

K>MOBIL

THE KIRCHHOFF GROUP MAGAZINE



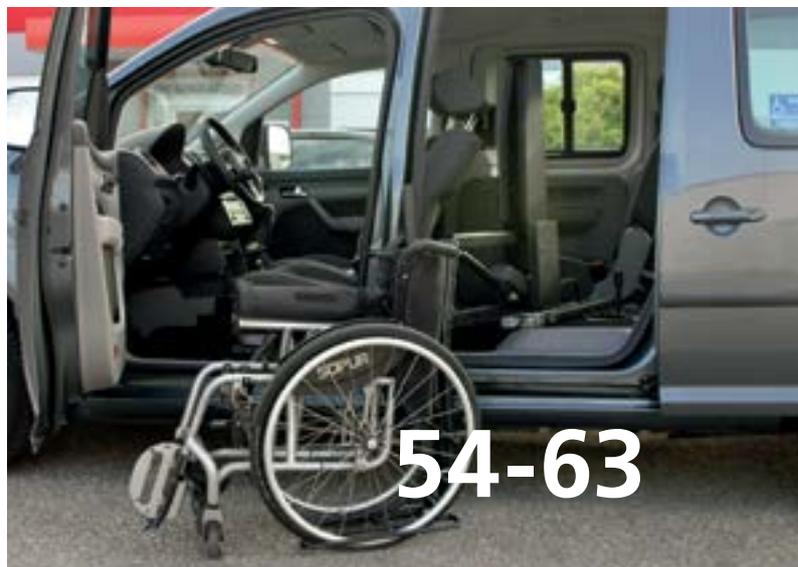
During her opening tour, the Chancellor of the Federal Republic of Germany, Dr Angela Merkel, visited the booth of KIRCHHOFF Automotive at the 65th IAA Cars.

K·MOBIL

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End-of-year review 2013

Due to its global approach, the KIRCHHOFF Group looks in almost all business divisions back on a successful year 2013.

Dear customers and friends of our group of companies,
Dear colleagues,

Over the course of 2013, we have experienced very mixed fortunes in the various global regions despite – or perhaps even because of – the interconnected nature of the world economy. Europe, and Southern Europe in particular, continues to be severely affected by the sovereign debt crisis. North America is enjoying a positive economic trend and solid growth, while China's markets are still booming, at least where the automotive industry is concerned.

The fallout from the elections to the German Bundestag will most likely see Angela Merkel leading a "grand coalition" of Christian Democrats and Social Democrats. For the first time in the history of the Federal Republic, the Free Democratic Party have been voted out of the Bundestag. Although we will naturally feel the loss of the liberal ideology in terms of regulatory policy, the decisive actions taken by a grand coalition could well represent a significant opportunity for our country, not least with regards to the make-up

of the Bundesrat. A new government must be especially decisive in tacking the urgent adjustments to the transformation of the energy landscape, the next steps in developing our education system, and the rebuilding and expansion of our infrastructure. Germany cannot rest on the laurels of the successful structural changes it has undergone in recent years; instead, it must press on in the same vein. As the largest economy in the European Union, we also have a particular responsibility in terms of stabilising the euro.

The high level of liquidity in the financial markets is still a cause for concern, not just in the euro zone but across the world. Liquidity is being pumped primarily onto the stock and commodity markets, pulling their valuation and volatility levels back out of synch with the real economy and fuelling the risk of new asset bubbles.

Within our company, we once again



focused extensively on innovation, training our staff and fostering our corporate culture. You can follow our progress in the corresponding reports on new products, trade fairs and the further development of our organisation. Despite the unsatisfactory state of the automotive industry in Europe, the KIRCHHOFF Group increased its sales revenues to MEUR 1,615 in 2013 and currently employs 10,500 staff worldwide.

KIRCHHOFF Automotive will see a turnover rise of 7 % this year, having increased revenues in Europe and Asia by 5.5 %. Although not a bad result given that the European market continued to shrink by another 4 %, it was still some way below our expectations. We successfully matched the positive market trend in the NAFTA area, increasing turnover by nearly 10 %. The integration of KIRCHHOFF and Van-Rob was completed this autumn when our global matrix organisation was launched and staff appointed to the new posts.

Our Agenda 2020 projects were also transferred to this organisation's sphere of responsibility. The ramp-up of the K2XX platform in Mexico and the USA gave us a lot of work, as did the extensive ramp-ups in Hungary. One particular highlight was achieved by our facility for new tool manufacture in Attendorn, which was crowned "Tool Shop of the Year" in the "Excellence in Production" competition (organised by RWTH Aachen University and the Fraunhofer Institute).

Over the past financial year, KIRCHHOFF Ecotec posted particularly marked sales growth in Eastern Europe and the Middle East and will be able to increase sales revenues by at least 6 % overall. Some major innovations in fuel efficiency were introduced successfully, which will help cut pollutant emissions. HYDROPOWER enables a proportion of the energy used in braking to be recuperated and makes body and lifter operation more efficient. On vehicles with E-POWER a battery pack provides the energy for the electrical operation of the compressor of the setup and the fill. This option also helps to reduce noise emissions. Each system can cut fuel consumption by between 10 and 15 %. And, with our established DUALPOWER refuse collection vehicle, the first diesel-electric hybrid vehicle of its kind, fuel savings of as much as 30-40 % can be achieved.

KIRCHHOFF Mobility further expanded its sales and service network this year with the acquisition of Haag Rehattechnik in Kronau and Huber Mobiltechnik in Kirchdorf/Iller, allowing us to enhance our product range for manually operated controls, wheelchair loaders and bodywork modifications. In this business sector – mobility for people with disabilities – we are now represented in ten locations in Germany and Austria.

Despite winning more new customers in Asia, WITTE Werkzeuge was unable to match last year in terms of turnover.

Its product portfolio was expanded with innovations such as "Impact-Bits" and the new "protop vde-slim" range of screwdrivers. In addition, some more new products are currently being prepared for unveiling at the "Eisenwarenmesse" hardware trade fair in Cologne in spring 2014.

My family and our employees will face these good perspectives relating to all business segments with our continued commitment and great pleasure. We would like to thank our esteemed customers for their understanding and support and our employees for their loyalty and dedication.

My father, my brothers and I would like to wish you and your families a merry Christmas and all the best – particularly good health in the new year.

A cordial good luck!

Yours



J. Wolfgang Kirchhoff

Research and development – in search of a suitable material

In order to meet the requirement for increasingly safe vehicles that are also significantly lighter and more economical, we tested and evaluated various welding concepts for aluminium crash management systems.

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In order to meet the requirement for increasingly safe vehicles that are also significantly lighter and more economical, we tested and evaluated various welding concepts for aluminium crash management systems.

Crash management systems (CMS) are designed to absorb the energy acting on the vehicle in rear-end collisions via the bumper and remove or reduce it via “crash boxes”. At low vehicle speeds of around 15 km/h, all the impact energy must be converted into plastic deformation so that no supporting chassis parts are damaged, thereby reducing repair costs significantly.

The requirements of the customer and the government for increasingly safe vehicles, but also for more economical models that are considerably lighter and emit less CO₂, can only be met with lightweight automotive construction. Aluminium, which weighs three times less than steel and is corrosion-resistant, constitutes a suitable lightweight construction material for this purpose. New grades that are opti-



mised for toughness also have the ability to absorb a large amount of specific energy i.e. energy in relation to the mass of a structural component. Aluminium is therefore suitable for use as a lightweight construction material for both bumper components and energy-absorbing crash boxes in particular.

As shown in Fig. 1, the crash boxes are usually screwed onto the aluminium bumper when fitting the CMS assembly. More recent approaches attempt to replace screws with lighter and more cost-effective arc-welded joints. This creates new technical issues, because the dynamic load on the CMS imposes complex requirements on the quality of the weld seam and the well-known challenges involved in welding aluminium also arise.

In principle, typical automotive grades of aluminium can be fusion-welded

Fig. 1: Crash management system with screwed-on crash boxes

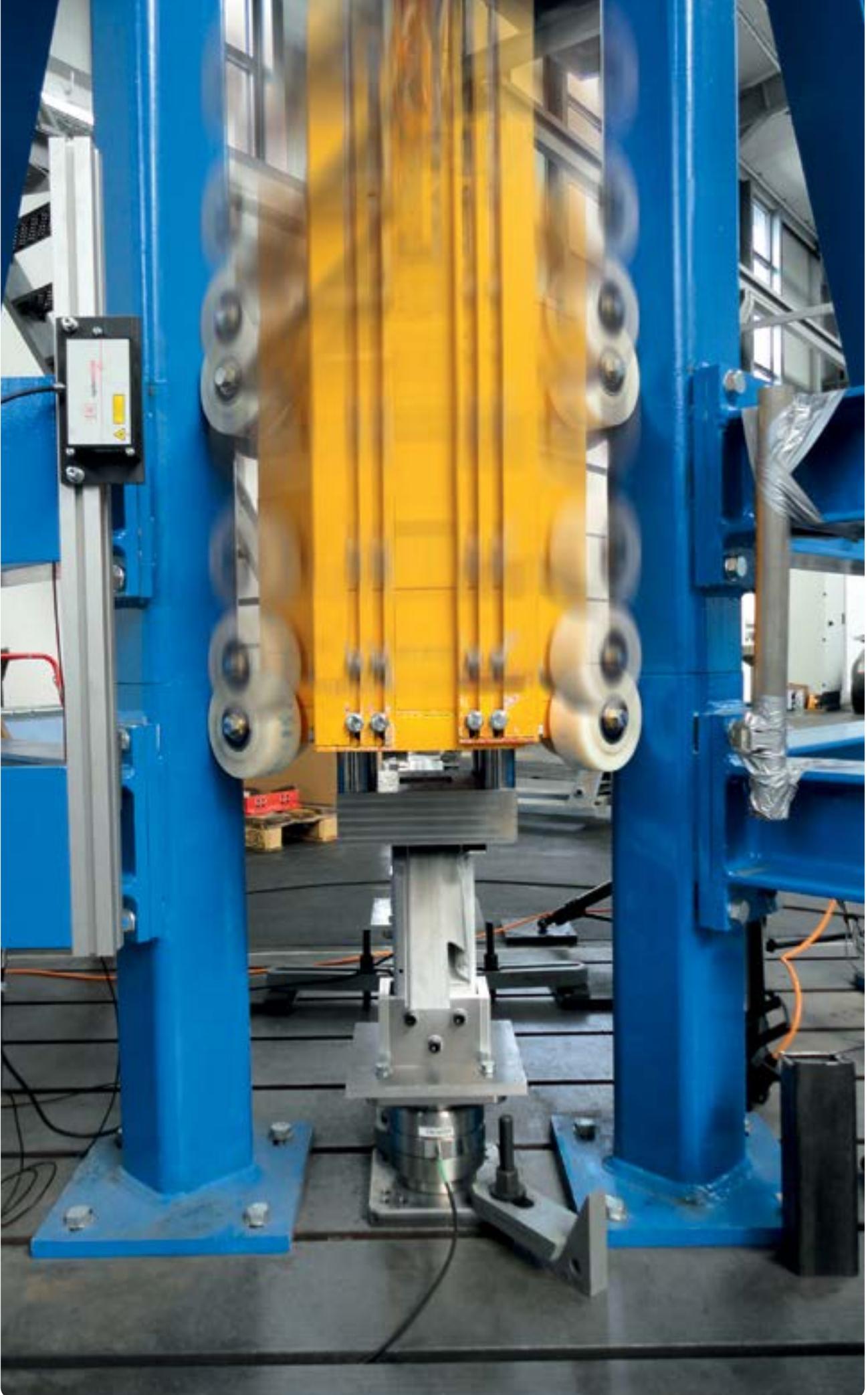


Fig. 2: Test setup for drop tower experiments

effectively if the physical and metallurgical differences between aluminium and steel are considered appropriately. These include the melting point, which is less than half as high, its thermal conductivity, which is three times as high, and its thermal expansion, which is twice as high. In a natural atmosphere, aluminium also always has a thick, tenacious oxide layer, which has a melting point of more than 2,000 °C.

Since temperatures this high are not reached during the welding process, in the event of a poor choice of welding parameters, these oxide skins can create flaws in the weld seam, which can be starting points for tears.

New grades of aluminium that have now been developed specially for crash-related components using heat treatment have strength levels that are comparable with traditional grades of steel and also provide the high levels of toughness required for absorbing energy. However, in a subsequent fusion-welding process, the additional heat introduced alters these properties taken on by the aluminium once more in the area of the weld seam, known as the heat-affected zone. Fig. 3 shows a typical strength progression that can be observed in welded high-strength grades of aluminium near the weld seam.

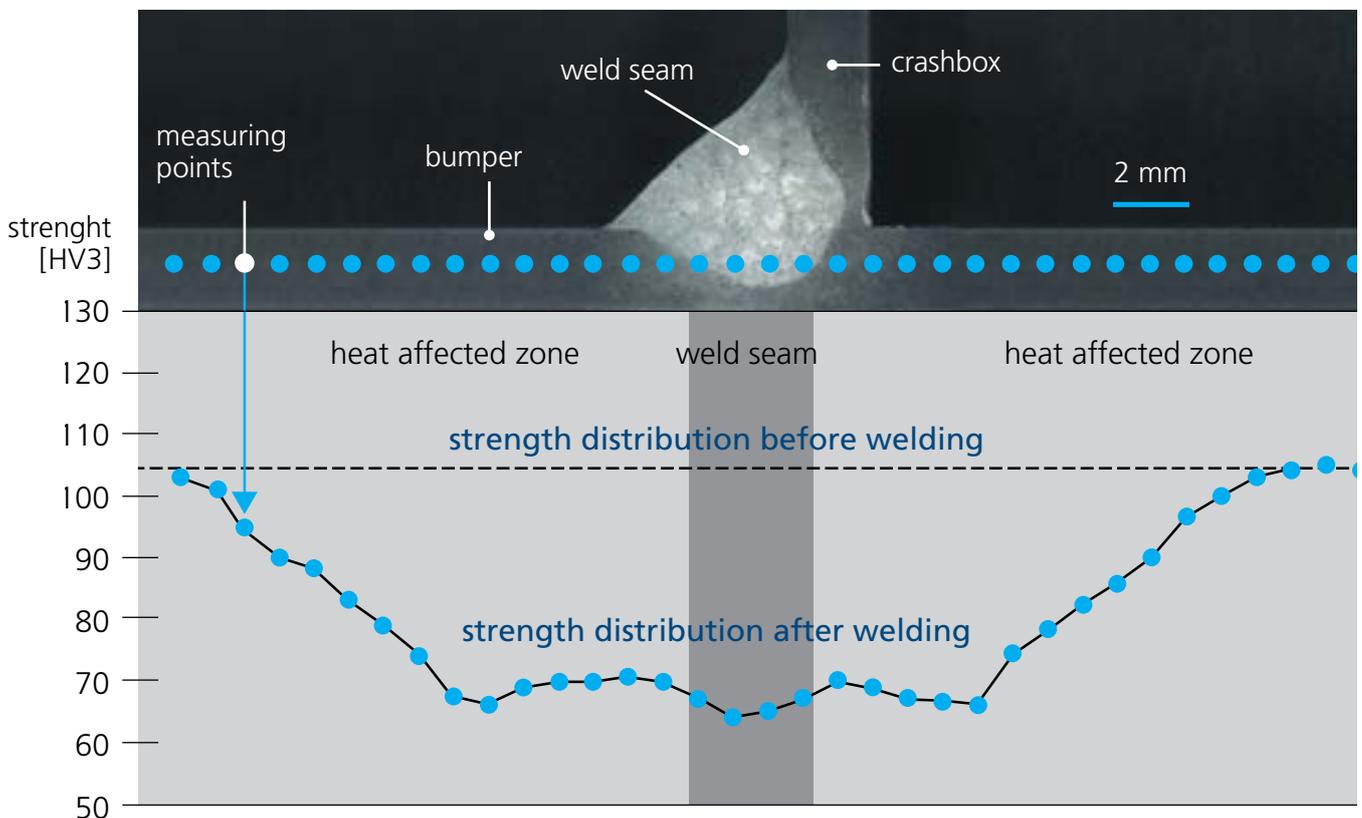


Fig. 3: Typical strength progression in the heat-affected zone of a weld seam in a high-strength crash grade of aluminium



Fig. 4: Welding connection between a crash box and bumper before and after the drop tower experiment

As part of a customer-driven development project, the effect of this heat-affected zone on the strength of the joint and the behaviour of a CMS in a crash was tested. First of all, suitable welding parameters and additional materials were identified and potential heat treatment strategies were determined by creating test joints using semi-finished samples. These parameters and strategies were then tested on various demonstration components and evaluated. Following consideration of the customer's requirements and the results of the experiment, a suitable welding concept was finally selected and validated in realistic crash con-

ditions with the help of a drop tower (fig. 2 and 4), newly developed by the Institute for Lightweight Vehicle Construction (Institut für Fahrzeugleichtbau) at the University of Siegen. In the experiment, a sled with an appropriate mass hits the CMS after falling from a set height to simulate a realistic crash situation. In this test, the actual energy absorption on impact can be measured quantitatively using force sensors, and the deformation and failure can also be rated qualitatively using high speed cameras.

