

ENNECKE-0

### **≌INNOVATIONS** >> Hennecke customer journal for technologies and trends on the PU market

COVERSTORY **HENNECKE-OMS S.p.A.** 

Expansion of the core business, increased service capacities and a new name

PROJECTS All from a single source Manufacture of polyurethane cable grommets ENGINEERING Fit for the fourth generation Premixing station LAMBDAMAT



### EDITORIAL



#### Dates

CAMX Dallas 15.10. - 18.10.2018

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JEC ASIA Seoul 14.11. - 16.11.2018

**THE BIG 5** Dubai 26.11. - 29.11.2018

**7TH PLASTIC JAPAN** 

Tokyo 05.12. - 07.12.2018

As at October 2018

### Dear customers, dear readers,

If we are to believe public perception, we are currently living in "troubled times". As machine manufacturers with a strong global presence, we are of course keeping a close eye on the diverse issues concerning Germany as a business location, as well as on the negative signals from geopolitical challenges which had seemed to be long settled. Meanwhile we are focusing our efforts on what we do best: providing our customers around the world with competitive plants for processing polyurethane. This issue of our customer magazine INNOVATIONS includes several examples of suitable responses to the aforementioned developments. We have recently increased our portfolio significantly through the takeover of Impianti OMS. I am delighted to introduce you to the Italian market leader in plant technology for manufacturing sandwich panels under a new name (see page 4). Alongside this strategical approach, we are also continuing to grow organically. In April we opened our third manufacturing site in Jiaxing, a Chinese region of growth. We have also established a new company in the Japanese capital Tokyo. These both represent significant milestones in our Hennecke strategy in Asia (see page 21). In addition to availability and performance, a strong sales and service network is one the most important purchasing incentives, especially for customers operating on a global level. See for example how Hennecke's metering machines have become the standard for developing and producing vehicle wiring harnesses for the automobile industry (page 14). The new premixing station of the LAMBDAMAT series for processing HFO formulations is also fully in line with market requirements. Users are perfectly equipped for the phase out of older blowing agents (see page 8). As you can see, instead of focusing on the wide array of uncertainties, we devote our expertise exclusively to positive signs in the rapidly growing market for polyurethane processing technology. The 70 year old material polyurethane certainly knows no limits to its applications and markets. With this in mind, I hope you enjoy reading our exciting and informative customer magazine.

Alois Schmid Managing Director Technology

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### COVERSTORY

Hennecke took over Italian Impianti OMS at the end of 2017. With this acquisition, the Hennecke Group has secured a leading position worldwide in the field of sandwich panel applications with flexible facings. Together, Hennecke and HENNECKE-OMS are now one of the largest and most reliable suppliers of machines and plants for polyurethane-based applications with the widest product portfolio on the market. Since August 2018, the newest member of the Hennecke Group has been operating as **HENNECKE-OMS** and is already the global market leader in sandwich panel technology due to the consolidation of its product portfolio.



## HENNECKE-OMS

>> World leading specialists for the production of sandwich panels and insulation boards. Expansion of the core business, increased service capacities and a new name Impianti OMS S.p.A. is now HENNECKE-OMS S.p.A.



he acquisition of OMS Group by Hennecke in November 2017 brought together two leading manufacturers of machinery and equipment for polyurethane processing. Both companies have since combined their extensive experience in the international PU business. The long-standing management team of the Italian PU experts, consisting of Enrico Lombardini and Dr. med. Andrea Mariani, also retains its function under the new company name. The acquisition included all subsidiaries of the former OMS Group. "Here, two leading suppliers in the polyurethane industry are joining forces to open up opportunities for stronger growth," said Rolf Trippler, Hennecke's General Sales Director, during the takeover. The development of global markets underlines this assessment, as polyurethane consumption is growing steadily in almost all applications. "Joining forces will enable us to continue to grow profitably," confirms Enrico Lombardini, CEO of HENNECKE-OMS.



