensive tour of the individual company buildings and departments led by the HORN youth and trainee representatives. In addition to a



HORN Glass Industries AG is pleased about their new trainees: Jonas Fiedler-Meier, Fabio Helm, Andreas Helm, Anja Schedl, Hannes Dirnberger, Anna Dill, Jeremy Rosenkranz, Pia Pannke, Heiko Frötschl, Hendrik Spitzl and Julian Gleißner.

well-structured induction, each trainee is supported by a person in charge from the respective specialist department in order to ensure a practice-oriented and successful training as a basis for a successful career.

This year, eleven trainees are strengthening the staff of HORN Glass Industries AG. The new

employees at the Ploessberg site include three metalworkers in construction technology, two architectural draughtsmen, three electronics technicians in industrial technology, two technical system planners for supply and equipment technology and one office management assistant.

ARE YOU BORN FOR HORN, TOO?

**THEN APPLY NOW
FOR THE 2023
TRAINING YEAR!**



**BECAUSE YOU
HAVE ALWAYS
THOUGHT BIGGER!**

WHAT DO YOU DO AT HORN?

VINCENT STEGER

QUALIFICATION: Certified mechanical engineering technician

WITH HORN SINCE: August 2019

AREA OF RESPONSIBILITY:

Project Manager Service at HORN Bau & Service GmbH (a subsidiary of HORN Glass Industries AG)



HOW DID IT COME ABOUT THAT YOU JOINED HORN?

After graduating as a technician, I was looking for a regional company that would offer me an interesting working environment with future prospects in the long term. After my job interview, which gave me a good impression in this respect, this was also confirmed to me by my friends and family, so I decided on the HORN company.

WHAT ARE YOUR RESPONSIBILITIES AT HORN?

My work environment includes the "Service" division. Here I take care of the service support for our customers. This means answering incoming enquiries and working out service solutions with the customer, preparing corresponding offers as well as processing and handling orders. In my position as project manager I am responsible for scheduling, cost monitoring, personnel allocation, etc. for the entire duration of the project. My tasks also include constant customer contact with on-site visits.

In addition to this activity, I travel all over the world to carry out inspections and endoscopies - these

are photographs taken from the 1600°C hot inside of the furnace. This is necessary to view and assess the wear conditions of the equipment. On this basis, any necessary repair work is then discussed with the customer.

WHICH OF YOUR ACTIVITIES DO YOU LIKE BEST?

The varied daily routine through our service assignments, the contact with our customers as well as the work steps to be accompanied from the first idea to the execution offer me a broad spectrum in which there is always something new to learn and experience.

WHAT IS NEW OR WHICH INNOVATION WILL BE IN THE FUTURE?

In the future, we will focus more and more on safety at work and on making work easier for our service personnel. For this purpose, new equipment and new techniques will find their way into our daily work, which will make the service work easier for us, but also more efficient for our customers.

NEW ORDERS

CUSTOMER	COUNTRY	FURNACE	PRODUCT
LAV	Turkey	175 t/d End fired furnace	Tableware
AmBev	Brazil	400 t/d End fired furnace	Container Glass
Sotuver	Tunesia	150 t/d End fired furnace	Container Glass
Zarafshon Oyna	Republic of Uzbekistan	300 t/d Cross fired furnace	Float Glass
Verallia	Germany	End fired furnace	Container Glass
Vetropack Moravia	Czech Republic	420 t/d End fired furnace	Container Glass
Libbey Crisa	Mexico	All electric furnace	Kitchenware
Borosil	India	All electric furnace opal glass	Tableware
-	Mexico	165 t/d End fired furnace	Container Glass
-	Mexico	375 t/d Cross fired furnace	Container Glass

IMPRINT

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