



### e - JOURNAL

### GAUDLITZ ON THE "K-TRADE FAIR"

From 16th to 23rd October the K trade fair takes place in Düsseldorf where GAUDLITZ has been represented for decades with its own large-area booth.

You will find us as usual in hall 05 at booth A22.

We look forward to informing you about our innovations at our booth and to inviting you to our GAUDLITZ "PlastBar".

On the basis of a wide range of exhibits you can get a picture of our expertise and knowhow in the automotive, industry and medical sector on nearly 100m<sup>2</sup>.

We will also present some products of our in-house development which have been generated in our own development department.

Those are in part developments which we have generated together with our customers according to their demands or which have been created and patented especially in the medical sector due to own ideas.

In the automotive industry, the emphasis is primarily given to the material substitution plastics vs. metal, especially with regard to the reduction of CO<sup>2</sup> in automotive engineer-

In the field of industry we turn increasingly towards the coating of pins and open new

The developments in the medical sector include new products in the field of Consumer Health and in the pharmaceutical industry which are designed according to the requirements of elderly people and which are to facilitate everyday life.

We will also focus more on the surgical sector where we are working together with medical specialists on some exciting subjects which will facilitate the work of surgeons and thus especially minimize the risk for the patient.

If you would like to make an appointment with our sales managers in advance, please contact Ms. Manuela Bauer via email manuela.bauer@gaudlitz.de or by phone +49 9561 648 203.





Please visit us at:

Hall 5 / A22

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### 25 Years of Gearbox Housing at GAUDLITZ

For 25 years GAUDLITZ has developed and produced in Coburg complex gearbox housings made of PBT, PA, PET for window regulators, retractable roofs, windscreen wipers and actuators which are predominantly applied in motor vehicles.

The production of the first gearbox housings already began in 1988.

In the following years, metal shafts for grabbing the worm gear, which are necessary for different applications, could be replaced by an integrated plastic shaft and in parallel, complex housing components in PP long glass fibre could be developed. At the moment,



gearbox housing from approx. 1992

gearbox components from up to 8-times cavities with integrated connector are produced both in Coburg and in our subsidiary company GPT in Chinese Wuxi. For this purpose, there are complex and fully automated production facilities available. Combined with automation facilities, pre-molded parts are lead to the production pro-

Integrated blank and pierce die tools produce complex plug contacts in real-time and provide them to the production process.

You will find the housing components which have been produced at GAUDLITZ in lots of vehicles of the international automotive industry.

GAUDLITZ has been available with its know-how for a quarter of a century for international customers as an approved and innovative specialist, also for future challenges.



gearbox housing from approx. 1988



gearbox housing from approx. 2005

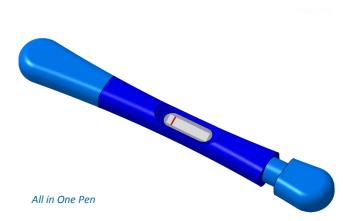
Do you also would like to benefit from our longtime expertise in development and production of gearbox housings? Then please contact Ms. Manuela Bauer in the sales department by email manuela.bauer@gaudlitz.de or by phone +49 9561 648 203.

### GAUDLITZ In-House Development - All in One Pen

We have extended our own range of products and developed an in-vitro diagnostic all-in-one platform technology in pen-size for whole blood based flash tests with serum

The pen is characterized by an integrated sterile automatic lancet. The test material will precisely be extracted by an incorporated capillary and transferred into the zone of the buffer reservoir(s). Here an optimum mixing of the sample with the desired buffer/solvent will be effected and afterwards the transfer of the mixture to the actual test strip. The platform technology offers a high flexibility concerning the used buffer/solvent as well as test strips dimensions and can be adapted according to the customer re-

Thus the user benefits from a simple, quick, precise and error-reduced handling without any other necessary provisions for the test.



For further information about our developments or if you would like us to realize your own ambitious and intelligent idea made of plastic, please contact Ms. Simone Schmitt by email simone.schmitt@gaudlitz.de or by phone +49 9561 648 255 or meet her on the K-trade fair at our booth in hall 05, booth 22!

# GAUDLITZ COMPETENCE CENTRE

With our extensive measurement equipment we are able to arrange significant analysis and complex measuring tasks in an uncomplicated way.

With the support of our computer tomograph METROTOM 1500, we are able to quickly, efficiently and non-destructively x-ray components out of a multitude of different materials, depending on the principle of the accumulated material thickness and material composition.

By the use of radiotechnology we are not only able to measure but also to reliably carry out analysis of defects and porosity as well as assembly controls and damage analysis.

