

10th Technology Workshop

for product development, mould design
and injection moulding

in Neustadt (near Hanover), **March 2nd and 3rd, 2006**

Konstruktionsbüro Hein GmbH

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Report



Cooperation, Expert lectures and exhibition

On the occasion of the 10th consecutive Technology Workshop the event encompassed two days this year. Thus, visitors could listen to 24 expert lectures and found an exhibition of 36 participating companies.

Visitors and exhibitors from the fields of plastics technology, mould design, injection moulding and product development/design got together in order to discuss solutions, talk about possible cooperations and future projects or to intensify existing contacts.

The Technology Workshops in Neustadt (KB-Hein), and Engelskirchen (Barlog plastics) have proven to be an excellent platform for product development, mould design and injection moulding for 10 years.

Especially today, plastics engineering is a discipline that needs new impulses from new technologies and procedures as well as from cooperation and living teamwork. Once a year, Konstruktionsbüro Hein GmbH offers this established platform for communication in the plastics engineering industry.



Let's make things happen!

36 exhibitors present their latest technologies regarding development and processing in the field of plastics technology. This report can only give detailed information on some of the lecturers and exhibitors. For additional information please refer also to the information on the CD for all participants of the workshop (only available in German).

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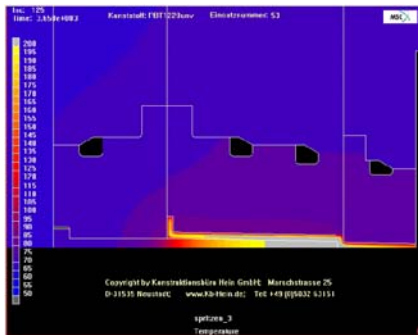
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24 lectures

Hasco / KB-Hein / Barlog

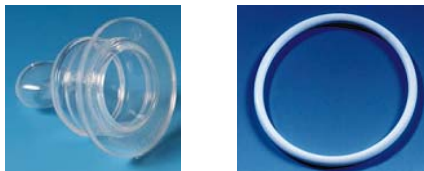


Following a good tradition, innovative cooperative projects were carried out this year.

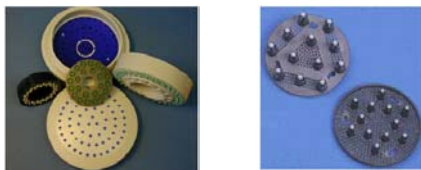
This project includes temperature studies of the same article using different mould cores (e.g. standard elements Hasco).

Following the workshop's philosophy (living cooperation) the companies Hasco Hasenclever, Barlog plastics and Konstruktionsbüro Hein worked on this temperature control project together and presented the first results as a comparison of the FEM simulation and the actual temperature increase of the tool.

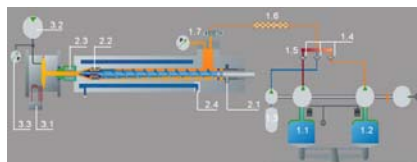
GE Bayer Silicones GmbH



2KM Maschinenbau GmbH



DEMAG Plastics Group GmbH



DME – Normalien GmbH



A special highlight of the event was a sequence of lectures regarding elastomers prepared by Mr Pulst (DME). We would like to explicitly thank you for this initiative.

Mr Oliver Franssen of GE Bayer introduced us to the world of silicone processing by giving examples for their use and explaining details of material technology.

Mr Möller of 2KM continued the subject by presenting special mixing and metering technologies for colours and other additives.

After the raw material has been prepared like this, the silicones can be processed using an injection moulding machine. The existing machine technology including necessary special equipment was presented by Mr Grimm of DEMAG Plastics Group.

Regarding tooling technology, Mr Pulst of DME- Normalien (standard elements) was now able to present the cold channel technology as well as the vacuum technology in many applications.

