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BI-MONTHLY INTERNATIONAL MAGAZINE FOR GLASS MANUFACTURING



YEAR 30 • ISSUE NO. 6/2017

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Stephan Meindl
CEO • MD

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EDITOR-IN-CHIEF

Marco Pinetti..... marco.pinetti@glassonline.com

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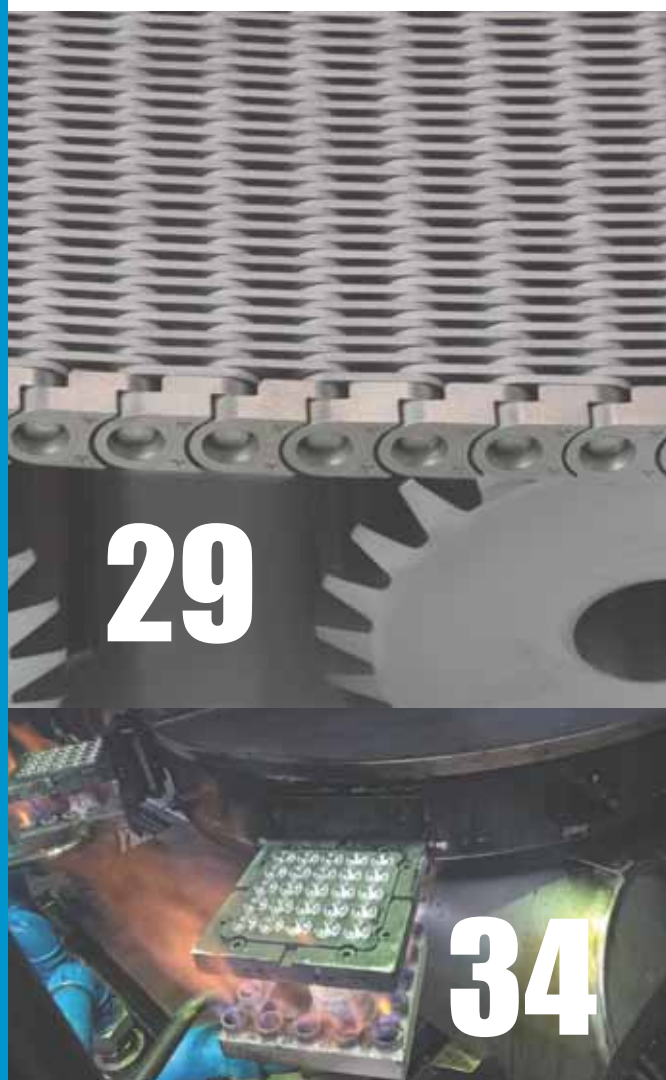
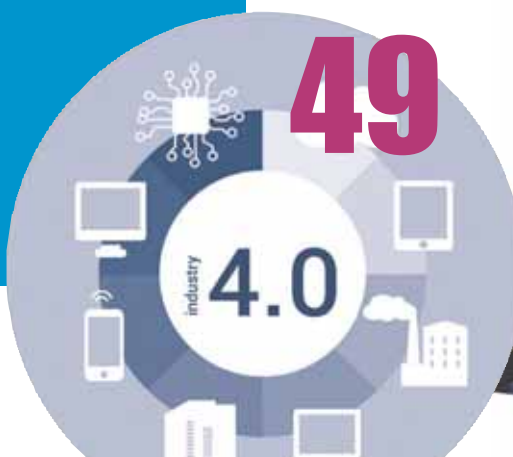
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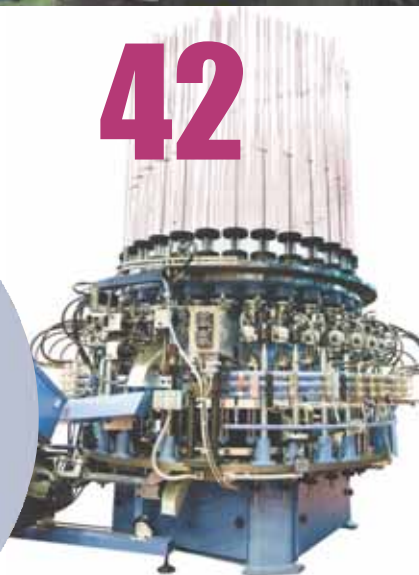


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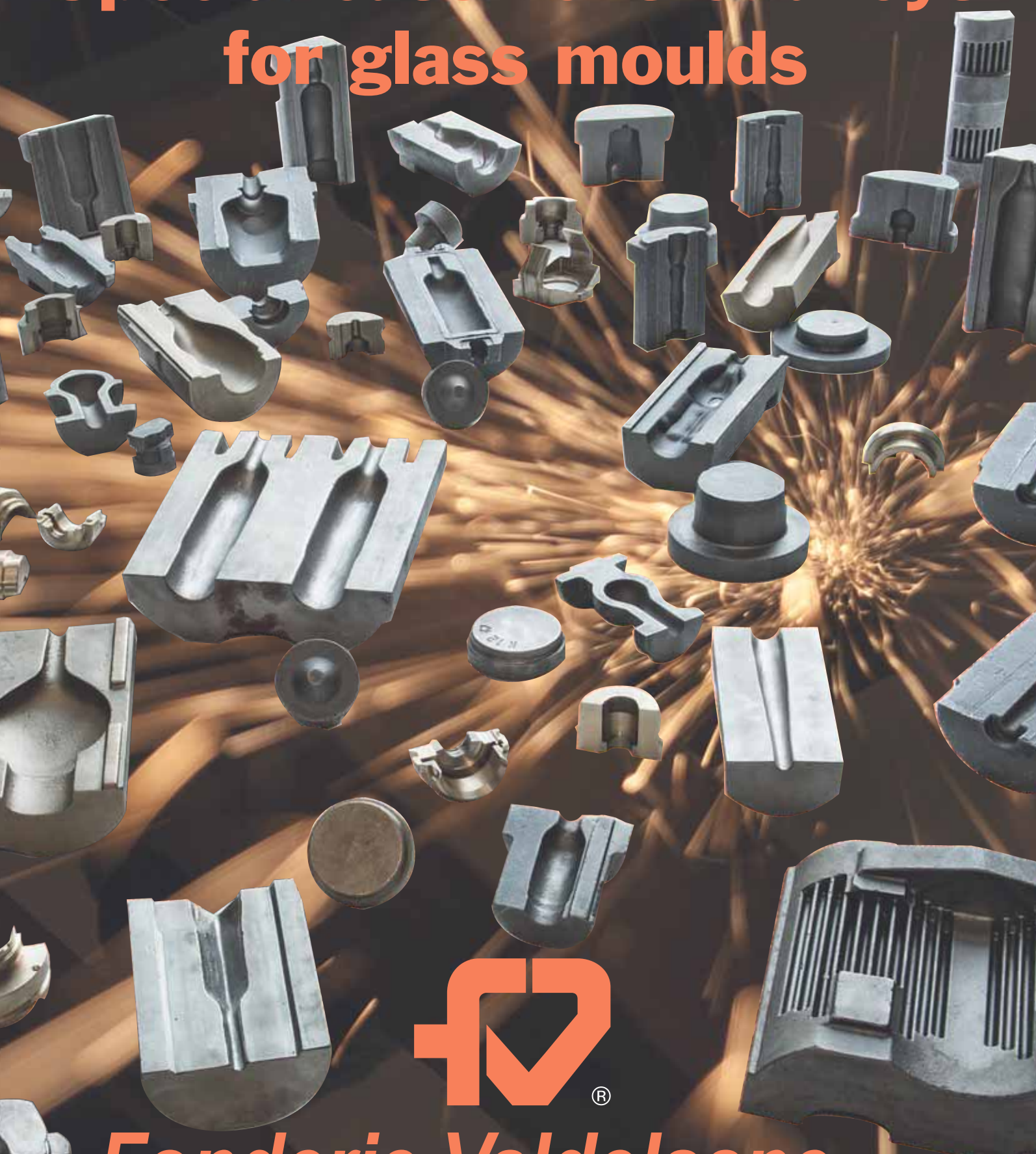
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issue	exhibition/conference	date	venue	deadlines
2018 1	GLASSMAN ASIA	24-25 January	BANGKOK Thailandia	Deadline Adv files: 20-12-2017
	PHARMA PACK	7-8 February	PARIS France	
2018 2	GLASSMAN LATIN AMERICA	21-22 March	GUADALAJARA Mexico	Deadline Adv files: 17-02-2018
2018 3	CHINA GLASS	19-22 April	SHANGHAI China	Deadline Adv files: 21-04-2018
2018 4	MIR STEKLA	28-31 May	MOSCOW Russia	Deadline Adv files: 21-07-2018
		29 May 1 June	MILAN Italy	
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2018 5	GLASSTEC	23-26 October	DUSSELDORF Germany	Deadline Adv files: 28-09-2018
	ALL GLASSTEC EXHIBITORS ADVERTISING IN THIS ISSUE ALSO RECEIVE A FREE GLASSTEC PREVIEW 			
2018 6	CONFERENCE ON GLASS PROBLEMS	November	COLUMBUS (OH) USA	Deadline Adv files: 22-10-2018
	HOLLOWGLASS ASIA	28-30 November	KUALA LUMPUR Malaysia	
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2017-07-05 - Filtraglass, manufacturer of water filtration systems for all types of industries, will be participating in the Colombia Glass 2017 event.

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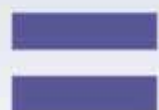
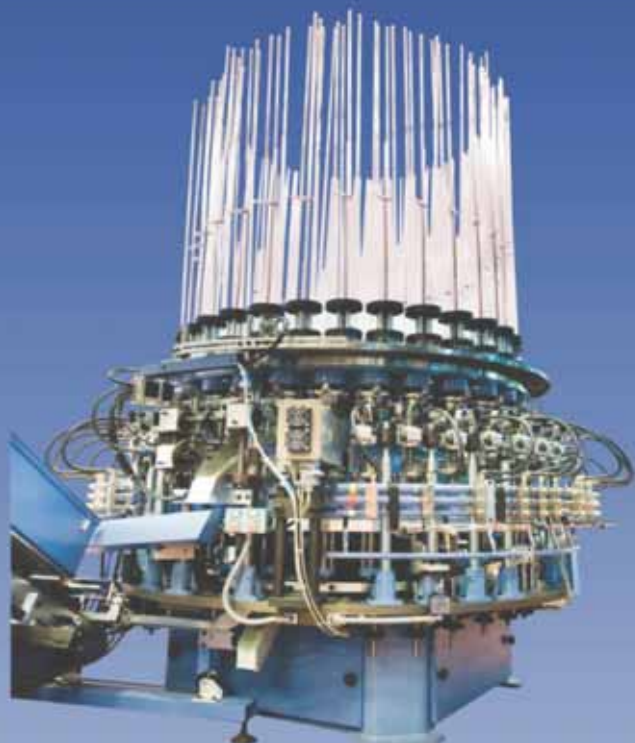
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XPART VISION

MEET THE R&D DEPARTMENT

Helping the glass industry optimize their business results, working at closed loops, dark factories and Glass Industry 4.0 requires a lot of knowledge, experience, research and development. Many factories need all their resources to keep the business running 24/7 and to solve their problems and issues on a daily basis. Where factories cannot invest in Research & Development, companies like **XPART Vision** make a difference.

“In our own R&D department we employ 15 highly skilled experts, among them a number of PhDs,” says Sander de Jong, XPART Vision’s Lead Development Engineer. “Together, we form a multidisciplinary team. We develop our future systems, improve and maintain our current systems and support our customers as a second-line support team.”

The modern glass industry is becoming more automated and manual operations are being minimized. The machinery consists of hardware and software that constantly needs to be improved. Computerized parts of the machines also generate larger quantities of data each time. It requires more complex algorithms to analyse and apply the data in a timely manner (preferably in real time). Last but not least, robotizing certain parts of the process demands computer vision, an essential discipline. In the Hot End process everything revolves around infrared cameras.

