Hennecke
Polyurethane Technology

215 **INNOVATIONS**

>> Hennecke customer journal for technologies and trends on the PU market

COVERSTORY

New application technology center:

Ceremonial opening at the Polyurethane Conference

ENGINEERING

Extended range of properties:

Production of steel-plastic-hybrid car door modules

PROJECTS

Hennecke for generations:

Production of flexible slabstock foam in India

Dates

FAKUMA
Friedrichshafen
13.10. - 17.10.2015

BRANCHENTAG KUNSTSTOFFLAND NRW
Sankt Augustin
30.11.2015

PUTECH EUROPE
Istanbul
12.11. - 14.11.2015

PU-TECHDAYS
Nagoya (Japan) /
Seoul (Korea)
17.11.-20.11.2015

POLYURETHANEX
Moscow
17.2. - 19.2.2016

JEC COMPOSITES
Paris
8.3. - 10.3.2016

As at October 2015

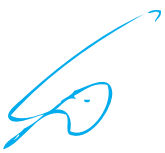
Dear customers, dear readers,

A beneficial market development only decides the success of a company in the short-term and even a sophisticated product portfolio is no longer a guarantee for permanent survival on the global market today. It is my personal conviction that regarding the company success in mechanical and plant engineering, there is no better investment in the future than continuous development in the form of innovative systems and new technologies. The Hennecke group shares this opinion. One of our most important unique selling points was and is the know-how and the ability for innovation of every single employee. This way we are able to offer our customers and possible future clients the best possible solutions for processing polyurethane worldwide. However, fully exploiting this potential requires the right framework conditions. With this in mind, we have made an important investment in the future of PU processing with the establishment of a state-of-the-art application technology center at the Hennecke headquarters in Sankt Augustin.

The festive inauguration of the "Hennecke TECHCENTER" took place in the framework of the FSK Polyurethane Conference in front of nearly 200 national and international representatives of the PU branch. We consider this to be the ideal occasion, because what better place is there to talk about current innovations than right where they are created (see page 04).

Among other things, the products that Hennecke was able to develop in close cooperation with customers and partners in the TECHCENTER were a focus of the conference. This included intelligent light-weight construction in the form of an automotive door module with a PU-reinforced exterior skin (see page 11) as well as a groundbreaking fibre composite INSITU component that is produced in a combination of HP-RTM process and injection moulding (see page 12).

I cordially invite you to take a look at our new technical center yourself. You will surely also be struck by the quotation of the economist Theodore Levitt decorating the interior of the TECHCENTER: "Creativity is thinking up new things. Innovation is doing new things." Nothing fits better, because every day we strive to transform new ideas into even better products together with you, creating real added value. In this spirit, I hope you enjoy reading this exciting and informative edition of our customer magazine INNOVATIONS.



Alois Schmid
Managing Director Technology

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COVERSTORY

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Innovative Industry Meeting:

International Polyurethane Conference 2015

A location steeped in history, 15 technical presentations, a top-class political discussion and the ceremonial opening of the Hennecke TECHCENTER: This year's International Polyurethane Conference drew more than 200 representatives from the polyurethane industry to Bonn and Sankt Augustin. Participants were invited to this established industry gathering by the Specialist Association for Foamed Plastics and Polyurethanes e.V. (FSK) and Hennecke GmbH, bringing together a range of expertise and a strong drive for innovation. This was a suitable occasion for Hennecke GmbH to hold the official opening of its state-of-the-art application technology center.

The former plenary chamber of the old parliament building in Bonn provided the numerous representatives of the national and international polyurethane industry with a fascinating setting for exciting presentations and lively discussions from the very first day of the event. One of the highlights of the morning was the presentation of the new Hennecke foaming plant type KTT for producing refrigerator doors, which has been in operation at the Giengen site of BSH Home Appliances GmbH since the beginning of the year. The novelty in this plant is an innovative concept in which the curing places are arranged vertically and disconnected from the curing line.

Conference held at a historic location: the old parliament building in Bonn

Presentation of the KTT plant technology by Rolf Bohländer (Hennecke GmbH) and Jürgen Lanzinger (BSH Hausgeräte GmbH)

Appropriately for the old parliament building, the afternoon began with a political debate. Here Ilka von Boeselager (CDU state parliament faction), Prof. Ernst Ulrich von Weizsäcker (Co-President of The Club of Rome), Johannes Remmel (North Rhine-Westphalian environment minister) and Dr. Dietmar Kopp (from the German Federal Ministry for Economic Affairs and Energy), among others, discussed in an engaged and well prepared manner, how much environmental law the processing of plastics and polyurethane in Europe and in Germany is tolerating in global competition. The final highlight at this special location was the awarding of the Innovation Prize "Polyurethane" by the FSK. Among the winners this year was Evonik Industries AG, Essen. The speciality chemical company was recognised for its

Focusing on lightweight automotive construction: exciting presentations at Hennecke's new TECHCENTER

innovative pultrusion process. In this, all stages in the process of a conventional sandwich construction and of the pultrusion are consolidated into just one step. The prize for the "unusual application idea and employment of a material" went to the electrically co-powered penny-farthing of BASF SE, Ludwigshafen. This bicycle was intended to show the benchmark at which, plastics, including PU, will be set to in future. Mara Freigang, a graduate of interior design at the University of Applied Sciences Mainz, got to enjoy a prize in the category "Idea and Design" for her modular storage system "eGo". The second day of the event took place in Hennecke's company premises at St. Augustin. The highlight of this was the ceremonial opening of the new application technology center TECHCENTER, where Hennecke is pooling its research capabilities into a total area of more than 1,000 square metres at its company headquarters, and is thereby significantly expanding its developmental capacities (see page 10). Adjacent to the new application technology center, the visitors were informed about the project InCar®plus in a specially provided show truck.