Enrico Lombardini, CEO, HENNECKE-OMS

"Our product portfolios complement each other optimally within the various business areas and we are expanding our technological and market leadership," explains Trippler. The logical consequence of the clearly formulated growth strategy was and is the preservation of all jobs and locations. "The combined competence of all our employees is the foundation for our success in the future," assures Dr. med. Andrea Mariani, CFO of HENNECKE-OMS, in this context.

### COVERSTORY

Impianti OMS was founded in the late 1960s to produce polyurethane plants technology for the production of soft and hard foam and metering machines. The company is one of the world's leading suppliers of machine technology as well as integrated production plants for a wide variety of polyurethane applications. Thanks to its excellent accuracy, reliability and quality, Impianti OMS met the diverse needs and requirements of its customers and markets alike. By the beginning of the 1990s, the company increasingly focused its business on the production of continuous sandwich panel plants and,



 The first generation of polyurethane metering machines under the OMS trade name

as early as the turn of the millennium, offered its customers a wide range of different technologies and production plants for sandwich panels with flexible facings. From the very beginning, the company based in Verano Brianza, Italy, near the economic center of Milan, focused on technical innovations, economical solutions and uncompromising product quality. Today, more than 160 highly motivated employees work on reliable product solutions for the polyurethane industry on the 18,000 m<sup>2</sup> site.

"HENNECKE-OMS will continue to focus on applications in the field of manufacturing sandwich panels with flexible facings," says Trippler. "Prior to the acquisition, Hennecke was particularly well positioned in the market for the production of sandwich panels with rigid facings, but was also focusing increasingly on applications for flexible facings. So at least in this core business, we barely came into contact as competitors. Regarding the consolidation, it is this expertise in particular that we have gradually developed together and are now structurally expanding."



An integral part of the HENNECKE-OMS product portfolio: Sandwich panel plants for rigid facings and low-pressure metering machines



Rolf Trippler, Managing Director Sales Hennecke GmbH

Sandwich panels with rigid facings are primarily used in the construction of halls and industrial buildings, cold and deep-freeze stores, administrative and residential buildings. In addition to accelerated construction and considerable cost savings, architects also benefit from other advantages. Today, a completely new generation of sandwich components not only fulfills requirements of building physics and economics, but also individual design demands.



Polyurethane insulating boards with flexible facings are mainly used for the thermal insulation of domestic and industrial roofs as well as for insulation of walls, floors and ceilings. In addition, HENNECKE-OMS multifunctional plant technology can also be used to make product combinations of rigid and flexible facings. These elements are used in the agricultural sector, for example.

By using process and handling plants, HENNECKE-OMS customers are able to produce packaged and transportable end products at a high speed. HENNECKE-OMS has all the equipment for reaction technology and the entire handling up to the packaging and stacking of the manufactured elements. This of course also includes expert knowledge of the process chain for the handling of raw materials including comprehensive tank storage solutions. Regardless of whether customers are planning continuous or discontinuous production. The qualified specialists with many years of experience in the most diverse production requirements will find a suitable solution for every product idea. This offers the advantage of working with only one reliable supplier in all phases of the project. The ability to deliver a fully integrated system also ensures that all economic, ergonomic, functional and energy-related aspects can be considered and optimized.

Within the Hennecke Group, HENNECKE-OMS is already responsible for the world's most comprehensive portfolio of plants for the production of sandwich panels, whether for flexible or rigid facings, mineral wool or discontinuous production for special applications. Through the integration into the global Hennecke Group, HENNECKE-OMS can also draw on a larger international network, substantially increased personnel capacities and Hennecke's 360° SERVICE portfolio. In addition, HENNECKE-OMS continues to produce standalone metering machines for high and low pressure applications, each enabling the most efficient and homogeneous mixing of reactive components and offering users an excellent level of price, performance and reliability thanks to wide-ranging standardization.