Dr Jan Stuhmann



The Dr KIRCHHOFF Foundation supported the performance of the "St. Matthew Passion" by Johann Sebastian Bach at the top town church in Iserlohn, conducted by Hanns-Peter Springer.

We have accomplished a great deal

Once again, the Dr KIRCHHOFF Foundation has been involved in a large number of activities for the region in 2013. Overall, almost EUR 50,000 was gifted to activities and a wide range of charitable projects in the areas of education, culture, sport and social causes were given long-term support.

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Nussberg rocks/open air festival at the secondary school Iserlohn

The Association for the Promotion of Music of the secondary school Iserlohn organised an open air festival with the help of a large number of volunteers and is therefore providing young local bands with an opportunity to perform.

Letmathe House shines with new radiance/ Association of House Letmathe

When the reconstructed lamp was placed on top of the tower on 26 July 2013, the final phase of the renovation of Letmathe House was complete. The foundation contributed towards the preservation of the historic building by making a donation to the Association of House Letmathe.

International Guitar and Culture Symposium in Iserlohn

The guitar symposium is now considered one of the largest and most important festivals of its kind in the world. This classical guitar highlight, attended by musicians from all over the world who flock to Iserlohn each year, was supported by the Dr KIRCHHOFF Foundation.

The Iserlohn "International Autumn Days for Music"

Since 1976, people have been able to experience a top-class range of concerts, masterclasses and music competitions during the annual „International Autumn Days“ for music.

Primary school in Wiesengrund/language support

Together with the charitable organisation Caritasverband Iserlohn e.V., we provided language support for children from a migrant background by employing additional specialist staff.



The CVJM Iserlohn e.V. thanks for the Board, which is required for floorball, a combination of field hockey and ice hockey, to separate off the playing area.



Förderverein Kinderbrandschutz e.V.

The association that supports fire prevention among children is planning to introduce a new training concept in Floriansdorf in Iserlohn to further the development of fire prevention education for children in nurseries and schools. The foundation supported the implementation of the „fire time travel“ project with a donation.

CVJM Iserlohn e.V. – boards for the floorball group

Floorball is an indoor sport that is still unfamiliar to most people. It is a combination of field hockey and ice hockey. The equipment required for this sport includes sticks and goals, and also floorball boards to separate off the playing area. These were provided by the Dr KIRCHHOFF Foundation.

Iserlohn evangelical choir

The Dr KIRCHHOFF Foundation supported the performance of the “St. Matthew Passion” by Johann Sebastian Bach at the top town church in Iserlohn, conducted by Hanns-Peter Springer.

Caritas Iserlohn’s chameleon group

In 2013, we continued to support the drop-in centre in Iserlohn for children and young people living in families affected by addiction.

Video contest 2012/13

For the video contest, organised by the “Netzwerk iserlohnenergieklima” (“Iserlohn energy and climate network”), the brief was to present the issue of climate protection in the categories “music video”, “documentary” or “theatre/drama/play”. The competition was aimed at young people from the Iserlohn region. The three best entries were selected by a jury and awarded prizes.

Bilingual project at the Bartholomäus school in Iserlohn

This project is intended to give children natural and uninhibited access to the English language as early as primary school age.



WE.MOVE.FUTURE.



KIRCHHOFF
AUTOMOTIVE

WE.MOVE.FUTURE.

12-53



We are ONE!

Successful integration workshop KIRCHHOFF Automotive / Van-Rob

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Two and a half years after KIRCHHOFF Automotive took over the majority share of the North American company Van-Rob, the management of both companies met for a second integration workshop. Before the International Motor Show (IAA) in Frankfurt, the team consisting of managing partners, managing directors and directors of the central functions met in the Falkenstein Grand Kempinski in Königstein for two days.

On the first day it was clear to all parties that this is not exactly an integration workshop in order to bring the two teams together and make them operationally efficient. This is a strategy workshop in which a global family-owned company prepares for future challenges. Everyone felt very determined this would be a constructive and creative workshop. These groups were mainly focused on new standards and the improvement of worldwide processes.

Considering this direction, all participants involved pulled together and had the same objectives in mind, regardless of the fact that their offices were based in North America or in Germany.

First of all, everyone was reminded of how the merger started in 2011. During the first integration workshop, when projects had been initiated, at that time it was already clear that we were on the right path. Due to common projects, a lot of members of the management-team from both companies had already known each other. As both are family-owned medium-sized companies, there was from the beginning a strong bond with regards to company culture and the values we believe in. As a result of the cooperative attitude both teams wanted to work together and above all were ready to learn from each other.

Thus now, 30 months later, it is evident that the objectives set in 2011 have mostly been achieved. 85 % of the integration projects have been completed and the remaining ones are soon to be finalized.

Where can we even improve with regards to Lean Management and Lean Production? How can we make the best out of the existing support programs for employees and apply it globally? One example already exists: By

means of KATE (KIRCHHOFF Automotive Talent Education) employees of all 30 locations are systematically promoted worldwide in order to enable them to take over future management tasks. And of course: How do we further bundle and optimize our research and development activities for new, much better and in particular lighter products for the mobility of the future.

After two days workshop it was clear to all involved:

TOGETHER WE.MOVE.FUTURE.

Andreas Heine



Committed teamwork on two workshop days



Right from the outset at eye level

Interview with Arndt G. Kirchhoff and Paul Dilworth about the integration process after the takeover of Van-Rob

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Shortly after the takeover of the majority shares of Van-Rob by KIRCHHOFF Automotive, the first integration workshop was held in early 2011. It quickly became clear that the employees of both companies cooperated well with each other. Characterized by the values of both family-owned companies they encountered right from the beginning at eye level, and together wanted to shape the now common future of their companies. In September 2013 the second integration workshop took place. This time it was clear to everyone, that another integration workshop was not required, as we are now one company.

A. Heine: Arndt Kirchhoff, Managing Partner and CEO KIRCHHOFF Holding. Why was the merger so important for both companies?

Arndt G. Kirchhoff: The Automotive sector is a global industry, so it was important for KIRCHHOFF Automotive as well as for Van-Rob that we merge to be a global supplier. This is not only in favor of our customers, it is also important for our own stability, because when we look at how the markets fluctuate, we see how the economy shows different growth patterns e.g. a 20 % growth in China, 10 % growth in America and a decline with the growth in Europe. If we look back five years we will find a recession in America and a good economy in Europe. As a global entity, we can balance our business and have much more stability as a group,

which is good for the company as well as for the customers.

A. Heine: Paul Dilworth, Executive Vice president Global HR, Van-Rob and KIRCHHOFF Automotive. What was the reaction of the Van-Rob employees when KIRCHHOFF Automotive took over the majority of the Van Rob shares?

Paul Dilworth: Well, whenever a company is purchased by another company, the natural reaction of employees is to be nervous or anxious about it. In this situation, however, there were some factors that reduced those concerns for Van-Rob employees. The first factor was that KIRCHHOFF Automotive and Van-Rob had been partners for ten years in Van-Rob's operations in Mexico. So KIRCHHOFF Automotive was very fami-

ARNDT G. KIRCHHOFF
Managing Partner and CEO
KIRCHHOFF Holding

liar to Van-Rob employees. The second factor was, that KIRCHHOFF Automotive did not have operations in North America. So there is no concern about consolidations of operations which could result in job loss. The third factor was Van-Rob employees were very well educated on the fact that Van-Rob wanted to be a global organization. By joining KIRCHHOFF Automotive, we are actually becoming much more competitive for the future which would lead

to more opportunities for employees and job security. So because of these special factors our employees met the announcement with much more excitement than the typical nervousness.

A. Heine: Arndt Kirchhoff, what was the reaction of our customers regarding the merger?

Arndt G. Kirchhoff: The customers were very positive, because they liked the technologies of both of the companies. Our customers today are expecting us to apply the best standards in technology all over the world. Our em-



ployees, together with our technology, from both Van-Rob and KIRCHHOFF Automotive will prove to be successful. We are therefore a better supplier with these strengths and knowing our customer's expectations.



A. Heine: What was the biggest challenge and what were the main factors for the success of the integration process?

Arndt G. Kirchhoff: The biggest challenge was to create common standards with respect for each other. Common standards are important to support what people are doing, to avoid mistakes, to have safe processes, which are of course very important for our customers. I am happy to say, that during our first "integration workshop", which was held in Toronto in 2011, after having discussed the different standards, we agreed on one standard throughout Van-Rob and KIRCHHOFF Automotive. Today, we are happy to be able to offer this to our customers.

A. Heine: Paul Dilworth, what do you think? Did the fact that both companies are family-owned have any influence on the integration process?

Paul Dilworth: Absolutely. Culture is the foundation of all organizations. If two organizations who are joining had completely different cultures it would be as if they were speaking two different languages and they couldn't communicate with each other. The culture at KIRCHHOFF Automotive and Van-Rob were created by the values of the Kirchhoff family and the van Schaik family. These values stress the importance of employee welfare, involvement in the community and also personal

commitment to success of their organizations. This common culture laid the foundation that was necessary for a successful integration.

A. Heine: Arndt Kirchhoff, looking at today – what is still to do? What is still missing?



PAUL DILWORTH
Executive Vice President
Global HR in Interview

Arndt G. Kirchhoff: There are still minor things missing where we can learn from each other. Learning from each other takes more time than introducing standards. This is of course an exciting time when people really start to respect each other and find out where the strengths lie in each colleague and where you can learn to improve from each other. With respect to continuous improvement, this is what our customers expect from us, but this also drives us to be successful in the future. When we combine our skills and

our strengths, we of course not only protect our jobs, but we offer the best service for our customers.

A. Heine: Paul Dilworth, just a few cues, if you think of the company formerly known as KIRCHHOFF Automotive and Van-Rob in five years. How are you going to describe this new company?

Paul Dilworth: I no longer see us referred to as two separate companies. We will be just one. Critical to this is the

new global matrix organization and the resulting global processes for each function. Once this is complete, we then will be able fully utilize the complete global resources of the organization which of course include the most important resource, our people.

The interview was performed by Andreas Heine, Director Corporate Communication and Marketing.



Great interest shows Chancellor Angela Merkel on the BMW front-end structure, an innovative solution of KIRCHHOFF Automotive for lightweight construction.

IAA 2013 – the world's most automobile show

With plenty of VIPs and over 1,000 visitors, KIRCHHOFF Automotive has had one of its most successful years at the IAA trade fair.

“Thank you for presenting here with the different generations as a family.” On her opening tour of the 65th IAA Cars, Federal Chancellor Dr Angela Merkel visited our trade fair stand. Apart from the large vehicle manufacturers, only three supplier companies had the opportunity to meet the Chancellor in person: Bosch, Schaeffler and KIRCHHOFF Automotive. The Chancellor was accompanied by Federal Trans-

port Minister Peter Ramsauer, Minister-President of the State of Hessen, Volker Bouffier, Lord Mayor of the City of Frankfurt Peter Feldmann and President of the German Association of the Automotive Industry (VDA), Matthias Wissmann.

Taking the BMW front-end structure as an example, Arndt G. Kirchhoff explained to the Federal Chancellor

how plastic and metal are joined in lightweight construction using a special bonding technique. „Lightweight automotive construction – this is our mission. It is our contribution towards fuel-efficient vehicles,” he emphasised.

Over an area of 400 sqm, KIRCHHOFF Automotive presented a range of innovative multi-material concepts (plastic/steel hybrids) at the IAA. These are

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Top picture: Grace Lieblein (Vice President GM, Global Purchasing and Supply Chain) | bottom picture: Bernd J. Runge (left) (Senior Purchasing Manager, European Purchasing Operations Interior, Ford) and Dr. Thomas Steinhaus (Director of Sales Cars) | right picture: Arndt G. Kirchhoff talking to Alan Draper (Vice President Purchasing Ford Europe)



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1. J. Wolfgang Kirchhoff and John B. Emerson, Ambassador of the United States of America | 2. Frank Schneider (2.f.l.), Head of Car Axles and Technical Development Fuel Systems VW and Prof. Dr Stefan Gies (2.f.r.), Head of Car Chassis Development at VW were informing themselves about the specialties of the electric race car of the student team of the Speeding Scientists Siegen | 3. Arndt G. Kirchhoff presents our product range to Annegret Kramp-Karrenbauer, Prime Minister of the Saarland.



F.l.t.r.: J. Wolfgang Kirchhoff | Hanns-August Kirchhoff | Lord Mayor of the City of Frankfurt Peter Feldmann | Federal Transport Minister Peter Ramsauer | Chancellor Dr. Angela Merkel | President of the German Association of the Automotive Industry (VDA), Matthias Wissmann | Dr Johannes F. Kirchhoff | Arndt G. Kirchhoff | Dr Jochen F. Kirchhoff | Minister-President of the State of Hessen, Volker Bouffier



4. Chairman of the Transatlantic Bridge and former Chairman of the CDU/CSU Parliamentary Group, discusses with Dr Thorsten Gaitzsch, CTO KIRCHHOFF Automotive | 5. Group picture with Karl-Thomas Neumann, CEO of Adam Opel AG and President GM Europe | 6. Also Garrelt Duin, Minister of Economic Affairs of North Rhine-Westphalia, visited our booth.

all used for lightweight automotive construction and therefore contribute towards reducing weight and CO₂ emissions. At the same time, the leading development partner for complex metal and hybrid structures for the body in white and chassis presented state-of-the-art production and joining methods as part of a global production project to build the vehicles of the future.