XPART Vision consultants spend a lot of their time in glass factories, where they help clients to implement, operate and optimize the systems. “After implementing and using our technology, clients often have

feature requests, specific wishes to customize our technology even further to the local situation, or to the personal preferences of the operators,” said Sander de Jong. “It’s always very satisfying to work together, fulfil wishes and see happy faces. On the other hand, sometimes we have to fix bugs in the systems. Although we don’t like bugs, we do learn from them. Every bug gives us a clue for further improvement. “With most of our clients we have a real-time remote connection with our systems, through Virtual Private Networks (VPN). If necessary, we can watch live over the shoulders of the operators, to see what is happening. Real time remote support is getting more and more important, since our systems are increasingly connected in closed loops. This means that they directly influence

the production, so we must be able to respond instantly, when asked. “Working at the R&D department here is very versatile. This is where the magic happens! Our work touches all imaginable disciplines of a high-tech company in a worldwide industrial setting. Big plants, with robust machines that produce 24/7. Employees with tight schedules and little time. Hot and noisy work floors, with lubricant in the air everywhere. We can add value, through high tech engineering, modern applied mathematics and algorithms, high speed cameras, real time processing, big data: you name it! Together, we work at the glass plants of the future: profitable dark factories, with robots, closed loops and the structural reduction of failures, carbon dioxide emissions, use of raw materials and transport costs.”



PNEUMOFORÉ

MAIN SPONSOR OF ‘PRETIOSA VITREA’ EXHIBITION

As old as the invention of writing, glassmaking is accompanying the human history since its early beginnings. To draw the public’s attention to the idea of glass as an ‘eternal’ tool, **Pneumofore** is sponsoring the exhibition “Pretiosa Vitrea - The Art of Glass Manufacturing in The Museums and Private Collections of Tuscany”, held from 17 October 2017 to 29 January 2018

at the National Archaeological Museum of Florence, Italy. The project, made possible by the financial contribution of Pneumofore, gives prominence to the evolution of glass manufacturing in history through the display of ancient and rare glass artifacts, nowadays preserved in state museums and private collections. Promoted by the Sehen Foundation in collaboration with the Archaeological Museum, the exhibition is held under the patronage of the Italian Ministry of Cultural Heritage and Activities and Tourism and it is accompanied by a content-rich catalogue.

Pneumofore, strongly committed to the glass industry with its vacuum and compressed air solutions, promptly supported the rediscovery of this prestigious glass heritage whose significance is invaluable.

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GERRESHEIMER GX ELITE VIALS AT CPHI WORLDWIDE

The *Gx Elite* vials have set new standards for type 1 borosilicate glass vials. They are the result of comprehensive optimization measures in the conversion process, which have focused on designing out the risk to create product flaws during production including the removal of all glass-to-glass contact beginning with the tubing material all the way through final packaging. The chemical composition of the borosilicate glass is still the same. **Gerresheimer** showcased Gx Elite vials at *CPHI Worldwide*.

"Our Gx Elite vials are setting new standards when it comes to quality," says Jens Heymann, Senior Vice President Europe & Asia Tubular Glass at Gerresheimer, underlining the major difference that avoiding glass-to-glass contact in the production process can have on vial quality. The highly shatter-resistant vials are extremely durable and free of cosmetic defects. They also boast an incredibly robust structure, while their resistance to delamination protects the drug inside. Simple handling and a range of packaging options ensure that Gx Elite vials can be supplied for end-to-end use on various filling lines. For customers, this means lower costs and higher quality.

All of Gerresheimer's tubular glass plants that produce vials work with standardized monitoring, inspection, and packaging technologies, which essentially comprise the Gx G3 and Gx RHOC systems. The inspection systems, for one, are developed in house and form part of a close-knit testing system that ensures the highest

precision and quality assurance in line with the latest standards. Complete with five HD cameras, the Gx G3 inspection system makes sure that cosmetic defects are identified reliably, for instance. The intelligent software detects and classifies the defects in a few fractions of a second, while the Gx RHOC system ensures dimensional quality with three HD matrix cameras on each side and a hypercentric ID camera.

Injection vials set the benchmark for primary packaging for parenteral drugs. Gerresheimer's come in all sizes and comply with the relevant international standards and pharmacopoeias (EU, USP, JP). The company's range includes solutions for bioengineered drugs and other specialist pharmaceuticals.

Gerresheimer is a leading global partner to the pharma and healthcare industry. With specialty glass and plastic products, the company contributes to health and well-being. Gerresheimer operates worldwide and its approximately 10,000 employees manufacture products in local markets, close to its customers. With plants in Europe, North America, South America, and Asia, it generates revenues of approximately EUR 1.4 billion. The company's comprehensive product portfolio includes pharmaceutical packaging and products for the safe, simple administration of medicines: insulin pens, inhalers, prefillable syringes, injection vials, ampoules, bottles and containers for liquid and solid medicines with closure and safety systems as well as packaging for the cosmetics industry.

METAGLOBAL

REPRESENTING WELL-KNOWN PLAYERS IN THE GLASS INDUSTRY

Metaglobal recently celebrated its 10th anniversary with a series of technical events in the presence of suppliers and customers from the global glass industry. Metaglobal, is a trading company, based in Lisbon (Portugal) representing the interests of several well-known players in the glass industry, in Portugal and Spain, but step by step

reaching other markets such as Italy, Belgium and Poland, places where our customers also have production facilities. Recently celebrating its 10-year anniversary, META held a series of technical workshops held in Montereal in May and June with the participation of customers such as BA Glass, Santos Barosa,

Libbey and Verallia. The invited suppliers were Pennine, Zirpro, GPS, Interglass, Pneumofore, TIB Chemicals, Novaxion, Duratemp Wall Colmonoy, Marpak, Orrion Chemicals, Rosario and Zecchetti, all who took part in this event, showing local customers a different way and approach to the market.

Moreover, about one year ago, META started to promote the sales of technical solutions for IS equipment, locally produced and developed over a period of several years in a very close relationship with the customers, trying to solve some of glassmakers' daily problems. New designs, new engineering and better materials such as titanium, are being used in order to ensure longer life time, easy mounting and less stoppages during production.

BDF INDUSTRIES

MAJAN GLASS FURNACE REBUILD SUCCESSFULLY CONCLUDED



The **BDF** team has successfully carried out the rebuilding of Furnace 1 at **Majan Glass**, Oman. With this operation, the Omani plant concludes the first important step regarding the improvement of its entire glass plant and process control.

The 45-day glass-to-glass period was met, with glass in line on 29 September,

after a challenging job of deep cold repair, which was extended on full checker blocks replacement and complete forehearth's change, control systems upgraded on the furnace and on the Batch Plant, where BDF was involved along with its Automation Division. A C Class repair on one on the existing BDF line completes the work scope after a successful C Class repair and NNPB process start up on another existing line.

FEVE

HOW GLASS PACKAGING MEETS EMERGING CONSUMER TRENDS IN PERFUMERY



The Perfumery and Cosmetics industry are servicing the needs of their consumers and packaging companies are supporting Brand owners in meeting these needs. To fully understand and anticipate final consumers' needs, we have first to investigate what are the emerging consumer trends. What do consumers need and wish from the perfumery industry? What can glass packaging bring as added value?

A panel of six CEO and High Level Speakers

from **FEVE** member companies *Stolzle, Verescence, Bormioli Luigi, Pochet, Heinz, Zignago*, presented recently launched or launching products which are concretely helping the perfumery and cosmetics industry to meet emerging consumer trends. The session was moderated by Michel Fontaine – President of the "Conseil National de L'Emballage" formerly the International director of Product and Packaging Development at L'Oreal for 20 years.

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QUERÉTARO IS ITS BEST FACILITY OF THE YEAR

Gerresheimer's Querétaro site in Mexico has been awarded the best facility within the pharmaceutical and medical packaging group. The site has made multi-million dollar investments in the past three years in vials, ampoules, pre-fillable syringes and specialties.

Hector Garcia, Senior Plant Director Querétaro, Tubular Glass Converting, said the site now has the most modern and efficient manufacturing lines in the industry to produce vials and ampoules, which are equipped with dimensional and cosmetic inspection systems. "These allow us to deliver to our customers, mainly pharmaceutical laboratories, the highest

GERRESHEIMER

quality containers for injectable drugs, fulfilling and surpassing the most strict quality requirements of the pharmaceutical industry and of medical devices." At the same time that the installation and validation of the new equipment was taking part, the site held ad hoc courses and trained personnel for the optimum operation of the equipment. Now, Gerresheimer Querétaro, produces 1.3 billion units per year, which is one container per six human beings in the world. It delivers to customers in Mexico and export to the US, Canada, Central America, Brazil, Chile, Argentina, Germany, Austria and India, among others.

Mr Garcia added: "Some of the main factors that

made us deserve this recognition among the group are our work philosophy based on Total Quality in all areas, High Performance Culture and Teamwork, and with the application of the Gerresheimer Management System (GMS) management tools we obtained a high customer satisfaction level and consequently outstanding business results."

REBUILD OF MOMIGNIES OPAL FURNACE COMPLETED

Gerresheimer has completed the rebuild of one of its furnaces at its Momignies, Belgium plant, where it makes a diverse range of glass for the perfumes, cosmetics

and beauty sector and operates two furnaces. One of these is the only furnace in the group that produces opal glass and offers a full portfolio to Gerresheimer's customers.

Nicola Balena, Gerresheimer Momignies General Manager, said: "The entire workforce showed great enthusiasm and they were happy to accommodate all the inconveniences associated with the installation of a new furnace."

Gerresheimer said its customers were welcome to visit the remodelled and modernised plant to see the technical optimisations and finishing options. Opal glass can also be used for segments such as spirits, food and household. It gives the packaging a visual appeal that differentiates it from standard glass and allows for a sophisticated individualisation of glass bottles, flacons and jars

CROXSONS

NEW PROMOTIONS

Glass packaging company **Croxsons**, has announced two new board level promotions as the company continues to grow and increase its market share. Formerly occupying a sales manager's role, Paul McGrane has been promoted to sales director. Having worked for the company for 11 years, his new position will focus on the Croxsons' sales team, their direction and performance.

George O'Brien, also previously a sales manager, moves into the role of commercial director. With eight years' experience with the firm, his responsibilities include providing strategic direction and control over the operational side of the business.

In a joint statement, both Croxsons' chairman, James Croxson, and COO, Tim Croxson, wrote, "These are exciting times for the business and we are delighted



to be offering promotions to Paul and George. The appointments follow a period of strong growth for the company, throughout which both have made significant contributions to the company.

"They have proven themselves to be hugely capable leaders and we look forward to their participation, in the wider context of the business, in helping to build strategies to complement our ambitious and aggressive growth plans. Both will continue to directly manage their customers."

Croxsons has been supplying glass packaging and closure solutions for nearly 145 years. Their faultless commitment to quality and the customer journey continues to provide leading brands with unique and unrivalled packaging solutions.

SCHOTT

EXPANSION AT US MANUFACTURING PLANT

SCHOTT glass made of ideas

Pharmaceutical and speciality glass manufacturer **Schott** has invested in the expansion of its delamination controlled vials manufacturing facility in the US.

The rise in biotech drug formulations has triggered an increasing demand for primary packaging with superior surfaces and high cosmetic quality,” said Christopher Cassidy VP Sales & Marketing, North America, Schott Pharmaceutical Packaging. To cater this need, the international technology group will be expanding its Schott Vials DC (Delamination Controlled) manufacturing capability in the beginning of the first quarter of 2018 to also supply customers from its Lebanon, PA facility. Over the past few years, delamination has led to recalls of numerous injectable drugs. Schott said its Vials DC reduce the risk of glass delamination and brings it under control. It has developed a hot forming technology to prevent delamination. The

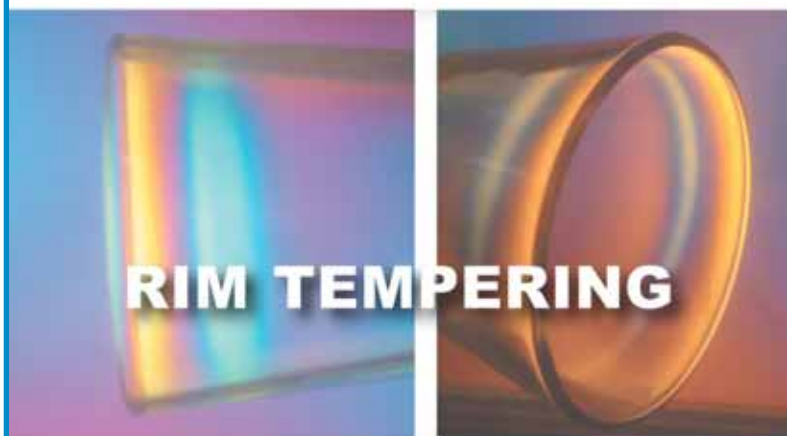
hot forming technology creates a chemically homogeneous inner surface for the vial, improving its chemical stability. Each batch of vials undergoes a clear control strategy based on the company’s Quicktest, which uses a predefined quantitative limit value to verify that the delamination risk has been reduced and is under control. Optimised manufacturing is also the key to preventing chips and cracks in the glass surface and improving overall cosmetic quality. This facilitates automated machine inspection during filling operations and makes the vials less susceptible to breakage. “Glass has a remarkably high internal strength”, said Cassidy. “Its weak points are small cracks on the surface or edges. Micro-defects caused during production or handling spread inward as mechanical stress increases. “This can lead to fractures. An intact surface will already make a glass vial twice as resistant to breakage without any additional treatment.”