### Fit for the fourth generation Premixing station LAMBDAMAT for the exact metering of blowing agents in a batch process

ydrofluorocarbon blowing agents (HFCs) are expected to be phased out worldwide by 2030 at the latest, based on the Kyoto Protocol. Some countries already prohibit the use of these blowing agents in certain applications. Hydrofluoroolefin blowing agents (HFO) - also called fourth generation - are used as successors. They have very good lambda values, have no ozone depletion potential (ODP) and a very low global warming potential (GWP).

In order to achieve the desired property spectrum in the production of hard and integral foams, it is necessary to condition the raw material systems used by adding blowing agents in various applications. The LAMBDAMAT is able to process all common blowing agents for the production of hard and integral foams. The HFOs that are environmentally friendly in terms of their ODP and GWP play a key role here. The LAMBDAMAT metering units process the blowing agents in a batch process. The proportion of blowing agents in the component stream can be adjusted with extreme precision and to a largely optional ratio. The specific amount of blowing agent can be adapted flexibly to the respective application.

As users no longer have to rely on existing formulations from polyurethane suppliers, usage of the advanced premixing station quickly pays off and the processor can respond flexibly and promptly to changing production requirements. In addition, certain pre-mixed raw material combinations do not have a very long shelf life and their property spectrum deteriorates with the storage time. With the LAMBDAMAT, the processor can pre-mix the raw materials as needed and process them directly. In addition, by using the new HFOs, users can achieve far better insulation properties than is possible with traditional HFCs. This creates additional savings potential due to lower component thicknesses or ensures effective optimization of product properties with the same component strength. The HFOs provide another advantage for integral foams, for example for gearshift knobs and steering wheels in the vehicle interior. The blowing agents ensure a very high-quality surface of the components.

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With the LAMBDAMAT blowing agent metering device, Hennecke offers a precise and reliable premixing station for blowing agent loading of the polyurethane components in a batch process. At the same time, the LAMBDAMAT is mainly designed for the use of HFO formulations. With the phase-out of older established blowing agents by many users, the fourth generation of blowing agents is now moving into focus.

ischarge time longer than 1 minute

> Processing blowing agents that are environmentally friendly in terms of their ODP and GWP: the new Hennecke LAMBDAMAT

#### ENGINEERING

The LAMBDAMAT machine frame is ergonomically designed and extremely easy to maintain thanks to its perfect accessibility to all components. Thanks to the plug-and-play design, the LAMBDAMAT can also be integrated into customer-supplied production solutions at any time. The integration is also planned as a stand-alone solution in tank storage and third-party systems. The LAMBDAMAT has state-of-the-art control and drive technology in combination with a practical operator panel for convenient retrieval and input of machine parameters. Using the graphics-capable touch display and a robust foil-laminated keyboard, users can control and monitor all system components with just a few operating steps and comprehensively log selected functions. This way, manufacturers can trace up to 200 metering operations, for example.

The machine control system also allows the provision of different formulations or mixing ratios. This means up to four different concentrations of blowing agents are available to the production, without additional investments in other metering devices. This is used for example when different components with different properties are produced in parallel. In addition, the machine control system also has interfaces for integration into higher-level production systems if required.

The LAMBDAMAT is also an alternative for manufacturers with lower production volumes, for whom the use of pentane as blowing agent is too costly. Pentane is a proven technology as a CFC substitute. The blowing agent also produces very good lambda values, has no ozone depletion potential and a very low global warming potential.



Practical, fully-graphic operator panel for input and retrieval of all machine parameters

It is inexpensive, but also highly flammable. However, by using Pentane Process Technology, processing of the blowing agent is possible without any risk. However, the fire protection equipment is associated with costs and is usually only worthwhile for larger quantities. If you want to produce components in smaller quantities that should have the same or better properties as those produced with pentane, the HFOs now offer a real alternative. Although the new blowing agents are more expensive than pentane, the investment cost is considerably lower than when using pentane-process technology, for example.