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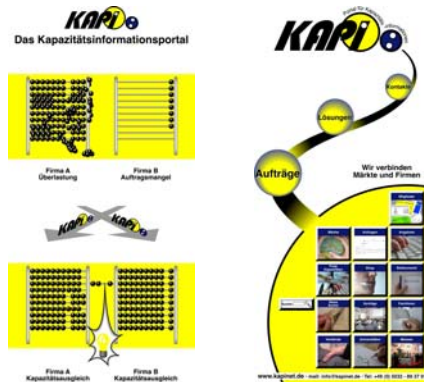
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Lectures

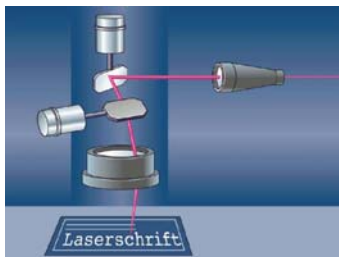
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Right on time for the Technology Workshop the new database portal KAPI got finished. It had already existed for 12 years as a database and for many years as a closed database on the internet.

The presentation by Mr Hein elucidated the task and the function of the new open database concept: Apart from representing the company, it is possible to find interfaces for cooperation, offers, inquiries, a shop, expert forums and contacts for tackling projects and problems. Companies looking for cooperations and using interfaces will be the ones to remain present in the future.

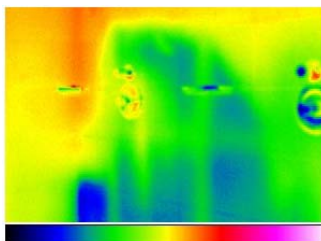
Barlog plastics GmbH



Mr de Beer of Barlog plastics introduced us to the basics of laser marking.

The principles of marking plastic materials were addressed as well as the advantages and disadvantages of the procedure which allowed the attendees to assess whether or not the procedure is usable for their own applications.

Stieler Kunststoff Service



Mr Stieler of Stieler Kunststoff Service presented the use of thermography during process management.

Mistakes of the temperature control thus become obvious and hot-spots can be recognised.

Sigma Engineering



The importance of "Cristallinity and Injection Moulding Simulation" was presented by Mr Thornagel of Sigma Engineering. Depending on the material to be simulated the mathematic interpretation of the resulting mechanics of distortion is crucial if the deformation of the plastic part is to be predicted.

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Lectures

Sozietät Wilkening



The determination of successors for the company management not only is an instrument for safeguarding the company's future. Mr Wilkening (right) also emphasized that it is necessary to consider that even a short-time loss of the managing staff can present a difficulty for the company if substitution is not provided for.

HARTING Electronics GmbH



People | Power | Partnership

Mr Rudolf Gläser presented a new procedure for the "EMC coating of plastic parts".

This kind of coating makes it interesting to use plastic materials instead of metal housings if the EMC demands are an important factor for the design of the product

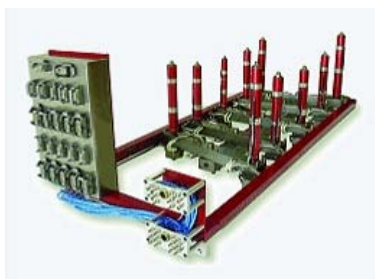
NBank



Mr Stefan Austermann of Nbank offered "Support for technological projects and international cooperation" during his speech.

Companies can get consultation, e.g. when establishing cooperation.

MHT Mold & Hotrunner



MHT demonstrated the advantages of the "Modular design of hotrunner systems for large-scale tools".

A modular design not only simplifies the construction but also allows for short access times and interesting prices as far as maintenance, spare parts and stock are concerned.

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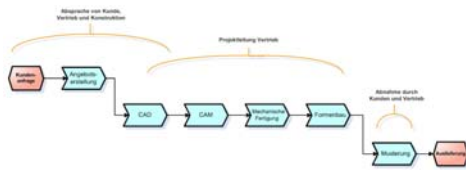
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Lectures

KontextWork



Mr Andre Ulrich of KontextWork presented “Development processes for developing and manufacturing moulds in a knowledge-oriented way“.

IAVF agion and Cibatec



In his lecture on “Anti-adhesive coating and microjetting for economic demoulding“, Mr Böhm demonstrated that mould surfaces can actually repel the plastic material. New perspectives are also opened up for the issue of residues in moulds, especially for deairing devices. Demoulding problems could be things from the past for many future applications.

