Successful commissioning of the world's largest end fired furnace

In March 2012, after 6 months of construction, a 175m² end fired furnace was successfully taken into operation at Hindustan National Glass in Nasik, India. The furnace is designed for a nominal melting rate of 635 tpd.

Hindustan National Glass (HNG) was founded in 1946 by CK Somany. Today HNG is one of the leading players in the Indian container glass industry with plants in Rishra, Bahadurgarh, Rishikesh, Neemrana, Nashik.
Neustadt an der Waldnaab, May 16, 2012, 18:30. A shot and all hell breaks loose. More than 3,400 people in running shoes and sportswear start the 5.8 km Nofi (Nordoberpfalz Firmenlauf) run in Neustadt an der Waldnaab. Among the 3,400 participants there are 49 HORN employees who have been training for weeks in preparation for this day. All the runners were highly dedicated and disciplined.

In order to optimize the running times and increase the motivation of all the runners, they trained regularly, individually and in groups. The last training session even took place on the course to be prepared for the local conditions. The training, fatigue and aching muscles, however, paid off. Horn was awarded the first prize for the most participants reaching the finish line of companies with up to 250 employees. The trophy now has a place of honour in the entrance hall. HORN took part in the Nofi for the second time this year. The challenge was organised for the third time this year by the newspaper "Der Neue Tag" in cooperation with the "Kliniken Nordoberpfalz AG". This year's theme was "Taking part is everything".

New Employee, Ulrich Imhof, at HORN Glass Industries AG

The HORN Glass Industries AG team is further complemented by Mr. Ulrich Imhof.

The former managing director of a major furnace manufacturer joined HORN in May 2012. As a graduate engineer of material science, Mr. Imhof disposes of more than 20 years of extensive experience in glass production as well as in sales and project management of glass melting technology.

As a committed and able employee, he is responsible for both customer service and the management of various projects at Horn.
Cooperative agreement with Fosbel

The HORN Glass Industries AG and HORN Bau & Service GmbH signed a cooperation agreement with the company Fosbel Europe GmbH. HORN and Fosbel will work especially in the field of services for glass melting furnaces and their marketing. In this area the services of three companies will complete one another optimally. The cooperation in particular will be successful for the companies, because they will adopt the services of the contractor in their offers.

Fosbel is a world leader in furnace refractory maintenance services. For over 30 years, Fosbel has developed and implemented innovative technologies that extend furnace life and increases productivity. Fosbel offers a wide range of innovative Furnace Maintenance Services e.g. ceramic welding.

The cooperation between the companies will cover the areas of marketing, drafting offers and joint project execution. The cooperation opens up new possibilities for both companies when conducting hot repairs, and the glass industry a comprehensive, worldwide service without interfaces.

**NEW ORDERS**

<table>
<thead>
<tr>
<th>Customer</th>
<th>Scope of order</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lizmontagens Group</td>
<td>Steel parts for ArdaghKnottingley</td>
</tr>
<tr>
<td>Artis Ltd</td>
<td>250 tpd end fired furnace with 2 lines</td>
</tr>
<tr>
<td>Vetropack Pöchlarn</td>
<td>Furnace 41</td>
</tr>
<tr>
<td>Mansoura Glass Plant</td>
<td>Equipment for 45 tpd recuperative furnace</td>
</tr>
<tr>
<td>Vetropack Moravia</td>
<td>Modification line 523</td>
</tr>
<tr>
<td>Samkwang Glass</td>
<td>Conversion from Bunker C-Oil to LNG</td>
</tr>
<tr>
<td>Sisecam</td>
<td>Batch charger HVR 700 F - 2P</td>
</tr>
<tr>
<td>Durobor Group S.A.</td>
<td>105 tpd end fired furnace</td>
</tr>
<tr>
<td>TRSG Glass Holding BV</td>
<td>Complete gas heating equipment</td>
</tr>
<tr>
<td>Sell Haustechnik GmbH</td>
<td>Control cabinet for cooling water plant</td>
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<tr>
<td>JSC “Dinur”</td>
<td>2 hood type furnaces</td>
</tr>
<tr>
<td>Sisecam-Trakya Glass Bulgaria E.A.D.</td>
<td>Float furnace gas heating equipment</td>
</tr>
<tr>
<td>Sisecam, Turkey</td>
<td>Container furnace gas heating equipment</td>
</tr>
<tr>
<td>El Nasr Glass &amp; Crystal Co, Egypt</td>
<td>Extension of end fired furnace to 67m²</td>
</tr>
</tbody>
</table>

Preparation is half the battle. Therefore the HORN Glass Industries AG exhibition team has been busy with the preparations for the participation at this year’s GLASSTEC since the end of 2011. HORN will be participating for the 13th time this year and it is always a new adventure. The newly designed booth is located in Hall 13, Stand B33. Each visitor, of course, has the opportunity to speak to a team of experts on-site regarding glass melting technology. In addition, visitors can also watch the new HORN Glass Industries AG image film on multiple screens this year.

Visitors can learn more about the working methods and structure of the HORN equipment by way of two models of the new HORN batch charger HVR 700 F-2P and the new innovative HORN forehearth concept. For information regarding exhibitions and events, please contact us at messe@hornglas.de.

