

GEMÜ® news

GEMÜ IS SETTING THE COURSE FOR THE FUTURE

Product news

Green Engineering

Application reports

Training

Commitment and initiatives

Magazine for the
customers, partners and
friends of the GEMÜ Group

EDITION 02.2016

When setting a course, it is important to first know where the journey should lead. If we do not, we run the risk of a rough ride with no clear destination. 2016 could, at least in parts, be described as one such journey. This year's dynamic world events, filled with geopolitical changes and upheavals, often gave us reason to pause from time to time and wonder: Where is this journey actually going to end up?

That is a good question, but often one without an answer. The situations were too complex and the information too confusing and unclear, leaving plenty of room for speculation.

We at GEMÜ prefer to design and plan our future, rather than losing ourselves in speculation. As we wish to continuously work to improve the services we offer you, we are also undergoing changes. This was achieved by founding strategic business units and segments, which will act as central hubs for all customer-driven and application-driven processes. By pooling our expertise and focusing on our customers and their needs, we are able to ensure that our company can meet the requirements of tomorrow and beyond.

In order to ensure that we are able to meet your justifiably high expectations, we will be once again investing in technology and additional manufacturing capacities in the year to come. In doing so, we are focusing in particular on finishing processes for stainless steel surfaces. We are establishing a unique competence centre for this purpose at our location in Waldenburg. Our goal is to constantly improve and perfect the products that we offer you, and to once again impress you with the products we offer. 2017. These are

the goals we had in mind when setting our course.

Dear business partner,
We would all like to take this opportunity to thank you for the trust you have placed in us and our products. It is both a pleasure and our mission to work with you to address the opportunities of the future – a mission that we welcome. We look forward to continuing to work in partnership with you in 2017.



Gert Müller
Managing Partner
Engineering & Sales



Stephan Müller
Managing Director
Finance & Operations



NEW SUBSIDIARY BOOSTS THE PRESENCE OF GEMÜ IN JAPAN

With the foundation of GEMÜ Japan Co., Ltd., GEMÜ is pushing further ahead with the expansion of its overseas business in Asia.

GEMÜ is further expanding its sales and service network due to its success in recent years. With immediate effect, experienced specialists are available in two offices in Nagoya and Tokyo to assist customers with all of their service requirements - from the initial enquiry through to fast delivery of all of our solutions relating to valves, measurement and control systems. The position of Managing Director has been filled by Mr. Yukata Kato. Mr. Hayashi Tomohiro will be responsible for Internal Sales for the new subsidiary.



"The new subsidiary will be another pillar for our company in a region of growth and will strengthen our long-term position in Asia," explains Gert Müller, Managing Partner.

"Japan as a market is not easily accessible from the outside. We must be present locally if we want to be successful there," says

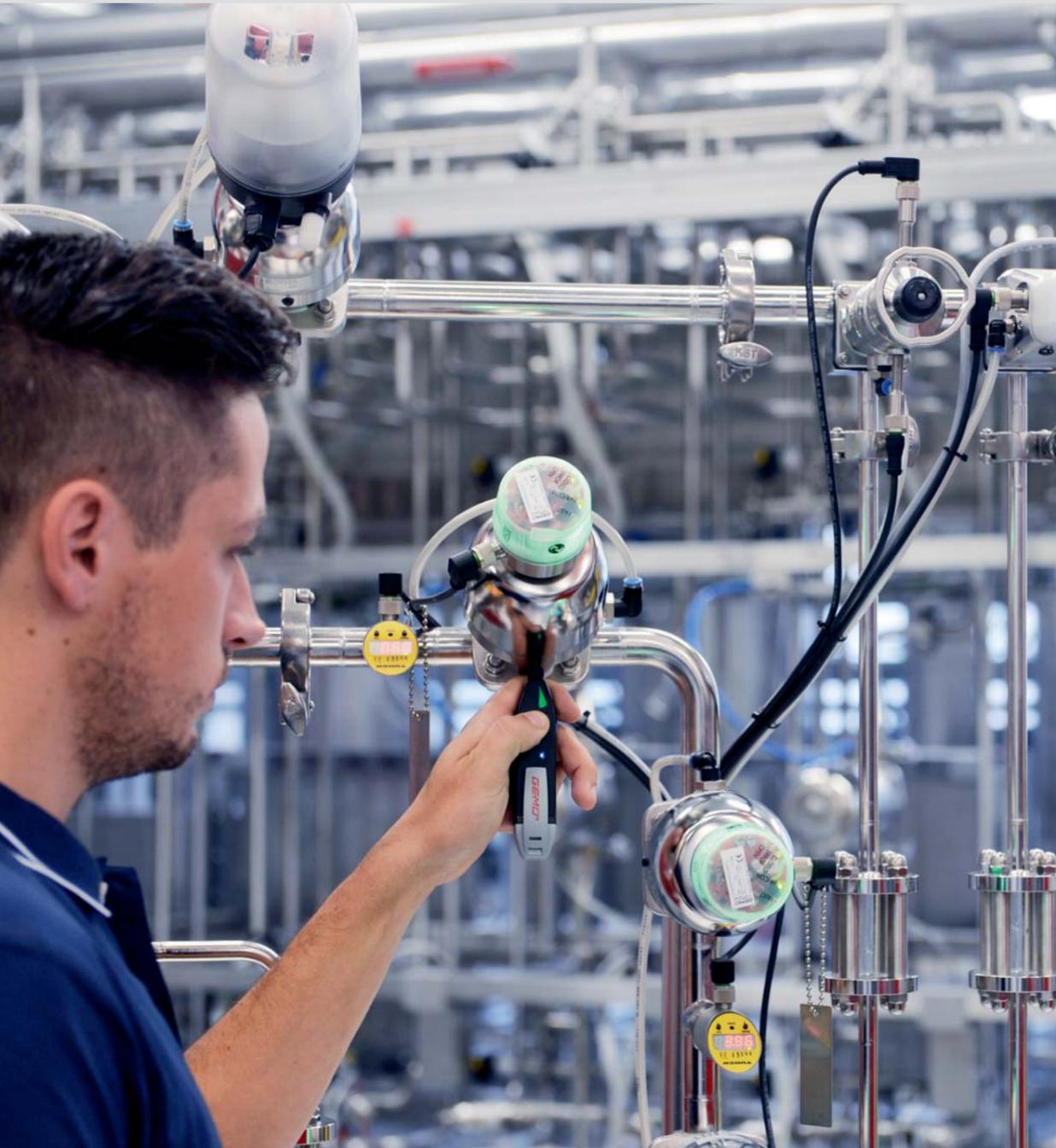
Stephan Müller, Managing Director. The country is an important industrial nation and economic force – and not just in Asia. Of course, Japan is a very interesting single market with 127 million inhabitants and an area only slightly larger than Germany. "Every industry that we supply is in Japan and we can still see great potential

there for GEMÜ. Up to now, we could only fulfil some of this potential with support from a commercial partner, so we hope that, with our own subsidiary, we will be able to ensure better market penetration and customer support for our clients in Japan," reports Stephan Müller.