This IAA showed once again that our trade fair stand is a meeting point for high-ranking representatives of our customers: Karl-Thomas Neumann (Chairman of the Board of Adam Opel AG and President of GM Europe), Grace Lieblein (GM Vice President for Global Purchasing and Supply Chain), Susanna Webber (GM Europe Vice President for Global Purchasing and Supply Chain) and Mike Ableson (GM Europe Vice

President for Engineering) visited the KIRCHHOFF Automotive stand. Alan Draper (Vice President of Purchasing at Ford of Europe) and Professor Dr Stefan Gies (Head of Car Chassis Development at Volkswagen) also came to find out about innovations and new technology. Hans Demant, who is responsible for coordinating international projects at Volkswagen AG, and Dirk Große-Loheide, Vice President of Volkswagen of America, as well as other representatives of the top management of all well-known vehicle manufacturers also found their way to the spacious trade fair stand, which focused on the concept of lightweight construction.

Apart from the Federal Chancellor, Arndt G. and J. Wolfgang Kirchhoff also welcomed the American ambassador John B. Emerson, North Rhine-Westphalia's Minister for the Economy Gar-





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Top picture:
 "Technology to touch" – Klaus Lötters, Key Account Manager Daimler, gives students insights into our company.

Bottom picture:
 The assistants to the management of KIRCHHOFF Automotive combine their quarterly meeting with a visit to the IAA.

reilt Duin and Saarland's Minister-President Annegret Kramp-Karrenbauer. Furthermore, the Chairman of the Transatlantic Bridge and former chairman of the CDU/CSU parliamentary group in the Bundestag Friedrich Merz visited our stand during a tour organized by the VDA.

"The IAA provides an excellent platform for finding out about competitors' new products, technology and trend expectations and for having discussions with the partners and managers of other successful family-owned companies in the industry," stressed Dr Thorsten Gaitzsch, CTO of KIRCHHOFF Automotive.

In the second week of the IAA, following the theme of "Technology to touch", we organised careers days for school pupils and students from our region. Experienced engineers explained the special features of the products exhibited and provided an exciting insight into the wide variety of tasks that an engineer can expect at KIRCHHOFF Automotive. The highlight was the tour of the various vehicle manufacturers

who install KIRCHHOFF Automotive products in their vehicles. Extensive information on the different career paths that the company can offer school pupils, students and direct entrants was provided to round off the day.

Our visitors were particularly interested in the innovation area. Here we presented selected research projects with certain purposes: reducing weight, saving money, reducing the number of components, making the best use of materials and simplifying the manufacturing process. These included a cross car beam in a hybrid design, a front-end structure for incorporated headlights made from filament-reinforced thermoplastic, a crash management system produced using the integral construction method and a bumper made up of aluminium profiles. Our customers' positive response to the developments presented shows us that we are on the right track and can make a significant contribution towards the future of the automotive industry as a partner of vehicle manufacturers.

Sabine Boehle



Dates and facts about the IAA Cars in Frankfurt

"The world's most automobile show' has completely fulfilled our expectations," summed up Matthias Wissman, President of the German Association of the Automotive Industry (VDA). The VDA organises the IAA. "With 1,098 exhibitors from 35 countries, the IAA Cars has once more strengthened its position as the world's largest and most comprehensive exhibition for vehicle manufacturers and their suppliers. With 42 per cent of exhibitors coming from abroad, it is also the most international automotive trade fair and the most important automotive trade fair in the world, featuring 159 world premieres, including 70 world premieres from vehicle manufacturers alone. With around 400 suppliers, the IAA reflects the entire value creation chain, which is unique too. Only at the IAA can you see suppliers' innovative potential all in one place – this is emphasised by the 65 world premieres presented here by suppliers alone." A total of 900,000 visitors came to the IAA in Frankfurt this year.

The next IAA Cars will take place in two years from the 17th to the 27th of September 2015 in Frankfurt.



F.l.t.r.: Andreas Heine, Director Corporate Communication & Marketing at KIRCHHOFF Automotive | Stephan Stracke, representative of the employers' association Olpe | Dr Peter-Paul Ahrens, Mayor of the town of Iserlohn | Klaus Hesener, Treasurer of the Town of Attendorn | Franz-Josef Mockenhaupt, Siegen Chamber of Commerce and Industry | Hans-Peter Rapp-Frick, Hagen Chamber of Commerce and Industry | Jochen Schröder, Association for Economic and Structural Development Iserlohn (GWS) | Ralf Gellermann, Head of the Credit Department and representative of the Executive Board of Sparkasse Attendorn-Lennestadt-Kirchhundem | Bernd Schablowski, Member of the Executive Board of Sparkasse Attendorn-Lennestadt-Kirchhundem | Jürgen Dröge, Corporate HR Manager of KIRCHHOFF Automotive | Dirk Hackenberg, Hagen Chamber of Commerce and Industry | J. Wolfgang Kirchhoff, Managing Director and COO KIRCHHOFF Holding | Wolfgang Hilleke, Mayor of the town of Attendorn

A shared goal

At the KIRCHHOFF Automotive regional meeting at the IAA Cars in Frankfurt, discussion focused on the current development trends in the automotive industry and what they mean for the region of South Westphalia.

Politicians and association representatives from the Märkischer Kreis and Olpe districts accepted the invitation of the local vehicle supplier and attended the second regional meeting. J. Wolfgang Kirchhoff, Managing Partner and COO KIRCHHOFF Holding, welcomed the mayors of Attendorn and Iserlohn, Wolfgang Hilleke and Dr Peter-Paul Ahrens. Representatives of the Chambers of Commerce and Industry, the employers' associations, the Association for Economic and Structural Development – (GWS) in the Märkischer Kreis district and the Sparkasse bank also participated in the meeting.

An important realisation was that only those companies in our region that have a strong international position can successfully carry out and promote research, development and production operations in the long term. Another topic of discussion was the measures that companies and municipalities can take together to find skilled employees with excellent training and keep them in the region and in the company.

However, the participants also discussed the local conditions. In order for a company in South Westphalia to be competitive on an international level, the energy prices, for example,

would also have to be at an international level and should not be more expensive than in France, for example. When the exchange of ideas came to an end, J. Wolfgang Kirchhoff stressed: "Sustainable growth is only possible when the general conditions required, such as energy prices and the attractiveness of the South Westphalia region, are right."

Everyone agreed that the positive exchange and constructive discussions should be repeated at the next IAA.

Andreas Heine

New products needs the country

With the components “boot recess” and “roof frame for the external sliding/tilting sun roof”, KIRCHHOFF Automotive in Poland is manufacturing two complex assemblies for the new S-Class at its Mielec and Gliwice sites.

The boot recess is designed for holding additional units such as control devices and spare batteries. Due to the wide range of versions and the use of the entire process chain (deep drawing,

bonding, welding, e-coating, sealing, insulating), these components are particularly demanding for internal logistics processes. The assembly cell was given a modular structure to enable it

to carry out the welding and bonding processes for all versions using one system with minimum cost.

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Spare wheel well

Technologies:

Deep drawing, manual and automatic process, weld nut, stamping nuts, spot welding, gluing application, e-coating, sealer application, assembly steps

Production sites:

Gliwice/Poland; Mielec/Poland

Capacity/Year:

90.000

Customer/Model:

Mercedes-Benz S-class

Roof frame

Technologies:

Forming, spot welding

Production sites:

Mielec/Poland

Capacity/Year:

60.000

Customer/Model:

Mercedes-Benz S-class

KIRCHHOFF Automotive is producing the roof frame for the external sliding/tilting sun roof. Very tight tolerance specifications required the welding fixtures to be designed precisely. During the process, the six individual parts were connected with 137 welded points.

With press-hardened side members and connecting members, KIRCHHOFF Automotive is also manufacturing further products for the new S-Class.

During the part sourcing for the new Suzuki SX4, KIRCHHOFF Automotive was chosen to produce the control arm and other welded assemblies. The products are being manufactured at the KIRCHHOFF Automotive site in Esztergom, Hungary.

The triangular wishbone connects the independent wheel suspension to the subframe on the vehicle to stabilise the spring movement and track. This means that, in addition to subframes for GM and Porsche, KIRCHHOFF Automotive is now supplying another high-tech product for vehicle chassis.

The high-strength component is made on a 1,600-ton servo press. MAG welding and dip coating complete the production process.

The B-pillar reinforcement for the new Škoda Octavia is produced on the new hotforming line at KIRCHHOFF Automotive in Hungary. This is the first time that flexible rolled sheet is used for a Škoda product. By usage of this mate-

rial, a component with different thicknesses can be constructed. The sheet thickness profile varies in three steps from the vehicle bottom to the roof. The middle, crash-relevant section has a higher material strength. As a result, this leads to the best score of 5 stars in the Euro NCAP test for the vehicle while simultaneously reducing weight.

Dr Thomas Steinhaus



Front lower control arm

Technologies:
Forming, MAG welding, e-coating

Production site:
Esztergom/Ungarn

Capacity/Year:
100.000

Customer/Model:
Suzuki SX4



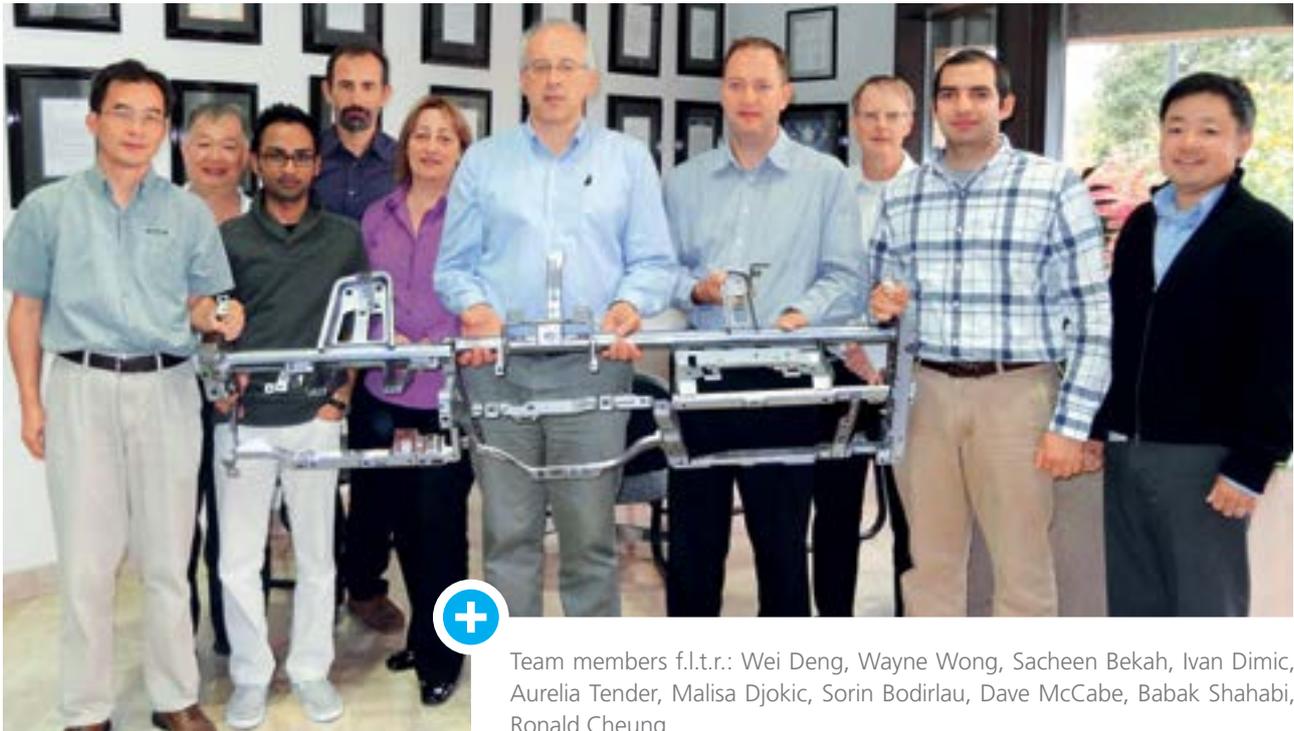
B-pillar

Technologies:
hotforming incl. hot trimming, brazing, spot welding, usage of tailored rolled blank

Production site:
Esztergom/Hungary

Capacity/Year:
260.000

Customer/Model:
Škoda Octavia



Close to the Customer

Global Cross-Car Beam development with Ford IP Engineering

The cooperation already began in the middle of the 1990's when we started supplying components for instrument panel beam assemblies and also complete instrument panel beams. By the end of the 90's Ford charged us with the development of the cross car beam for the Ford F-150 Pick-up, and we became Full Service Supplier (FSS) to Ford IP (Instrument-Panel) Engineering.

Each cross car beam concept, each development is an extraordinary challenge, because certain characteristic frequency values have to be achieved within the specifications of the available space for the dash board and the mounting configuration of the steering column assembly. Our product development team is always ready to meet these challenges. With the help of

the benchmarking cross car beam data from our R & D department and newly developed process technologies it is possible to design innovative products.

Today we are working closely with Ford IP Engineering to develop cross car beam assemblies for global and local platforms. Our most recent development in this field is the CD4 platform.

The location for this program is the Ford Product Development Center in Dearborn, Michigan. This cross car beam will be produced in North America, Europe and Asia. For the European version, stamping tools for the bivalve housings for both the LHD and RHD vehicles would have to be built, which would have resulted in high tooling investment.

Consequently, we simplified the driver tube design to lower the tooling investment for the program. During the development of the CD4 platform, Ford introduced a new variant called the AFS (Active Front Steering). For this we had to develop new brackets in order to achieve the higher characteristic frequency value while simultaneously simplifying the base model. At the VP (Verification Prototype) Build, it has been confirmed to us that the AFS cross car beam design proposal is meeting the characteristic frequency value - as predicated in our R & D results.

The latest example is the Ford Mustang cross car beam for which a new bracket had to be developed for the

transfer of the transverse energy load from the mount surface of the steering column assembly to the front car in order to fulfill the specified frequency requirements. Together with our R&D department and our team for process development we designed

a new cylinder-shaped special bracket to significantly increase the vibrational characteristics without making the bracket assembly heavier. Now Ford IP Engineering is using this new special bracket whenever possible for the new cross-car beam assembly. When Ford IP Engineering tested the physical cross car beam assembly, the characteristic frequency values proved higher than the R&D calculations.

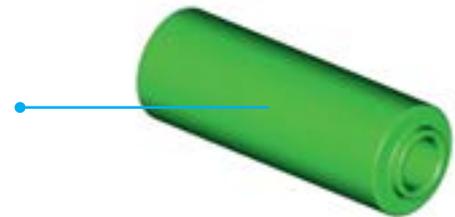
Another example for the successful cooperation with Ford IP Engineering is the P552 cross car beam assembly where a lateral attachment on the driver side was developed to fulfill the specified requirements of equal mass and without changes in existing components of the instrumental panel environment. We will continue the development of instrument panel beams for all global markets and we look forward to the further cooperation with Ford IP Engineering in developing innovative light weight solutions.

Wayne Wong

Standard M8 Weld Nut



New cylinder-shaped M8 Fastener



Kal Bharathan, Ford Motor Company:

Van-Rob has been an integral part of the Cross Car Beam (CCB) development at Ford and contributed research results regarding alternative materials (Aluminum CCB) as well as innovative constructions for cost and weight reduction. Van-Rob created several concepts to ensure specifications for NVH (Noise, Vibration, Harshness) and occupant safety.

Van-Rob developed a weight-optimised bivalve concept for the driver side. The efficient cylinder-shaped special bracket for joining the steering column and CCB attachments is now being implemented in several Ford programs.



Ford F-150 – America's best- selling truck

— Van-Rob Tecumseh to supply
Cross Car Beam for new Ford F-150.