News about Glasstec 2012 in Düsseldorf, October 23 to 26, 2012

"Always near you" is a popular advertising slogan. It symbolizes that the helping hand is always only a phone call away or a few minutes drive from the customer. This gives the customer peace of mind. If need be a rapid and uncomplicated response to inquiries, requests or an emergency is possible.

This concept prompted HORN to establish three more subsidiaries, in China, Malaysia and the Czech Republic, after the successful establishment of the subsidiary, HORN Glass India, two years ago. This is primarily due to the growing market in Eastern Europe and Asia.

Mr. Sollfrank, CEO of HORN Glass Industries AG, said: "We hope that our new subsidiaries can establish themselves just as well as HORN Glass India. We want to be more accessible to our customers, break down potential language barriers and increase the quality of service for our customers." The contact details for the HORN subsidiaries can be found in the footer of the front page.
Thanks to HORN's new HVR 700F-2P batch charger.

Here’s some tasty news for glass producers who wish to reduce energy and emission values: Due to the unique double paddle design of the new, static HVR 700F-2P charger, the dog house area is better sealed and therefore much hotter. The advantages:

- preglazing of the batch inside the doghouse – for furnaces with or without batch preheating
- reduced carry-over of raw materials
- reduced energy consumption
- reduced NOx emissions
- adjustment of batch layer through individually controlled paddles
- reduced wear and tear compared to screw chargers, for example

The new HVR 700F-2P: yet another example of our ongoing innovation. For an additional helping of our industry-leading solutions please visit www.hornglass.com
Improved gas flow measuring in melting tank heating

In the middle of last year HORN implemented measures to improve gas heating equipment with flow meters of the melting tank which show the current gas flow rate of each burner. The gas metal flow control units with analogue display were replaced by a measuring orifice plate with a measuring converter. The benefits of this restructuring are:

- Digital optical display in conjunction with 4-20 mA output
- Display and output in Nm$^3$/h
- No maintenance
- No display fluctuations
- m$^3$ accurate reading possible

Under the name “Siemens Solution Partner”, selected system integrators act as universally uniformly qualified solutions providers for Siemens in the automation and drive technology field.

The Siemens Solution Partner emblem represents highest quality, making it a reliable sign that projects are realised successfully. Contractually defined quality criteria for a Solution Partner as well as clearly defined processes for optimal support of a Solution Partner play an important role. This guarantees that HORN invariably distinguishes itself by its solid product and system know-how as well as by its excellent knowledge of the industry.

With HORN as a Solution Partner, the customer benefits from future-proof and tailor-made solutions which contribute significantly to the sustained improvement of the customer’s competitiveness.

SUDOKU

The objective is to fill this 9 x 9 grid with digits so that each column, each row, and each of the nine 3 x 3 sub-grids that compose the grid contains all of the digits from 1 to 9. The puzzle setter provides a partially completed grid, which typically has a unique solution. There is only one possible solution which can only be found using logic!

Further infos at:
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Concept, Design, Production
The Growth Group AG
www.growth-group.com
What do you do at HORN?

Name: Kopp
First name: Andreas
Occupation:
Graduate Engineer (University of Applied Sciences)
With HORN since: April 1997
Responsibilities: Managing Director of HORN Bau & Service GmbH since 1999

What do you do at HORN?
I am Managing Director of the subsidiary, HORN Bau & Service GmbH. HORN Bau & Service is the executive arm of HORN Glass Industries AG on-site. We have a strong team of highly trained specialists and experts in high temperature work environments. The high precision achieved by our employees in the bricklaying and hot repair work is the basis for long life and trouble-free operation of the glass melting furnace over many years.
Our staff operates all over the world wherever there are glass melting furnaces.

What activities do you enjoy most?
I enjoy it most when I can visit satisfied customers or when they visit me. Customer satisfaction is one of the most important factors for us since we are a service company. Only satisfied customers recommend a company and that’s still the best advertising.

What’s new?
On the one hand, we implemented a re-certification of our Occupational Health and Safety Management System, AMS Bau. On the other hand, we have recently signed a cooperation agreement with the company, Fosbel. We agree that cooperation between our renowned companies in the hot repairs area will have a significant positive impact for our clients. Interfaces, for example in ceramic welding, are eliminated and new opportunities arise in hot repairs.

The quote "standstill is death" by Max Frisch applies to many things in life, even to business. New developments revive the business and have many advantages for customers as well as HORN. The HVR 700 F – 2 P is such a new development and represents a step forward in the Horn product range.

The HVR 700 F – 2 P is fixed to a movable carriage with a non-rotating frame. The rigid construction allows better sealing of the doghouse, which increases the temperature within the doghouse. This leads to pre-glazing of the batch within the doghouse, which allows the use of pre-heated and non-preheated batch.

The straight heat shield is designed with reinforced insulation. There is an inspection port in the doghouse hood. The HVR 700 F – 2 P has a single vibrating chute, which is separated lengthwise in the middle by a bar and two separate pushers for each side of the chute. The end piece of the vibrating chute is made of heat resistant steel and is water-cooled and interchangeable. The two water-cooled pushers can be operated in three different modes. The pushers can operate absolutely synchronized, or synchronized but offset at 180°C to one another, or independently from one another.

Wisdom at the end ...

"He who always does what he already can, remains what he is."

Henry Ford (*1863, † 1947)