"The realisation of future expectations and challenges in lightweight construction can only be achieved through joint innovations based on creative research, development and the implementation of combined thermoplastic and reactive systems. A long-standing partnership is a basic requirement for this, beginning in R&D with joint application technology optimisations, through to customer service. The successful work together with Hennecke confirms this way for us."

Gerald Schöfer, Managing Director of
Schöfer GmbH, Schwetberg, Austria

The ceremonial opening of the new application technology TECHCENTER. From left to right: Jens Winiarz (Head of Sales for CSM Spray Technology and New Technologies at Hennecke GmbH), Dr. Hans W. Schloz (Managing Director of FSK), Jürgen Wirth (Head of Development and Application Technology at Hennecke GmbH), Alois Schmid (Managing Director of Technology at Hennecke GmbH)

> *"The new TECHCENTER has really impressed me. I am of course delighted that one of our machines stands here as a visible sign of our good work together. Now we can advance the area of high pressure RTM and the combination of polyurethane and injection moulding even further."*
>
> Peter Egger, divisional management of the technology center for lightweight composites at Engel, St. Valentin, Austria

This project with ThyssenKrupp Steel Europe AG is substantially optimising efficiency in the fields of drive, chassis and bodywork through the use of intelligent lightweight construction. On display were a wide variety of lightweight parts, including among others, a car door with a steel-plastic-hybrid construction. In his presentation Andreas Keutz, from Research and Development at Thyssen Krupp Steel Europe AG, explained how the innovative door concept was put into practice in cooperation with Hennecke (see page 11).

Along with other interesting presentations from the companies ENGEL AUSTRIA GmbH, MAGNA STEYR AG and Audi AG, which primarily focused on solutions in the lightweight automotive construction, the participants were also able to experience live demonstrations at the opening. Among them was the production of a trunk floor for a mid-range vehicle using PUR-CSM spray technology as well as the production of a fibre composite component in the INSITU process (see page 12). In addition, the factory tours inside the Hennecke production facilities were especially popular. On this occasion, the participants gained a detailed insight into the production of mixheads and the final assembly of metering machines, among other things.

> *"With the new TECHCENTER we can now test and implement ideas for steel-plastic combinations in the field of automotive lightweight construction, faster, and more efficiently."*
>
> Andreas Keutz, research and development at Thyssen Krupp, Duisburg

Detailed insight into the production facilities: factory tours at Hennecke

"On land, sea and in the air": presentation on the innovative power of polyurethane by Jens Winiarz (Hennecke GmbH)

In his welcome speech, Rolf Trippler, the Managing Director of Sales at Hennecke GmbH, traced the historic arc of the company from its foundation to today. Jens Winiarz, Head of Sales for CSM and new technologies, presented the innovations and milestones. His presentation showed the multifaceted nature and innovative power of "Fascination PUR" in an impressive way. With the new TECHCENTER, Hennecke has now reached another milestone in its company history.

"One of the trends that has become apparent in polyurethane technology in recent years is the search for new combinations of processes," explained Jürgen Wirth, Head of the TECHCENTER. "In our new application technology center, a range of state-of-the-art machines from highly diverse fields of PU expertise is available in order to create new processes and products together with our application specialists."

> *With the new TECHCENTER we now have the opportunity to considerably reduce our time-to-market."*
>
> Marco Biava, Sales Director of
> Persico Automotive, Nembro, Italy

Milestones in Hennecke's history: welcome speech by Rolf Trippler (Hennecke GmbH)

Guarantor of the technological leadership in the PU sector: the Hennecke TECHCENTER

At Hennecke's new TECHCENTER, customers will be able to draw on state-of-the-art polyurethane processing technology for all applications across a surface of more than 1,000 square metres.

Hennecke offers innovative systems and technologies that are geared to meet customer requirements in all conceivable applications. Without intensive and continuous research and development, this would not be possible. From the machinery and plant manufacturer's point of view, it is thus logical to establish a new application technology center at Sankt Augustin headquarters which places the focus on specific customer requirements on the one hand and in-house research on the other hand. Apart from product development and product optimisation, the comprehensive service portfolio of the Hennecke TECHCENTER comprises process development and raw materials testing under close-to-production conditions. Moreover, training, demonstrations to customers and matching tests will be carried out in the state-of-the-art application technology center. The process and machine technology available in the TECHCENTER covers high and low-pressure metering machines with up to six components and a large output range. It also includes plant technology for all processing variants in the area of polyurethane spray moulding (PUR-CSM) as well as systems engineering for the production of fibre-reinforced structural components (HP-RTM). In addition, machine and plant technology for various injection, moulded foam and insulation foam applications is provided to the customer.