The Ford F-Series has been the best-selling, full size truck, for a period of 37 years. The Van-Rob Tecumseh Plant is part of this success story as it produces the structural Cross Car Beam for the current P-415 model. Ford Motor Company has now awarded the Tecumseh plant also with the successor Cross Car Beam platform, named the P-552, which will begin in the summer of 2014 to supply Ford's Dearborn and Kansas City Truck manufacturing facilities. The "Built Ford Tough" tradition is carried



The Ford F-150, since decades one of the best-selling and distinguishable makes in the Ford line-up. Ford F-150 from 1975 (bottom picture), from 1994 (top picture) and from 2014 (large picture)

on at the Tecumseh plant as the Cross Car Beam holds the steering wheel, climate control, entertainment functions, glove department and air bag components intact behind the dashboard. It also assists in the structural integrity of the vehicle.

The F-Series truck line has been selling well for over the last six decades and the F-150 is one of its most popular and distinguishable makes in the Ford line-up. The first F-Series truck rolled off

the assembly line in 1948. The F-Series trucks can be easily recognized by the nameplate with a blue oval backdrop. There are many special F-Series models, such as the King Ranch, Harley-Davidson and SVT Raptor. These models are highly prized by farmers and businessmen alike for their good looks and rugged capability.

100 years ago the automated assembly line manufacturing has been consistently perfected under founder Henry

Ford. We congratulate our customer on this jubilee and look forward to partnership with them long into the future.

Ray Skierski

New Centre of excellence for lightweight automotive construction

— Around 300 invited guests attended the opening of the new lightweight construction centre „Automotive Center Südwestfalen“ (acs) by the Minister for Economy of North Rhine-Westphalia Garrelt Duin on 9 July in Attendorn.

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The acs is a joint venture by the universities, municipalities and automotive supply industry in the region, including KIRCHHOFF Automotive. During his welcoming speech at the opening ceremony of the acs, the Minister for Economy of North Rhine-Westphalia, Garrelt Duin, declared: "Here in South Westphalia lies the beating heart of the North Rhine-Westphalian automotive supply industry. The acs is making an important contribution that will help us hold our own international competition. Lightweight construction is a future-oriented aspect of vehicle construction. It makes low vehicle weights possible and therefore contributes towards reducing fuel consumption." And Arndt G. Kirchhoff, CEO of the KIRCHHOFF Holding and Chairman of the supporting association, emphasised in his speech: "This type of cooperation between universities and industry in the closest possible way, as partners, has never taken place before. In the acs, we are working together to create the conditions required for developing the next generation of products and processes, for the future of jobs in our region."

The stated aim of the acs is to examine the entire lifecycle of a product, starting with market research, moving on

to theoretical product development, process design, technological development and the validation of the product characteristics, and ending with recyclability issues. This means that, using the modern integrated product development approach, the interaction of the product and process in particular is also being rigorously analysed.

The participating partners from industry and academia worked closely to-

gether to develop the acs in line with this goal. The investment required is being provided as part of the "Regionale 2013" funding programme by the state of North Rhine-Westphalia, using funds from the "target2" programme to the tune of EUR 14.8 million.

Today, lightweight construction is a key task, not only for vehicle manufacturers, but also for suppliers. In the acs, innovative product concepts will be





The newly constructed „Automotive Center Südwestfalen“



Injection molding compounder with a clamping force of 13,000 kN

developed together with customers in future. To do this, calculation tools are available in addition to construction software for optimised design according to the principles of lightweight construction.

Apart from advanced high-strength steels, lightweight metals or fibre-reinforced plastics are also being used to an increasing degree. The question of how to process these different, sometimes new, materials and how to join indi-

vidual components to form complex components and modules is fundamental to innovative lightweight construction. With this in mind, a state-of-the-art 1000-ton servo press, for example, has been installed in the acs, which is intended to advance the development of pressing processes. In combination with an injection moulding compounder, which is used to develop new materials or mix existing ones, it is possible to manufacture products made from metal/plastic composites.

Thanks to an extensive range of equipment in the joining technology department, individual parts can be made by combining different materials. For this purpose, the acs offers automated cells for arc and laser welding, friction and spot welding machines or fixtures for mechanical joining, for example. Using the test-benches provided, such as a servo hydraulic test station or an electromagnetic shaker, the product characteristics can also be validated under climatic conditions.

However, the Automotive Center Südwestfalen not only provides the means and space for designing innovative products and processes in a creative environment, it also has highly motivated and qualified employees. The acs therefore creates the best possible conditions for strengthening the “automotive excellence region of South Westphalia” and securing jobs in our region.

Christoph Wagener

At the opening ceremony, f.l.t.r.: Arndt G. Kirchhoff, CEO KIRCHHOFF Holding and chairman of the acs | Garrelt Duin, Minister of Economy, Energy, Industry, SMEs and crafts of North Rhine-Westphalia | County Commissioner Frank Beckehoff and George Schöntauf, responsible for engineered plastics and materials in the acs.



Picture left: Jürgen Wlochowicz, tool shop manager, (l.) and Sabahudin Delic, Teamleader Tryout, are inspecting an oil sump |
Picture in the middle: New tools can now be produced on a production area of 2,200 sqm.

“Tool shop of the Year 2013“

Two highlights in 2013: The tool shop gets a big modern hall in Attendorn and wins in the competition “Tool shop of the year” in the category „Internal tool shop with less than 50 employees“. The price is awarded by the RWTH Aachen University and the Fraunhofer Institute for Production Technology.



The KIRCHHOFF Automotive team at the prize giving ceremony: Both new tool shop managers Jürgen Wlochowicz and Andreas Willmes as well as Managing Director Stefan Leitzgen are glad about the award.

Tool shop of the Year 2013 – now it is officially allowed to give itself this title. For on 16 October 2013, the team from Attendorn was named the winner of the category “Internal tool shop with less than 50 employees” in the German national “Excellence in Production” competition.

This much-coveted award was introduced ten years ago in the tool and mould-making sector by the Laboratory for Machine Tools and Production Engineering (WZL) of RWTH Aachen University and the Fraunhofer Institute for Production Technology (IPT). 301 companies from all over Germany entered the competition this year. The award ceremony was held in the Coronation Hall of Aachen City Hall.

KIRCHHOFF Automotive’s tool shop had relocated from Olpe to new premises in Attendorn only in July of this year.

Toolmaking can now take place under optimum conditions in a production hall measuring about 2,200 sqm. Two gantry and four cantilever cranes are

available to ensure a smooth flow of materials throughout the manufacturing process, from the receipt of incoming goods to dispatch of the finished tools. This allows heavy components to be moved while independently supplying the individual assembly bays at the same time.

A reduction in manufacturing costs has resulted from the new production layout in combination with the continuous flow production system already introduced in Olpe, which forms a key part of the „Synchronous Tool Manufacture” project. Transport and waiting times have decreased while transparency has improved even further. This has significantly enhanced the competitive position of tools „Made by KIRCHHOFF Automotive”.

With relocation of the tool shop to Attendorn an era has come to an end in Olpe. Following the move to Attendorn the site „In der Trift” shut down for good after more than 35 years of production and tool-making in Olpe, first of all under the name of Sigro,

then Kutsch from 1994 and finally as KIRCHHOFF Automotive. The property was sold off to a financial investor from Attendorn at the end of last year.

Stefan Leitzgen

Highest distinction for exceptional performance

Ford grants the Q1 Award to our plants in Poland and Romania. The Q1 flag is now already flying in front of nine KIRCHHOFF Automotive plants in Europe.



The management of Gliwice is glad to receive the award, f.l.t.r.: Rafał Lechowski, Managing Director | Ugur Tuerkoez, Ford STA Senior Manager; Janusz Sobon, CSO KIRCHHOFF Automotive | Dawid Tausz, Quality Manager | Bartłomiej Staworko, Quality Engineer

The Ford Q1 Award is the highest distinction for suppliers. Only suppliers who are successful in the following areas receive the award:

- Evaluation and validation of the management system covering the criteria of safety, environmental impact, quality and customer satisfaction
- Certification to ISO TS 16949 and ISO 14001
- Effective supplier system with regard to quality and supplier agreements
- Ongoing performance monitoring
- Continuous improvement processes within the company

On 9 October 2013, important representatives of the Ford Group presented the Q1 Award during a special ceremony at the plant in Gliwice in Poland. Bartłomiej Staworko, Quality Engineer, received the award from Ugur Tuerkoez, Ford STA Senior Manager. Urszula Horodynska, Ford STA Site Engineer and Daniel Schröder, Ford CBG Buyer, accompanied Ugur Tuerkoez on his visit to our plant.

The successful cooperation began in 2008 with the supply of cross car beams for the Ford Fiesta. Thereafter the production of welded and pain-

ted parts for Ford increased to over 3 million per year. Today, Ford is one of the most important customers of KIRCHHOFF Automotive in Gliwice.

In Romania, KIRCHHOFF Automotive produces 32 body parts for Ford. Obtaining the Q1 Award was one of the most important goals for 2013. The award will be presented in January 2014. The Q1 Award flag will then also be flying in front of the Romanian plant in Craiova.

“Receiving the Ford Q1 Award is an honour and we are proud of this achievement”, says Quality Manager of KIRCHHOFF Automotive in Romania, Danut Manolache. “I would especially like to thank our entire team, who made this success possible. In future, we will continue to rise to the challenge of providing good quality products and services that meet, or even exceed, our customers’ expectations”, stresses Gabriel Porojan, Managing Director Operations of the plant in Romania.

In addition to the Gliwice and Craiova plants, the European plants in Iserlohn, Attendorn, Mielec, Ovar, Cucujaes, Letterkenny and Saarwellingen are also Ford Q1 suppliers.

Rafał Lechowski, Carmen Iacob

Important award for North York and Richmond Hill

In September Van-Rob's Richmond Hill and North York facilities were awarded the "GM Supplier Quality Excellence Award 2013".



F.l.t.r.: Alan Galardo, Quality Manager, Richmond Hill and North York | Randall Pappal, GM Executive Director, Body and Exterior, Global Purchasing and Supply Chain | Chris Mailloux, GM Director, Supplier Quality, Global Purchasing and Supply Chain | Dennis Berry, CEO Van-Rob | Hans Lubke, Plant Manager, Richmond Hill and Aurora | Thomas McMillen, GM Executive Director, Interior and Safety, Global Purchasing and Supply Chain at the awards ceremony.

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"General Motors (GM) is striving to become an excellent car producer. Achieving this goal depends largely on the quality of our products. Product quality plays a major role in customer satisfaction. We have made a lot of progress in recent years improving product quality and recently achieving the top spot in the J.D. Power Initial Quality Study. Our continued progress is directly related to your progress and a shared commitment to quality.

To recognize outstanding supplier performance in quality we award the GM Quality Excellence Award since 2012.

Only our top suppliers are qualified for this award and only they cope with our strict quality requirements and have rendered outstanding services to the whole GM organization", Sheri Hickok, Executive Director Global Supplier Quality General Motors, emphasizes on occasion of the price awarding to Van-Rob Richmond Hill and North York.

Also in future Van-Rob wants to be part of GM's excellent suppliers and will continuously increase its efforts to realize this objective. This is the only way to strengthen our relationship with our customer and to secure our future.

In this process all staff members of North York and Richmond Hill play a significant role. With their outstanding team efforts they made this award possible in the first place.

Alan Galardo



Ceremonial cutting of the birthday cake: f.l.t.r.: Paul van Rooij, Managing Director Gametal | Mariana Lima, Managing Director Finance Gametal | Arndt G. Kirchhoff, Managing Partner and CEO KIRCHHOFF Holding.

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20 years of production in Portugal

On 21 June 2013 our site in Portugal, celebrated its 50th anniversary of the parent company GAMETAL and its 20-years of affiliation with KIRCHHOFF Automotive.

Besides the Kirchhoff family and the managing directors, around 100 guests included many important figures from the worlds of business and politics and associations who have played a role in the firm's history.

We welcomed Dieter Bell from Ford as the representative of our most important customer in Portugal. Also in attendance

were the mayor of Ovar, two founder members of Gametal, the economic adviser from the German embassy, the German consul from Porto as well as representatives of our customers and suppliers, in addition to various associations, public institutions, banks and service providers. The guests naturally also included staff from Gametal and KIRCHHOFF Automotive, both past and present.

In his welcome speech Tomás Moreira, Chairman of the Advisory Board, thanked everyone for their personal contribution to the success of the company. „Our success is based on the trust you have put in us, your decisions, your expertise and your commitment. Please accept our sincerest thanks!“, were the closing words of Tomás Moreira's speech.



About 100 guests were invited (top right), among them the Kirchhoff family and the Managing Directors (left picture below). Also the plant tour was greatly appreciated by the guests (picture top left). The event was planned by the organizing team, led by Tomás Moreira (bottom right, f.l.t.r.: Tânia Peralta, Pink Loureiro, Fernanda Santos, Tomás Moreira, Sara Fonseca, Helena Silva).

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Caption: Tomás Moreira during his welcoming speech (left). Mariana Lima passes the "Supplier of the Year" Award to António Cruz from Pecol II.

This was followed by an assessment of the situation on the international automotive market by Arndt G. Kirchhoff, CEO of KIRCHHOFF Holding. Here he also looked at the development of KIRCHHOFF Automotive in general and the specific case of Portugal. Paul von Rooij, Managing Director of Gametal, then described the current situation of the business in Portugal. Last but not least, Mariana Lima, Director of

Finance at Gametal, awarded the title of „Supplier of the Year“ to the companies Pecol II and Óscacer.

The offer of a plant tour was eagerly taken up by many guests. Afterwards they all had the opportunity to exchange views about the past, present and future of the company over a light lunch.



Great family celebration

On the following day, more than 750 people – among them employees, relatives, and the Kirchhoff family – celebrated the family day on 22 June. This joyful event, as part of the 50/20 anniversary celebration, will surely leave a lasting impression in hearts and minds of those in attendance.

Groups of employees had organized games as well as a multicultural banquet. The musical contribution of a philharmonic band and a samba school, as well as conversations with colleagues, made for a good atmosphere.

Blessed by the Portuguese sun and refreshed by the sea breeze of the Atlantic Ocean, the atmosphere at the event was truly excellent. Everyone present was full of praises for the organization of the family day. That day is a fine example of how a business can bring employees together.

We thank the participating teams for their contribution and encourage them to engage in the organization of future family events while employing their exceptional skills and overwhelming dedication.

Rosa Loureiro, António Rosas



Good mood and many visitors characterized the family day of the 50/20 anniversary.



Government delegation in Mielec

Political and economic issues were on the agenda of the Polish Deputy Prime Minister and Minister for Economic Affairs, Janusz Piechociński, during his visit on the KIRCHHOFF Automotive plant in Mielec.



Caption: During the tour in the plant in Mielec, f.l.t.r.: Ryszard Muzyczka, plant manager Mielec | Janusz Piechociński, Deputy Prime Minister and Minister of Economy of Poland | Krystyna Skowrońska, Member of the Polish Parliament, Andrzej Chrabąszcz, head of the district council Mielec

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Janusz Piechociński, Deputy Prime Minister and Minister for Economic Affairs of Poland visited our plant in Mielec on August 26.

He was accompanied by a group of local authority representatives led by head of the district council Andrzej Chrabąszcz; local MP Krystyna Skowrońska;

Wojciech Dąbrowski, Chairman of the Polish Industrial Development Agency; Mariusz Błędowski, Director of the Mielec Special Economic Zone; and Alicja Wosik, Deputy Voivode of Podkarpackie Voivodeship.