GEMÜ Japan has already been represented as a subsidiary at the Interphex trade fair in Tokyo. Interphex is the international trade fair and conference for the pharmaceutical, cosmetics and cleaning agents industry. GEMÜ is now represented all over the world with 27 subsidiaries. We would like to wish GEMÜ Japan a warm welcome to the GEMÜ group and good luck!

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GEMÜ CONEXO INTELLIGENT VALVE DESIGNS



CONEXOⁱⁱⁱ

Advantages at a glance

- ⇒ **Captive electronic identification** of the valve body, actuator and diaphragm
- ⇒ **Simplified identification and inventory** of devices in the field
- ⇒ **Increased process reliability** thanks to electronic traceability
- ⇒ **Electronic documentation** by preparing job-specific documents (e.g. certificates)
- ⇒ **Optimized maintenance processes** thanks to a maintenance log book
- ⇒ **Improved IQ** (installation qualification)
- ⇒ **Paperless maintenance**



CONEXO, the system for electronic traceability and active maintenance support, was successfully introduced to the market in the summer.

Since the CONEXO system and its elements, such as RFID chips, RFID reading device, CONEXO app and portal were already introduced in the last edition, we would like to use this edition to explain the operating principle using a few practical examples with field test customers.

For example, the Swiss plant designer Bioengineering uses CONEXO to support their customers particularly in lifecycle management. The system availability of the customer is actively increased thanks to electronic traceability, as well as the application of preventive maintenance. Andreas Strehler, CTO at Bioengineering, says: "In future, the documentation of maintenance and planning, and regulation of servicing procedures, can all be stored electronically."

The integration of other plant components such as agitators, tubes and pressure gauges are important for Strehler. A manufacturer system of this type only makes sense for a plant designer if it does not operate as an isolated solution, but enables other components to be managed within it.

The same applies for integration in the software environment of the plant designer or operator.

CONEXO is designed so that it can be integrated in the IT landscape of the customer, whether in the SCADA environment at the process control level, or within the area of product management, i.e. the ERP environment.

Optimized maintenance process

There are distinct advantages for the plant operator by using CONEXO in the maintenance process. Whereas information is currently recorded manually on large amounts of paper, in future the data will be recorded on a tablet. This means it can be clearly assigned to the maintenance technician. Further processing is carried out electronically. Each maintenance step can be clearly specified and confirmed using so-called templates. This increases the overall security throughout the process. Individual maintenance procedures are logged in the maintenance log book and can be compared and analyzed accordingly.

CONEXO is only the first step towards intelligent valve and process technology.

Increasing digitalization opens up increasing opportunities to better understand the procedures in the plants and devices.

This understanding of the process will help towards operating the individual components to their optimum capability, without foregoing the equally important process reliability.

 **Marco Becker**
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GEMÜ WINS "ALLIANZ INDUSTRIE 4.0" AWARD

With the innovative CONEXO system, GEMÜ was amongst the prizewinners of the "100 places for Industry 4.0 in Baden-Württemberg" competition.

With this competition, the federal state of Baden-Württemberg awards prizes to companies who are already developing and implementing innovative solutions for the intelligent networking of production and value creation processes in their daily activities. In addition to the level of innovation, the assessment primarily considers practical relevance with regards to Industry 4.0. As a prizewinner, GEMÜ will receive an honorary certificate for being named one of the "100 places for Industry 4.0 in Baden-Württemberg". In addition, the companies receiving awards will be listed on the Allianz website (www.i40-bw.de) and recorded in the Competence Atlas for the federal state of Baden-Württemberg. "CONEXO translates the buzzword "Industry 4.0" into genuine customer benefits. We are delighted that this approach is attracting interest," explains Marco Becker, Head of Sales Marketing.

GEMÜ presented the future of intelligent valve technology under the name of CONEXO last year. Through the interaction between valve components equipped with RFID chips and an IT infrastructure, comprising a mobile and a stationary software solution, the CONEXO system is actively improving process reliability. GEMÜ CONEXO helps customers to understand and interpret the procedures in their systems even better and always with a higher-level objective in mind – to increase system availability.



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EFFICIENT MOTORIZED ACTUATOR FOR GLOBE AND DIAPHRAGM VALVES

The new GEMÜ eSyDrive motorized actuator sets new standards in the areas of compact design, speed and accuracy.

GEMÜ has designed this new actuator as a response to increasing requirements in the area of motorized valves, while recognising the current trend in the area of process automation. Pneumatically operated valves are increasingly being replaced with electrical versions.

The development of this new actuator has been based on decades of experience in the area of motorized actuators. GEMÜ already boasts a long-established selection of corresponding products in the areas of linear and quarter turn actuators for globe and diaphragm valves, butterfly valves and ball valves.

Functional principle of the new actuator

Designed on the basis of the hollow shaft principle in conjunction with technology that does not use brushes or sensors, the GEMÜ eSyDrive sets new standards in terms of compact design, reliability and accuracy. The self-locking actuator also offers a high level of reproducibility for positioning and is therefore particularly suitable for use in precise control applications. The Ethernet-based eSy-web interface, in conjunction with an integrated web server, enables the exchange of parametrization and diagnostics data and the networking of several devices.

GEMÜ eSyDrive specifications

After starting initialisation, the actuator automatically adjusts itself to the current process valve, enabling the user to carry out commissioning quickly and easily. If necessary, the user can also make adjustments to the integrated stroke limiter as well as the respective end positions. The power supply for the GEMÜ eSyDrive is ensured via a 24 V DC connection. Depending on the size, the actuator has an actuating speed of between 2 mm/s and 6 mm/s. A mechanical position indicator and an electrical status and position indicator are integrated as standard. The GEMÜ

eSyDrive also features a manual override as standard. A suitable emergency power supply module is optionally available. Customers who wish to use the actuator as a control actuator can rely on a design with an integrated positioner or process controller.