Process and machine engineering at the Hennecke TECHCENTER

We can demonstrate the following technologies at the Hennecke TECHCENTER:

- Processing of rigid, flexible and integral skin foams, elastomers as well as epoxy resin systems and reactive thermoplasts
- RIM, RRIM, SRIM, PUR-CSM fibre composite clearmelt®, Skinmelt, Sprayskin and HP-RTM applications
- Hand or robotically operated pouring of reaction mixture into open and closed moulds

The following machine and plant technology is permanently available at the Hennecke TECHCENTER*

- High-pressure reaction casting machines for a reaction mixture output of 10 to 1,500cm³/s (outputs below 10cm³/s are also possible depending on the application)
- Metering machines with up to six individual components that can be temperature-controlled, evacuated or gas-loaded
- Processing of all common blowing agents (plant modifications are possible depending on vapour pressure and flammability of the blowing agents)
- Processing of fillers in the batch technique with a carrier component
- Low-pressure reaction casting machine with up to eight individual components (four main and four additional components)
- Heatable casting table for elastomer processing
- Mould carrier with clamping plate dimensions of 1,600*1,140mm (clamping force of up to 60t, max. opening stroke of 1,900mm, +/-30° swivelling)
- Handling robot with a carrying capacity of 130kg
- Spray booth with robot for small parts with dimensions of approx. 1,000*1,000mm
- PUR-CSM-CENTER** (Polyurethane Composite Spray Moulding) with press (3*2m clamping plate dimensions, clamping force of up to 600t, large-format spray booth with handling devices, mobile handling robot with 130kg carrying capacity)

* If required, other machine and plant combinations can be demonstrated in the Hennecke TECHCENTER by arrangement.

** PUR-CSM process variants: PUR-CSM-SANITARY for solvent-free reinforcement of bath tubs and shower trays, PUR-CSM-PREG for manufacturing extremely high load-bearing lightweight composites and PUR-CSM-SKIN for realising high-quality polyurethane spray skins.

Extended range of properties thanks to PUR-CSM:

Production of steel-plastic-hybrid car door modules

Hennecke is the specialist when it comes to substituting familiar manufacturing methods and processes using polyurethane. The best example of this is the PUR-CSM technology which has now become part of a promising project by the ThyssenKrupp Group. The focus is on intelligent lightweight construction in the form of an automotive door module made of ultra-thin sheet steel which, thanks to a CSM long-glass-fibre polyurethane spray coat, saves significant weight and extends the required range of properties.

InCar®plus door module with PU-reinforced outer skin

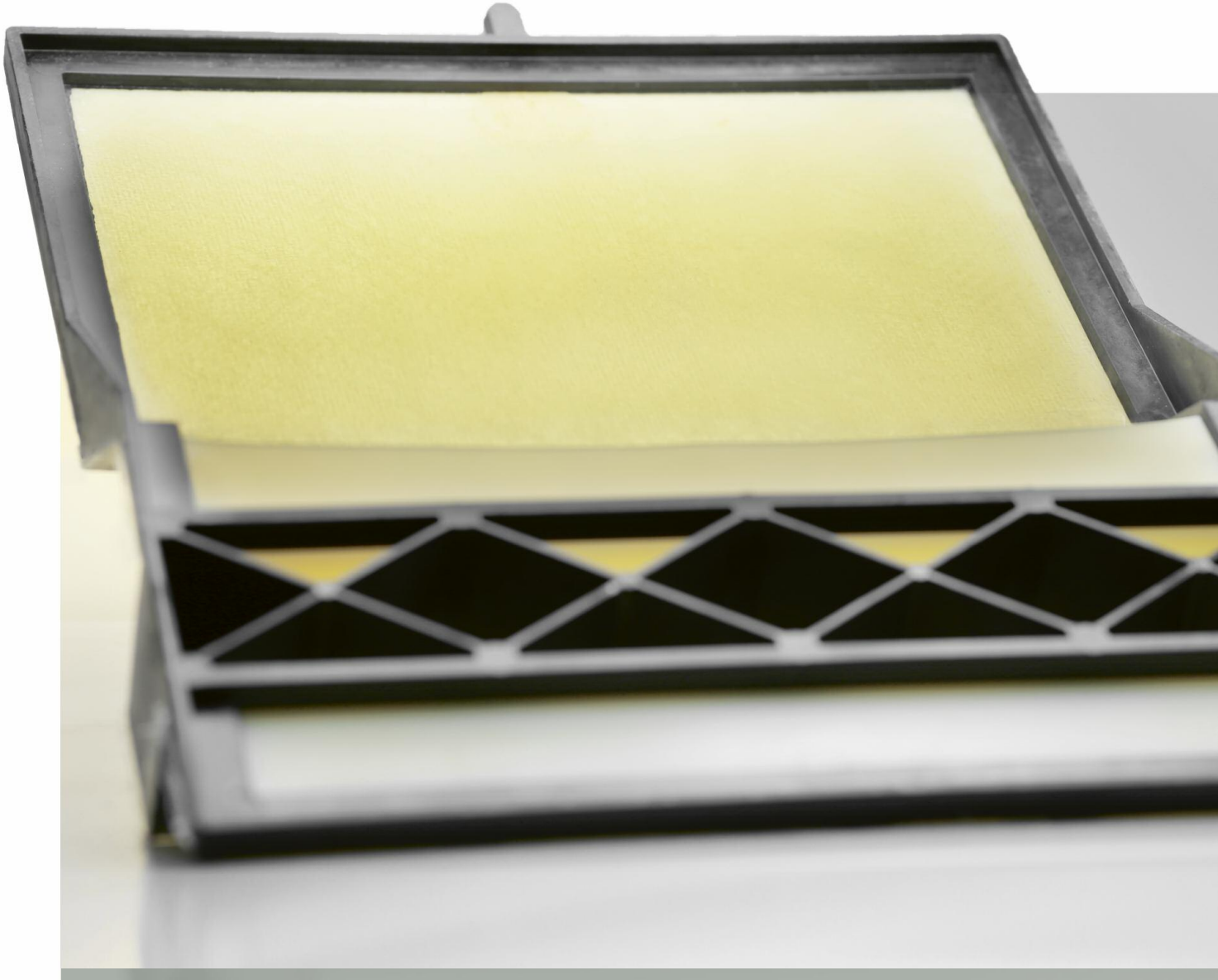
Within the framework of ThyssenKrupp's technology offensive, InCar®plus passenger car door modules are for the first time reinforced with a locally focused polyurethane spray coat. This makes it possible to use very thin sheet thicknesses for the outer skin because the inevitable loss of dent resistance and buckling stiffness is effectively compensated by the PU coat. The properties of the hybrid material can be precisely adjusted by adding stiffening additives and by varying the number of sprayed layers. The aim is to significantly expand the lightweight potential for automotive body parts with improved performance because apart from dent resistance, accoustic and insulating features are enhanced. Due to the characteristic spray pattern, precise spraying in selective areas is possible.