As well as a tour of the factory, the event also offered an opportunity to consult on a strategy for maintaining Poland's Special Economic Zones until 2026 that takes account of current framework conditions. Our company was one of a select few chosen to be involved in the visit alongside PZL-Sikorski Aircraft, a global leader in helicopter and aircraft manufacture, and the automotive supplier Bury Technologies.

The guests were welcomed by site manager Ryszard Muzyczka and the members of the Executive Board. The Deputy Prime Minister and his fellow guests were impressed with the potential offered by KIRCHHOFF Automotive

in Gliwice. The government delegation took a particular interest in the technologies used in product manufacture as well as the raft of innovations used daily in production, logistics and quality management processes and in research and development. They also complimented staff on their excellent knowledge.

Our guests regarded a standardised approach to the throughput of parts as offering a major advantage. The move allows production to be further optimised without any great expenditure on containers or materials required.

Bogusław Wytożyński



Info

The strategy has now been signed off by the Polish government. KIRCHHOFF Automotive in Gliwice can thus continue to enjoy preferential tax treatment for the rest of the current year at its site within the Mielec Special Economic Zone.

A broader base

Over three years ago, KIRCHHOFF Automotive in the Hungarian Esztergom still produced 100% of its products for just one customer – Suzuki Motor Corporation. Now its customer base is significantly larger.



The plant of KIRCHHOFF Automotive in Hungary after the plant expansion (see blue marking) in 2013

This was in the nature of things. The original plan was to build a „just in time“ plant in the immediate vicinity of our largest Japanese customer. In early 2005, KIRCHHOFF Automotive started to produce for and supply to Magyar Suzuki Corp. (MSC) from its Esztergom plant in Hungary. MSC was still our sole customer at the end of 2010. At that time, our Hungarian plant employed 240 employees.

In 2010, the management of KIRCHHOFF Automotive decided to build a large production site in a central location in eastern Europe to be able to cover the growing demand from customers who had moved to the area. These included Daimler in Kecskemét, VW in Bratislava, Audi in Győr and PSA in Trnava.

As a result, the Esztergom plant was expanded significantly—marked blue in the picture on top. As a part of the plant expansion we invested in two new hotforming production lines. At

the same time, new modern transfer presses were installed including a 1,600 to servo press.

The new technology of steel forming was supplemented by a large number of new welding cells (spot and arc welding) and laser cutting robots. These measures more than doubled the number of employees to date – there are currently over 580 people working at KIRCHHOFF Automotive in Esztergom in Hungary.

Over the past two years, the Hungarian team has been supported by the management and experts from our “sisters“ in Germany, Poland, Ireland and Romania in testing more than 500 new sets of tools and launching projects for several new customers.

Today, KIRCHHOFF Automotive supplies parts to nine vehicle manufacturers, including Škoda, Daimler, VW, PSA, BMW, Porsche, Audi and Ford from the site in Hungary.

Visiting IAA this September was a very special honour for the employees from Esztergom, but also for their colleagues from Attendorn, Iserlohn, Mielec, Gliwice and Craiova. Many were involved in the development of our plant in Hungary and were now able to see, and sometimes even sit in, the new vehicles with parts from the Hungarian KIRCHHOFF Automotive.

These included five models that were being shown in public for the first time. These premieres at the IAA with parts “made in Esztergom“ were for example the: Suzuki SX4 S-Cross, Škoda Rapid Spaceback, Škoda Octavia Combi, Mercedes GLA and the Suzuki iV-4.

Janusz Soboń, Csilla Gál, István Réдай



On course of growth

At the Van-Rob facilities in Manchester, Tennessee, the production area will more than double in the following years – an investment of almost 6 million US-dollar.

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Appreciatory remarks at the groundbreaking ceremony: “For some years Van-Rob have been part of our local industry, and we are pleased to know that this engagement will be continued by the extension of the location in our township”, emphasizes David Pennington, mayor of Coffee County. Manchester is the biggest city and at the same time the administrative center of the region. “In the course of the years this company have created many jobs for the citizens of this region, and he look forward to many further years of cooperation.”

The investment will occur in two separate phases. The first phase is a \$2.3 million dollar investment that will allow Van-Rob to consolidate two plants, both located on Volunteer Parkway, under one roof. The 54,000 square foot addition will bring Van-Rob’s manufacturing space to roughly 120,000 square-feet at its Coffee County facility. It is scheduled to be completed end of 2013.

The second phase will be a \$3.6 million dollar investment that will add 30,000 square foot to the facility’s press shop. This addition will allow for larger trans-



At the groundbreaking ceremony, f.l.t.r.: Ted Hackney, Executive Director Industrial Board of Coffee County | Clay Banks, Regional Director Southern Middle Tennessee, State of Tennessee Economic & Community Development | Rick Burchett, Plant Manager Van-Rob Manchester | Dennis Berry CEO Van-Rob | Coffee County Mayor David Pennington | Manchester Mayor Lonnie Norman | State Representative Judd Matheny | Bill Comer, Chairman Industrial Board of Coffee County

fer presses for future growth. The second phase is scheduled to be completed in 2014/2015. Once the second phase is completed the total manufacturing space for Van-Rob, Manchester will be roughly 150,000 square feet.

The employees of Van-Rob, Manchester have already demonstrated several

times that they contribute to the success of the plant with the manufacture of high quality products. We are also thankful to the local representatives of Coffee County, Manchester and the State of Tennessee for their support throughout the years.

Rick Burchett



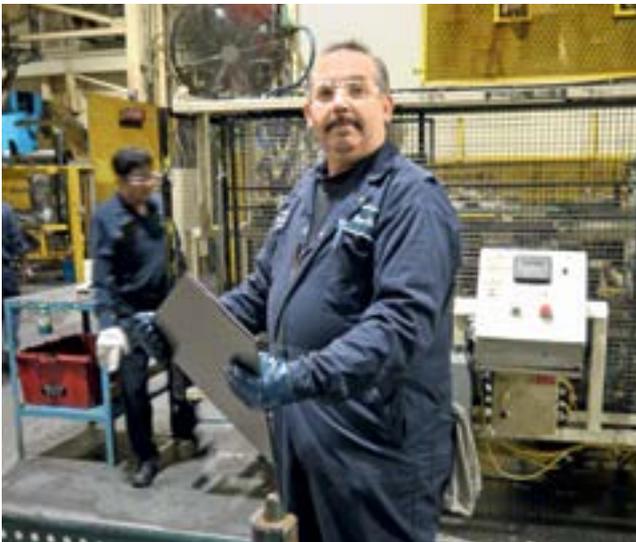
This is how the plant will look like in future.



The Manchester plant before the expansion.

The 1.000.000 Hours Club

— In 2013 the Van-Rob North York and Richmond Hill facilities both reached the magic number of one million working hours without having a lost time injury.



Arpad Magyari – Co-Chair of Richmond Hill's JHSC (joint health and safety committee)



Mohamed Mirza – Co-Chair of North York's JHSC (joint health and safety committee)

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In September North York exceeded the magic figure when the facility was running one year and eight months without having a lost time injury. In Richmond Hill this figure was reached in October 2013, here after a period of nearly five years without working injuries.

These milestones are a testament to the dedication and commitment of Van-Rob's Employees, Supervisors, Managers and Joint Health and Safety Committees. Using and reinforcing safe work practices, identifying hazards and promptly implementing corrective

actions to prevent re-occurring incidents is part of the culture at both locations.

Safety is a partnership between workers and management that is truly applied at the Committee meetings. All members are active and empowered to communicate and recommend actions to correct hazards that are identified in the plants. Photos of safety issues identified during monthly inspections are reviewed and discussed during monthly meetings, so all members understand the nature of the hazard and the actions to be taken to correct the hazard.

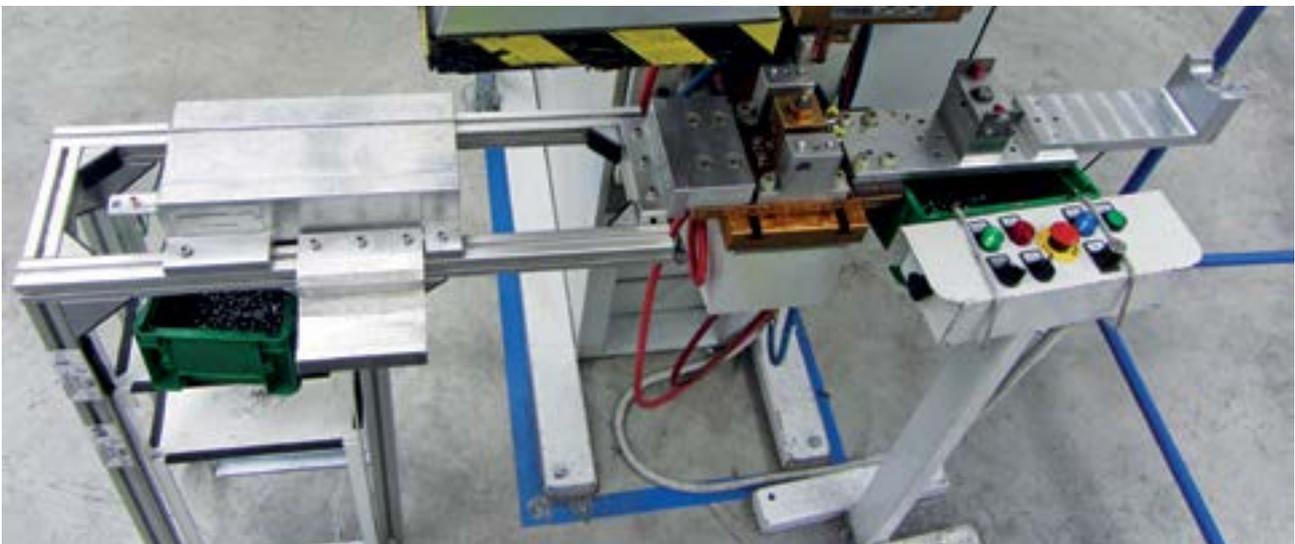
Both plants take incident reporting seriously. Managers and Supervisors are aware that if effective corrective actions are not identified in the investigation report, they must re-evaluate the incident.

The achievement of one-million-hours mark shows that both plants pay attention to occupational health and safety and provide for a safe work environment.

Adam Irvine, Michael Walsh

Shaping the future with new ideas

— Idea management has existed in Germany for almost 14 years. This system of continuous improvement based on suggestions from employees was also introduced at our newest plant in Romania in summer this year.



A good example of how a process can be improved: By means of a simple but very efficient modification of the assembly jigs of a manual press the setup times could be reduced from twenty to three minutes.

A few months after the official launch of KIRCHHOFF Automotive's idea management system in Romania we now want to see how things are going in practice.

A clever suggestion for improvement need not automatically involve costs. Many good ideas can generally be put into practice without any additional expense. They are put forward by the employees themselves: people who are actively involved in trying to improve daily processes and so their own area of activity – frequently resulting in major benefit for the company.

When making suggestions for improvement, the employees submit a standardised form. This is designed to act as a sort of guideline, with specific questions that nevertheless offer staff sufficient scope for a detailed description of their idea - and including pictures where appropriate.

Every idea is then categorised by activity or area and assessed by a management board meeting at regular intervals. Once a year prizes are awarded for the best suggestions. „For us it is essential to motivate employees, both individually and as a team.

The idea management system encourages the initiative of every person to ensure a safe and clean environment and to improve cooperation and the exchange of knowledge between departments“, emphasise Romania's two Managing Directors, Gabriel Porojan und Carmen Iacob.

Gabriel Porojan



Energy as a competitive advantage

— In May, the energy management system at KIRCHHOFF Automotive was successfully certified in accordance with ISO 50001.

Rising energy prices and growing pressure from politicians to be more energy-efficient are increasing the importance of energy as a factor in competition. This is hardly surprising, as there are many ways in which a company can benefit from having a certified energy management system.

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These benefits include:

- improved sustainability and more efficient use of resources
- lower energy costs
- new potential for savings in production and administration
- tax relief
- a positive corporate image on the international stage

For this reason, TÜV-Nord were invited in May 2013 to certify the company's German sites in accordance with ISO 50001. All sites passed the test, proving that the company has an energy management system in place that meets all the requirements and that will, in the future, also increase the competitiveness of its German sites.

To ensure this issue retains our long-term focus, we have set up an energy team at each site, who are responsible for supporting energy-related projects and realising the associated potential for saving energy. The teams are led by Markus Hundt, energy officer



Dieter Hoffmann, energy officer for Iserlohn, checks the energy consumption with a special portable measuring set.

for Attendorn, and Dieter Hoffmann, energy officer for Iserlohn.

By taking these steps, we hope to increase employees' awareness of energy issues and make it an integral part of our production processes.

Uwe Suchland



Markus Hundt (left) trains a colleague with regards to energy management at the Attendorn site.



ENVIRONMENT. SUSTAINABILITY. EFFICIENCY.



Targeted fostering of young talents takes place worldwide at KIRCHHOFF Automotive.

Qualified training worldwide

Introduction of 'dual system' in Portugal and Mexico.

At KIRCHHOFF Automotive we offer specific training for our junior staff on both the commercial and technical side of the company. A combination of attendance at a vocational college sandwiched between practical instruction in the company, the dual apprenticeship system is unique and, in terms of educational policy, serves as a model throughout the world.

As the same structural conditions do not exist worldwide, the KIRCHHOFF Automotive subsidiaries outside Germany are now also taking the initiative of helping staff to improve specific skills.

In Portugal for example, a training centre has been set up in Ovar to

train junior employees as toolmakers because qualified staff are not available on the labour market. The HR department and training managers have single-handedly come up with a concept that combines theoretical knowledge with practical skills. „The result has been extremely positive“, reports Antonio Rosas, Head of HR at the Ovar site. „Everyone who took part now makes a key contribution to our success.“

Our plant at Querétaro in Mexico has also adopted the German training system and today employs 17 staff who qualified as toolmakers in-house. Another six trainees are currently in their second year of apprenticeship while another eight are embarking on

the course this year. The company has joined forces with the Secretaria de Educación to ensure that these employees are awarded a qualification that is recognised throughout Mexico.

„We are the only people who have as yet managed this,“ said a delighted Paloma Herrera, Head of HR at the site in Querétaro.

Two examples that illustrate the special importance attached by KIRCHHOFF Automotive to offering career opportunities and in-house training to youngsters all over the world.

Lisa Kitterer





The two production operators Teresa Sanchez Gonzalez (left) and María Guadalupe Lopez Bárcenas also completed the educational program with success.

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A second chance

Van Rob Plant Querétaro, Mexico, and INEA (Instituto Nacional para la educación de los adultos) work together to improve the educational facilities for those people without graduation.

INEA is a government educational institution in Mexico that serves people over 15 years old that have not had the opportunity to complete basic or middle school. One of their main programs is called "CONEVt". The purpose of this program is to improve the national education level in Mexico. Also private companies contribute to this program within the framework of social responsibility. The objective is to motivate employees to

complete their basic education through this free educational program provided by INEA.

Regardless of the small number of employees in our plant that meet the program criteria, we are determined to provide our team with the opportunity to achieve the highest education level possible and receive recognition from the CONEVt program.

We firmly believe that making these types of alliances will motivate our employees, encourage our team to perform even better and contribute to the development of our country.

Four employees have already completed the program and graduated! Congratulations!