Key applications and availability

Motorized valves are primarily used in areas where the use of compressed air is not desired or possible. Large-scale production plants are cited as examples of such areas, as distribution of compressed air is uneconomical in such facilities. Another example of the areas of use of these valves is mobile or decentralized facilities for drinking water treatment. The GEMÜ eSyDrive is a linear actuator suitable for open/close and control applications. It can be used both in sterile applications in the pharmaceutical and foodstuff industries and in industrial processes. With its hygienic design and robust construction, featuring a protection class of IP 65, this new actuator is highly versatile.

At launch, the actuator size 2 for diaphragm valves with nominal sizes of between DN 40 and DN 65 and for globe valves with nominal sizes of between DN 32 and DN 100 will be available. The new diaphragm valve will be available under the type GEMÜ 649. The globe valve will be available under the type GEMÜ 549. The product range will be developed successively to cover use in globe and diaphragm valves with a nominal size of between DN 6 and DN 150.



Diaphragm valve with GEMÜ eSyDrive motorized actuator

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HIGH-QUALITY ANGLE SEAT GLOBE VALVES FOR USE IN PURE STEAM APPLICATIONS



GEMÜ 505

Valve solutions must satisfy strict demands when used in complex pure steam systems, such as those in the foodstuff or pharmaceutical industries. The GEMÜ 505 and GEMÜ 555 pure steam valves are manufactured from high-quality materials, enable optimal processing of the individual materials and offer numerous advantages in terms of both function and servicing.

In the foodstuff industry in particular, but also in the chemical and pharmaceutical industries, products must sometimes be manufactured aseptically. As a result, stringent requirements are placed on the purity of the working media used during manufacturing and even the steam used. If steam comes into contact with surfaces or directly with liquid or gaseous products during aseptic production, this contact must satisfy the purity requirements of the products. The solution is found in complex pure steam systems at product requirement level. The valve solutions used here must therefore satisfy very strict demands. GEMÜ is able to meet these requirements with the aseptic GEMÜ 505 and GEMÜ 555 globe valves.

Aseptic globe valve impresses in terms of both function and maintenance

The pneumatic (GEMÜ 555) and hand-operated (GEMÜ 505) angle seat globe valves have been specially developed for isolating pure steam in close collaboration with well-known customers from the pharmaceutical industry and provide a genuine alternative to the valve types which are usually used. They require significantly less maintenance than diaphragm valves, for example, and are easier to clean than ball valves. The globe valves are available in nominal sizes DN 8 to 80. Thanks to the metal bellows and selected seal materials, the temperature of the medium can range from -10 to +180 °C. The butt weld spigot connections are designed and available in accordance with common standards such as ASME BPE, DIN 11866 or DIN EN ISO 1127.

High quality – reasonable price

All media-wetted parts are manufactured from high-quality stainless steel (316L) in order to meet the stringent requirements placed on the quality of the components used in the systems. The valve body is mechanically polished with high precision on the inside and electropolished on the outside. With this surface finish, GEMÜ is able, thanks to the body

geometry on the inside of the body as well as extensive technical expertise, not only to produce Ra values of down to 0.4 µm but to even reliably reproduce them. Particular importance was also given to the seal materials, which also satisfy the stringent requirements of the FDA. The seals were tested according to USP Class VI at 121 °C.

Even in the actuators, the materials and the processing of the individual materials are impressive, as is the case with the stainless steel bellows which accomplishes up to 100,000 cycle duties without problems and enables the actuator to use non-ferrous metals, for example. The sealing at the valve seat is provided by a seal made of extremely inert, acid-resistant and heat-resistant thermoplastic synthetic material (PTFE). The valve plug itself is welded to the valve spindle and is also smoothed in order to eliminate the otherwise usual "dirt pockets" which occur with valve plug solutions which are bolted together. The welded valve plug also ensures that this is connected permanently to the valve spindle, thereby increasing plant reliability. Because of these and other finer points, both angle seat globe valve variants provide a long service life including outstanding material properties and body geometries.

Traceability guaranteed

The stringent requirements placed on products in the pharmaceutical and foodstuff industries call for, amongst others, the traceability of all media-wetted parts in order to guarantee product quality and product reliability. For this reason, valve bodies, the retaining nut, seat, valve plug, spindle, bellows and actuator seal of the GEMÜ 555 and GEMÜ 505 are manufactured in specific batches and combined together in one production run. As a result, material test certificates in accordance with 3.1 DIN EN 10204, amongst others, can be issued and supplied with the product where necessary. In addition to the design of the valve as a low maintenance fitting in terms of material, it was also ensured that an actuator change can be carried out quickly, directly on the piping. This means it is possible to perform cost-effective maintenance and repair work and protects materials over the long term. If desired by the customer, the valve solution can also be subsequently automated, for example by switching from manual to pneumatic operation or by attaching electrical position indicators or positioners for open/close control.

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GEMÜ 555

PHOTOVOLTAIC PANELS AT THE PRODUCTION AND LOGISTICS CENTRE - POWERED BY THE SUN

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The starting signal for the construction of a photovoltaic panel system on the roof of the European Production and Logistics Centre in the Hohenlohe business park was triggered on 25th April 2016, marking a very special foundation stone ceremony.

With a production and operations area of over 13,000 sqm, GEMÜ's current consumption is a continuous cost factor not to be underestimated. The first electricity from our own 2,545 sqm photovoltaic panels was supplied on 13th May 2016. They produce approximately 390,000 kWh per year with the help of 1,518 modules. The company's own consumption is approx. 81%. The remaining power is fed into the network as it cannot be used by us over the weekends. Fossil resources are spared by using renewable energy, contributing greatly to climate protection due to the reduction in emissions. By changing over to renewable energy sources, GEMÜ has now reduced its CO₂ emissions by approx. 234 tonnes annually. Investment for the project came to around half a million euros.



SINGULARLY USEFUL GEMÜ IS EXPANDING ITS SINGLE-USE RANGE

GEMÜ, the valve specialist based in Ingelfingen, has developed the world's first controllable single-use diaphragm valve, the GEMÜ SUMONDO. The product range now comprises a manually operated version alongside a pneumatically operated solution.

The trend towards simplified upstream and downstream plant designs and the effective prevention of cross-contamination risks means that single-use disposable technology is becoming an increasingly high-profile and important field – especially in pharmaceutical process engineering.

Single-use design is increasingly being used particularly in the manufacture of smaller batch sizes, which are required, for example, in research and pilot plants.

GEMÜ SUMONDO links the valve body and manual operator together using a defined process. After the application process, only the valve body is removed, the manual operator itself can be reused repeatedly in the plant.

