

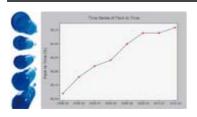
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MESSAGE IN A BOTTLE



These days, **energy** is valuable in more ways than one – we can't live our everyday lives without it but the monetary and environmental costs of using it are continually rising.

Here at Heye International, one of our primary goals is to work with our customers in reducing energy consumption by making their production lines even more efficient. This is one of the guiding philosophies behind the Heye Technical Assistance Agreement.

We make our knowledge, experience and expertise available to our partners, providing them with the latest developments in processes, machinery and techniques, as well as direct consultation with our large pool of in-house experts. This collaboration results in increased Pack to Time ratios and overall production efficiency.

In this way, Heye International is helping to cut the energy usage of the container glass industry, reduce

REFLECTION AND OUTLOOK FOR 2011

Spring is well and truly in the air and, here at Heye International, we find ourselves asking where the first part of the year has gone? The answer is simple – we have been enjoying our work so much that we haven't noticed the time flying by!



I am delighted to be able to tell you that we have had a

very strong start to 2011, advancing ongoing projects, building on existing customer relationships and opening new doors whenever possible. The first third of the year has been both exciting and rewarding, and all the indications are that 2011 will be a fantastic year for Heye and its partners.

However, 2011 has not all been good, as the world media has shown us through its coverage of the events in Japan. We join with everyone in sending our most heartfelt thoughts to all those affected and are only too happy to assist them in some small way by making a donation to the international aid effort. We are heartened by the way in which the whole world has rallied to help those in need in Japan and look forward to celebrating the recovery of this strongest of nations and her people, which will make 2011 truly a great year.

Yours, Dirk Pörtner

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SINGLE-STAGE FORMING RESEARCH PROJECT

Heye International is proud to be an integral part of the new, government-sponsored EinFormGlas research project, exploring the viability of single-stage forming. Dr Michael Kellner, Heye's Director of Research & Development and a key advisor on the project, suggests that the goal should be a modular system, capable of integration into existing production lines, as the development of a stand-alone machine could take 5-10 years.

costs for our customers and preserve our precious environment.

IMPRINT

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One of the biggest challenges to glass as a packaging material is weight reduction. Traditional container glass manufacture employs a two-stage forming process, which uses a generous amount of glass and has the advantage that heat-retention allows minor surface imperfections to heal during production.



This self-healing does not occur in single-stage forming, leading to a lower overall consistency of production quality. Therefore, a primary goal of this project is to optimise the integrity and stability of the final product by, for example, eliminating sand accumulation or dust build-up in the furnace. This allows the creation of totally homogeneous batches. A further challenge is to avoid the occurrence of asymmetries in the gob, which

requires an even temperature distribution within the glass. New advances in other areas, such as mould lubrication, are also important.

This first stage of the EinFormGlas project aims to reduce wall thicknesses by a third to only 0.7-0.8mm. It further consolidates the position of German glass machine manufacturers as global leaders and advances the merits of glass as the most healthy and environmentally friendly packaging solution in the world.

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CUSTOMER PORTRAIT: TONGCHAN



Tongchan Packaging Group - the fastest growing high-grade packaging manufacturer in China

In recent years, the Chinese glass market has grown at a rate of more than 10% per annum. Having enjoyed success since 2005 in the manufacture of packaging for cosmetics, Shenzhen Tongchan Packaging Group entered this arena in 2007 with its acquisition of Shenzhen Huajing Glass. In 2009, the Group continued its investment in the high performance glass market with the setup of a new greenfield plant, ultimately commissioned in 2010, in Gaoyao (Guandong Province), with one triple-gob and one double-gob line dedicated to beer bottle production. Heye International was selected as the Group's technology provider and technical partner for this project. The second phase of the Gaoyao

project, upscaling production to two triple-gob and three double-gob lines, will come into operation in 2011. The plant's main customers are international brewers with a presence in the Chinese market and large Chinese condiment suppliers. Furthermore, Shenzhen Tongchan Packaging Group is continuing to expand by way of another project in Nanchong (Sichuan Province), also scheduled to be operational in 2011, and again in partnership with Heye International. Accordingly, we at Heye are very much looking forward to the continued future growth of this prospering and extremely successful group.

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HEYE INTERNATIONAL LOOKS TO THE FUTURE WITH NEW PREMISES IN NIENBURG



Building on the success of its
SmartLine product range, Heye
International is already taking steps to ensure that it will be able to meet the future demands and

expectations of its customers.

In order to maximise efficiency, we have brought together all our Cold End facilities, including Research & Development, in a single new site in Nienburg. The new premises more than double the production area and offer the potential for additional expansion in the future.

This process began three years ago with the successful integration of Busch & Spreen into Heye International and our current workforce in Nienburg of more than 50 people is the result of the perfect merging of our companies.

With the creation of the HiSHIELD brand specifically for the full range of Cold End applications, Heye International has further strengthened its position as a market leader in this sector.

We are looking forward to meeting the challenges of the future with confidence.

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