With this, Hennecke's technology provides for a very uniform and reproducible PU distribution. The output is variable while production continues. On the one hand, this enables a rapid and homogeneous spray application over a large area, and on the other hand - by reducing the spraying distance and spraying discharge - locally focused spraying is possible. The self-cleaning CSM spray mixhead again shows the great potential of a PU spray technology for use in large-scale production.

The InCar®plus project takes advantage of ThyssenKrupp's many years of know-how in material development and manufacturing in order to significantly increase the efficiency in drive, body and chassis components. Find extensive information on InCar®plus online at www.incarplus.thyssenkrupp.com.

Innovative lightweight construction solutions:

Hennecke presents fibre composite INSITU component



Anyone studying the subject area "lightweight vehicle construction for the future" in relation to its basic elements and prerequisites, must take the following requirements into account:

- Requirement-oriented fibre composition
- Suitability for high volumes
- Time and cost optimisation

Requirement-oriented fibre composition is a classic feature of products that are largely manually produced using the RTM (Resin Transfer Moulding) process. Here, Hennecke has already been able to significantly improve the conventional manufacturing process in terms of cycle times by developing the HP-RTM procedure using reactive plastic systems.

The injection moulding process has always been the perfect example of a system **suited for high volumes** in the area of plastics processing. If both processes for manufacturing fibre-composite components are applied in combination with each other, this brings significant advantages in terms of **time and cost optimisation**, particularly in high-volume applications. This is also because it is not always necessary to produce components in a complete fibre fabric structure.

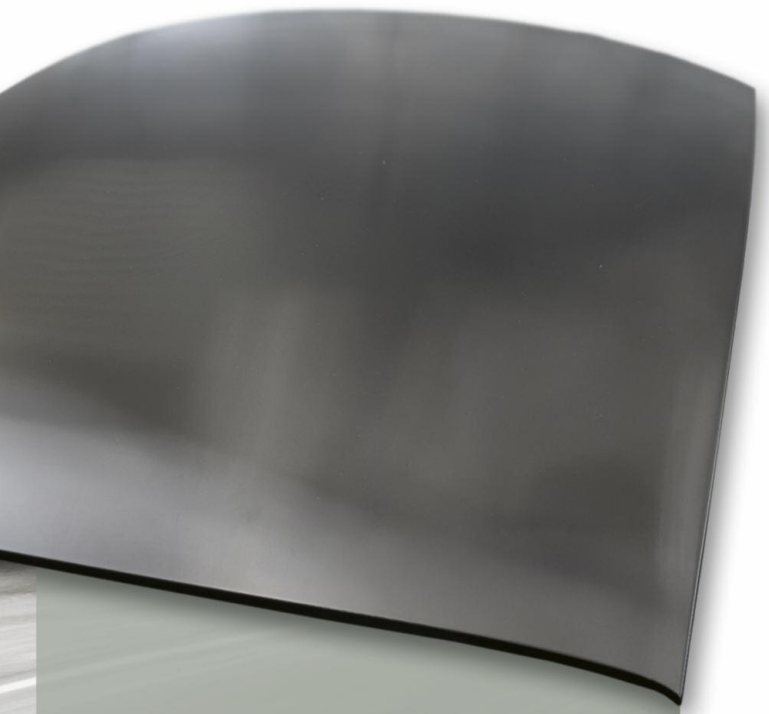
Injection moulding and the HP-RTM process: combined production unit in the Hennecke TECHCENTER

STREAMLINE high pressure metering machine in three-component design

Ideally, the fibre fabric within a component is only required in places where forces must actually be absorbed. The final moulding can then be performed completely, in a high-quality design and even in the final net shape using thermoplastic injection moulding.

The INSITU demonstration component now produced with the aid of this technology combination demonstrates exactly this kind of application. An HP-RTM process with reactive caprolactam produces the fibre composite part of the product, while the subsequent injection moulding process with polyamide determines the component's shape. "In composite products, widely varying materials are paired with one another, in order to emphasise their positive properties. Ideally, for the manufacturing process, this has to begin during machine construction," argues Jens Winiarz, Head of Sales for CSM and New Technologies at Hennecke GmbH. Producing such a component using the process described is a great step forwards into the future. To Hennecke, this represents considerable added value for its customers. This is in particular because the combination of requirement-oriented fibre composition on the one hand and cost optimisation on the other is the key to large-scale production with short cycle times in the prominent area of lightweight construction.