The valve body is manufactured from polypropylene in a cleanroom and is gamma-sterilizable up to 50 kGy. It isolates the working medium hermetically from the environment and from the manual operator via a welded diaphragm. The internally welded diaphragm protects the medium from the environment not only during operation, but also after removal of the valve body.

The major advantage of GEMÜ SUMONDO in comparison to conventional pinch valves lies in the precise controllability of processes. Using a tried and tested operator design from conventional plant engineering, a high degree of flexibility and reliability can be achieved.

The manually operated version has an optical position indicator as standard. The new manual operator is manufactured from high-grade plastic. It is gamma-sterilizable and washable. An autoclavable version is planned for the first six months of 2017. The process for selecting the valve body is identical to that for the pneumatically operated version



The new GEMÜ SUMONDO manual operator

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GEMÜ HONoured AS "GLOBAL MARKET LEADER 2016"

The Ingelfingen-based specialist in valves has been recorded as "Global market leader 2016" in the global market leader index of the University of St. Gallen and the Academy of German Global Market Leaders.

In the equipment and automation components segment: Valve, process and valve control technology for sterile applications, the company GEMÜ Gebrüder Müller Apparatebau GmbH & Co. KG was awarded the quality mark "Global market leader 2016" for its outstanding services. Based on scientific criteria, the Henri B. Meier Business School at the University of St. Gallen and the Academy of German Global Market Leaders (ADWM) developed the global market leader index. This researches and presents the actual global market leaders using objective and transparent selection processes. All selection criteria and established values are presented in an open manner. The index is also open to the public.

The researchers designate companies as global market leaders which are, among other things, represented on at least three continents with their own exports, production or sales companies, have an annual turnover of at least 50 million euros, are first or second in the relevant market segment, and can demonstrate export sales of over 50% of their turnover. These requirements are met by GEMÜ, with its 27 subsidiaries and six manufacturing sites in Germany, Switzerland, China, Brazil, France and USA. "We are delighted with the award. It is based on scientific criteria and confirms the worldwide success of our family-owned enterprise with leading design," says Gert Müller, Managing Partner.

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MORE VERSATILE APPLICATION POSSIBILITIES THANKS TO NEW CERTIFICATIONS

A high level of product quality and numerous configuration options increase the versatility of GEMÜ's Victoria® series of butterfly valves.

GEMÜ, which is based in Ingelfingen, is continuously investing in innovative products and in optimising their existing range. Their corporate philosophy has always involved making tried-and-tested products even better. One example of this is the butterfly valves in GEMÜ's Victoria® series.

Thanks to ongoing enhancements to this product range, its area of use has continued to grow in recent years. With immediate effect, in addition to the existing DVGW approval for water, this series will also have the certificate for gas.

Equipment that has been tested in accordance with DVGW's regulatory code is guaranteed to comply with the applicable regulatory codes and standards and to meet high quality guidelines.

This means that it is now possible to use the GEMÜ 481, GEMÜ 487 and GEMÜ 488 butterfly valves for applications that demand DVGW gas approval. Examples of this include gas production, treatment and injection. Depending on the product type, the butterfly valves are available with the new approval in versions that have manual, pneumatic or motorized actuators.

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GEMÜ 487 with DVGW (German Technical and Scientific Association for Gas and Water) gas approval

IMPRINT

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CREATING THE FUTURE GEMÜ'S NEW BUSINESS AREA STRATEGY

Change is the subject of 2016.

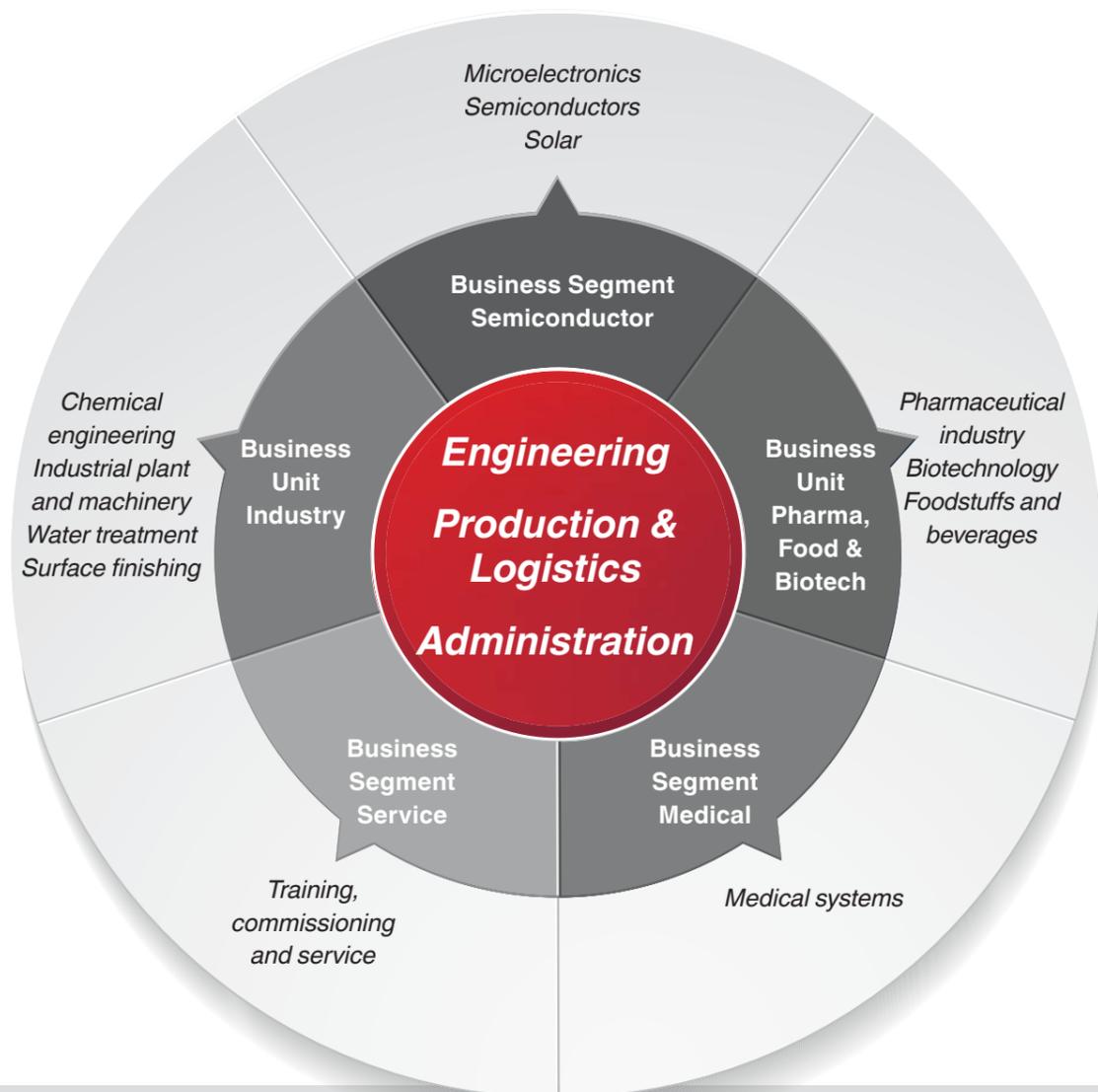
We already reported on the change process in the last issue of GEMÜnews. The question that arises as a result is obvious: Why are we changing? We want to respond to the requirements of our customers even more effectively in the future.