Paloma Herrera

We are “family-friendly”

— The employers’ association of the metal and electronics industry in the German federal state of North Rhine-Westphalia (NRW) has acknowledged the exceptional commitment of KIRCHHOFF Automotive to the issue of work-life balance.

An increasing number of firms are attaching special importance to the issue of “family-friendliness” – and with good reason: when competing for skilled workers, employers have a fundamental interest in attracting well qualified staff who have young families, in addition to ensuring their loyalty and retaining them at the company. When compared with other businesses operating in Germany in the metal and electronics sector KIRCHHOFF Automotive

was given an above-average rating as regards this issue.

The employers’ associations of the metal and electronics industry (M+E) based in North Rhine-Westphalia have created their own online benchmarking tool to help firms make achieving a work-life balance part of their personnel policy. The participating companies use a standardised assessment procedure to determine their success in this

regard in comparison with other similar-sized firms in the M+E sector.

KIRCHHOFF Automotive offers a raft of family-friendly ideas and initiatives. For example, employees have the opportunity of working flexible hours in the week or at weekends or can apply for part-time positions. Daily routine at the company also includes help with child-care at the firm’s own crèche.

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The company has now received a seal of approval from Stephan Stracke, director of the employers’ association for the district of Olpe, for its successful showing in the benchmarking of “Family-friendly M+E Companies in NRW”. With this seal the association signals its approval of members who are committed to ensuring a work-life balance for employees.

“For many companies in the metal and electronics industry striking a balance between work and the obligations of being a parent has become an integral part of their corporate personnel policy. I am delighted that today we can pay tribute to KIRCHHOFF Automotive as an exceptionally family-friendly M+E company”, was the comment of Stephan Stracke on presenting the seal of approval to the firm.

Jürgen Dröge



Stephan Stracke (r.) presents the award “family-friendly company” to Jürgen Dröge and Eva Kirchhoff from KIRCHHOFF Automotive.



In the presence of the KIRCHHOFF Automotive executives from the departments logistics, purchasing and quality assurance the awarded companies Hermann Rahmer and ThyssenKrupp Steel Europe present their certificates.

Paying tribute to the very best!

KIRCHHOFF Automotive honours its Suppliers of the Year.

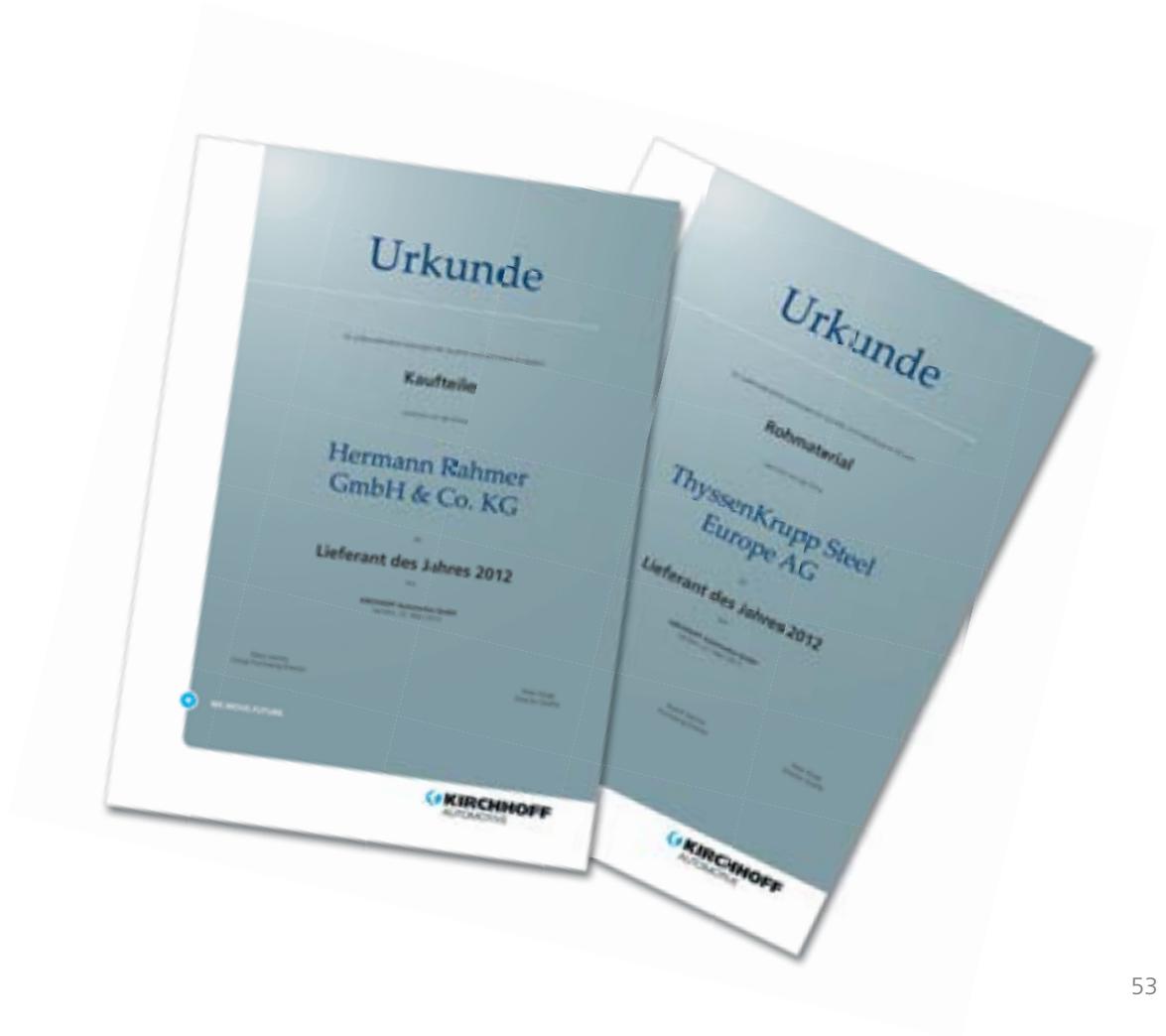
With the „Supplier of the Year“ award KIRCHHOFF Automotive paid tribute to its two top German suppliers of 2012 at a prize-giving ceremony held in Iserlohn this spring. The winner of the product category “Raw Materials” (steel strip) was ThyssenKrupp Steel Europe AG, and in the category “Bought-in Parts” (bent wire components) it was Hermann Rahmer GmbH & Co. KG.

The award of the title “Supplier of the Year” for each product category is based on the average of the monthly supplier ratings over the year. This follows an evaluation of performance in terms of

quality, logistics and service, as well as the status of the supplier’s quality and environmental management systems.

J. Wolfgang Kirchhoff, Managing Partner & COO KIRCHHOFF Holding, highlighted the continuous growth enjoyed by his group and in this context paid tribute to the exceptional levels of commitment shown by the companies invited to the ceremony. “Over the past few years we have become an international automotive supplier with 30 sites. To remain successful, we require first-class suppliers such as ThyssenKrupp Steel and Hermann Rahmer.”

In his speech Klaus Lawory, Purchasing Director and a company officer at KIRCHHOFF Automotive, expanded on the close partnership with these firms. “On the supply side we are happy to work closely with both large organisations such as ThyssenKrupp Steel and smaller partners like Hermann Rahmer. The requirement for successful cooperation is your willingness to cater in every detail for our needs as a customer. And you both once again demonstrated this in 2012 to impressive effect. With our award we wish to acknowledge your achievements and those of your staff. We hope this will act as an additional



incentive to everyone to further intensify the successful cooperation enjoyed with KIRCHHOFF Automotive.”

The awards were presented to representatives of the winning companies, Thilo Lutz, at that time board member at ThyssenKrupp Steel Europe AG, and Thomas Schulmeister, managing director at Hermann Rahmer GmbH & Co. KG.

Klaus Lawory



Suppliers of the year at the international locations:

For raw materials:

Sinosteel Shanghai Steel Service Co., Ltd. (China)
 Sebden Steel Ireland Ltd. (Ireland)
 Oscacer (Portugal)

For bought-in parts:

NES Ltd. (China)
 Constellium (Spanien)
 Bulten Polska (Polen)
 Pecol (Portugal)





KIRCHHOFF
MOBILITY

Custom-made cars –
for handicapped people.

54-63



More locations, more service, more performance

— KIRCHHOFF Mobility continues to expand.



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This year, on 1 June, REHA Group Automotive GmbH & Co. KG acquired the business operations of Haag Reha-technik GmbH & Co. KG, Kronau, and since 1 October, 2013, Huber Mobil Technik is also part of the REHA Group. Both companies are among the leading vehicle converters for people with limited mobility in southern Germany.

The company **Haag Reha-technik**, based in Kronau (between Heidelberg and Karlsruhe), has specialised entirely in vehicle reconstructions for people with limited mobility for 30 years and ensures that people's quality of life is improved. Company founder Claus Haag, who has been in a wheelchair

himself since an accident, knows from many years of experience that you cannot be satisfied with standard solutions. "When every disability is as individual as the person, every vehicle adaptation must be just as unique," says Claus Haag.

In order to carry out the adaptations in this personalized manner, Haag Reha-technik has developed and built many solutions itself such as manually operated controls, gas rings, wheelchair loading systems and reconstructed chassis. To complete its range of services, Haag also offers advice on driving lessons and the option of asking health insurers to cover the cost of reconstructed vehicles for disabled people.

Claus Haag, Managing Director of Haag Reha-technik, is being appointed an authorized representative of REHA Group Automotive and manager of the new subsidiary.

Also **Huber Mobil Technik** has been working actively in this business area for more than 20 years and has achieved extensive knowledge. Stephanie Huber, Managing Director of the well-known Huber Mobil Technik, is being appointed a manager of the new REHA Group Automotive branch and works in close cooperation with the Munich branch. She therefore remains the main point of contact for all customers and partners, and for all employees taken over by the REHA Group.



On 18 June, 2013, Olav Gutting, Member of the German Parliament (2. r.) and the Mayor of Kronau, Jürgen Heß (2. l.) assured themselves of the efficiency of the new REHA branch. On the left branch manager Claus Haag, on the right Dr. Ing. Axel Panne, manager business area KIRCHHOFF Mobility.

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KIRCHHOFF Mobility is now represented in a total of ten locations in Germany and Austria with the companies REHA Group Automotive, Behindertenfahrzeuge Jelschen and Pruckner Reha-technik. Every year, more than 2,000 individually adapted vehicles for active or passive drivers leave the factories. The nationwide network of branches, which is becoming more and more tightly knit, is important for this, because it makes the company quick and easy for all customers to access.

Sieghard Pusch, Andreas Mischk



Contact

Huber Mobil Technik GmbH
Gewerbestraße 1
88457 Kirchdorf
Baden-Württemberg
GERMANY

Haag Reha-technik GmbH & Co. KG
Südenstr. 3
76709 Kronau
GERMANY
Baden-Württemberg

New Plant Manager at Jelschen in Bad Zwischenahn

Jörg Brach has been appointed Plant Manager of Behindertenfahrzeuge Helmut Jelschen GmbH, Germany with effect from 17 July 2013 and is responsible for the management and strategic orientation of the company.



JÖRG BRACH
Plant Manager of
Behindertenfahrzeuge
Helmut Jelschen GmbH

The increasing expansion of the product division with the addition of the companies REHA Group Automotive and Jelschen, and its future orientation made this change of management essential. Jörg Brach replaces Dirk Powelleit and reports in his function to the head of the business area KIRCHHOFF Mobility, Dr Axel Panne.

After completing his apprenticeship as a fitter at Daimler-Benz, Jörg Brach studied mechanical engineering and process technology at Düsseldorf University of Applied Sciences, specialising in production technology. After working as a trainee and assistant to the member of the Executive Board for technology at Thyssen Industrie AG in Essen, he became Head of Technology, Planning

and Maintenance and then Central Division Manager of Investment Planning at Thyssen Umformtechnik. Later he assumed the position of Plant Manager at a well-known precision forged parts company.

Jörg Brach most recently worked as a freelance consulting engineer in interim management and project management. Jörg Brach, who comes from Düsseldorf, is married and has a daughter.

We would like to wish Jörg Brach a warm welcome to KIRCHHOFF Mobility and wish him every success and enjoyment in his new role.

Sabine Boehle



CUSTOM-MADE CARS

Progress through service

— KIRCHHOFF Mobility: customers that are well looked after and satisfied are the key to a successful business and have a huge impact on competitiveness!

In addition to vehicle reconstruction itself, customer service is increasingly becoming a decisive competitive factor and is therefore also very important to KIRCHHOFF Mobility.

Alongside the traditional after-sales service issues, the importance of pre-sales service is also growing. It is in this respect that KIRCHHOFF Mobility stands out clearly from the competition due to its tightly-knit network of branches and its comprehensive cost-free services. As well as the free advice and service hotline, which is pretty much unique in the industry, KIRCHHOFF Mobility offers a personal consultation to anyone who is interested. Thanks to the well-positioned team of representatives, this can even take place at the customer's home.

In a business sector that focuses on the customer's restricted mobility, this free service is particularly essential. "Off the rack" products are only rarely the best solution for people with disabilities, regardless of whether they are wheelchair users or older people requiring greater convenience. The KIRCHHOFF Mobility advisors develop personalized solutions that are precisely tailored to the customer's needs and apply them to the customer's current vehicle or a vehicle of their choice.

KIRCHHOFF Mobility's consultation service often extends far beyond the actual vehicle reconstruction. Based on the customer's situation, KIRCHHOFF Mobility works out financing options via public health insurers, manages

the transaction with health insurers, recommends foundations and funding organizations or puts customers in touch with transport medical specialists and TÜV (Technical Inspection Agency)/DEKRA (German Motor Vehicle Inspection Agency) inspectors to provide medical and technical expert reports on driver licensing requirements.

It is only through these extensive services and the expertise of the advisers that KIRCHHOFF Mobility is able to win a customer's trust in advance.

However, we do not lose sight of the after-sales service. Only a customer who remains satisfied conveys a positive impression to the public and therefore becomes a disseminator of KIRCHHOFF

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Pre-Sales-Service:

- Personal advice
- Free service-hotline
- On-site Service
- Close network of branch establishments
- Financial consulting
- Individual solutions
- Custom-made products



We focus on personal advice.

Mobility's image and its brands REHA Group Automotive, Jelschen, Pruckner, Haag, and the very recent acquisition Huber Mobil Technik. KIRCHHOFF Mobility already stands out with its special service when the vehicle is delivered by the manufacturer or dealer. As with the pre-sales consultation, the customer's restricted mobility is also the focus of the entire process chain for vehicle reconstruction. In the end, customers' mobility is only restored when they are holding the key to their adapted vehicle in their hand. Therefore, they have the opportunity to receive the adapted vehicle wherever they find most convenient: at the branch, the dealership or at their home. KIRCHHOFF Mobility is even on hand in the event of a breakdown and can have abandoned vehicles delivered directly to a branch without additional costs with the help of the BAVC, one of the largest German automotive clubs, for example. Here the customer receives

help promptly and quickly, even for the most complicated reconstructions, thanks to the nationwide network and technical documentation. It is also important that the staff in all branches work in accordance with the same guidelines to the same standard of quality.

The satisfaction of our customers is the foundation of our competitiveness. This can only be achieved with a comprehensive service package to complement the actual vehicle reconstruction. This starts from the customer's first enquiry and only ends when the customer no longer needs the reconstructed vehicle.