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'GLASS AND MODERN TECHNOLOGIES-XXI'



The **International Forum 'Glass and modern technologies-XXI'** will be taking place at the Institute of glass, Vladimirskaya oblast', Gus ' -Khrustal'nyy, Russia, 23-24 November, with the key theme of: "Problems that hinder the development of the glass industry and their solutions". Organized by the Association United

National Council of the glass industry enterprises "StekloSouz" of Russia, the topics of the event will include:

- Strategies and trends of development of domestic glass production.
- State support measures: Russian reality and world practice, import substitution and export.
- High quality machines and equipment for the glass industry.
- Quality and affordable raw materials - basis for high profitability.
- Design glass companies from scientific idea to the project.
- Features of design, materials and equipment to create safe and energy-efficient glass constructions.
- Problems with supply of power plants. Technologies of energy efficiency.
- Modern refractory materials. Technical possibilities for increasing the life cycle of a glass furnace.
- Recycling. Energy saving.
- Problems of application of new types of glass products. Nanomaterials.
- What prevents the development of foam glass production in Russia.
- Quality control.
- How to effectively collect debts and to save on legal costs.
- Changes in the legislative base. New standards.
- Protection of results of intellectual activity (RIA). Judicial practice, within the countries members of the WTO.

Those who wish to take part in the conference should send their application to the Organizing Committee by e-mail to: kristina@steklosouz.ru, or call: (495) 411-68-40.

ENCIRC

BRINGING BOTTLES TO LIFE WITH AUGMENTED REALITY



Thanks to its new *Augmented Reality (AR) Service*, customers of UK-based container glass manufacturer **Encirc** can see their glass container designs brought to life. In fact, the AR technology means Encirc customers can view their glass packaging design concepts in real-world settings as well as move and amend them quickly. The AR technology service superimposes a computer-generated design onto a customer's point of view via an

iOS app on a tablet or smartphone. When compared to the typical method of 3D printing prototypes, this digitisation of the design process increases the efficiency and speed at which Encirc's customers' products come to market. The new AR offering will build on Encirc's current design options which already allow customers to create innovative and effective containers through the use of Computer Aided Design

(CAD) technology. Combined, Encirc's CAD and AR services will ensure the technical quality of the product is optimised, while the aesthetics still meet the desired requirements. Using AR, Encirc can put container concepts through their paces using virtual reality stress tests. These deliver comparable results to real-life testing, but can be completed in approximately one week. By doing this, it allows Encirc to gain an accurate understanding

of what will happen when glass prototypes are progressed to the trial stage, and therefore decrease the chance of re-trials. Streamlining the whole process is also more sustainable as it reduces the total amount of products used during the testing process. Rob Coates, Product and Graphic Designer, Encirc, said: "Our new service is in-line with our future-thinking focus and mission to make Encirc even more efficient and sustainable through the use of innovative digital technology."

VERTECH

SIL SYSTEM FOR INDUSTRIA VIDRIERA DE COAHUILA

Mexico's **Industria Vidriera de Coahuila** (IVC) has placed an order for a **Vertech SIL** system on seven of its production lines. The system will be installed on four production lines on its furnace number 3 and three lines from furnace 4. Both furnaces' decoration

lines and mould shops will also be installed with the SIL system.

The IVC plant in Nava, Coahuila, Mexico is a joint venture between



O-I and Constellation Brands.

The order was placed in the middle of December 2016 after the successful installation of SIL on the six lines of furnaces 1 and 2.

With several improvements specifically developed for the plant throughout the year, the SIL version is set to improve plant operations for the demanding expectations of the market.

Vertech's presence in Latin America has been growing recently as the region, prolific in the production of glass containers, continues to supply the market with products.

SAVERGLASS

COMMISSIONING DATE FOR MEXICAN FACILITY SET

Construction of French company **Saverglass**' container glass facility in Mexico is making rapid progress, and the commissioning date has been fixed for 2 June 2018, with aims to produce 80 million bottles a year.

The French company has invested EUR 100 million in the new container glass facility about 40km from Guadalajara, which will produce bottles for tequila, wine and rum and produce bottles in a variety of colours. The group will focus on three markets: American wines, tequila and the rum market in the Caribbean and Central America.



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OCMI

double tip ampoules production for Vietnam



O CMI/Moderne Mecanique confirms once again its great flexibility by providing forming and after-forming equipment for the production of special types of ampoules, outside of ISO DIN standards. This is the case of special machines used to manufacture double tip ampoules, products that are still relevantly produced and sold in France and former French colonies such as Northern African countries and Vietnam. In the past, these countries had an important tradition of filling machines working with vacuum system, perfectly suitable for double tip ampoules. This is the reason why this type of ampoule is particularly popular there.

DOUBLE TIP AMPOULES

Double tip ampoules are usually manufactured with amber

glass of Hydrolytic Class II and filled with drinkable solutions that are not subject to restrictions linked with alkalinity, and do not need to be packed into fully neutral borosilicate glass.

OCMI has already supplied several lines to produce this type of container in Vietnam, where the main manufacturer of double tip ampoules recently decided to improve its production capacity. In this case, the forming machine has the same structure as an MM30 standard forming machine, with the possibility to produce ampoules from 1ml to 20ml, but a special section must be installed to manufacture this special product.

Camera inspection system can be installed under customer's request even if in Vietnamese factories such controls are still not

OCMI/Moderne Mecanique are well-known for their forming and after-forming equipment for ampoules and in this article the companies demonstrate how they can take a step further and provide this type of equipment for special types of ampoules. The most recent supply of this machinery was for Vietnam for double tip ampoules.

very common, and visual inspection carried out by operators is still the preferred working way.

PARTICULAR SHAPE, DELICATE OPERATIONS

The opening of the finished ampoule tube is not carried out with a dedicated burner but is realized through cutting blade scoring the capillary made through stretching operation. Thanks to this operation one of the tips remains open to allow the next filling operation.

Due to the particular shape of this ampoule of course it must be handled with the utmost care along the after-forming process in order to avoid any breakage. After-forming line is usually equipped with double color ring device with two parallel ink tanks. Printing station is available in the standard version and also the annealing lehr keeps the same features of standard electrical oven for ISO ampoules. Scoring section, that is an obsolete device for the production of standard ampoules, it is used for double tip ampoules and usually installed before packing units. Packing is a very delicate operation in case of double tip ampoules since the product can't fall down into the box like standard ampoules since the tip capillary would get broken. In order to avoid such problem, the ampoules are picked directly from the chain and collected in special boxes placed in vertical position.

VIETNAM – A SMALL BUT FAST GROWING MARKET

Vietnam remains a small market but the growth of ampoule business has been important in the last three years. It is one of the fastest growing pharmaceutical markets in Asia and the expected growth



through 2017 is 20 per cent. This is also fueled by the progressive expansion of population and growing possibility of access to medicines across the country. This trend is followed by Government policy so that National Health Insurance System that is expected to cover 90 per cent of Vietnamese people within 2020.

This is why OCMI is constantly monitoring this market and waiting for new actors to get into the business of glass pharmaceutical packaging.

The two main ampoule manufacturers improved relevantly their production capacity in the manufacturing of standard and double tip ampoules with OCMI machines supplied from Italy or France.

THE OCMI GROUP

OCMI Group has 15 production lines installed in Vietnam. FA36S, developed at OCMI's Italian headquarters of Milan for which OCMI India provides technical assistance to Vietnamese customers, is composed by 36 stations. Six of these stations are used to produce the first bottom of each new glass tube in order to reduce the glass waste and manufacture one more ampoule per tube.

MM30 forming machine, developed in OCMI French factory of Moderne Mecanique, is suitable to produce standard and double tip ampoules. Both machines can be connected with Moderne Mecanique processing line LA502, with different configurations according to the type of container to be produced.

Commercial support is offered in a really timely way thanks to a local Representative linked to OCMI by a long term trusted relationship. Technical assistance could be provided from Europe or from nearest OCMI subsidiary in India.

OCMI India follows directly Vietnam market offering spare parts and, if needed, reconditioning services to the customers under the direct supervision of Italian headquarters. ■



OCMI OTG SPA

Via Venezia Giulia 7
20157 Milano (MI) - Italy
Tel.: +39 - 02 - 3909181
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HEYE INTERNATIONAL

technology, people
and complete service

Glass Machinery Plants & Accessories (GMP&A):
What can you tell me
about the Heye International and
its markets right now?

Jens Langer, Heye International (Heye): If we consider markets, we can say that Asia is becoming a strong market for us, along with China in particular, especially in the last few years. We are also seeing growth in Central and South America as well as Australia and Thailand, which are strong markets for us. And going back to Asia, there are some

larger projects coming up for us, as well as in Africa. But as we all know, business is not as fast moving there as in other areas, and it is not a very easy market to work with. But in Europe there are only few new big projects as companies tend to carry out restructuring and renovation.

GMP&A: Why is this? Is it because Europe is now a market that has reached 'the top' ...?

Langer: The European situation is quite different as there are glassworks and companies that

are working on improvements on their productivity, mainly replacing outdated equipment by modern machines, while there are other big companies taking over smaller ones. The concentration of plants and integration into one bigger company is still going on.

GMP&A: Does that mean that in the future we will have about four or five big companies controlling all the industry?

Langer: Perhaps more than five, as some local or regional players will keep their strong position,



Jens Langer

During Glassman in Lyon, France, we spoke to Heye International, and the company's Director of Sales and Marketing Jens Langer and Mark Ziegler gave us an overview of what is happening at the company and how Heye is continuing to develop its products and services for glassworks – with safety in mind.

apart from the 4-5 global players. From our perspective as a machine manufacturer and service provider there are opportunities and challenges. A challenge is that the suppliers can maintain the contact to the local plants and their people, if negotiations only take place in the headquarters. On the other hand, a centralised organisation helps to achieve a common technologic standard, helping to reduce costs.

GMP&A: How is choice affected? If you have a large number of

companies – let's say 50 – selling their products, with fewer big companies you are surely going to have less choice and less flexibility in price.

Langer: From our point of view it means that you have fewer customers but at the same time a decreasing number of competitors. Both will have advantages: The supplier will be able to focus more on standardisation and develop better products at better prices with high-technology and less variations. The procurement and sales process will be

shorter and more efficient for both sides. This does not mean that we will forget the technicians in the plants but we will have to re-orientate our sales process to cover both needs, the commercial and the technical one.

GMP&A: In this situation how is Heye handling the market?

Langer: We are in a good position, with a lot of good contacts with the big companies. Our aim is to try to understand the needs of these customers – or of brand owners (our customer's customers) – because we have a philosophy: if the customers of our customers are satisfied then we get the benefits at the end of the day.

The other point is that we are actually moving from a product provider to a solution provider. This is also valid in terms of digitalization, vision and strategies. Heye is not only a machinery manufacturer for the hot- and cold-ends of glassworks and the assistance that is required in these areas, but thanks to our technical assistance agreements we also provide not only a product delivery and commissioning but also production support to ensure profitability and sustainability for our customers.

SMART PLANTS AND THE INTERNET OF THINGS

We have our new concept Heye smart plant, which was an important topic at our symposium this year. In fact, we have a vision of the future plant behind our products and development. This allow follows a single strategy – to make container glass production more efficient – also in terms of digitalization, plant management and transparency. This is something we also transmit to our customers not only with regards to smart plant but also green plant, which means environmental protection.

COMPANY UPDATE

When we see savings in energy and resources and not only manpower – when we see a swabbing robot – we try to decrease the resources used in terms of oil and other material that you need in container glass production.