Ask Mr. Robert Seitz for our service catalogue via email at robert.seitz@gaudlitz.de or by phone +49 9561 648 748!



R. Seitz, Head of Competence
Centre with S. Liehr

### Measurement Technology through the Ages

At GAUDLITZ, measurement technology considerably decides on the quality of our products. As a launching customer, we therefore established for a number of times new measurement procedures and instruments for being prepared for the increasing requirements – lastly a computer tomograph.

"With this, we are able to measure flexible and elastic plastic parts quite easily, as if by magic", says Walter Franz, head of development at GAUDLITZ, while he is standing in front of the six-foot measuring device of approx. 1,8 x 1,5 meters base area.

The computer tomograph, deployed for six years at the head office in Coburg, x-rays component parts from all sides. The result: a three-dimensional solid model which the measurement engineer can compare with the CAD-model. The software presents each attribute of a component in colour, whether it is inside or outside the specified tolerance – for visible areas and contours as well as for dimensions in the inside of the part.

The computer tomograph of "Carl Zeiss Industrielle Messtechnik" served GAUDLITZ well in the past few years, such as during the development of a protection cap for a surgical instrument.

The challenge during production and quality assurance: a few tenths of a millimeter thin plastic hairs keep the multipart system together until they equally move apart when activating the mechanism. To make this work, the hairs must have precisely consistent transverse sections. "This is impossible to measure by picture processing or coordinate measuring technology, but with a computer tomograph no problem", explains Franz.



Zeiss METROTOM 1500

When around 2005 GAUDLITZ decided to further expand its business area medical engineering and additionally positioned as a system provider who develops, instead of simple parts, customized solutions out of several complex components, the requirements for quality assurance grew. It was more often necessary to get a closer look at the interior of the component in order to detect defects or to evaluate the interaction of different elements.

Finally the CT released the look at the interior – also with complex materials and devices. With the introduction of the computer tomograph Metrotom 1500 we again became a launching customer of Zeiss, as already in the 1980ies and 1990ies we updated our measurement technology several times with the support of Zeiss – partly as a precursor in the plastics industry.

Due to the long lasting collaboration, also a video about the measuring technology of company Zeiss will be generated at the moment on the premises of GAUDLITZ which we will present you on the homepage after finishing.

Article extracts from Zeiss customer magazine special edition "Innovation Spezial", written by Judith Schwarz, agency storymaker in Tübingen.

"With this, we are able to measure flexible and elastic plastic parts quite easily, as if by magic"

### GAUDLITZ INTERNATIONAL

GAUDLITZ was established in 1937 and has its headquarters in Franconian Coburg.

Consistent with our slogan "at home in the world – rooted in Coburg" we do not only supply global customers from the business divisions automotive, industry and medical technology, but we also have two international affiliated companies in China and the Czech Republic.

GAUDLITZ Precision Technology (Wuxi) Co., Ltd. - GPT for short-is located near Shanghai and was already established in 2004.

With approx. 135 employees, the GAUDLITZ group here supplies especially customers from the automotive sector.

Gaudlitz Precision s.r.o. in Czech Dacice is a joint venture which GAUDLITZ is having together with its longtime distribution- and development partner INTENSA from Austria.

Since its establishment in 2007, the Eastern European facility has successfully evolved on a technological level.

# Head of Development Walter Franz - 45 Years at GAUDLITZ in Coburg



Walter Franz

This year, our head of development, Mr. Walter Franz, celebrates his 45 years jubilee at GAUDLITZ.

Mr. Franz began his apprenticeship as a toolmaker in 1968 and was, amongst others, responsible for the competence centre including measurement technology.

Thus he initiated the integration of efficient coordinate measuring technology at GAUDLITZ 25 years ago, whereby a procreative cooperation with Zeiss IMT began which enabled GAUDLITZ to come up to the increasing requirements for measuring technology relating to the required

precision and possibilities of analysis as well as the necessary speed of measurement. With his know-how and the use of most modern measurement technology it was possible to realize and constantly improve the development and optimization of complex gearbox housings. Therefore, also challenges of future tasks can reliably be realized. Since 2008 Mr. Franz is head of our development department with 5 development experts for engineering, mold- and process engineering technology as well as prototyping, who do not only promote substitutions of metal in plastic material in the automobile. The existing knowledge is also used for in-house developments e.g. in the medical sector and for the product developments for industry.



Device

Sample W. Preparation

Thus already patented Sample Preparation Device for the laboratory diagnostics sector could be designed.