### ENGINEERING

O Kunststoff Institut Lüdenscheid

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Seminar on the finishing of plastic components in the injection molding process

Many users of the clearmelt<sup>®</sup> technology come from classic injection molding and usually have little experience in processing polyurethane. That's why Hennecke, in cooperation with the Kunststoff-Institut Lüdenscheid (Plastics Institute Lüdenscheid - K.I.M.W.), is offering a novice training course for the clearmelt<sup>®</sup> process for the first time. In a two-day course, participants learn to master the process and correct any errors in theory and in practice directly at the machines. So far, this training offer is the only one of its kind on the market.

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peakers		
lennecke GmbH	Jens Winiarz, Jens Geuer	
Schöfer GmbH	Gerald Schöfer	
unststoff-Institut Lüdenscheid	Jens Reinicke, Ralf Klein	
unststoff-Institut Lüdenscheid	Jens Reinicke, Ralf Klein	

www.kunststoff-institut-luedenscheid.de/veranstaltung/einstieg-in-die-clearmelt-technologie



#### ENGINEERING

ith the CLEARRIM technology, Hennecke offers a process for the manufacture of components with high-quality and functional surfaces. A thin polyurethane layer is used to finish surfaces. The technology is particularly suitable for combining with other processing methods. An example is a process development resulting from Hennecke's collaboration with the company Engel: the clearmelt<sup>®</sup> technology. The Austrian mechanical engineering company has been a development partner of Hennecke for many years.



Perfect partner for the clearmelt® process: the Hennecke STREAMLINE in the K.I.M.W. laboratory

The clearmelt<sup>®</sup> process has been established in the market for many years and enables users to produce durable, scratch-resistant yet highly sensitive, self-repairing PUR coatings in a time-saving and efficient manner. The depth effect of the surface and the ability to integrate decorative parts and switch functions

make this process particularly interesting for manufacturers of automotive interior components or consumer electronics, for example.

Future-oriented coating processes have been researched as part of the Kunststoff-Institut's project

"Surface Treatment of Plastic Moldings" for the past 19 years. Meanwhile, Hennecke is involved in the eleventh joint project and is providing a STREAMLINE high-pressure metering machine for the clearmelt<sup>®</sup> process in the institute's laboratory.

Since the Kunststoff-Institut is very active in the area of training as well as research, it seemed natural to offer a novice training course for the clearmelt® process for the first time. The training is aimed at people who are looking for an way in to the process of clearmelt<sup>®</sup> technology for the finishing of thermoplastics.

The objective of the seminar is to give participants an overview of the possibilities and challenges of this technology. Top-class speakers from the PUR specialist Hennecke, the Austrian toolmaker Schöfer, who developed and built one of the first clearmelt<sup>®</sup> tools, and the Kunststoff-Institut provide the participants with condensed know-how over two days.

On the morning of the first day, the course begins with an introduction to materials science and systems engineering. In the afternoon, the speakers discuss the method and processing parameters. Tool technology is the focus of the last presentation. The second day begins with the topic of molding defects and remedial measures. Then participants go to the Institute's laboratory, where the theory of clearmelt<sup>®</sup> technology is put into practice with production machines.

After the seminar, there is a chance to discuss specific component inquiries and concepts without any obligation. This takes place bilaterally in a small round after previous registration. A corresponding non-disclosure agreement should be concluded in advance.

### All from a single source

Manufacture of polyurethane cable grommets with Hennecke high-pressure metering machines

Cademy GmbH based in Ennepetal, Germany, specializes in turn-key manufacturing solutions for the manufacture of polyurethane cable grommets in vehicle wiring harnesses. At the beginning of 2018, the company built a new facility. The heart of the new building is the laboratory with a Hennecke HIGHLINE metering machine.