SAFETY, SPEED AND THE REDUCTION OF THE GLASS WEIGHT

Mark Ziegler: Safety is one of the issues we are addressing right now – with special safety grids which move up and down, or with LED lights for every section, indicating if a section is safe to work in (green) or running (red).

And this is all connected to our smart plant concept, which we can sum up as follows:

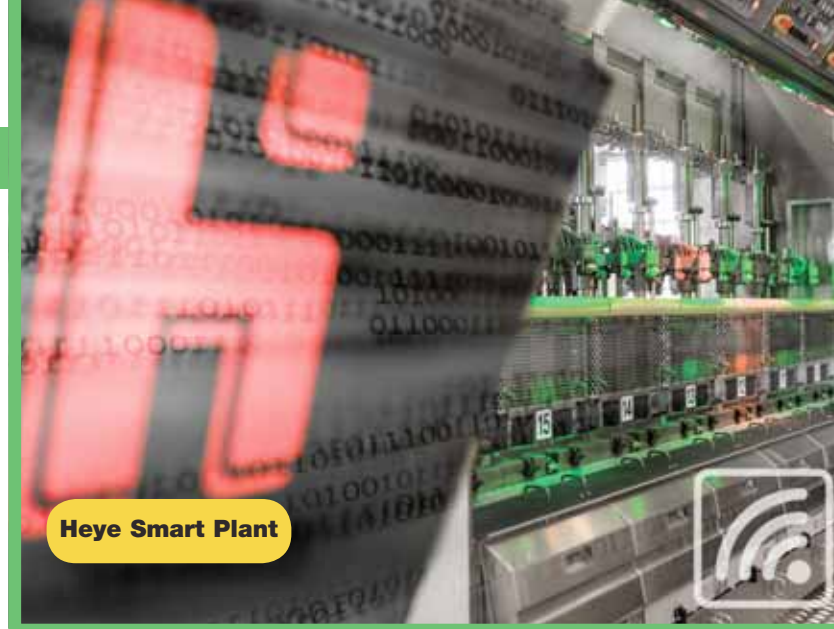
- Integrating the best technologies from Industry 4.0 and the internet of things
- Implementing in the long-run a fully automated, stable and safe production process

The ideal smart plant will be very profitable, resource-efficient and delivering high quality containers.

At Heye we have implemented different enabling technologies that support this technology and will become cheaper as the technology develops – such as such as smaller and cheaper sensors.

Our work is based on four different 'columns', the first being improved integration in production sites for information management and integrated engineering are also important aspects to consider with regards to the value chain. There is also the possibility of laser marking of the containers at the hot end, which means that each and every container has its number and can be traced right back to production. This is an essential value for containers in all industry sectors, but especially for high-valued spirit bottles or the pharmaceutical industry.

Another aspect is vertical inte-



gration where all the information comes together and is made available, making it easy to see where there is a problem or where a mould needs to be modified, or even just where settings need to be changed.

At Heye, our Smart Process Controls control e.g. wall thickness, gob weight and coolings, all to avoid critical defects like unfilled or overpressed finishes.

Flexibility is another important aspect: we can now have different bottles being made on the same machine.

The IS machine, which is the biggest machine at the hot end, is a platform from where we can integrate with other suppliers.

Heye is the inventor of the NNPB process (Narrow Neck Press and Blow), and this process is now becoming very popular in Asia because all the European and Western breweries and companies are starting to work there and they obviously want to have the same level of quality. This is challenging the local glassmakers in Asia to become more familiar with this process. This in turn is creating a great opportunity for Heye not only with regards to the technology, but also for the support we give to our customers to obtain the best possible levels of production.

So weight reduction also means savings in raw materials and energy, and all contribute in protecting our environment.

DEVELOPING PRODUCTS

Developing products is easy to say, but to develop good products you need to have a solid base and in the hot end we are speaking about the IS machine of course. The borders between hot end and cold end will become less important. In a Smart Plant all data are integrated and information will be shared.

GMP&A: What about speed? Has Heye reached its speed limit or are you still working to make things even faster?

Langer: We are actually still working on speed together with our customers, which should take us to a really extraordinary level.

Of course we must also focus on flexibility as we said before because our machines and services go to different sized glassworks – from those that make a few bottles and small but different batches, right up to glassworks that have continuous production runs for incredible numbers of bottles and containers all of the same type.

However, speed also depends on the type of containers you are making, and our job is to get the maximum for each container, with the complete system – from the feeder to the Lehr – running at a certain speed that gives the best it can, eliminating and improving the weakest point in this production chain. We do this with our Process Control and Plant Pilot systems.

GMP&A: Speaking about smart factories and operators, how has the number of human operators been reduced in these past years?

Langer: The target of all plant managers is to reduce operating costs. And one of these costs is for manpower and working hours. However, to reduce these costs you need to set up a basis. Another aspect is that manpower costs differ quite a lot from one country and customer to another, depending on the history and the know-how of each customer.

We support the plant managers with our solutions to be able to reduce working hours concerning swabbing or maintenance, or by having technical issues displayed on a monitor, thus avoiding the time required to check and look manually for these problems.

On the other hand, we also know – and we have received information from a number of customers all over the world – that it is becoming more and more difficult to find experienced people to work with glass. This means that right now we cannot just reduce the number of people working in a glassworks, but we have to keep and ‘protect’ the experienced workers already there.

So our job is also to find new people who want to work in glassworks; we need to motivate them and show them that the working environment right now is completely different from in the past. This is the big challenge for plant managers – having the right machinery, protecting the (work) environment, making it safe and almost nice to work in.

Mark Ziegler: And this is what the bigger companies are doing – showing that it’s safe to work there now, there are new machines and technology to make the work easier, and this

should motivate the young people of this digital era to work there.

Heye for example, has a big touchscreen where all the people can see the production that is running and see what’s going on. This means that they can also analyse each and every step of the production process.

All these pieces of the ‘puzzle’ combine to attract people to work in a glass plant.

Glassmakers also need to inform that working in a glassworks also involves a high level of technology and expertise and the need to reach production optimization, so not only working on the factory floor but also in the office and labs, as well as management – lean management.

GMP&A: What can you tell us about new product development?

Langer: We are investing a large part of our capacity in product development regarding both the hot-end and cold-end. For the hot end, the SpeedLine is our most important step. This development is a result of many customer projects and discussions with long-term customers, also considering the possible future demands of the glass industry.

GMP&A: What could be the future demands of the glass industry and what could be the next steps?

Langer: I think that if we consider a glass machine and the high number of machines

installed there, the next step could be to clean up the working environment, continue with safety aspects of course, and data interface and management, sensors and analyses.

The new Heye machines are true future-orientated forming machines, and we are now working on the optimization of process control and on different sensor systems for the hot end, and of course the swabbing robot.

With regards to the cold end, we have the SmartLine with a very robust and reliable Starwheel inspection machine, and we are working to redesign this inspection machine and will ensure the quality standards in countries where they have inspection carried out by manual workers.

Heye does not only provide machines but also performance optimisation (TAA - technical assistance agreements) for complete glass lines and factories.

Thanks to our local presence we can work side by side with our customers, learning about their needs, and providing them with the complete services that they need to use the machinery and plants to their best advantage. ■



HEYE INTERNATIONAL GmbH

Lohplatz 1, 31683 Obernkirchen - Germany

Tel.: +49 - 5724 - 260

Fax: +49 - 5724 - 26539

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RAMSEY

new products and patents with Accelerated Research and Development

In more than 50 years of activities in supplying chain to glass manufacturers, Ramsey has continued to develop and improve its products, introducing new glass conveying products which have earned eight US and European patents.

Glass conveying has changed a lot over the past 50 years. Today, with production lines running at speeds which were once thought to be impossible, the demand for innovative conveying chain solutions is stronger than ever. Glass producers expect products which run better, wear

less, and last longer, with minimal maintenance. Comments like these from customers have fuelled Ramsey's growing investment in new product development and improvement. In this article, Ramsey highlights some recently developed products and discusses their impact on glass production.

BACKGROUND

When Ramsey began supplying chain to glass manufacturers, more than 50 years ago, silent chain was just beginning to be used as a conveyor. At the time, transport speeds were relatively slow and the problems of bottle spacing, mishandling, and breakage were less important.

RESEARCH AND DEVELOPMENT

Additionally, with slower speeds came less conveyor wear, making maintenance and downtime a lesser concern. However, as production speeds steadily increased through the years, new problems emerged. Faster speeds meant more risk for breakage, higher costs for downtime, and increased wear on equipment.

PATENTED CONVEYING PRODUCTS THAT IMPROVE BOTTLE CONVEYING

Recognizing the challenges inherent in higher conveying speeds, as well as customer interest in improved productivity and reduced maintenance, Ramsey began a decade long period of intensive research and development. These efforts produced a multitude of improved conveying chains and related products. Three of these products, Lifeguard®, R-Select®, and Ramsey's RKO Knock Out Tool®, are so unique and innovative they have earned a total of eight patents in the United States and Europe. A fourth product, Sentry™ conveying chain, is the only two pin conveying chain which has recessed pin heads and is also pre-stressed.

LIFEGUARD – REDUCED WEAR AND IMPROVED PRODUCT HANDLING

Designed to improve conveying chain performance and life, Lifeguard® chains utilize unique interlocking side links that not

only guard against pin head wear, but also greatly reduce the size of gaps between adjacent side plates. With much smaller gaps between the links, smooth product transfer on and off the conveying surface is assured and the potential for snagging on lateral guides is reduced. As a result, Lifeguard chains can be run in direct contact with lateral guides. The Lifeguard link design also reduces the need for expensive, complicated guide profiles and is especially beneficial when transporting small glass products, which are less prone to tipping as gaps in the conveyor are minimized. In a production environment, these features translate directly to fewer ware handling problems, extended chain life, and improved productivity.

R-SELECT – WEAR RESISTANT ALLOY CHAINS

Over time, conveying chains wear at the link tips and within the chain joints. This causes chains to elongate, also known as “stretch”, and link height to decrease, conditions which lead to product breakage and more frequent chain maintenance. R-Select chains are Ramsey's solution to these problems. R-Select chains are built with special wear resistant steel alloy links, which have been shown to last up to twice as long as standard steel links. Because of their improved resistance these links reduce both link tip wear and chain joint wear. But what makes R-Select chains unique is the chains can be assembled so the wear resistant links are only used in the parts of the chain which are expected to wear the most. Other parts of the chain, which are less subject to wear, can be made with standard, more economical links. This results in a chain with improved resistance to wear and only a modest increase in cost. Alternatively, customers who are looking for optimum wear char-

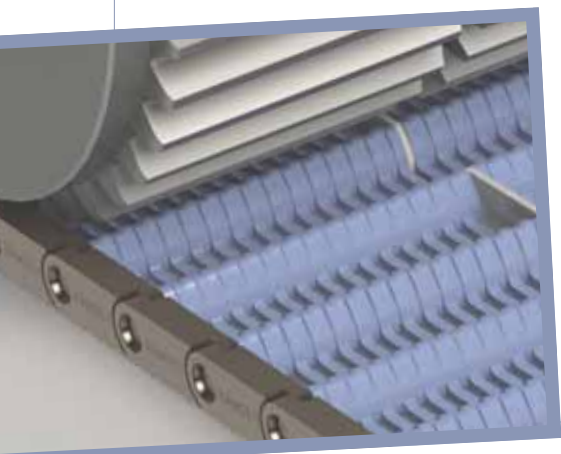
acteristics, and are less concerned about added cost, can have chains made entirely from R-Select links.