We have therefore decided to coordinate all customer-related activities from strategic business units.

By interlinking our international sales activities with the specialists from the application and engineering areas, we are creating a competence centre for customer-orientated solutions.

What is the benefit to our customers?

- ⇒ Close-to-market solutions for customers, through specialised sales
- ⇒ Cutting-edge innovative products
- ⇒ Global presence and direct availability
- ⇒ Professional project monitoring by technical consultants



INTRODUCTION OF A NEW BUSINESS UNIT BUSINESS UNIT INDUSTRY

In the last issue of GEMÜnews, we reported on the Business Unit Pharma, Food & Biotech. In this issue, we want to introduce you to the Business Unit Industry. Joachim Brien, Head of the Business Unit Industry, answers some of our questions in the following interview.

GEMÜnews: Mr Brien, please tell us a little bit about yourself.

Joachim Brien: My name is Joachim Brien, I am 50 years old, widowed, and have 3 grown-up sons, aged 22, 26 and 29. I studied mechanical engineering, specializing in flow technology, at the Heidenheim/Brenz vocational academy. After my studies, I was employed in various positions at Erhard Armaturen (later Tyco Waterworks) in Heidenheim – I was then employed as the Head of the Technical Department from 2007 to the end of 2012 at Schuck Armaturen. I have worked at GEMÜ since February 2013.

GEMÜnews: What are the core tasks of the Business Unit Industry and where are you specifically focusing your efforts?

Joachim Brien: GEMÜ is a fantastic and very innovative company with outstanding products and excellent employees. In the pharmaceutical sector, GEMÜ has achieved an outstanding position as market leader. GEMÜ is very much at the cutting edge of this sector worldwide. This is what we need and want to achieve with the Business Unit Industry and, to do this, we will need to do a great deal of "foundational and structural" work. The industrial market worldwide is several times larger than the pharmaceutical market – but is subject to much harder and more fierce competition. We have good products for this market – but we are often not consistent enough with regard to designs and versions. Our processes are not yet as integrated and refined as they are for the pharmaceutical sector. And: Our orientation in the market – starting with sales – subsidiaries, external and internal sales, as well as product advice and product management – has not been sufficiently focused on the industrial market. We are now changing this with the integration of sales in the business unit and concentration on 4 key sectors:

Surface finishing, chemical industry, industrial water and mechanical engineering. We have to understand the problems our customers are facing in their applications, in order to provide better support and implementation for our products and systems – and to gain feedback and input for product optimization and innovations. There is plenty of potential and opportunity for growth in industrial applications – and we already have a good industrial base at GEMÜ that should not be underestimated. With a clear focus on industrial applications, with our core products, the Victoria butterfly valve, globe and control valves, and industrial diaphragm valves, with competent technical consultation and product support, as well as an integrated supply chain and product availability, there is no doubt that we can be successful and increase our market share. We have set our course and will be armed and ready with a strong team from 2017.

GEMÜnews: What has changed as a result of the restructuring for the Business Unit Industry?

Joachim Brien: As already described: We will be able to focus more intensively and pay exclusive attention to our customers and their problems in industrial applications. As a result of the additional global alignment in our subsidiaries, we will have extensive opportunities to share experience and projects and will be able to build on more success stories and application expertise. We will be able to dig "deeper" and will be able to "drill down" into issues with greater expertise.

GEMÜnews: Previously, you were Head of the Technical Department at GEMÜ. What was it that caused you to take up the role of Head of the Business Unit Industry?

Joachim Brien: I have worked for over 25 years in the equipment and valve sector – both in engineering and sales – and think that I have a measure of experience that I can bring to this position. When the Company Management spoke to me about this position, I immediately accepted. I am conscious of the fact that this additional responsibility brings considerable challenges with it, but I am totally convinced that there is great potential and opportunity in this sector for GEMÜ. I am especially pleased that, in Bernd Haidt as Head of Sales and Uwe Schmezer as Head of Product and Application Management, we have managed to place two experienced staff in important and pivotal positions within the business unit. In addition, we have filled several other important positions and responsibilities with excellent members of staff – who will roll up their sleeves and get on with the task at hand. Whatever the position or area of responsibility, everyone will be a vital piece in the jigsaw of the Business Unit Industry. It is only together that we can achieve our ambitious objectives – I am a team player and will bring my experience and ideas to bear in a strong team. To enable me to lead both areas – global engineering and the Business Unit Industry – we will need a very good support network and organizational structures. In the Business Unit Industry, we have, as already described, put these measures in place. For the global engineering sector, in addition to the already known "new" CCA (Competence Center Automation) section, under the leadership of Marcus Ripsam, we will install a global engineering section. Global engineering will also incorporate the design section, led by Steffen Philipp, and the newly created GSC (GEMÜ Standard Center) team. The third pillar will be the Global R&D section,

NEW PERSONNEL MARKETING CAMPAIGN "GEMÜ SMILE"

Have you seen it yet?

GEMÜ started a new advertising campaign for its staff recruitment not long ago under the motto "GEMÜ Smile".

The new personnel marketing campaign can be seen in various media, including on the internet, in print, on cars and advertising spaces throughout the region. The campaign is based on a special German letter in the GEMÜ logo. If you look a little closer, you will see that the German "Ü" looks just like smiley ☺.

GEMÜ is smiling. Smile with us!

 Ivona Jovic

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 Joachim Brien

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which will incorporate the development departments (previously TF and TE), testing, innovation management and the project managers. The Technical Documentation and Tool Engineering departments will continue to report directly to me.

GEMÜnews: Now we have found out a little more about your responsibilities at GEMÜ, what does Joachim Brien do when he is not at work? What are some of your hobbies away from the workplace?