Fit for exterior components in large-scale production:
PUR-CSM PREG

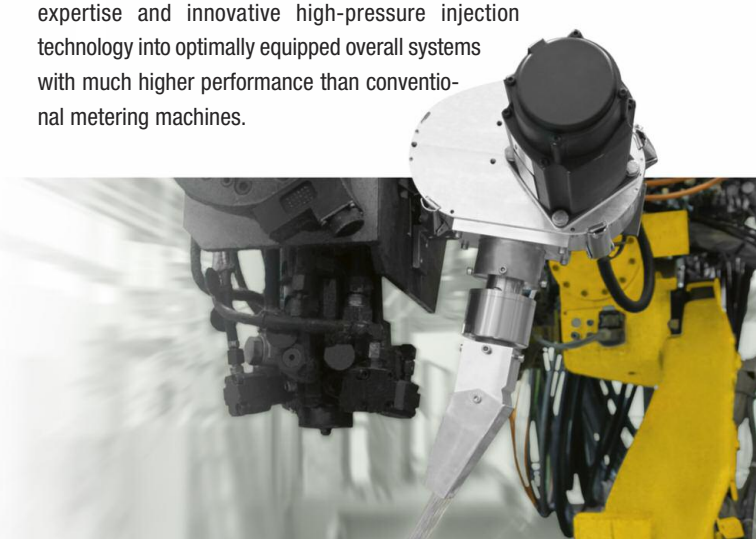


The issue of lightweight construction cannot be ignored by any automotive manufacturer today. The number of innovative composite parts in vehicles is growing year by year. The automobile supplier Fehrer Composite Components has developed for the new "smart fortwo" a new lightweight roof in a sandwich construction. Thanks to very short cycle times and using an optimised overall process, Hennecke machine technology is making sure that the lightest vehicle roof construction currently available on the market can be produced economically on a large scale.

Hennecke's expertise gained from more than 90 high-volume production lines for load floors and sliding roofs in paper honeycomb sandwich structure all over the world is being concentrated in the first exterior sandwich component which is mass produced. The innovative lightweight roof developed by Fehrer Composite Components for the new smart fortwo consists of a material mix of polyurethane, glass fibre and paper honeycomb and is coated with a thermoplastic outer skin. It provides the same stability as the plastic standard roof of its predecessor but it is 30 percent lighter.

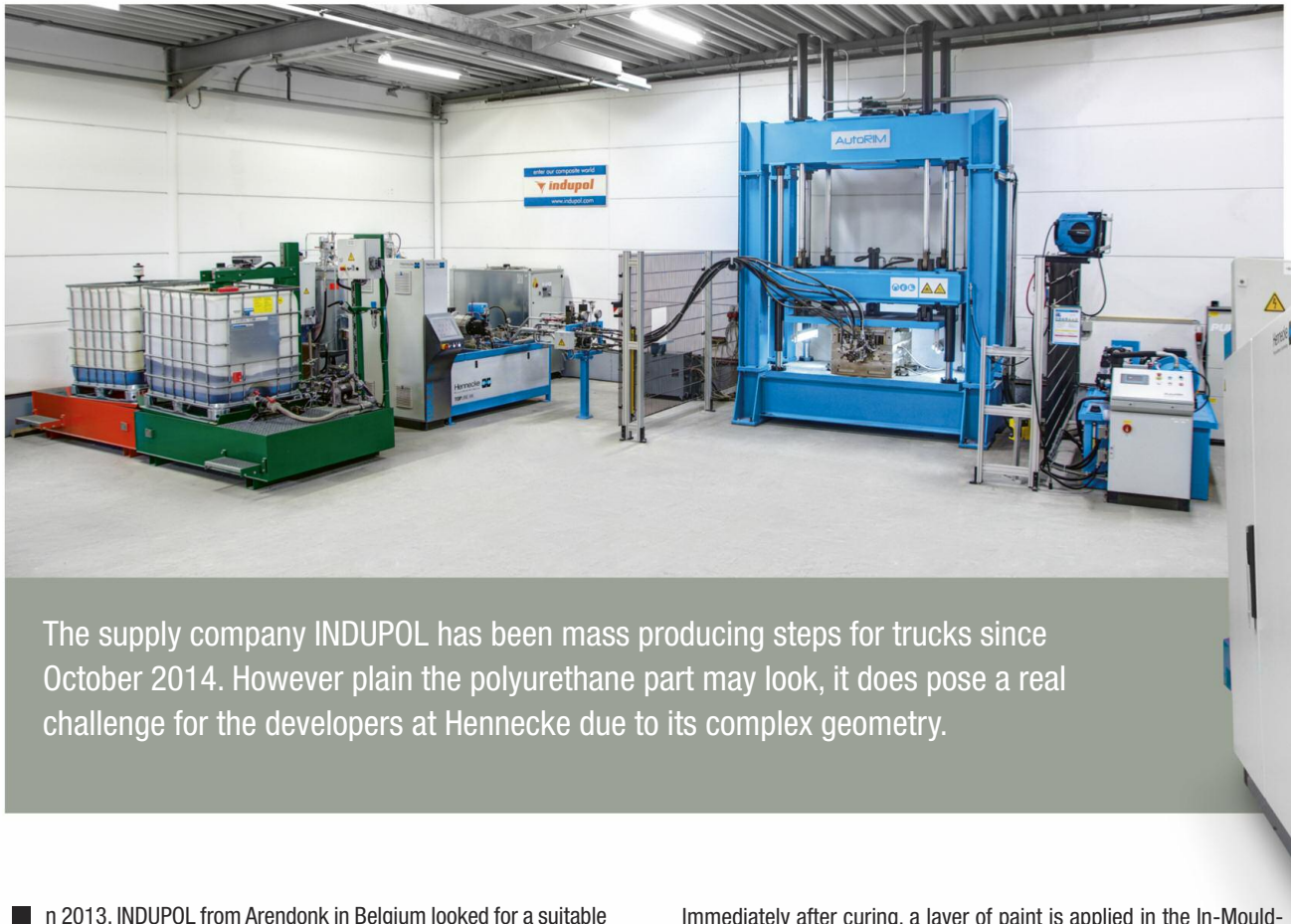
Compared to traditional composite parts, the individual layers are not bonded in a complex, multi-step process, but in a single operation. This so-called "one-shot process" is becoming more and more popular. Products are manufactured to be as close to their final contours as possible, and in terms of surface finish can be demoulded without requiring further processing. The part also represents a first for Fehrer Composite Components. With the lightweight construction for the smart fortwo, the vehicle interior specialist is providing an outer body part in mass production for the first time. The component is produced in the Fehrer plant in Großlangheim and delivered directly to the smart assembly line in Hambach where it is installed onto the vehicles.