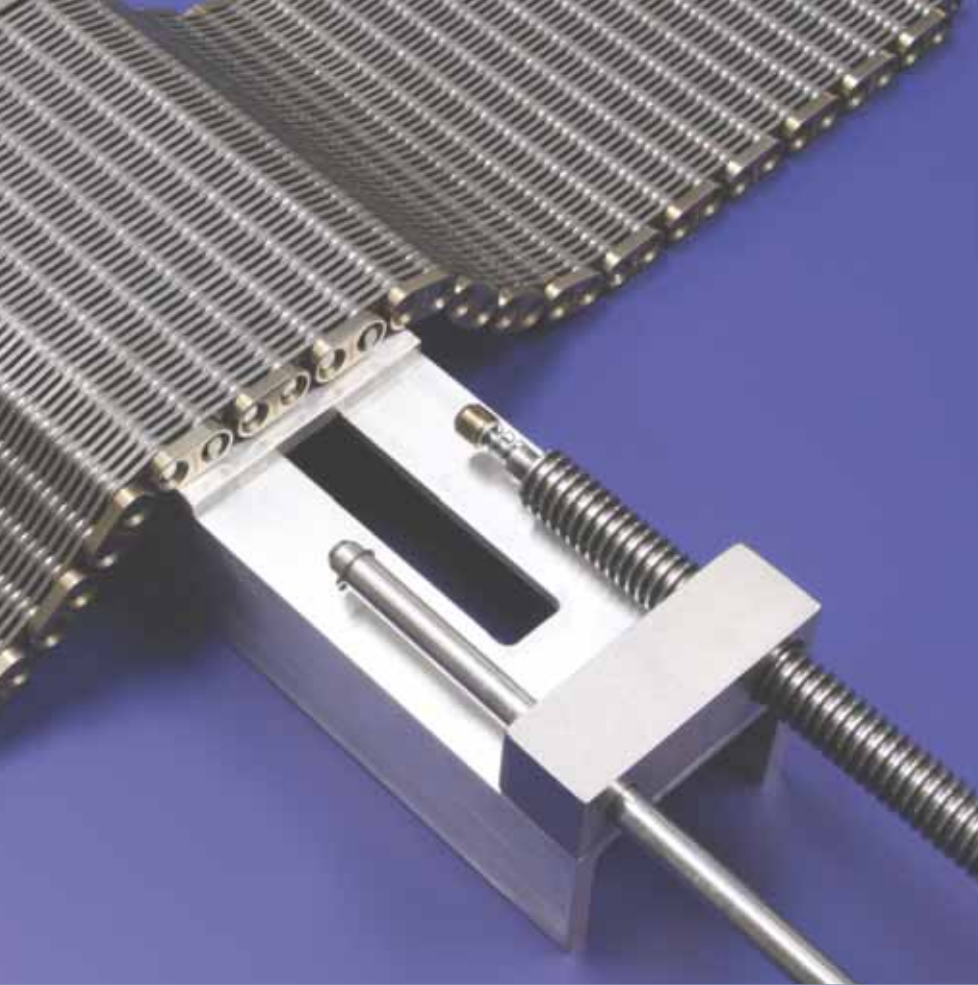
The development of R-Select required years of research, as well as testing in both laboratory and production settings. The results have shown that R-Select chains elongate much more slowly than standard chains, resulting in fewer maintenance shut downs to remove excess chain length. Some customers have reported a doubling of chain life with R-select chains.

RKO KNOCK OUT TOOL – SIMPLIFYING CHAIN CONNECTION AND DISCONNECTION

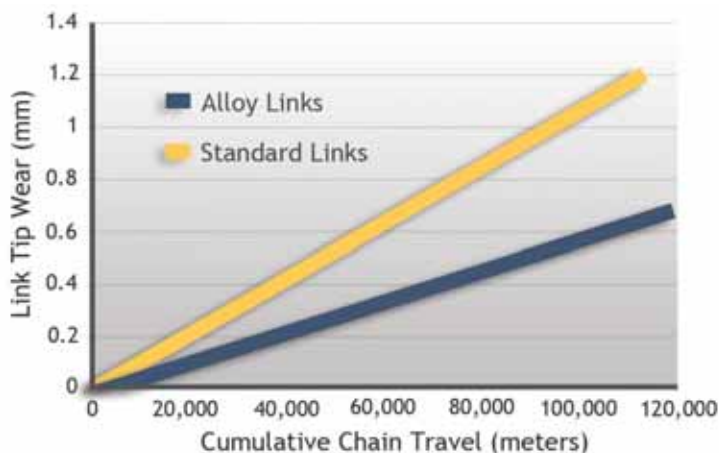
Chain connection and disconnection can be tedious and time consuming, especially with wear protected chains, where pin heads are recessed below chain link surfaces. The RKO tool can save hours when connecting the chains on a typical IS machine or cross conveyor.

Ramsey's RKO tool is designed to simplify connecting





IMPROVED WEAR RESISTANCE OF ALLOY LINKS



and disconnecting Allguard and Lifeguard conveying chains. The RKO tool provides three distinct stations for working with a chain. The first station has a ram screw which is used to break off the head of a pin during chain disconnection. The second stage allows the pin being removed to be driven out of the chain, using a hammer and a tapered assembly pin. This second stage is also useful for keeping chain components aligned when connecting chains that have spacers

between the links. The third stage maintains chain alignment during connection so that a drive pin and washer can be inserted in the end of the connecting pin.

SENTRY™ - WEAR PROTECTED AND PRE-STRESSED CONVEYING CHAIN

Following the success of Ramsey's established wear protected chains, customers who prefer two pin chain designs challenged Ramsey's engineers

to come up with a new chain. In response, our engineers developed an all steel, two pin chain design that offers the same wear protection as Lifeguard and Allguard FX. Unique in the industry, Sentry chains blend features which have been successfully used in Ramsey glass conveying chain for decades with totally new features which are only available from Ramsey. No other company offers chains comparable to Sentry!

Sentry chains utilize time tested assemblies, two pin joint designs, and wear protected recessed pin heads to produce chains that are strong, durable, and resistant to wear. In addition, the pin heads in the chains are "staked" using proprietary technology developed by Ramsey. Staked heads are very durable and more compact than heads formed by other methods. And since the pin heads are recessed, they will not wear like pin heads in laser weld style chains. Also, the guard links on Sentry chains are hardened alloy steel. No sintered metal parts are used in the chain. This results in a more robust and impact resistant chain. Lastly, Sentry chains are pre-stressed during manufacturing to fully seat components and to reduce chain "stretch". ■



Ramsey Products
CORPORATION

**RAMSEY
PRODUCTS
CORPORATION**

P.O. Box 66827
Charlotte, NC 28266-8827 - USA
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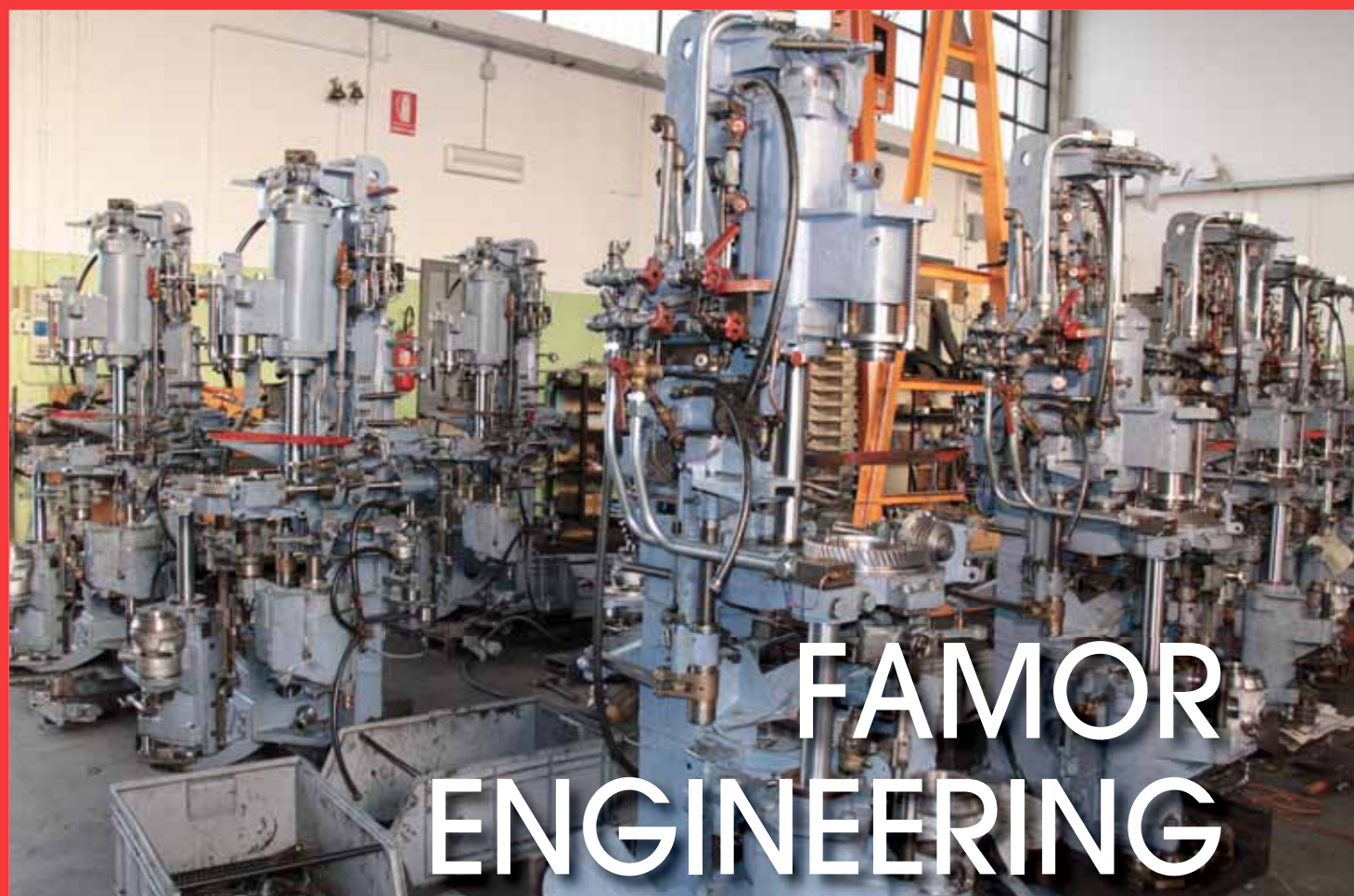
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FAMOR ENGINEERING

celebrating 40 years' activities in
hollow glass machinery production

Forty years of experience, all machinery manufactured in-house; this all amounts to important and competitive advantages, which Famor Engineering exploits to the full when supplying its clients with equipment and machinery.

However, in its continuous efforts to reach its goals, the General Manager knows that the “future depends on the success of those who are among us” and encourages its collaborators and workers to develop and share qualities and talents together.

For Famor Engineering,

experts in the manufacture of glass machinery, 2017 represent an important milestone: that of 40 years since its foundation, in fact was founded in Torino in July 1977. Today, the company provides a wide range of glass equipment, as well as manufacturing technology and high-tech machinery.

The company is situated in an industrial area to the north of the city of Turin, covering an area of 2.000 square metres and in which more than 15 people are employed, using the most up-to-date technology available on the market today.

RANGE OF EQUIPMENT

The fact that all its equipment is produced in – house and its facilities, where it uses the most accurate production and quality control methods in one of the most important and competitive advantages of Famor Engineering. The company is, and always has been, focused on new realisation and improvements of the following equipment:

- Press and Blow machine
- Press machine
- Spinning machine
- Fire polishing machine and accessories
- Handling and transfer equipment

Founded in 1977, Famor Engineering is celebrating 40 years of activity and tradition in glass machinery manufacture. In this article, the company leads us through the most important moments of its history.

Achille Fattori
General Manager
FAMOR ENGINEERING SRL

**“THE FUTURE DEPENDS ON
THE SUCCESS OF THOSE
WHO ARE AMONG US”**

Famor Engineering, recognized as one of the leading producer of Press & Blow, Spinning and Press machines has been operating successfully in the internal market, Europe and the Mediterranean area. The reason for the company's success is its ability to resolve the specific problems of glassworks by offering high quality technology and tailor-made machinery, along with the combination of experience gained of technical and commercial experience in the glass industry of the founders, and in mechanics has developed its own working methods founded on quality and innovation.



ANNIVERSARY

The result obtained have proved that such an approach is more than correct.

No less important, the speed and efficiency of its customer service department. Such working

methods are clearly appreciated in the company market sector as demonstrated by the number of machines and equipment sold annually, as well as by the loyalty with which customers come back

to the company for their new investments.

TECHNICAL DEPARTMENT

The technical department is made up of three different offices: mechanics, with people using CAD 2 and 3D; the software office and a third – the system office.

The latter, which works on pneumatics, hydraulics, electrics, and supervises entire projects from the first technical specification up to the commissioning of the machine.

QUALITY MANAGEMENT

In the late 2008s, Famor Engineering established a Quality Management System to controls its order fulfilment process: specifying, designing, building, testing, shipping, installing and commissioning.