Joachim Brien: I am a weekend commuter – in the week I am an "Ingelfingen and GEMÜ man", at the weekend I am at home in the Ostalb region in Treffelhausen. I have very strong roots in my local community. My family is very important to me. I really enjoy my home and garden, and they provide me with a good level of distraction and change – and a whole lot of work and new projects. In addition, I am involved as the first chairman of my local team and am a passionate handball fan. I played handball myself for many years – today, it's my sons who play, and I get to watch the games as a fan, when time permits. I also take on the role of public announcer

at the home games. I am also a committed lector and extraordinary minister of Holy Communion in my local Catholic church. When time permits, I do sports with my partner; we ride bikes, or go hiking in the beautiful Swabian Jura.

GEMÜnews: Many thanks for the interview, Mr Brien. We wish you and your team every success and hope that you will achieve all your objectives.

TRADE FAIRS 2017

NATIONAL | INTERNATIONAL

Salon Sepem Douai	24.01. – 26.01.	Douai (FR)
Expo Lounges	31.01. – 02.02.	Stuttgart (DE)
Bioinnovation Leaders Summit	07.02. – 08.02.	Berlin (DE)
Semicon Korea	08.02. – 10.02.	Seoul (KR)
Pumps & Valves CH	08.02. – 09.02.	Zürich (CH)
Disposable solutions	27.02. – 28.02.	München (DE)
Farmaforum	01.03. – 02.03.	Madrid (ES)
GP Pharma	01.03.	Jakarta (ID)
CFIA	07.03. – 09.03.	Rennes (FR)
Propak East Africa	07.03. – 09.03.	Nairobi (KE)
EnergyStorage	14.03. – 16.03.	Düsseldorf (DE)
Semicon China	14.03. – 16.03.	Shanghai (CN)
WIN	16.03. – 19.03.	Istanbul (TR)
Interpex USA	21.03. – 23.03.	New York (US)
Surface World	22.03. – 23.03.	Birmingham (GB)
Pharma-Kongress	28.03. – 29.03.	Düsseldorf (DE)
Pumps & Valves DE	29.03. – 30.03.	Dortmund (DE)
Industriemässor	29.03. – 30.03.	Malmö (SE)
GMP Wasserseminar	01.04.	Mainz (DE)
Wiosenna Konferencja Farmaceutyczna	01.04.	Polen (PL)
ProFood Tech	04.04. – 06.04.	Chicago (US)
MSR Spezialmesse Chemiedreieck	05.04.	Halle (Saale) (DE)
Korea Pharm	18.04. – 21.04.	Seoul (KR)
CIPM	19.04. – 22.04.	Qingdao (CN)
Salon Sepem Avignon	25.04. – 27.04.	Avignon (FR)
Bioprocess Europe	25.04. – 26.04.	Amsterdam (NL)
Iranhealth	01.05.	Teheran (IR)
Components (Interpack)	04.05. – 10.05.	Düsseldorf (DE)
Iran Oilshow	06.05. – 09.05.	Teheran (IR)
Reitze Tec	17.05. – 18.05.	Bremen (DE)
FCE	23.05. – 25.05.	Sao Paulo (BR)
Intersolar	31.05. – 02.06.	München (DE)
ISPE Annual Conference	01.06.	Jakarta (ID)
MSR Spezialmesse Nord	14.06.	HH-Schnelsen (DE)
Interpex Japan	28.06. – 30.06.	Tokyo (JP)

GEMÜ, ALL FROM A SINGLE SOURCE AN OVERVIEW OF VALVE TYPES

The new section "GEMÜ, all from a single source" contains technical articles about the versatile products of GEMÜ. The first article briefly defines the most important valve types which are used at GEMÜ.

For over 50 years, GEMÜ Group has been a leading manufacturer of valve, measurement and control systems, employing more than 1600 members of staff worldwide. It is an exciting challenge every day to meet the increasing needs of our customers. Our products are successfully implemented in process engineering as well as allied fields of activity in more than 50 different markets in the most varied of industrial sectors. GEMÜ offers all the current valve types in all the common materials for a wide variety of customer groups and applications. This is a major advantage compared to other valve manufacturers, as GEMÜ can basically supply everything from a single source. Thanks to the modular design system, all valves can be equipped with, or converted to, manual, pneumatic or motorized actuators. The materials used range from common industrial plastics right up to temperature-resistant and chemically resistant high-tech fluoroplastics. Non-ferrous metals, different cast materials as well as high-quality stainless steel alloys are used for the metallic materials. The required seal materials are always adapted according to the application conditions. This creates a variant range of well in excess of 400,000 product versions. The different quarter turn valves are briefly explained below. Linear valves will be described in the next issue of the GEMÜnews.

QUARTER TURN VALVES

Butterfly valve

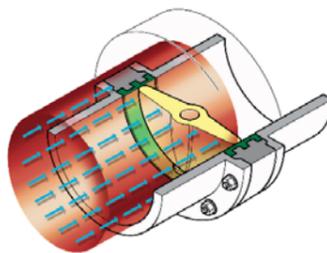
The butterfly valve comprises a ring-shaped body in which a ring-shaped elastomer seat/liner is inserted. A washer guided through a shaft swings through a 90° rotary movement into the gasket. Depending on the version and nominal size, this enables operating pressures of up to 25 bar and temperatures up to 210 °C to be shut off. Most often, these valves are used for mechanically pure liquids, but can also be used in the right material combinations without posing any problems for slightly abrasive media or gases and vapours.

Due to the large variety of materials, the butterfly valve is universally compatible, for example with countless industrial applications, water/drinking water treatment, coastal and offshore sectors. The butterfly valve is also often a cost effective alternative to other valve types, where there are no stringent requirements regarding switching cycles, hygiene or control accuracy. In large nominal sizes of greater than DN 150, it is often the only shut-off valve that is still viable. For more stringent demands with respect to chemical resistance or hygiene, there is the possibility of using a butterfly valve with a seat made of PTFE or TFM. In combination with a PFA encapsulated stainless steel disc, it is suitable for highly aggressive media in the chemical or semiconductor industry; and with a polished stainless steel disc, it can also be used in the foodstuff or pharmaceutical sector.