The realisation of such high-quality fibre-composite components on a large scale illustrates how the Hennecke specialists manage to combine state-of-the-art processing systems, long-standing process expertise and innovative high-pressure injection technology into optimally equipped overall systems with much higher performance than conventional metering machines.



Complex tasks require well-thought-out solutions:

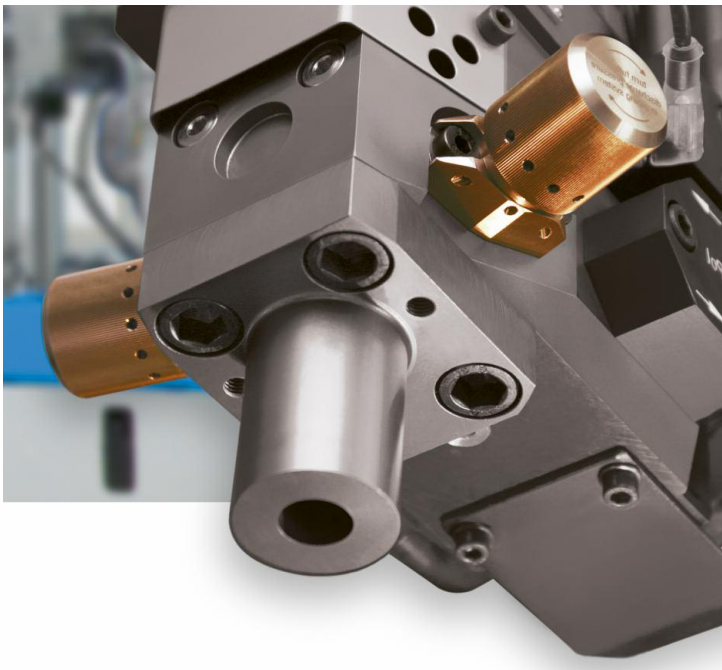
Manufacturing truck steps using the In-Mould-Coating Process



The supply company INDUPOL has been mass producing steps for trucks since October 2014. However plain the polyurethane part may look, it does pose a real challenge for the developers at Hennecke due to its complex geometry.

In 2013, INDUPOL from Arendonk in Belgium looked for a suitable partner for systems for manufacturing steps from rigid polyurethane foam with a painted surface for truck driver cabs. After asking the polyurethane specialist Hennecke, they soon had the first sample parts. The challenge with this project was the extreme mould geometry of the 3D cavity, which made filling the mould with polyurethane considerably more difficult. Together with BASF, a supplier for the easily foaming PU material, and BOMIX, who contributed with the relevant paint and release agents, Hennecke specialists found a suitable solution in several series of tests carried out in their technical center whereby the reactive mixture fills the cavity reliably when being poured into the closed mould. Immediately after curing, a layer of paint is applied in the In-Mould-Coating process. After extensive testing of the sample parts, the truck manufacturer gave the go-ahead to INDUPOL for mass production. Hennecke supplied the required production line, a high-pressure TOPLINE HK metering machine with IBC container station and a mould carrier press from Hennecke partner AutoRIM Ltd, as a complete solution. INDUPOL's mould is designed as a dual cavity so that the driver's and passenger's side can be manufactured in one cycle period. Due to the complex geometry and a design with a grained surface, the mould is equipped with hydraulic extractor rods for demoulding components more easily.

A highly efficient MT 18-2 deflection mixhead ensures optimal mixing quality and raw material efficiency. The high-pressure polyurethane metering machine HK 470/470 supplies the reaction mixture. The Hennecke machine is designed for a maximum output of 940cm³ of mixture per second. The mould is opened and closed by a mould carrier of the MG series from the Hennecke partner AutoRIM Ltd. from Derbyshire in England. The press is for moulds of up to two tonnes in weight. State-of-the-art security systems with safety laser scanners and light curtains provide the best possible protection for workers. When opening, the upper and lower mould plates pivot towards the operator, thus facilitating the removal of components. The cycle time is approximately four minutes. The period is divided into a shot time of four seconds and a curing time of 120 seconds for the PU mixture. The subsequent application of paint takes a total of approximately two minutes until curing.