Ingenieurbüro Streifling



The fifth lecture on elastomers was the “Rotary table technology for the accurate cross-linkage of rubber applications“, presented by Mr Streifling. Who isn't familiar with this: The exhaust on the car in front of us is hanging from a much too long rubber strap. Yet another example for a faulty cross-linkage from a multi-cavity mould. The advantages of the rotary table with low tolerances and a high repeat accuracy are obvious.

Konica Minolta



Mr Thorsten Terboven presented laser scanning in his lecture. He demonstrated the speed by scanning an article the data of which were then transmitted to Alpha-cam's stand where a prototype was manufactured overnight. A real teamwork, originated live during the Technology Workshop.

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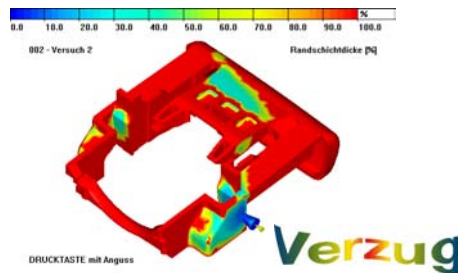
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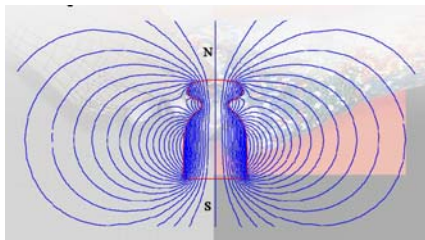
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Using the example of a pushbutton for a seat belt in a car Mr Hein demonstrated the potential of an early injection moulding simulation of an article during the product development phase.

For applications that have already been performed within the tool, corrections can be determined on the basis of the simulations. Those corrective measures may reduce distortions fast and reliably and satisfy the customer.

Barlog plastics



Mr Frank Barlog presented the rapid development in the field of "Polymer bonded magnets" over the last two years. For example, the 2C process allows for the production of completely new applications. Not only the development of the continuously increasing forces of the magnetic fields but particularly the way of production shows a lot of potential for the future.

KontextWork

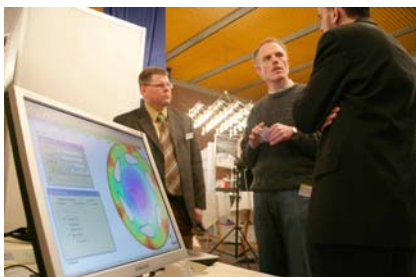


Here, Mr Ullrich highlighted how "Know-how can systematically be found" and made accessible within the company.

Many employees = many ideas and suggestions.

The art lies in the coordination and evaluation of this potential.

Simcon



According to Mr Genoske, the use of the software module Cadmold 3D-F shows that the profit can considerably be maximised if all costs from the development to the manufactured injection-moulded part are gathered.

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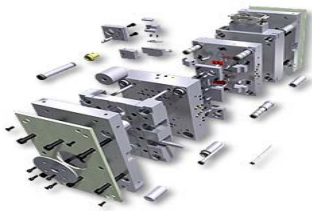
IHK Hannover



Mr Christian Treptow presented innovation consultancy with many new possibilities.

A number of internal databases are of assistance for contacts and innovations.

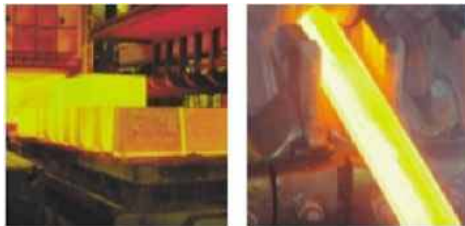
Hasco Hasenclever



Interactive software on the internet eases the calculation and ordering of standard elements for injection moulding tools.

Mr Hauser presented this possibility and gave some interesting hints for its use.

Uddeholm



New tool steels and special steels for mould design were presented by Uddeholm.

Transportation of temperature, hardness, viscosity and many other chemical and physical requirements have to open up new perspectives in a demanding market.