For quick analysis an All-In-One Pen with complex inner life was designed and a lot of other exciting projects will soon become marketable. With his infectious enthusiasm for plastics engineering Mr. Franz is not only a competent contact person for our customers but also an inspiration for his colleagues at GAUDLITZ.

We would like to thank Mr. Walter Franz for his long lasting loyalty to the company.

# Good Education -

### a Part of the GAUDLITZ Company Philosophy for Decades

At the moment, 23 trainees are learning different occupations as e.g. process mechanic for plastics and rubber technology or toolmaker.

And they push theirselves because, "being one of the best – that is no individual case at GAUDLITZ", as Head of Training Lutz Armann points out.

As one of the latest examples he mentions Christian Müller. As even one of the first in the company, he has graduated the profession of a Technical Product Designer – as in a manner of speaking "prototype" he achieved his graduation with the dreamlike grade of 1.3 on a scale ranging from 1-6 with 1 being the best grade.



L. Armann with C. Müller

"I got all the support from the company as one could wish to have.", Christian Müller explains and especially compliments coherence and collegiality.

Lutz Armann refers to the own training centre which has been further developed for lots of years and which is an important element of the company for the assurance of young qualified employees.

Excerpt from an article of the Neue Presse Coburg special supplement "Berufskompass", 31.07.2013; written by Andreas Herzog.

# **GAUDLITZ** International

## Gaudlitz Precision s.r.o achieves an Excellent Reputation in the Field of Microelectronics

In cooperation with our longtime partner INTENSA from Austria, a new project from company Hella has been acquired.

Hella is a traditional manufacturer in the sector of lighting technology and electronic engineering for the automotive industry.

This project from the electronics sector is about a plastic housing with contacts with integrated light- and rain sensor.

In this case, the end customers are a Swabian and a French automotive manufacturer. The first step is the production of the plastic parts, the three press-in contacts will be pressed in and checked afterwards.

The assembly process of contacts and electronic components is an important step for our Czech daughter for further growth in the field of hybrid components or rather power electronics.

From the extended workbench in the starting years, the company evolved in the meantime into a technologically experienced enterprise with 105 employees. More and more customers appreciate this – also from the medical sector.

You are interested in the performance of our Czech daughter?
Please contact Ms. Edita Staňková, assistant to the General Management by email edita.stankova@gaudlitz.cz or by phone +420 384 350 306.



Assembly line

### Introduction of the "Golden Idea" at GPT



Zhao Pengjie with robot hand

Our subsidiary company in China, the Gaudlitz Precision Technology Ltd., this year very successfully introduced the programme of the "Golden Idea".

Similar to German idea for improvement programmes, here the employees will be motivated to suggest facilitations of work, new processes or to create independently technical devices.

Although implemented not until April, this new programme enjoys great popularity. The team could already generate improvements in the different business areas and reduce costs.

An example is a modified robot hand for a more safe and efficient regulation which has been built by Zhao Pengjie and will now also be applied for various other machines.

Do you like to get more information about the business activities of our associated company in Chinese Wuxi?

Mrs. Rebecca Shao, Head of human resources department / assistant to the General Management will be available by email Rebecca.shao@gaudlitz.cn or by phone +86 510 85331177.

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## Gear Wheel and Gearbox Technology at GAUDLITZ



Lots of our visitors asserted in Coburg that GAUDLITZ has been successfully engaged in the development and production of gear wheels and complete gearboxes made of plastic for years.

Thus in Coburg e.g. gear wheels and complete gearbox components for electrical parking brakes, e-gas and exhaust gas recirculation systems as well as for door locking units are produced.

Special gear wheels with an irregular tooth work had to be created for a gear-

box which was arranged for a variable transmission.

The use of highly stressable and tribologically onlimized plastics was

The use of highly stressable and tribologically optimized plastics was necessary for another application for vehicle gear boxes. In order to meet the customers' requirements, the company KISSsoft provided us calculation tools.

For the analysis and the optimization activities of the components, special calculation tools, which had been developed for GAUDLITZ, are used.



Those tools enable us to analyze deviations which emerged from shrinkage and geometric errors and to create interactively datasets for the necessary correction work.

For analyzing and measuring activities, there are 3 ZEISS coordinate measuring machines, 2 double flank gear roller systems as well as a computer tomograph METROTOM 1500 of company Zeiss available.







For further information about the GAUDLITZ Group you can contact Ms. Simone Schmitt, Head of Marketing, by email simone.schmitt@gaudlitz.de or by phone +49 9561 648 255.



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