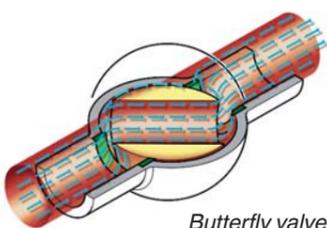
Ball valve

The ball valve comprises a ball with a continuous bore hole, which generally sits in a body between PTFE sealing rings. The ball is connected via an externally positioned shaft. The valve can be opened and closed by rotating it through 90°. Depending on the material combination, ball valves can be used for medium temperatures up to 200 °C and operating pressures up to 63 bar, and they can also be used without any problems in vacuum applications. They are suitable for mechanically pure, inert or corrosive liquids, gases or vapours, making them ideal for numerous industrial applications, process media distribution, water supply and treatment, swimming pool processes, electroplating, etc. A major advantage for "full bore" ball valves is that, when they are opened, the full cross section of the pipeline is free, resulting in minimal pressure loss and a high Kvs value. This makes them ideal for high viscosity media and they are the only named type of valve that is also piggable. In contrast to the 2-piece valves, 3-piece ball valves have the advantage that the wearing parts are easily replaceable. For change-over or distribution tasks, 3-way ball valves are also available with a choice of a ball with an L- or T-bore.

For hygienic applications, there are dead space- and surface-optimized solutions. Where space is an issue, compact valves with short lengths can also be provided.



Butterfly valve in closed position



Butterfly valve in half-open position

For all the valve types specified, GEMÜ offers numerous customized accessories which can be easily and quickly fitted, adjusted and integrated in the existing process control technology:

- ⇒ Automation and process optimization
- ⇒ Electrical position indicators
- ⇒ Positioners and process controllers
- ⇒ Sensor systems and measurement devices

 **Markus Hammel**
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Topical training dates

ALL-ROUNDER LEVEL

⇒ Basic technical principles of valve design

GV01GB Functional principles of valves and their selection criteria (basic module) 29th May 2017, 8:00 am – 5:00 pm

GV02GB Plastics, elastomers and their selection criteria 30th May 2017, 8:00 am – 12:30 pm

GV03GB Metals and their selection criteria 31st May 2017, 1:30 pm – 6:00 pm

GV04GB Pipe connections and their selection criteria 1st June 2017, 8:00 am – 2:30 pm

⇒ Basics principles of application technology

GA01GB Processes in the biotechnology, pharmaceutical, foodstuffs and cosmetics industry 7th June 2017, 8:00 am – 5:00 pm

GA02GB Processes in the high purity, semiconductors and critical media industries 9th June 2017, 8:00 am – 5:00 pm

GA03GB Processes in the chemical, processing and water industries 8th June 2017, 8:00 am – 5:00 pm

⇒ Basic principles of measurement and control systems

GM01GB Introduction to electrics, electronics and pneumatics (basic module), 28th June 2017, 8:00 am – 5:00 pm

GM02GB Measurement variables and measurement principles in process engineering 29th June 2017, 8:00 am – 5:00 pm

GM03GB Control circuits, their design and function 30th June 2017, 8:00 am – 5:00 pm

SPECIALIST-LEVEL

⇒ Product training in valve designs

PV01GB Valves for biotechnology, pharmaceutical, foodstuffs and cosmetics industries 12th June 2017, 8:00 am – 5:00 pm

PV02GB Valves for high purity, semiconductors and critical media industries 19th June 2017, 8:00 am – 5:00 pm

PV03GB Diaphragm & globe valves for chemical, processing and water industries 20th and 21st June 2017, 8:00 am – 5:00 pm

PV04GB Accessories and instrumentation for linear and quarter turn valves 14th June 2017, 8:00 am – 5:00 pm

PV06GB Single-use valves for biotechnology and pharmaceutical industries 13th June 2017, 8:00 am – 2:30 pm

PV07GB Butterfly & ball valves for chemical, processing and water industries 22nd and 23rd June 2017, 8:00 am – 5:00 pm

The training courses will be held in English.

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Sales Marketing Team Assistant
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SUCCESSFUL START AS AN INTERN

VOCATIONAL INTEGRATION OF REFUGEES

In his red GEMÜ shirt, Ammar Majalli is immediately recognizable as a colleague in the Production and Logistics Centre. The 37-year old Syrian was given the opportunity to apply for an internship at GEMÜ via the job centre. This resulted in his appointment as a mini-jobber. Ammar Majalli and his supervisor, Nicole Riegler-Kurz, share his experiences in an interview.

GEMÜnews: Mr. Majalli, when did you come to Germany, and did your family accompany you from the beginning?

Ammar Majalli: I came to Germany on my own two years ago from Turkey. My family was unable to come with me at first. I had to wait for a year and three months before my wife and three children could join me. My children are ten, eight and two years old. Now we all live together in Kupferzell.

GEMÜnews: What were the first weeks and months in Germany like?

Ammar Majalli: Initially I lived with other refugees in Künzelsau-Amrichshausen. People were friendly to us. But it was a big adjustment to travel from Damascus, a city with over a million inhabitants, to Hohenlohe. In the meantime, however, I have settled in very well and I really like the peace and quiet here.

GEMÜnews: What did you do as a job in Syria?

Ammar Majalli: I worked as a gardener. One of the main things that I did in my job was install irrigation systems in gardens. I am also a qualified electrician.

GEMÜnews: How did you like the internship at GEMÜ?

Ammar Majalli: I really enjoyed the internship. My colleagues were very friendly towards me. I did struggle quite a lot with the language at first. I still need to get better at German. I did a course at the adult education centre in Künzelsau, but I still have some way to go. Initially I also had a few problems with the Hohenlohe dialect. There were a few things that I didn't really understand.

GEMÜnews: Ms. Riegler-Kurz, how did you find the project and the integration of Mr. Majalli from the point of view of the employer?

Nicole Riegler-Kurz: Mr. Majalli applied himself well during the internship. He showed interest and motivation. During the internship, Mr. Majalli has carried out small assembly and soldering tasks, and he is currently employed as a mini-jobber in the Production and Logistics Centre. To enable him to be used more flexibly, however, he still needs to improve



Ammar Majalli at work at the Production and Logistics Centre

his language skills. That's an important prerequisite. Of course, support and supervision during the internship require a certain investment of time. As the head of production in the Production and Logistics Centre, I would like to take this opportunity to thank the core team for fully supporting the integration of Mr. Majalli at all times.

Nicole Riegler-Kurz
Head of Production at the
Production and Logistics Centre
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GEMÜnews: What happens next?

Nicole Riegler-Kurz: In the first instance, we are very pleased with the shared success of the internship and the possibility of continuing to work with Mr. Majalli in his role as a mini-jobber. Additional qualifications will require the necessary knowledge of the German language. Mr. Majalli is doing another German course and is, of course, being challenged to expand his vocabulary as he works with his colleagues. As we are able to follow the personal development of Mr. Majalli very closely as part of the existing work relationship, we can decide what additional qualifications are subsequently required.