The standard in many customer orders and therefore perfect for use in the Cademy GmbH laboratory: the Hennecke HIGHLINE



ach vehicle has a main cable set that runs through the entire vehicle. Even in a compact car it can consist of up to 1.6 kilometers of cables weighing up to 70 kilograms and up to eight meters long when rolled out. This highly complex product is mainly manufactured manually by specialized suppliers. Delivered just-in-time to the vehicle manufacturer, the highly complex lifeline of modern vehicles is usually installed in a single operation. Openings between the passenger compartment and the engine compartment are particularly critical areas in the automobile. The biggest challenge here is to ensure a watertight and gastight installation of the cable harness. An exact and geometrically accurate foaming of the cable harness using polyurethane ensures completely reliable sealing and high durability at this critical position.



### PROJECTS



Serial production success: Cademy GmbH's mould carrier system for fast and reliable foaming of vehicle wiring harnesses

This so-called cable grommet is longitudinally watertight due to the initially liquid polyurethane, which penetrates between the cables. This way, no water can enter the vehicle interior even under extreme precipitation. The grommet also assures a completely secure positioning of the cables, since the individual cables and the grommet are permanently connected with each other in the foamed cable harness.

The mould for foaming the cable harness provides the outer shape of the cable grommet. It is designed so that the transition between the grommet and opening is completely tight and the harness is firmly positioned in the vehicle body. The cable grommet is often used to pre-form the bulky cable harness, for example to permanently fit a 90-degree angle. Between two and four different cable grommet

moulds are used for each harness for one vehicle type. Cademy supplies the complete manufacturing solution for the production of polyurethane cable grommets to automotive suppliers. These customers of Cademy supply all well-known car manufacturers worldwide. The company's expertise lies in the development and production of the very specific moulds that are used to foam the cable harnesses, as well as in the offer of delivering turnkey production solutions as a general contractor.

Indispensible to modern car manufacture: polyurethane cable grommets



## Interview with the CEO of Cademy GmbH from Ennepetal, Michael Faupel

#### Mr. Faupel, what is the historical background of Cademy?

Faupel: The origins of the Cademy GmbH go back to the beginning of the seventies. Sohl Modell- und Formenbau was founded in 1972. In the mid-eighties, the company started to develop and manufacture moulds for cable foaming with my father Walter Faupel as manager. In 1997 I started my own business with my own design office. Over time, my father and I began to work very closely together. Around the year 2000 we first had serious thoughts about combining the expertise in cable foaming and my design skills into a joint project. In 2003 we finally joined forces and founded the Cademy GmbH.

#### Cademy moved to a newly built factory early in 2018. What was the background story there?

Faupel: We have grown steadily step by step since 2003. We finally reached a point where the old location just got too small. Our customers' projects had grown so big that the old premises were no longer big enough. The heart of our new business is our laboratory. This is where customer acceptance of the moulds takes place. Construction and mould manufacture are located directly in the laboratory, so that these tests can now be carried out very quickly.

#### The laboratory includes a new Hennecke HIGHLINE metering machine. Why did you choose this machine?

Faupel: We are general contractors and make the selection of metering machines according to our customers' wishes. Since we deliver most of the manufacturing solutions with a Hennecke metering machine, it makes sense that this machine type is also used in our laboratory. Hennecke's standard metering machines are accurate and reliable, and therefore perfectly match our philosophy of providing our customers with an optimized system solution in terms of applications and cost.





### Customized plant engineering for the best fiber composite materials in the world PGTEX relies on a combined production line for wet shot and HP RTM applications



Trade fairs for fiber composite materials play a central role in the Hennecke event calendar. This year's JEC trade fair in Paris, which is considered the leading trade fair in this application area, was more than satisfactory for Hennecke GmbH. The focus of the trade fair presence was on product innovations around the topic of wet compression molding, another innovative method for the production of fiber-reinforced structural components. Among other things, the composite specialists were able to present a new wide slot dispenser for the wet shot process, which has been optimized in terms of serviceability and offers impressive new technical features. Hennecke was particularly delighted with the successful transaction for a combined wet shot and HP RTM application plant secured with the Chinese composite enthusiasts from PGTEX.