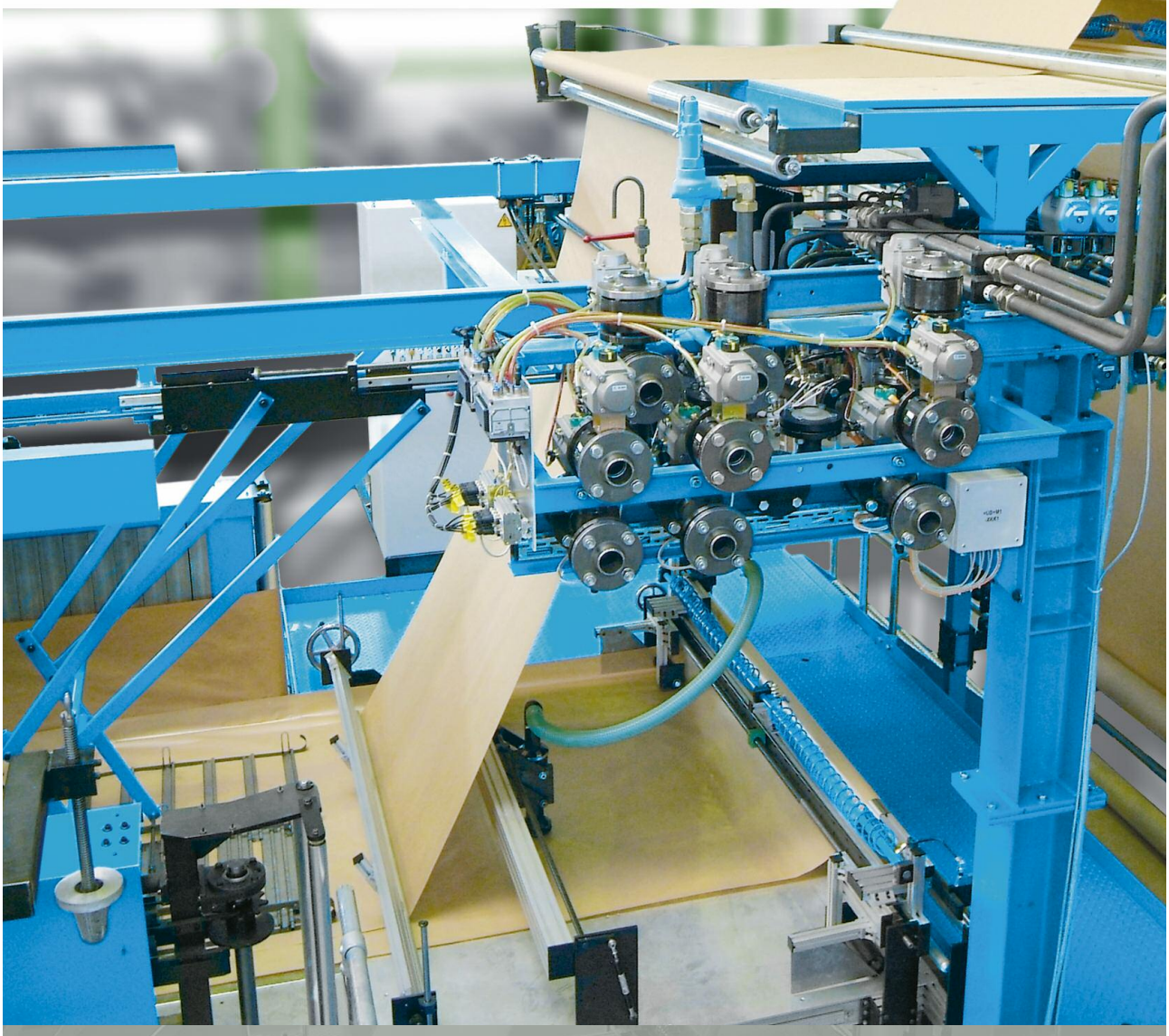
INDUPOL INTERNATIONAL NV

INDUPOL is a supplier for truck and bus manufacturers. For this purpose the company develops and manufactures sleeping cabs, polyester body parts, interior parts, spoilers, and bumpers, amongst other things. INDUPOL also supplies large-scale plastic parts to mobile home, caravan and agricultural vehicle manufacturers as well as to the aircraft industry. INDUPOL also gained 40 years of experience in the rail industry with the acquisition of Bekro Composites in 2013.

indupol composite solutions

Hennecke for generations:

Production of flexible slabstock foam in Greater Noida, India



Hennecke has been building traditional and modern high-tech machines for many generations. Praduman Patel is a good example of this. Five years ago he founded his company Prime Comfort Products for manufacturing high quality foam products in Greater Noida, a satellite town of the Indian metropolis Delhi.

In a short span of three years, Praduman Patel has managed to become the 3rd largest PU foam manufacturer in the Indian market. Prime Comfort started in 2010 with an annual production of 1,750 tons. Today the family company produces around 8,000 tons of slabstock foam per year from one plant and employs almost 250 people. Mr. Patel was able to achieve this tremendous growth thanks to his excellent knowledge of the market and his technical know-how in the production of flexible slabstock foam.

The company founder has more than 35 years of experience in the PU Foam and Bedding industry in India. For many years he was part of the management of the market leader for flexible PU foam, and it is there that he first invested in Hennecke in the year 2005. When the PUR specialist introduced the current MULTIFLEX series into the Indian market in 2006, Mr. Patel was impressed by Hennecke's slabstock technology and was immediately convinced of its benefits. By using high-pressure technology, the liquid laydown method and the flat top equipment, he had a highly efficient raw material yield in the continuous production of slabstock foams and got the best foam qualities with an excellent price-performance ratio.

When Mr. Patel came to found his own company, Hennecke was his first choice as machine supplier. Within six months the factory was built on a total area of 30,000m². His two sons Rohan (29) and Krish (27), who are now in responsible management positions, provide valuable support to their father. His sons are also convinced of the advantages of the advanced Hennecke technology and that's what has made Prime Comfort Products India's fastest growing PU Foam Company. The MULTIFLEX production lines are equipped with high-quality, standardised plant components. For Prime Comfort, this means a high degree of plant capacity, as well as reduced maintenance and spare part costs. Its modular design has reduced assembly and start-up times – and therefore also investment costs – and,

Family with accumulated experience in slabstock: Praduman Patel (centre) and his two sons

in addition, it gives the Patel family the possibility to adapt the system to current market requirements long after commissioning, by means of additional modules, special accessories and equipment, thus ensuring the competitive capability of the company in the long run.