Andreas Kassette

IAA Cars Frankfurt 2013

At the International Motor Show (IAA, Frankfurt, 12-21 September 2013), a vehicle for disabled people was exhibited at the Fiat stand for the first time – presented by KIRCHHOFF Mobility.



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Sales Manager Jens Cordes presents the Fiat Doblo modification at the IAA Cars in Frankfurt.

Under the shared umbrella brand KIRCHHOFF Mobility, Behindertenfahrzeuge Helmut Jelschen and REHA Group Automotive presented a Doblo provided by Fiat with a long wheelbase and taxi ramp. This conversion comprised a lowered floor with wheelchair access and an aluminium folding ramp. An especially impressive and convincing feature of the Fiat Doblo is its rear suspension. This is based on an independent single-wheel suspension and therefore ensures, among other benefits, an outstanding roadholding and a pleasant driving feel for the wheelchair passenger. A further reason why many people are enthusiastic about the spacious, family-friendly vehicle conversion for disabled people is the option of

folding down the ramp to form a load floor. The entire original loading space can then be used again when there is no wheelchair inside. Via the Fiat Autonomy-Platform there could be gained plenty of enquiries and specific contact addresses. This is a very positive result for the KIRCHHOFF Mobility Group. The team is already looking forward to repeating this success in 2015.

Anna Krüger, Jörg Brach

REHACARE 2013

KIRCHHOFF Mobility exhibits three vehicles at the world's largest trade fair for rehabilitation, everyday aids and mobility products and care.



The booth of KIRCHHOFF Mobility with an Opel Combo conversion in the foreground.

At the REHACARE international trade fair in September in Düsseldorf, around 44,000 visitors got to hear about aids for an independent lifestyle and the latest scientific and research findings presented by 750 exhibitors from 37 countries at the trade fair and conference.

„REHACARE always provides an opportunity to determine which issues and questions about the provision of aids are currently important to those affected. Self-help plays a key role when combining information about new aids with personal advice and support“, said Dr Danner, National Executive Director of BAG Selbsthilfe (German association for people with disabilities, those who need care and their relatives).

And so the trade fair turned out to be a complete success for the two vehicle conversion companies Jelschen Behindertenfahrzeuge and REHA Group Automotive, with its new branch Haag Rehatechnik in Kronau, which appeared under the umbrella of the KIRCHHOFF Mobility brand for the first time.

The KIRCHHOFF Mobility product portfolio attracted considerable attention from vehicle manufacturers. Staff members working in the sale of vehicles for customers with restricted mobility and in technical departments for the development of driving and operating aids and „convenience components“ such as seat technology listened intently to explanations of the various new

developments. In addition, relationships with pension funds, professional associations and insurance companies were strengthened.

Of course, one of our priorities was also to present our products to all end customers with disabled family members who are either active or passive drivers.

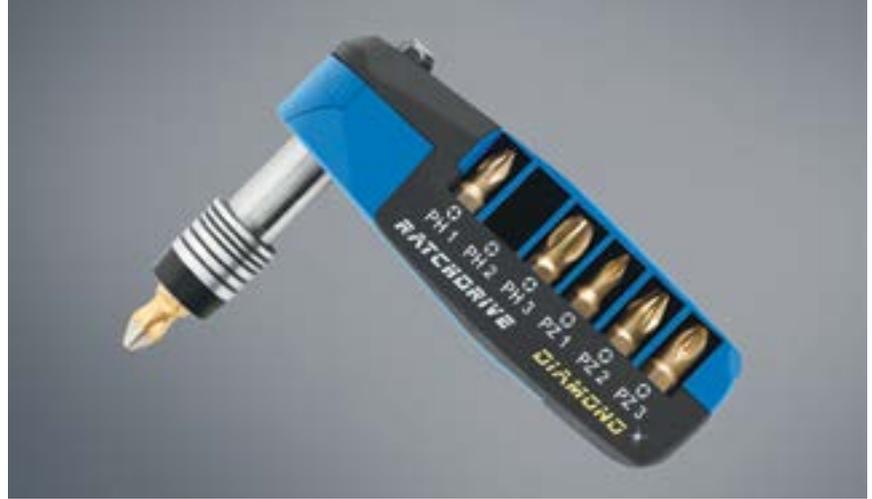
The sister companies REHA Group Automotive and Jelschen Behindertenfahrzeuge jointly exhibited an Opel Combo L2 for active and passive drivers indoors. A swivelling seat on the passenger side, a lowered floor with a taxi ramp and a multifunctional rotating knob combined with the new Easy Speed manual operation system were on show.

Outside, the company presented several new products at once: the Easy Speed manual operation system (push/pull principle), the lateral wheelchair loading system RolliFix and the rear loading system RolliButler for heavy electric wheelchairs weighing up to 150 kg. A Kia Carnival was available for use as a base vehicle in this area.

The company also exhibited a VW Crafter with a RolliBox conversion. The RolliBox system combines all the features required for organising the transportation of both wheelchair users and people without a disability as conveniently, safely and professionally as possible.

Adem Okutan





WITTE
WERKZEUGE

When function and
effect are in line.

64-67



WITTE Werkzeuge at the Moscow International Tool Expo (MITEX)

WITTE Werkzeuge exhibits its tools for years at Russia's leading international fair for tools, equipment and production technology.



The Skyline of Moscow

This year from 5 to 8 November WITTE Werkzeuge was again represented at MITEX in Moscow by its partner Michael Grenz, who has been in charge of sales in the CIS states for many years.

Our products were exhibited under the slogan „Quality tools, Made in Germany“ together with other German manufacturers such as Wilpu, Stabila, Nws, Keil and Dronco.

The Russian economy is in good shape and is without doubt one of the growth markets for WITTE Werkzeuge.

This was amply demonstrated once again by the numerous customers and visitors who flocked to the company's stand this year.

Michael Grenz



With more than 500 international exhibitors MITEX faced a record number of participants.

New screwdrivers for electricians

— WITTE Werkzeuge launches the „protop vde-slim“.



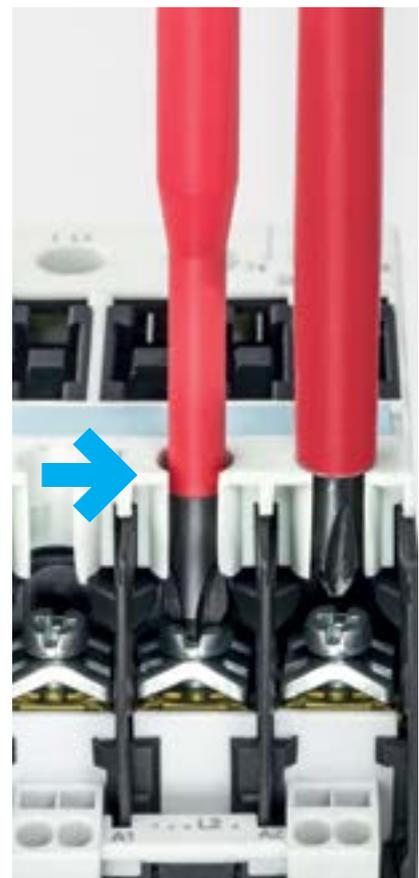
One particular problem confronting electricians is that they are often unable to access all screws using a standard VDE screwdriver. This is especially true of insulators and contact strips in control cabinets. Here the diameter of an insulated screwdriver blade is too large to fit into the relevant openings.

This is why WITTE Werkzeuge is now launching the „protop vde-slim“. The diameter of the screwdriver blades has been significantly reduced and the insulation modified accordingly. This gives electricians easy access to small openings and/or screws that are tucked away deep inside.

The new „protop vde-slim“ naturally also satisfies all relevant VDE and GS requirements such as DIN EN 60900 and is approved for voltages of up to 1,000 V.

This new series comprises four high-quality screwdriver ranges as well as all individual screwdrivers in the standard VDE sizes.

Oliver Fries



On the left the „protop vde-slim“ with a significantly reduced screwdriver blade and to the right of it a conventional VDE screwdriver.





FAUN
KIRCHHOFF GROUP



69

RELIABLE PROGRESSIVE

68-91



For the love of the environment

Five years of DUALPOWER – how it all began. FAUN R&D manager Georg Sandkühler on the birth of the DUALPOWER vehicles.



Fig. 4: VARIOPRESS DUALPOWER

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It all started when our customer group posed the question: “What could you at FAUN do to reduce fuel consumption in our refuse collection vehicles?”

This rather succinct enquiry led to a project which eventually resulted in a technology for refuse collection vehicles which, with fuel-reduction of around 30 - 40 % and corresponding reduction of emissions, enables extremely comfortable and above all extremely quiet modern disposal operations.

However, we are getting ahead of ourselves. We first investigated the general technical potentials to meet the “reduced consumption” brief. From the outset, we aimed to keep an open path to further development. The re-

sults of these investigations concluded that a combination of an electric drive concept and efficient energy recovery, along with significant downsizing of the still-necessary combustion engine offered the best potential for future progress.

Based on these considerations a first vehicle (Figure 1) was built in conjunction with a number of innovative partners and with the help of funding from the BMWi (German Federal Ministry for commerce and technology) Economic Stimulus Package II in order to demonstrate the sustainability of the concept. That was in 2008.

In order to ensure the necessary scientific background, including in the evaluation of the concept, RWTH Aachen was

appointed to produce a comparison study which would show the potentials of the hybrid drive as compared to a conventional refuse collection vehicle. One of many visualisations is shown in Figure 2. Savings of approx. 40 % were determined although on the basis of a relatively few actual implementations.

For further affirmation of these results, test drives were carried out on the ADAC site in Linthe. Fig. 3 is a summary of the results and the verified potential savings of 40 % and more.

On the basis of these very positive results the decision was made at FAUN to produce a small fleet of test vehicles. These vehicles would firstly demonstrate their potential when used by customers and secondly, it would be possible

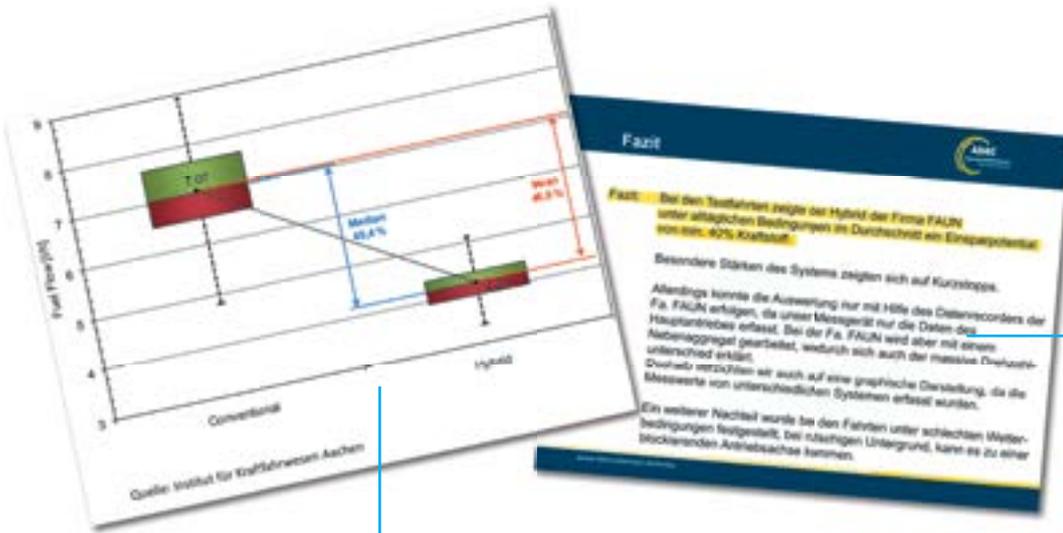


Fig. 2: A study: The potential of the hybrid drive concept

Fig. 3: The ADAC attests the saving potential



Fig. 1: The first prototype ROTOPRESS DUALPOWER

to reduce material costs by procuring components in larger quantities.

The BMWi also provided funding for the manufacture of this test fleet from the German Federal E-Mobility funding programme. The first ROTOPRESS DUALPOWER vehicles went into service in January 2011. Refuse disposal companies from Bremen, Freiburg and Offenbach were the first to use the DUALPOWER vehicles.

Fig. 4 shows how the experience from the initial pilot models have been integrated into the technical design of these vehicles. For instance it quickly became clear that bundling all components into one s.g. powerbox would offer great improvements with respect to weight and assembly, repair and maintenance.

In the tough everyday world of refuse collection, the pilot vehicles suffered a few problems and teething troubles which had to be remedied in retrofits. The FAUN engineering team and the operators were in constant close contact during this period. In these situations communication is not always simple and straightforward. However everyone made an effort so that the vehicles are now ready for work or as one user neatly put it, in the "recovery position". The teams in the FAUN customer centres are trained professionals who can respond rapidly if required.

At this point further optimisation measures were introduced in the knowledge that the technology must work even though it had not been tried and tested yet on "heavy" HGVs. Today's

DUALPOWER vehicles are products which meet all the specified requirements as refuse collection trucks but which also operate quietly and are economical on fuel. A relief for us, the environment and for the purse.

K>MOBIL spoke with Norbert Hett, Abfallwirtschaft und Stadtreinigung Freiburg GmbH, about his experiences with the ROTOPRESS DUALPOWER.

"In active service the vehicle has satisfied all our expectations with respect to noise and emission levels. The custom vehicle has had an overwhelmingly positive reception with the local population. The response has been such that residents in the affected streets have even called when the hybrid vehicle was not in use and a 'normally' loud conventional vehicle collected their rubbish. In principle we believe this alternative drive form is the ideal replacement for the conventional diesel drive."

Georg Sandkühler

Psssst - the brand new ECOPOWER options

Concepts for sustainable business are highly relevant for companies today. The demand for environmentally sustainable and commercial projects is increasing. FAUN has embraced this issue and offers three ECOPOWER options for refuse collection vehicles which minimise fuel consumption and noise- as well as CO₂-emissions.

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DUALPOWER (diesel & electric hybrid drive)

The requirements for refuse collection vehicle engines are highly diverse and vary greatly during a daily round. With the DUALPOWER option FAUN has produced an optimised drivetrain with its own diesel & electric generator which stores energy from braking processes for reuse in the collection operation cycles. This not only relieves the diesel drive engine but also your budget and our environment. Instead of energy-intensive pneumatic brakes, the ROTOPRESS DUALPOWER is fitted with electric brakes which enable energy recovery and minimal brake wear. An additional diesel generator, which is activated at the correct moment, reduces fuel and CO₂ emissions by a third. Because the refuse collection vehicle is operated during the

collection tour without the chassis engine and the small generator is surrounded by a sound cover, the noise is also significantly reduced compared to refuse collection vehicles without a hybrid drive.

HYDROPOWER (hydraulic accumulator)

The HYDROPOWER option offers the opportunity of a more environmentally-sustainable, more economical waste collection by the installation of a hydraulic accumulator which stores recovered braking energy for cost-free operation of the lifter. The kinetic deceleration energy of a conventional refuse collection vehicle is generally dispersed to the environment as waste heat and is therefore irrevocably lost. HYDROPOWER converts kinetic deceleration energy

from the vehicle into hydraulic energy. The FCS body controller controls the brake energy which is used to fill the hydraulic accumulator. As soon as the reservoir is full, stored energy is used to drive the pump. The energy recovered in this way is then enough to power a few lifter operations without having to increase the engine speed.