Automated resin application on a fiber fabric outside the press: easy to maintain wide slot distributor for WCM applications

**P** GTEX set itself the goal of developing the best fiber composite materials in the world in order to be able to offer tailored composite solutions. Here the investment in the company's first multifunctional production plant for HP RTM and wet shot applications fits into the picture perfectly. For this reason, Hennecke is particularly proud that PGTEX has selected a German machine and plant manufacturer from Sankt Augustin. The plant will be used at the PGTEX site near Shanghai and will start production next year in conjunction with a 3600 ton Schuler press. PGTEX has far-reaching plans in the field of electromobility. For example, the Changzhou-based company was commissioned to develop and mass-produce a CFRP / GRP hybrid body for a Chinese electric car. Here PGTEX can draw on extensive company has been involved in the production of fiberglass fibers and related fabrics for many years.

PGTEX is supplied with the latest plant and process technology by Hennecke. The heart of the production plant is the STREAMLINE high-pressure metering machine, which Hennecke has successfully delivered and commissioned more than fifty times worldwide. The modern metering system is equipped with a hydraulic multi-point. This allows the connection of two mixheads within the system network. The first mixhead is used as HP RTM mixhead and is fixed to a mould inside the press to inject the reactive raw material directly into the closed mould, thus enabling infiltration into the fibre fabric. The second mixhead is equipped with the previously mentioned wide slot dispenser and is controlled by a robot, which in turn allows automated resin application on a fiber fabric outside the press. As is typical for Hennecke, the output system is designed to be particularly easy to maintain. For example, the user is assisted by an automatic raw material discharge process if the nozzle is blocked by reacted raw material within the nozzle body.

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### PROJECTS

Due to the design with two mixheads, the customer can switch between both technologies in a short changeover time and produce different fiber composite components on one plant. While the HP RTM process is primarily used for the fabrication of complex 3D parts, the wet shot process is preferred for the efficient production of large-scale and less complex fiber composite components. This ensures maximum flexibility within the production of PGTEX. With the successful deal at the JEC, PGTEX and Hennecke have laid the foundation for a long-term partnership.



### The new STREAMLINE MK2 Equipped as standard with expertise from the world market leader:

# With the new "MK2" generation, Hennecke is further developing the efficient STREAMLINE high-pressure metering machines using the experience of dozens of production systems and preliminary product developments.

Building on the sale of over 70 STREAMLINE machines in the first generation, developers, manufacturers and raw material suppliers have been able to develop, in many ways crucially, a variety of processes in the manufacture of fiber-reinforced structural components and in efficient surface finishing using polyurethane and polyurea coating, leading to diverse serial applications. The STREAMLINE has become the industrial standard across the world for HP-RTM applications.



The process expertise and wide-ranging experience now form the basis of the machine design for the STREAMLINE MK2 - a new generation of machine which has been developed in line with current market demands. The MK2 provides Hennecke customers with a highly developed product, precisely adapted to the process availability of serial applications in HP-RTM, CLEARIM and clearmelt® processes. The second STREAMLINE generation offers further impressive benefits. Production flexibility increases considerably thanks to the ultra-space-saving layout of the machine on a frame which is mobile and can also be lifted by crane. The plant automation is also particularly flexible: The STREAMLINE MK2 is equipped with a wireless operator panel, which enables on the spot operation of all process parameters independent of location. The efficient heating configuration is also impressive in terms of innovative detailed solutions: the heating and metering cabins are joined together using quick-locking mechanisms which allow for easy dismantling at any time.

Delivery of the new STREAMLINE MK2 will begin in January 2019. In

connection with the product launch of the STREAMLINE MK2, Hennecke is following a great tradition in which machines are brought onto the market by industry partners before the official sales start. Are you interested? Then please contact one of our experts for more information. We look forward to hearing from you, because one thing is certain: feedback from manufacturers is the most valuable way of continuously improving our products.