This enables the office to have a complete vision of each line on offer and/or in production at that precise moment, thus acting as a meeting point for all technical offices, enabling them to work together avoiding, for instance, incompatibilities in the final product.

SERVICES

Complete customer satisfaction is the principal strategy of Famor Engineering and customer service support is one of our main activities to achieve our goal.

The company now has a network of representatives and service centres in many countries that provide support and easy communication in local languages, as well as providing hot line service.

We provide the following full range of service activities:

1. Guarantee Service, all details of this service are agreed individually with each customer and conditions are usually stated in the contract. The standard warranty period is 12 months.



Milestones

- 1977 - Famor was founded and registered in Turin, Italy
- 1979 - Production of the first assembling machine for TV monitors
- 1981 - Opening of mechanical unit assembly department.
- 1983 - Beginning of moulds production for brake shoes
- 1986 - Construction of the prototype machine for rotors/electric motors
- 1990 - Construction of the prototype of Olivotto O90 machine
- 1992 - Machining department upgrade with the inclusion of CNC machines
- 1994 - Construction of the prototype of 12-station turntable spinning machine
- 2004 - Construction of head blow moulding prototype
- 2005 - Construction of blow moulding machine for borosilicate glass production
- 2010 - New enhanced anti friction surface treatments
- 2015 - Construction of pendants injection line

Italian tableware forming equipment success in Portugal

Smart Forming Enlarged

The successful installation of a Smart Forming Enlarged version from Famor Engineering was completed at one of Portugal's glassworks, an ideal tableware-forming machine based on the press and blow process.

The Smart Forming Enlarged station is made up of:

Forming station developed to obtain flexible production with diverse article designs of large dimensions; glass loading can be carried out by ball gatherer robot.

Blank mould on sliding beams with lifting unit to deliver the gob from the cutting position to

the neck ring holder. The section is provided with rotating and fix blowing neck ring system.

A movable blowing head with different forming pressures controlled by electronic valve, reinforced mould holder for heavy weight articles, combined with a pneumatic closing system, and final forming is carried out with split past mould.

Automatic take out can be provided to unload the glass articles after the forming process.

The Smart Forming Enlarged station is controlled by a PLC system, which can be programmed with ON - OFF article parameters, and can be recorded and saved in the system.

Brushless Servo motor for motion control and Electronic valves control the pneumatic movements. All the utilities links are provided with fast connectors.

Articles data	Value
Maximum diameter	350 mm
Minimum diameter	60 mm
Max. height with moil	450 mm
Max. height without moil	400 mm
Max. parison length	255 mm
Neck ring diameter	120 mm



2. Post Guarantee Service System, of small, medium and large overhaul; each overhaul has its own frequency schedule and duration

2.1. Small overhaul occurs every two years and is for the substitution of used parts;

2.2. Medium overhaul occurs every four years and is for the substitution of critical mechanisms;

2.3. Large overhaul occurs after 10 years; it is for general repair, and usually includes modernization.

ates opportunities and spreads the seeds of change. The sharing of information develops abilities and strengthens ideas. Famor Engineering provides the resources and the know-how to overcome challenges and achieve the best results. The company puts its faith in the performance of the individual and the team, as a way of overcoming the future. ■

FAMOR

FAMOR ENGINEERING SRL

Via Avigliana, 3
10040 Rivalta (TO) - Italy
Tel.: +39-011-9528691
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VERTECH'

an insight into the company and its developments

During Glassman this year in Lyon, France, we had the chance to speak to Ulas Topal, CEO of Vertech', who gave us an insight in how the company follows its clients closely, upgrading, developing and adapting its software system to the different requests from its clients, as well as the needs and demands of today's glass sector.



Glass Machinery Plants & Accessories (GMP&A): Thank you for speaking to use here at Glassman!

When you come to a trade event, what do you expect and what kind of results are you looking for?

Ulas Topal, Vertech': We are not used to participating in Glassman, but this time we are here to meet with some of our customers who will also come to visit our headquarters after the event. We also have a presentation here at Glassman so it was the right thing to do.

GMP&A: How would you promote Vertech' to a new client? Why should a glassworks choose Vertech' and not another company?

Vertech': OK. The first and very important reason is that Vertech' was founded 22 years ago, which means that we have 22 years of experience working in this industry worldwide. We have already implemented our system into 125 plants, and we gather experience from each of these plants and we

SOFTWARE SPECIALISTS



use this experience in our system. And this experience is shared by everybody because it goes into our software. Vertech' has, in fact, one software base, which is developed and adapted as per the needs and demands of each of our customers.

GMP&A: So this means that you customize your software totally for your clients?

Vertech': Not totally, it's more like fine tuning because the structure of the software is the same wherever it is installed, and we just make some small 'tweaks' based on the use of the software by the company, according to the processes and procedures it uses. This is especially important for quality procedures for example, which are internal procedures which are secret and which we cannot make public.

If we are speaking about more general developments, we inform the clients and request their agree-

ment that this will become part of the system. Obviously, the client may not agree to have the development made public, but if we know that this particular development can be useful for the system we inform them that it will be made public. On the other hand, we also make special developments, especially with regards to quality procedures, for customers, and these are only for them.

At Vertech' we have a special database where we have all the requests of our customers – about 600 – and then we choose which developments we want to carry out. These development can then be shared by everyone.

GMP&A: So this is the 'push' that makes glassworks choose you? They have the possibility of all this 'shared' information and development which they can all benefit from.

Vertech': All all these shared developments and changes are

free of charge for our customers as it is we at Vertech' who have decided to use them. On the other hand, if a customer asks us for special developments or changes in a short time, these changes have a cost. But it will still be included in the system because we have a 'versioning' system – a SIL system which is updated each year. Right now we have the 2017 version and next year there will be the 2018 version.

GMP&A: When you're saying that your changes and upgrades are in the system, how can your clients use these upgrades?

Vertech': Vertech' provides maintenance contracts, and every year we go to our clients to do an audit of the system, we inform them about what needs to be changed, removed and upgraded. This means that we are there at the plants of our customers for two to three days during



which we upgrade the system and correct anything that needs to be corrected. Last but not least, we do training on the new functionalities of the upgraded system, so that they are informed on how and why we have made these changes. The customer can then decide which changes and developments he wants to use. Just imagine this system – it is so full of know how that maybe you don't really need to use everything. And this is why we give our clients the possibility to choose what they want to use. And, of course, we can also 'hide' some functionalities for them.

Many of our customers start out using the basic version of our software and later they start to ask us to integrate other functions. And what is surprising for them is that when they ask us how much it costs we say: "nothing, it's already in the system!" They are the people in charge of

what to use from the system – deciding what to use, what they need and what they don't want to activate. Too much information can be very confusing so we prefer to let them decide.

An example of this took place in Thailand in September this year when we activated two or three functionalities for one of our clients.

GMP&A: Who are your typical customers? Big or small glassworks?

Vertech': We have one customer for example, with one furnace and three lines (in Angola), and we also have a customer with four furnaces and 17 lines (Sisecam in Turkey). This is the range.

GMP&A: You're speaking about global operations here: Africa, the Far East, the United States. Is there any country where you are not present?

Vertech': Yes, unfortunately we are not in Australia. This could be because the glass market is too small or because the market is decreasing. In fact we have never been there, we have never visited glassworks there, but we have just met with companies at trade events, or communicated with them by email and so no.

Our software is for hollow glass such as bottles, jars and special containers such as those for the perfume sector, but also for glass tubes. In Italy, companies producing tubes and tableware are using our software. And, of course, our software is also used for the pharmaceutical glass sector.

It is not, however, suitable for the float glass sector as the float glass process is completely different.

This is the only exception.

GMP&A: Let's go back to the beginnings of your company – 22 years ago. How many people worked at Vertech' at the beginning and how many people are there now?

Vertech': At the start, in 1995,

there were two people working at the company. Right now there are 25 people working and developing at Vertech', plus three external collaborators. So all together there are 28 people. Today we have an office in Italy at Avigliana, near Turin, an office in Mexico at Durango, and an office in the US at Fishers.

We are also looking to hire a person in Italy as well as three new people in France – two new developers and one implementation engineer.

So we are continuing to grow.

GMP&A: What about news and developments for this year? What could be the next step for you and your software?

Vertech': The next step for us could be the development of the software by renewing some of the modules, which we are actually doing right now. We are preparing a new module for quality that we already have in the system with a completely new technology a new 'skin', new colours and new graphics. This module will be offered to our customers during the programmed upgrades that we do.

We will be upgrading this in three customers in November this year. ■



VERTECH'

Campus Saône - 11, rue Alfred Kastler
71100 Chalon-sur-Saône - France
Tel: +33 - 3 - 85981917
Fax: +33 - 3 - 85981918
Email: sales@vertech.eu
www.vertech.eu

COMPANY PHILOSOPHY

KYP ACCESORIES

fulfilling clients' needs
and demands leads
to higher satisfaction



Founded in 1992, KYP has grown from a parts supplier to a fully-fledged machinery manufacturer. This was made possible thanks to the continuous interfacing between the company and its clients, along with investments not only financial, but also in people and their skills

Right since its founding, the philosophy of KYP has always been based on a number of pillars, namely:

- Customer service comes first
- Our quality should be a role model
- Innovation and technology should serve to produce more and better

After sales service is fundamental

CUSTOMER SERVICE COMES FIRST

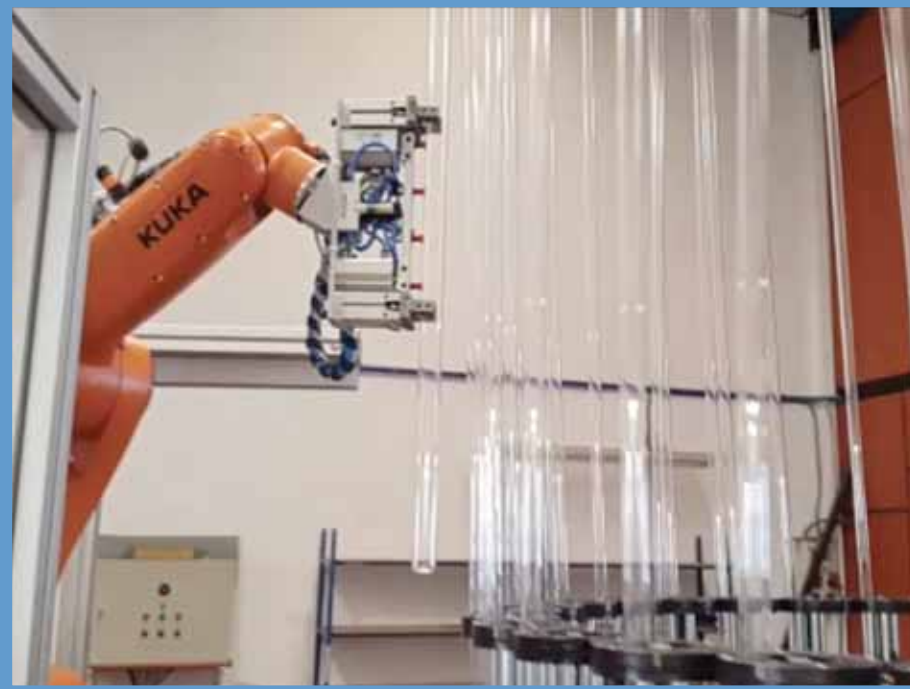
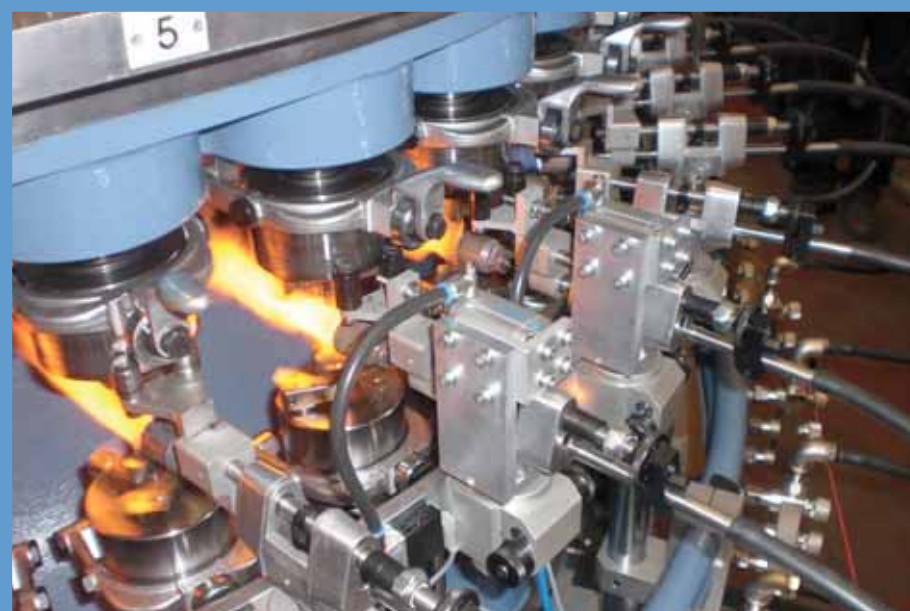
From the very first contact between the client and KYP, we try to make the client feel at home, in order to facilitate all the interactions they may require from us. Knowing how to listen to what the client needs is important in order to provide the best solutions.