Barlog plastics



Intelligent complete plastic solutions using the correct technical plastic materials or hybrid solutions that cleverly combine metallic properties with the freedom of design of plastic materials for functional elements!

It is not sustainable to satisfy the market's demand for cost reduction by means of cost saving programmes – only innovations are able to astonish, as Peter Barlog showed with his lecture on “Best practice Engineering”.

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36 exhibitors

2 KM GmbH: Metering and mixing systems for silicones



Alphacam Fertigungssoftware GmbH: A 3D printer for your office was presented in action.



ASK GmbH: Automation equipment and special machines

ASK GmbH

Barlog plastics GmbH:
Laser marking of plastic parts, polymer bonded magnets,
plastic raw materials, climatic conditioning, Engineering



Böhler- Uddeholm: Special steels



BWT GmbH: Regenerated screws and reverse flow locks,
surface coating, cleaning of temperature control drillings



Christmann Kunststofftechnik: Babyplast machine with dif-
ferent applications live at the stand.



CiBaTec GmbH: Micro-jetting services / Sales of device
technology for micro-radiation



DEMAG Plastics Group GmbH: LSR injection moulding ma-
chines



Dips'n'Pieces: 3D decoration / water transfer pressure



DME- Normalien GmbH: cold channel systems, standard
elements for moulds



GE Bayer Silicones GmbH: Silicone raw materials



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Günther Heißkanaltechnik GmbH: Hotrunner systems



Harting Electronics: EMC coating



People | Power | Partnership

Hasco Hasenclever: Standard elements for mould design



IAVF agion Antriebstechnik AG: Anti-adhesive coating



IHK Hannover: Innovation consulting



Inno- shape GmbH: Inserts manufactured with temperature control close to the contour by means of "Direct laser forming"



Kapi Kapazitätsinformationsportal: Your internet portal



Konica Minolta Photo Imaging Europe: Laser scanning



Konstruktionsbüro Hein GmbH: Design studies, product development, FEM calculation, prototyping, injection moulding simulation, calculation of distortion, tool design for injection and pressure moulding, rubber moulds, NC programs, software sales for Thinkdesign and Hypermill



KontextWork: Support of development processes



MBS – Ing.-Büro Streifling: Rubber product development



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MHT Mold & Hotrunner Technology: Hotrunner systems



NBank: Support of technological projects / cooperations



OPEN MIND: 5-axis NC simulation software



Phoenix-x-ray GmbH: Computer tomography: the complex analysis of assembled components.



Plasmatreat GmbH: Atmospheric plasma for activating, perfect cleaning and coating plastic surfaces.



Profex Kunststoffe GmbH: Matrices for strips, sections and tubings; flow loops of closed contours



PTS Jena GmbH: Rapid prototyping: vacuum casting



Signal Computer: Data protection for your computer



Sigma Engineering GmbH: 3D injection moulding simulation



Simcon GmbH: Injection moulding simulation system Cad-mould 3D



Sozietät Wilkening: Succession within the company



Stieler Kunststoff Service: Gas and water injection



VHS Hannover: Training for Windows, languages, CAD and CAM courses



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24 expert lectures



36 exhibitors



Establishing contacts and ex- changing information



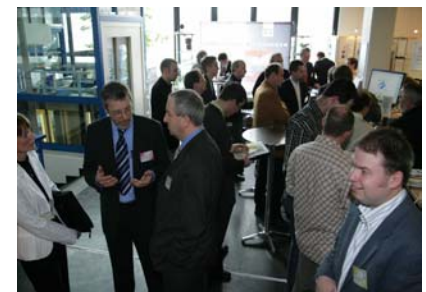
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Hereby, we would like to thank all exhibitors, visitors and participants.

This event has again demonstrated that it is possible to make things happen together.

The feedback we got during and after the event shows clearly how contacts and cooperations were established and intensified by many participants.

Therefore, there will be a Technology Workshop again in 2007: The 11th Technology Workshop will be a one-day event on Friday, February 23rd, 2007. Of course, there will be an evening event including the band Hotch Potch.

We wish you a successful and innovative year.

Your team of Konstruktionsbüro Hein GmbH