After running his first MULTIFLEX for three years and seeing the advantages of consistent quality, raw material savings and ease of operation he invested in his second Hennecke MULTIFLEX machine in a 50:50 Joint Venture with Fortune Foam in Hyderabad (South of India) which started production in August 2015. Mr. Patel expects a similar growth to that of the Greater Noida plant and has already contracted his third MULTIFLEX for his Gujarat Project (West of India) to start production in the middle of 2016. One day, Mr. Patel's sons will take over the company and, with the tried and tested Hennecke technology, they will continue to expand on its success proving that high-quality machines from Hennecke that were bought by the father will also be good for the sons of the next generation.

Comprehensive production solutions for Asian customers:

Open House Event for sandwich panel plant technology at Hennecke Machinery Shanghai

The growth rates in China and the entire Asian region are still unbroken in the polyurethane processing sector. The Hennecke group underlines the significance of the steadily growing market with the consistent expansion of the Chinese subsidiary Hennecke Machinery Shanghai (HMS). Local branch representatives were just now able to see the comprehensive performance portfolio in the continuous sandwich panel unit sector for themselves in the framework of an open house event.

Hennecke understood the significance of the Asian market and the Chinese market in particular early on and has been represented with a sales and service location in China since the opening of the market itself. Since the founding of HMS, the production capacities have been successively expanded along with the targeted extension of the engineering and after-sales portfolio. Just recently, the Chinese Hennecke subsidiary was able to double its production area with the inauguration of a new production hall. This is a great competitive advantage in particular in the manufacture and sales of large production lines, because in addition to optimised customer service in all project phases, logistics is also significantly facilitated. In particular in the area of continuous sandwich panel lines of the CONTIMAT series, the Hennecke group is able to offer a comprehensive full system competence in the form of complete production lines - from raw material storage to roll forming machines and packaging installations. HMS answers the unwavering demand for this plant type in the Asian region with an Open House event, which attracted more than 50 customers from China, Singapore, Japan and Korea to the production site in Shanghai in September 2015. The HMS CONTIMAT team proved their technical know-how to the participants in specialised lectures. Along with a general introduction of the company by CEO Andrew Chan, the presentations focused on the comprehensive product portfolio and the far-reaching measures of quality assurance at the Shanghai location, among other things. In addition, Andreas Fischer (head of sales sandwich panel lines, Hennecke GmbH) and Wolfgang Inhof (sales director sandwich panel lines, Hennecke GmbH) were able to present advanced developments in the discharge system as well as Hennecke's competence in profiling metal facings.

Stacker including program-controlled optimization of the panel stacks

Extremely accurate in spite of fast cutting sequence: Andrew Chan (center) explains the advantages of the CONTIMAT band saw

In the subsequent visit to the production hall, the HMS representatives presented a CONTIMAT double plate conveyor including foam portal and saw, as well as a complete plant outlet in the form of a cooling section and stacking, and packaging from local production to the interested participants. All the system components convinced the attending experts with their high production quality, because Hennecke makes no compromises on quality in growth markets either. The advanced production capacities were another focus point of the event. The new production hall, whose foundation and cranes are specifically designed for heavy loads as they are needed in CONTIMAT production, shows just how serious HMS is about advancing the market penetration of the CONTIMAT system technology.

The conclusion of the event is positive in every way. All of the visitors were enthusiastic about the quality and performance capability. HMS was able to step up customer contact significantly and the next order conclusion with a large-scale customer from China is pending. Similarly to successful projects in the past, the comprehensive performance portfolio and the well-founded after-sales support of HMS is the centre of this decision to purchase

Hennecke Machinery Shanghai – Service and customer vicinity in China

What started in 1994 in Shanghai as a modest agency for different sales activities is one of the most important Hennecke subsidiaries today. After consistent growth, the first activities in production and assembly of Hennecke products commenced in 2005. Today, HMS is able to offer comprehensive solutions, consisting of consulting services, engineering, production and a complete after-sales portfolio to all Chinese customers. In the process, the Hennecke subsidiary acts locally and is therefore able to provide the services as efficiently and cost-effectively as possible. Further tasks of the Hennecke subsidiary include the sales of the entire Hennecke product range as well as a number of marketing activities to increase the awareness of machine and plant technology in Asia. The experienced team around CEO Andrew Chan also takes care of proper final assembly and start-up on customer location, covering everything from metering machines to comprehensive large-scale plants for the automotive, construction or refrigeration industry.

Production quality without any compromise: double plate conveyor from HMS'production facility

NEW DISCHARGE SYSTEM FOR CONTINUOUS SANDWICH PANEL UNITS

The quality of continuously manufactured sandwich elements is above all determined by the mechanical and isolating properties of the PU hard foam. The focus is on the way the liquid raw material mixture is applied between the cover layers. What is needed here is an ideal interaction of an even distribution over the entire foam width with simultaneously starting foam reaction. Conventional discharge systems use several mixing heads to achieve these two properties. Now, a revolutionary discharge system is enabling a decisive improvement and bringing the desired ideal in this interaction a significant step closer. Extensive flow simulations were used during the construction of the first prototype. The first real experiments were then conducted in Hennecke's own testing facility and served as a basis for the continuous further development towards a practical system. After further optimisations and tests under real production conditions, also regarding simple handling, cleaning and reusability among other things, the new discharge system has now reached market maturity. The aim is to introduce the system for a broad selection of successive applications on the market as early as next year. In this way Hennecke is again proving its abundant professional expertise in the production of sandwich elements with PU cores.

Homogeneous distribution with simultaneously starting foam reaction: revolutionary discharge system

Hennecke
Polyurethane Technology

HENNECKE.COM

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