We believe that a relationship should not be established as it is typically carried out between a client and a supplier. We believe more in a relationship as partners, where there is a mutual benefit, and therefore, where there are common objectives, which will serve as a pillar and base to work together.

OUR QUALITY SHOULD BE A ROLE MODEL

At KYP we are prepared to offer a product with the highest performance, always using the latest technology and the finishing that is best adapted to our clients' needs.

Quality has always been an 'obsession' for us. Quality does not come about by chance, but thanks to hard work and devotion. We believe that our clients must have the maximum confidence that products from KYP will satisfy them as expected, and even surpass their expectations. For this reason, we have provided our technical team with the appropriate training and tools to ensure a product of the highest quality.



COMPANY PHILOSOPHY

INNOVATION AND TECHNOLOGY SHOULD SERVE TO IMPROVE DAY BY DAY

KYP has an R & D & I team on a permanent basis, which allows us to live the continuous evolution of our products. This evolution is also facilitated thanks to many of our customers with their observations. The only way to be at the top is to always listen to clients.

Continuous research is a maxim at KYP, which has always allowed us to be a spearhead in our market sector. Being able to offer our clients the advantages that technology gives, allowing the have production of the best ampoules at the lowest cost and with maximum productivity is another highly positive aspect.

AFTER SALES SERVICE IS FUNDAMENTAL

KYP considers that relationships with clients is not finished when the sale is done, but the opposite: it is the beginning.

Our after sales service is in permanent contact with our clients, since we believe that the better our client is doing, the better we will be. This is not just a way of speaking, it's a philosophy we firmly believe in and our day to day is based on that. We are available for our clients almost 24 hours a day, facilitating the contact with our technicians - some of them with more than 25 years of expertise and experience in the production of ampoules - who can also be contacted by mobile, as we know that working hours are not always the same, and thus, help may be needed at any time.

COMPANY TIMELINE

1992

The company was created by Raul Paz Fernandez, current Director at KYP. The decision was made following a market study made in several countries. During this first stage, KYP only supplied spares.



1993

Of course, the beginnings were tough, as the business started at the home address of Mr. Paz. But quite soon, demand enabled KYP to hire new staff and move to established business premises, more appropriate to its activity. Now not only spares were sold, but also assembled sets were supplied as per our clients' request.

The success in the selection of suppliers and the eagerness to improve the delivery terms, the quality and the prices, to be even more competitive, which made possible to get a share in an expanding market and thus have an exponential growth.

1994

A new partner entered the company; a person who knew the market of the pharmaceutical ampoule manufacturing machines market, with an experience of more than 25 years as a technician in this kind of machinery, adding expertise knowledge to the project.

Initially as a complement, and afterwards as a business line, given its volume and demand



COMPANY PHILOSOPHY



success, KYP started with the overhaul of forming machines service, which was demanded by the most important companies, since they had machinery with quite a lot of years of production. This allowed them to have machinery with more production capacity at a lower cost.

With the process of the overhauls, KYP not only tuned up the old machinery, but also gave it with the latest technology. With this update, an important improvement in the overhauled machines was achieved, at regulation level as well as with regards to performance, production, etc., since with this overhaul process, the machines could produce more products with higher quality.

We are adults, at last!... it's time for KYP to put its first overhauled machines –with new technology – in the market.

In KYP we have the highest confidence in our overhaul process, reason why we offer a one-year warranty for them.

1995

After these initial years, it was the moment for KYP to take the next leap and make a product according to clients' requirements: high requisites regarding quality, durability of the product, high level of adjustment, as well as the application of the latest technologies.

The partners at KYP, with the lead of Mr. Paz, due to his commercial role, and thus with the knowledge captured first-hand

from clients, decided to start producing ampoule production machines and lines, that is to say more complex equipment than the simple spares o sets, offering the market a new range of products and services, which soon made its way.

From the beginning, KYP equipment was recognized by clients as innovative and high quality, which allowed the new business line to consolidate and become the main rudder of the company.

With the excellent path so far, the support of a market with more and more need of technology and quality, KYP decided to

offer machinery that allowed its clients to manufacture pharmaceutical ampoules.

If the entry in the market of the sets was a success, we can say that the entry in the market of the complete lines was a real hit, since their reception in the market exceeded the most optimistic expectations.

1996

In order to undertake this new stage, two new partners joined KYP, one taking care of purchases, and the other involved in the design and assembling of the new machinery.

From that moment, KYP became the supplier of the most important clients and groups in the pharmaceutical ampoules sector.

1997

New premises in the industrial area "Las Monjas in Torrejon de Ardoz"

2001

New larger premises –owned directly by the company – in "Torres de la Alameda"

2003

Purchase of machinery for own manufacturing.

2009

Constitution of a new manufacturing company for raw materials and spare parts.

THE PRESENT

Currently, KYP is considered one of the most important companies in the sector of the pharmaceutical ampoules manufacturing machinery, thus becoming a leader in the sector.

KYP currently sells in 48 countries on five continents, and is living constant expansion, at territorial level as well as at market share level.

The technology, the sturdiness

and the service to the client are still, as it was 25 years ago, our main concerns.

Today, KYP produces more than 65 per cent of the parts used, limiting the acquisition of parts from known suppliers and from first trademarks of those products that are considered standard, such as motors, screws, bearings, belts, or too specific to have own production. Due to this concept of production, we can guarantee that our products are downed with the highest quality standards.

THE FUTURE

KYP is in an expansion process, due to the demand of the market, that will result in a new future and new services to clients.

Wishing to understand our clients more and more, KYP is planning a change and expansion of premises, where we will have some modern facilities, capable to bear the continuous growth of the company.

As always, at KYP, technology is one of the main pillars, so we recently hired new engineers, who, together with those already in the company, are studying new innovations, based on new technologies that will offer our

clients functionalities that do not exist right now.

In an effort to offer new services, KYP is updating its ERP, which includes the commercial, production and financial areas.

Our new WEB: KYP is finalizing its new format, more modern, more functional, and with new features to its clients, having a restricted and personalized area for the client, so we can establish a better communication and documents exchange.

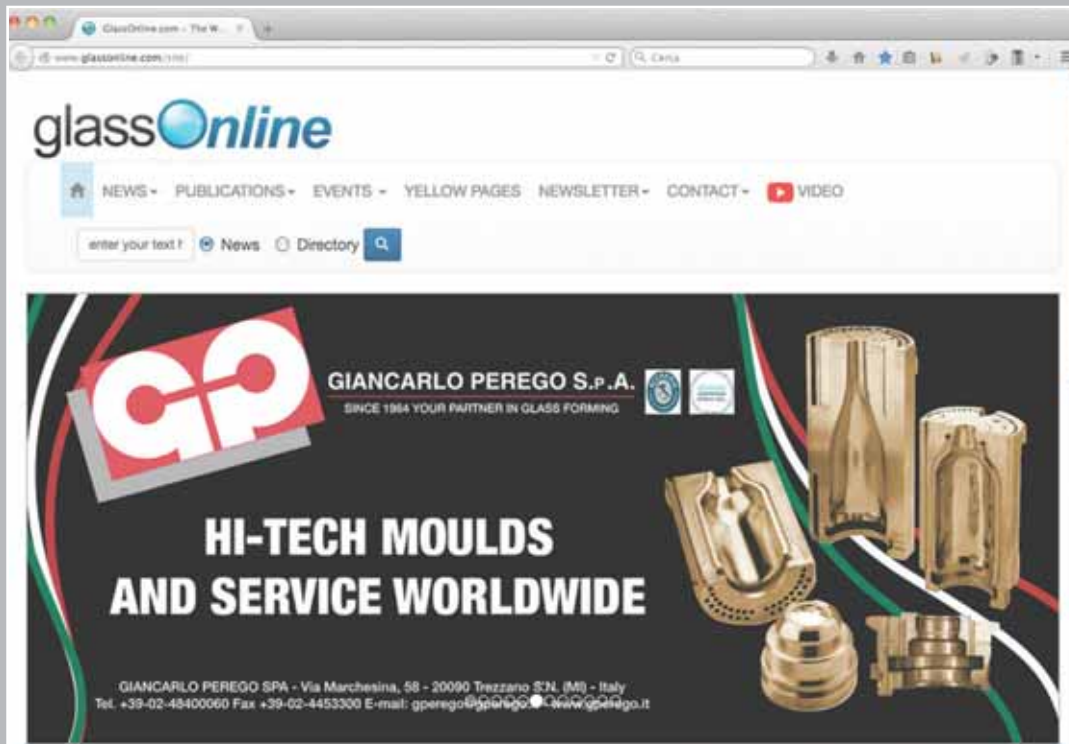
In the near future, KYP will offer all its clients a search and consultation system of plans and structure of its products, which will facilitate placing orders for spares. ■



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C/ Madrid 22, Naves 11-12
28813 Torres de la Alameda, Madrid
Spain
Tel.: +34-91-8863090
Fax: +34-91-8868371
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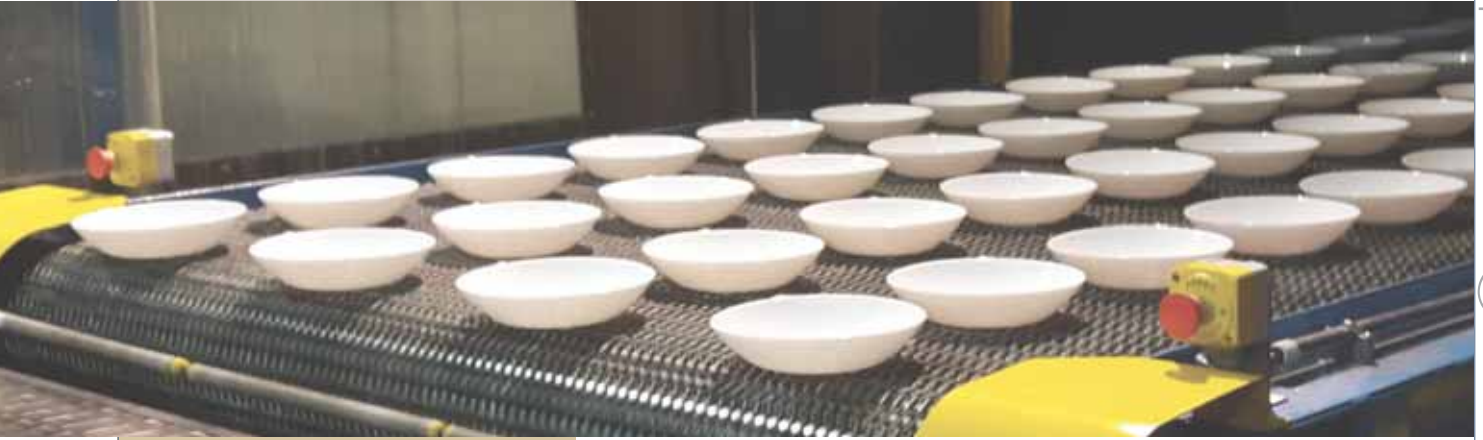
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VIDROMECHANICA



During the recent edition of Glassman in Lyon, we spoke to Joao Curado, Technical Sales Director at Vidromecanica, who gave us an update on the company and its markets, as well as the way the company is developing and specializing its products – on a daily basis.

continuous improvement in quality; man-machine interfacing

Let's start with markets; which are your main markets and how does France fit in?