QUICK AND EXCLUSIVE

THE NEW GEMÜ NEWSLETTER FOR GERMANY

This year, GEMÜ has started offering a newsletter to its employees, customers and any potential customers.

Every three months, subscribers are kept up to date with a small collection of short reports about current product changes as well as any innovations from GEMÜ. This also provides information about the latest

product applications and a quick overview of upcoming trade fairs, events, dates and news concerning the company.

Detailed reports on the relevant newsletter topics can be accessed via the embedded links. Any subsidiaries can also forward the newsletter to their customers, or even add to it or make it shorter. Other subsidiaries, such as GEMÜ

France, have had their own newsletter for years now.

You would like to subscribe to our newsletter? Please register by clicking on the link below:

www.gemu-group.com/newsletter

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YOUNG PEOPLE PROJECT FIRST PLACE IN "ENERGY-SCOUTS MEETS NEAZUBIS"

The Young People Project (YPP) is an in-house department of apprentices in environmental management under the supervision of Mr. Jürgen Kerl. The YPP works on sustainability and environmental projects. The department was set up in September 2014.

Their goal is to raise awareness of the environment and to encourage sustainable thinking in the workforce. Efficiency is a top priority, too, of course. The aim of YPP projects is to minimize costs, resulting in savings for the company and the environment.

At specified times, apprentices are sent from all sections to the department to identify energy wastage, such as compressed air leaks. They also ensure heating and cooling energy, as well as electricity, are used efficiently.

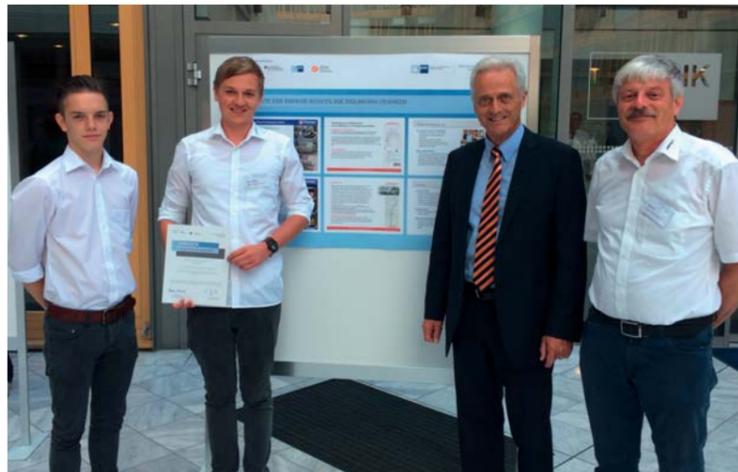
Up until now, the apprentices have taken on the following projects:

- ⇒ Checking the compressed air networks for leakages at all locations
- ⇒ Facilitating car pools
- ⇒ Managing and lending out energy cost measurement devices and safety shoes
- ⇒ Measuring noise
- ⇒ Measuring illumination
- ⇒ Raising employee awareness of sustainability using posters on the subject of saving energy

Our young people – the best energy scouts in the region

In the autumn of 2015, the ICC Heilbronn-Franken offered a total of 8 companies the opportunity to take part in the "EnergyScouts meet NEAzubis" project. This provided apprentices with the opportunity to learn all about sustainability and corporate social responsibility, as well as uncovering the greatest energy traps in the company.

These subjects are, of course, made for our young people. For this reason we are very pleased that our apprentices, Benjamin Kempe (electronics technician for devices and systems) and Lukas Bauer (tool mechanic), were



also able to take part. They attended theoretical lectures over the course of three days at the college in Heilbronn. In addition to the various options for power generation, the lectures also covered subjects such as sustainability management, and corporate social responsibility in the workplace.

However, the real challenge came at the end of the theoretical seminars. Now was the chance for our apprentices to really show their creativity, resourcefulness and commitment. The task involved the development of their own project in order to achieve sustainability and resource savings in the company. They then presented this in front of an ICC judging panel.

Our apprentices developed the following project: The formation of car pools to save resources. Their idea involved helping to set up car pools between GEMÜ employees to reduce fuel consumption and thereby CO2 emissions. An added benefit was the optimization of car parking spaces. In total, over the past year savings of over €49,000 and 3.12 tons of CO2 have been made as a result of the car pools that have been created. The long-term objective is for approx. 10% of employees to travel to work using car pools.

And it's not only GEMÜ that sees great potential in this project. In January 2016, the ICC judging panel voted on the best ideas. At the awards

ceremony in June 2016 in the Experimenta in Heilbronn, the GEMÜ apprentices were awarded 1st place. This qualified them to take part in the German National Energy Scouts Competition at the end of June 2016 at the DIHK in Berlin, where they were worthy representatives of our company.

If you are interested in taking part in a car pool, please get in touch with the YPP team. Simply call extension 8375 (the department for the Young People Project) or send an email to Fahrgemeinschaften@gemue.de. The notice with further information is available in Share Point (search centre) under the heading "Fahrgemeinschaften" (car pools).

Jürgen Kerl
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Occupational safety
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representative /
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TASTEFUL ATTRACTION THE "INGELFINGER FASS" WINERY HAS BEEN INAUGURATED



Ingelfingen city centre has a new attraction. The "Ingelfinger Fass" winery across from the Schlosshotel opened its doors in March.

The newly constructed building fits harmoniously into the historical environment and provides a generous sales room on the ground floor, where you can also take part in wine tasting sessions. There are also hotel rooms upstairs.

"I would be delighted if this became a new hub, a meeting place for the citizens of Ingelfingen and an attractive centre for guests," explained Fritz Müller at the opening.

Family and friends joined in the festivities, along with the Mayor of Ingelfingen, Michael Bauer and his colleague from Niedernhall, Achim Beck. Of course, the Wine Queen Laura Irouschek was also present. As the landlord, who will no doubt be entertaining and hosting guests at the winery on a regular basis, Fritz Müller was presented with an apron by his nephew Stephan Müller and his wife. Fritz Müller thanked the architect, tradesmen and everyone involved with planning and design. There was a special thank you for his wife, who was responsible for the interior design and who selected every little detail with a great deal of love and dedication. Hotel manager Hans-Günter Clement was excited about the hotel expansion and the additional facilities for his guests. Apart from our own wines, other especially selected wines from Wuerttemberg will be featured. Anyone whose curiosity is piqued during their visit, and who would like to find out where the grapes for the winery's house wines grow, can follow the informative path to the Ingelfinger Fass just a few metres away to find out more about their origin.



Hans-Günter Clement
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