### Customer proximity as a growth engine Hennecke's Asian strategy on a successful course



Asia is and remains the growth region for PU applications in the international sector. Hennecke recognized this early on and provides local sales and a variety of services to its local customer base. Production in the customer's home market is a further part of the recipe for success when it comes to harnessing the huge potential in the Asian region. In April 2018, Hennecke opened a new, 10,000 m<sup>2</sup> plant 200 kilometers west of Shanghai in the Sino-German Industrial Park of the Economic and Technological Development Zone of Jiaxing. This is the third in China. Two months later, the PUR specialist founded a new service and sales office with five employees in Tokyo, Japan. The Singapore site has also been strengthened by experienced employees from the main plant in Sankt Augustin.

### HENNECKE GROUP

he PU market is a global market", explains General Sales 111 Director Rolf Trippler. "To survive in this market segment in the long run, it is essential to also think and act globally. We continue to see strong growth rates in the future, especially in Asia. A broad product portfolio and a strong international network are the keys to success in these diverse markets with their different requirements. "The markets in Eastern Asia, China, Korea and Japan are also highly technologically driven. According to Trippler, new innovations, especially in these markets, are important in order to maintain and expand their competitive edge. Another topic in the countries mentioned is the clear growth of the middle class. This creates new, rapidly growing markets and applications. These include, for example, the production of slabstock foam for high-quality mattresses and furniture as well as the production of energy-saving refrigerators. In general, the topic of sustainability is gaining importance in Asia as well. In Southeast Asia the demand for building insulation with sandwich panels is booming, and the rapidly growing Chinese automotive industry is also banking on lightweight construction that is suitable for mass production. "Ideal examples of tasks that the companies of the Hennecke Group have mastered perfectly as world market leaders. In these industries. we are ideally positioned with our systems portfolio. All in all an excellent starting point to become the most trustworthy, reliable and advanced supplier of machine and systems technology for polyurethane processing in Asia," adds Trippler.





Experience competence first hand: Showroom in the entrance area



Around 8,000 m<sup>2</sup> of additional production space in the newly opened factory

About 40 percent of the world's available polyurethane raw materials are consumed in Asia. No wonder then that Hennecke decided early on to focus more on the largest part of the world in terms of surface area. On July 30, 1994, Hennecke founded a subsidiary in Singapore that operates today as Hennecke Asia Pte. Ltd., and recently received competent reinforcement from two German employees from the parent company. In 2011, Hennecke opened the first factory of Hennecke Machinery Shanghai with a floor area of 6,500 m<sup>2</sup> in the metropolis of Shanghai. Here, Hennecke produces dry parts for refrigerators and car seat production systems. A mere two years later, a second, 6,000 m<sup>2</sup> plant was inaugurated at the same location. Currently more than 80 employees work for Hennecke in Shanghai. The newly opened plant in the province of Jiaxing now has around 8,000 m<sup>2</sup> of additional production space. It is connected with a state-of-the-art office landscape.

A showroom in the entrance area allows customers to experience what distinguishes Hennecke machinery and systems technology. "Unlike our competitors, we did not go to China just to produce cheaply," says Trippler, explaining the company's motivation. "Instead, we want to produce internationally to be closer to the customer. This is an invaluable advantage, especially for large-scale systems. Over the years, we have built up and qualified the entire supply chain of the plants with meticulous quality management so that we can ensure that the machines from the Asian factories have exactly the same quality standards as those which have been appreciated for decades in the German production."

Hennecke has also worked in other Asian countries since early on. The company has its own branch office in Seoul, Korea, and the PUR specialist maintains a sales and service office with a five-man team in Hyderabad, India. In Japan, the market presence has also been significantly strengthened with the founding of Hennecke Machinery Japan. The Tokyo-based company has been available to customers for all questions regarding the extensive Hennecke product portfolio since June 2018.

On-site service in all Asian countries is provided by local staff. All Southeast Asian locations assume the service and sales responsibilities of the entire Hennecke Group. These include Hennecke Profiliertechnik GmbH from Kreuztal, Germany and the newest group member HENNECKE-OMS, based in Verano Brianza, Italy.



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