France is and has always been a very important market for us. We have several types of sector in the glass industry where we work. Tempering for example has now become very important compared to a few years ago. Annealing and decoration were very important for us here in France, especially with regards to the cosmetics sector. Now, for example, there is not so much demand as there was before. The reason behind this could be that

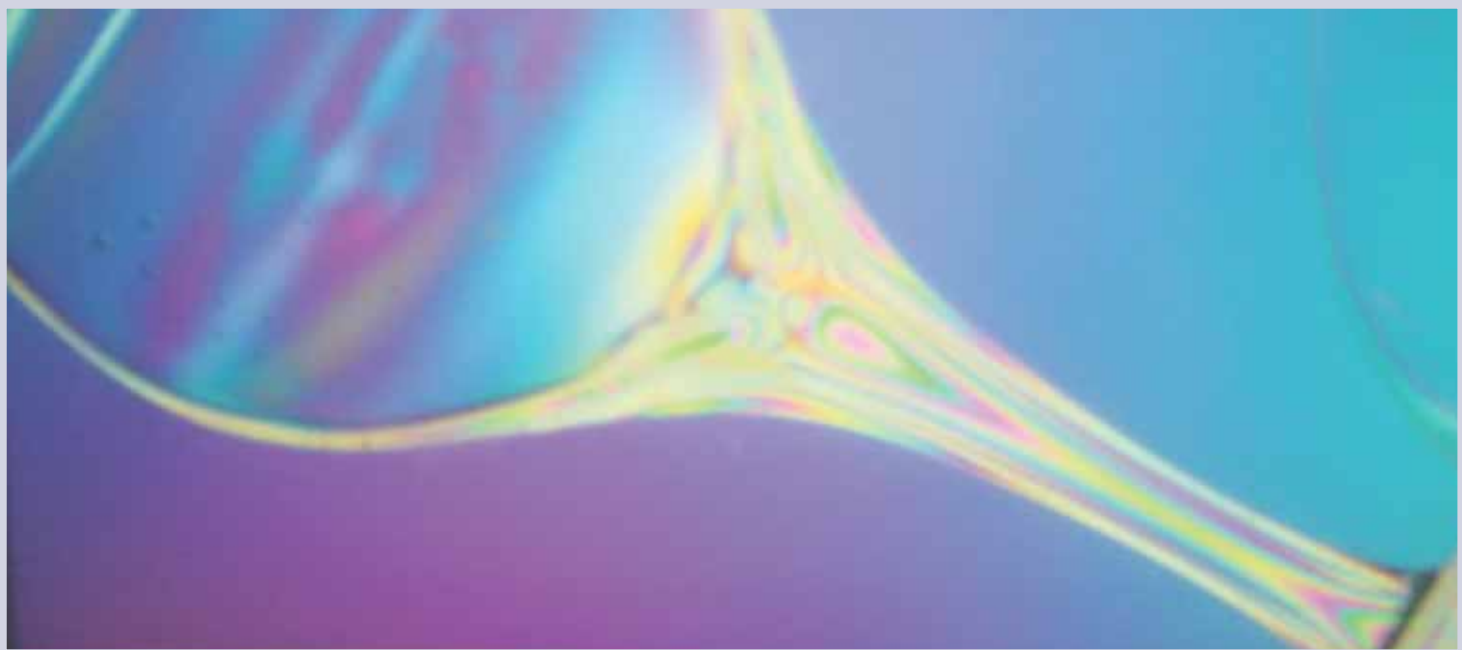
the companies involved in this type of decoration and annealing are now working in more specialized sectors.

But France, as I said, remains an important market for us.

Which other (European) markets are important for you?

Of course, the Iberian Peninsula is where we come from so it's a very important market for us, as we started there – in Portugal – in 1984. We work mainly with southern Europe, and then we work with South America, a big market for us, and parts of Asia.

TEMPERING TECHNOLOGY



What do you think about the Asian market? Are you expecting to see growth there?

Asia is a very complex area with many different countries, all with their own production types and aspects. But we are selling there, we go to exhibitions with our products and our quality. And being an area with a lot of different countries means that we sell a lot of different products there!

What about new products? Do you have anything in the pipeline?

In the last few years we have

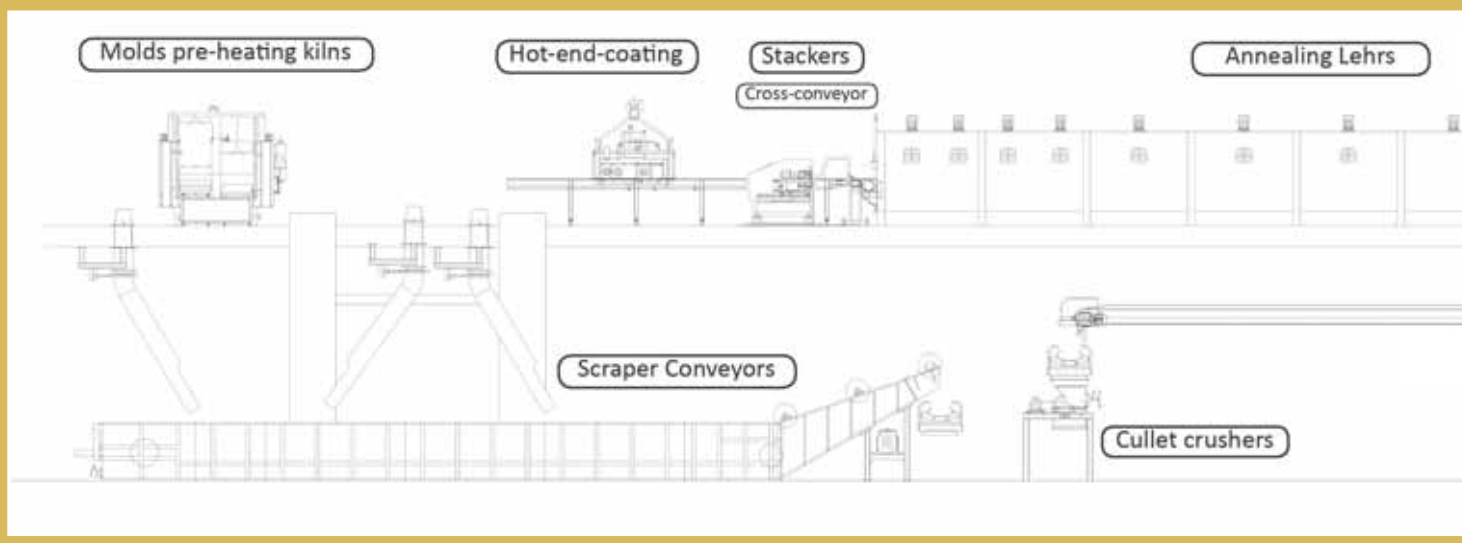
been moving more and more towards tempering, mostly thermal tempering, even if we also do some chemical tempering. In fact, we have been the most important name in stemware and tableware thermal tempering for the past 15 years. Annealing is our business card – that's what we are specialized in, but we know now that we are also very strong in the tempering sector too.

We are aware that most of the tempering lines in the world come from Vidromecanica. So it's something to be proud of!

Your home country – Portugal – has quite an important tradition in glass ...

There are two things to be said here: one is that having these glass plants so near is a true benefit for us. In fact, in our (small) city, there are four big glass plants, all in a radius of about five kilometres from Vidromecanica. I have never seen this type of situation elsewhere around the world. And in this city the glassworks produce almost 3000 tons of glass per day!

And this means that we can apply our equipment at our cli-



ents to test. We can discuss with them – even directly during social time. When going somewhere in our region, it's almost sure that we will see someone that is also from the glass industry.

When and why do you decide to develop or update a product?

We don't decide that – we do it every day! There is no need to make a decision here, as we must do it daily or we could not continue to work. Personally, I started working in the glass industry 20 years ago as an engineer. People taught me how to do my job and the things that I had to do and I thought that it was the way to work. This was how I and we worked for about five years and then things began to change very quickly – at a speed that is almost impossible to keep up with.

Now we have to continuously change and improve machines, making this one better than the last one, and the next one better than this one. This is because people and glassmakers are not only requesting quality, but they are also asking for information and also for interfacing with the machines. And this means that our machines must be user-friendly too.

And from now on things will continue to move along this way. We are all connected with the

internet and we can even carry out remote operations regarding our homes – burglar alarms, heating and even washing machines – can all be operated from our smartphones.

And now people want to have these possibilities for their machinery in the glass plants too. Obviously not at the same level. Consider for example a plant with 200 or 300 machines – you cannot work from your phone or tablet at that level. But interface is what is important, to have the most important information available when we need it.

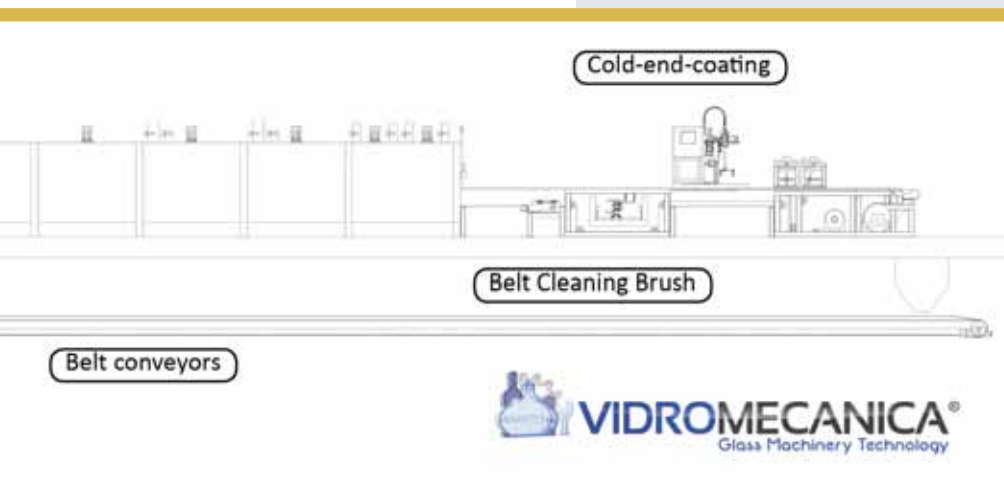
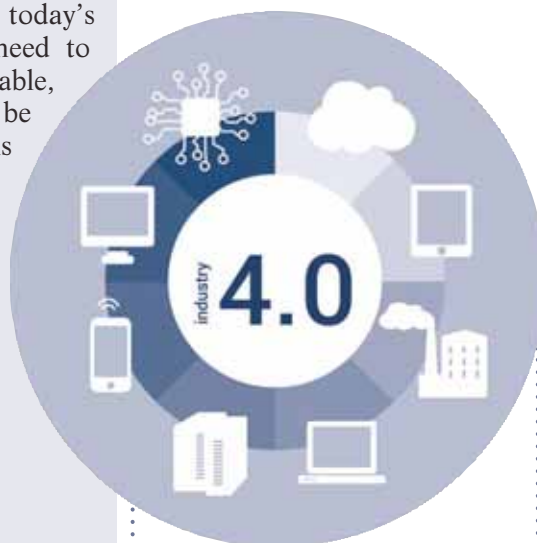
And this is the way the world is and works now – being globally connected 24/7, and getting immediate information and answers.

So this means that today's machines do not only need to work well and be reliable, but they also need to be easy to work with and this is a major challenge for machinery manufacturers to keep up with these needs and demands.

Let's speak about being user friendly – what can you tell me about the operators who use these big machines? Do they need any specific qualifications?

First and foremost, we work with glassmakers that know what they are doing. Our machines are used by people who are experts in this 'art', so they know the temperatures that they need to set and the speed at which the machine can operate.

OK, so machines now can also be automatically operated, but it's not really the way to do things in this industry. Operators of these machines need to have the experience and know-how – features that a robot still is not able to do right now. ■



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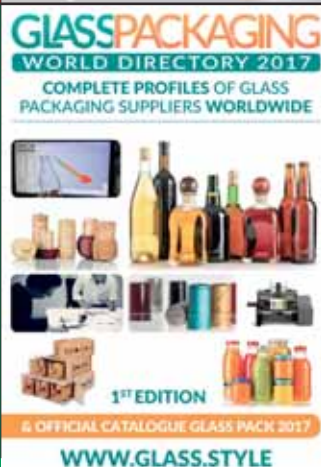
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