E-POWER (Electric Power Takeoff)

Another option for reducing fuel consumption and noise emissions is the "plug-in and charge" battery pack for the electrical operation of the body and the lifter of refuse collection vehicles. This system is described as E-POWER. In conventional vehicles the combustion engine supplies energy via the hydraulic



The Swiss have always been innovative and connected to the environment. Therefore the Swiss Company Isler from Pfäffikon was one of the first to opt for HYDROPOWER. Werner Isler chose HYDROPOWER with ECO control for his new VARIOPRESS. The vehicle is also fitted with a fully dynamic WIGA 09 lifter scale and an Ochsner combi-lifter with mounting frame. Werner Isler drives for KEZO (Kehrichtverwertung Zürcher Oberland).

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pump connected to the PTO for compaction of the collected material and to lift the container. In a vehicle fitted with an E-POWER a battery pack, which can be charged overnight in the municipal workshops in off-peak energy periods, delivers the power for the electrical operation of the compacting equipment of the body and the lifter.

With FAUN's ECOPOWER options the customer can vary how environmentally-sustainable and quiet its refuse collection vehicle fleet can be.

Claudia Schau



ECOPOWER-OPTIONS



The New VARIOPRESS combines functionality and design.

Love at first sight

— The arrival of the new body for the VARIOPRESS and POWERPRESS.



One of 24 new VARIOPRESS from Munich. (picture: AWM)

We decide in the first few seconds whether we like something or not. Whether a first good impression remains and the object becomes the love of our life is then down to the experiences which follow. We asked Reinhold Bauer, divisional director of

fleet management in Munich's refuse disposal operation about his first experiences with the new VARIOPRESS. Bauer took charge of 24 of the new-generation vehicles this year.



The new VARIOPRESS

Since the start of production, some 258 VARIOPRESS and POWERPRESS models have been produced with the new body. 112 further orders have been taken for this series

For more Info:

www.derneuevariopress.de

C. Schaeue: Since when have you been using the new VARIOPRESS?

R. Bauer: "We've been using the vehicles since March 2013."

C. Schaeue: Where do you use the vehicles?

R. Bauer: "Throughout the entire urban area of Munich for paper-, bio- and refuse collection."

C. Schaeue: How do you like the new vehicle in terms of design and functionality?

R. Bauer: "I like the new design as do my colleagues and we are also satisfied with the functionality. It will be around two years before we can evaluate the reliability and durability of the vehicle and its individual components. However FAUN should concentrate on making the bodies lighter."

C. Schaeue: Do the drivers and operators notice any differences to the predecessor models?

R. Bauer: "It is far easier to clean the exterior of the vehicles."

C. Schaeue: So could you say ultimately that you are satisfied?

R. Bauer: "Yes"

C. Schaeue: Dear Mr. Bauer, many thanks for the interview.



The new generation of refuse disposal and transportation: SIDEPRESS MSTS

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 In harmony with ergonomics and technology

Bio-waste, refuse, paper, LVP, electrical waste – the German refuse disposal landscape and the wastes produced by Germans is becoming increasingly diverse in order to keep waste materials and particularly recyclable materials separate. The logical outcome therefore is that volumes of individual fractions are becoming smaller and the requirement for flexibility in the disposal of the individual fractions is increasing continually.

FAUN has addressed this development and designed a product which combines flexibility, efficiency and fast, new technology – the SIDEPRESS MSTS.

The linking of the tried and tested SIDEPRESS technology with the potentials of uninterrupted refuse collection and transport in the context of MSTS (Multi Service Transport System) make this vehicle and almost unassailable

one-person operated tracker of recyclable- and environmental waste.

From 240 l MGB to 1.1 m³ MGB – the C 1100 Lifter of the SIDEPRESS MSTS accommodates all traditional container sizes with both diamond- and comb lift, compacting the collected fractions in the packer container (PA20). When redesigning, FAUN also optimised the collection of liquids, providing the new SIDEPRESS MSTS with a total liquid capacity of 250 l. The collected liquids are contained in lightweight tanks situated at the sides of the chassis which can be emptied separately.

The packer container is attached to the SIDEPRESS compact unit via the 3-point latching system typical of MSTS. The vertical manoeuvring mechanism, with a 90° action on the tailgate hatch of the PA20, is engineered to allow extremely space-saving positioning of the





The Al Kayyat Group from Abu Dhabi relies on FAUN. Dubai-based customer Al Kayyat (Alphamed) has chosen FAUN technology in the context of the re-tendering of its refuse disposal service in the emirate of Abu Dhabi. From January 2014 a total of 32 SIDEPRESS MSTs and new VIAJET 7 sweepers will contribute to the cleanliness and sense of well-being in Abu Dhabi.

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lifter body at the emptying points and an efficient onward-transport by load carrier to the recycling plant.

The integration of the FAUN Control System (FCS) also allows connection of modern camera technology with no additional screens in the driver's cab so that the driver of the SIDEPRESS MSTs can concentrate fully on one display while the container is being mounted. The modular design of the body control is extremely beneficial for servicing the whole vehicle because potential causes of faults can be more rapidly located and remedied by CAN bus technology, so reducing downtimes for the product.



Technical Data

SIDEPRESS MSTS

Admissible total weight: 26 t

Payload: approx. 9.4 t

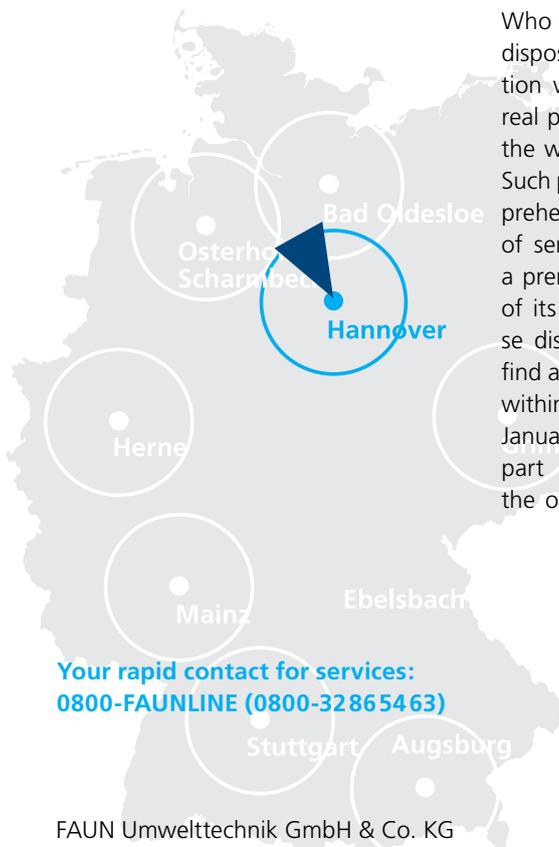
Average cycle time of lifter: 9 s

Lifting force C 1100: 550 kg

In your area, wherever you are

 New FAUN and ZOELLER service support centre in Hanover from January 2014

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Who cares for the schedulers in refuse disposal? Breakdowns of refuse collection vehicles and sweepers can cause real problems in the tight schedules of the waste disposal and logistics chain. Such problems can be costly. With comprehensive services and a tight network of service support centres, FAUN sets a premium on the constant availability of its vehicles for its customers. Refuse disposal operators in Germany will find a service centre or mobile engineer within a radius of 150 km. From 1st January 2014 Hanover is now also part of the FAUN service net. With the opening of another branch in the

Lower Saxony capital, FAUN now offers its customers service provision for their vehicles in the southern Lower Saxony as well as in the northern North Rhine Westfalia. Regular services and inspections are getting closer to your area. No need to travel long distances to keep your refuse disposal vehicles running smoothly. The FAUN service net now numbers a total of nine sites and, teamed with mobile service engineers in various regions, it covers the whole of Germany.

Christian Bremer

**Your rapid contact for services:
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Everything under control

FAUN Control System in all refuse collection vehicles

Users of refuse collection vehicles want reliable vehicles which are easy to operate. The machines should withstand robust conditions on the collection rounds while offering the best possible levels of comfort. Schedulers in the control centres want to be able to plan reliably and remain informed about the status of the vehicles. With the FAUN Control System (FCS) FAUN meets safety and comfort requirements with a state-of-the-art and economical body controller. The FCS is now integrated into all FAUN-brand refuse collection vehicles. Disposal operatives can now use the ergonomic control concept and the same hardware in all FAUN refuse disposal vehicles. That means less spare parts and the operators has to know

only one FCS and can handle each FAUN truck.

Claudia Schae



Overview main menu FCS display



Command Modul



FCS clear and brief

- Control unit incl. on-board computer for control and monitoring of body functions
- Straightforward structure and wiring harnesses
- Open CAN bus system
- Easier to use because everything is controlled from the driver's cab
- Straightforward operation with navigation wheel and function buttons
- Error log is saved directly to SD card (with date and time)
- Clearly laid-out display
- Rapid fault-finding and remedy
- No additional screen required for reversing camera, camera image is integrated
- Individual configurations can be saved and recalled in a few seconds by the operator



Queen of the desert

VIAJET 7 STREAMLINE brings gleam to Abu Dhabi.



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Abu Dhabi is truly a city of superlatives and is the richest of the Arab Emirates. The population is increasing steadily and today the city on the Persian Gulf has more than 2.5 million inhabitants. Always on the lookout for the best, the Emirate outsourced the refuse disposal management of the city to two international companies. The companies Alphamed and West Coast operated by Saubermacher have been appointed to bring disposal logistics technologies and expertise to the Gulf State.

SIDEPRESS MSTs

Supported by experienced partners IFEU (Institut für Entsorgung und Umwelttechnik GmbH), Alphamed commissioned FAUN to develop a new disposal technology for Abu Dhabi. It was a challenge for all parties. For the first time in the history of the Emirates Alphamed will introduce the emptying of 240 l and 1100 l diamond bins by 32 SIDEPRESS MSTs with PA 20 containers and SIDELIFT C 1100. More about the vehicle in this edition of K>MOBIL, page 76. In terms of efficiency and eco-

nomy, the concept of separating refuse collection and transport is a clever idea and can only benefit a city like Abu Dhabi, with its heavy traffic and landfill sites far removed from the collection rounds.

VIAJET 7 STREAMLINE

The final shine to Abu Dhabi will be given in future by 16 latest-generation FAUN sweepers. Alphamed has ordered seven VIAJET 7s and West Coast operated by Saubermacher has ordered nine vehicles. The vehicles are particularly designed for the desert conditions and are fitted with a special vacuum blower with wear-resistant coating. This will drastically reduce wear and tear of the blower impeller by sand and salt. The machine has a standard water tank with a capacity of 2,200 l, and an additional 2,000 l water tank. This increases the water reservoir to an astounding 4,200 l. To ensure that the machines withstand the climatic conditions in Abu Dhabi the water tanks are made of special GFRP. This is heat resistant and can sustain the high summer tempera-

tures in Abu Dhabi of more than 50° C without damage. To counteract the excessive dust from the fine dry desert sand, the machine is fitted with special atomiser nozzles. Thus the VIAJET 7 STREAMLINE has been customised with a package of innovative measures to make it a real Queen of the Desert.

Tim Collet, managing director of FAUN Expotec: "With this project and our vehicles we can set a real precedent in the Emirates. We had an amazing co-operation with experienced and successful partners. We delivered robust, tailor-made products and our dealer Mohammed Tayyeb Khoory & Sons will deliver a local after sales service."

Caption: VIAJET 7 for Abu Dhabi. The vehicles were shipped in October and the Desert Queen is now in charge of cleanliness in the land of the legendary Arabian nights.

Nicolas Malaplate



Specialised Cleaning

The company Hülsmann from Drensteinfurt today specialises in oil spill control and accident site clearing. For these difficult operations Hülsmann uses a special sweeper from FAUN – the VIAJET AQUATHERM.



VIAJET 12 with
AQUATHERM system



Big dimensions for more capacity



The AQUATHERM system combines a conventional VIAJET with a thermal high-pressure cleaning system. FAUN Viatic GmbH has just produced the third custom machine for oil-spill control for Hülsmann Umwelttechnik GmbH. The current machine outperforms both its predecessors within the same dimensions. It is a VIAJET 12 built onto a 3-axis Mercedes Benz chassis in place of the traditional 2-axis chassis. The vehicle sets new standards in loading, lower power, water volume and hydrostat. The main aim of the design of the custom machine was to increase its operational radius. This was achieved with greater tank reserves. Another innovation is the newly designed HS300 hydrostatic drive for the 3-axis chassis. FAUN has closed the performance gap in the upper vehicle segment and is now one of the few manufacturers to offer a hydrostat range from 7.5 – 26 t.

Claudia Schae



Technical data at a glance:

- 300 heating power, variably controllable
- Heating system for 4,600 l water for use at temperatures significantly below 0 °C
- Tenside jet system
- 140 l/300 bar high-pressure washer
- Various flat-fan and rotary nozzle systems on the rear vacuum unit

In the land of Jack Frost and the Snow Queen Snegurotschka



Red Square in Moscow

FAUN opens branch in Russia

On 30st October 2013 FAUN Expotec will open a subsidiary in Russia with FAUN RUS. Sales Manager for Russia Ewgenij Schönberg will become the managing director next year and will operate FAUN RUS from Moscow. FAUN is thus intensifying its engagement with the significant Russian market, offering a local point of contact for spare parts supply and prompt service assistance. Schönberg is very familiar with the Russian market and sweeper machines from his previous posts. Schönberg is supported by Bernd Neumann, who has comprehensive knowledge of the manufacture of FAUN products from his time as foreman in the FAUN assembly plant at Osterholz-Scharmbeck. Neumann gained service experience as workshop manager at J. Ochsner AG

in Switzerland. His profile is completed with overseas experience and good knowledge of Russian.

The FAUN has a good reputation in Russia, consolidated by long-lasting products which have also proven themselves in the tough conditions of the Russian winter. The continued privatisation of the refuse disposal industry in Russia and the huge demand offer great potentials for FAUN. With Ewgenij Schönberg and Bernd Neumann in post in Moscow we are both linking to former sales successes and also, particularly, developing the business regularly and steadily.

Claudia Schae



Ewgenij Schönberg as the designated managing director of the new FAUN RUS and Bernd Neumann as the managing director of the parent company FAUN Expotec GmbH sign the founding contract.

Comeback at the RWM

September 2013 saw FAUN ZOELLER (UK) Ltd' s triumphant return to the RWM show at the NEC, Birmingham after an absence of 4 years.



As always Innovation and technology remains the focus of FAUN ZOELLER in the UK and the RWM show in Birmingham provided the ideal stage to showcase the latest products and design initiatives from the company to our customers.

Simon Hyde, Chief Executive Officer said, "In the thirteen years that I have been with the company, this year's show was a hugely successful return to the exhibition for us and I am very pleased to confirm that we will definitely be attending in 2014! The level of interest shown in all the products were phenomenal, just to cope with the increased demand and interest generated we have had to add two more demonstration units to our fleet of vehicles. Customers old and new complimented us on the level of investment clearly made in these products showing that we are actually exceeding operational improvements, which is what we had set out to do".

The improved version of our EVOPRESS body generated a lot of customer interest due to its shorter overhang, larger body volume and greater payload the show vehicle was combined with the new ZOELLER ROTARY 3 lifter which was launched at the show. The ROTARY 3 is a lifter not only designed in the UK but specifically created for the UK markets based on feedback our from customers, operatives,



maintenance personnel and fleet managers, it offers distinct operational efficiencies for the future of waste management.

Due to its small size, with a full compaction body, two tonne payload and choice of single or trade lifters coupled with its exceptional access capabilities perhaps it is no surprise that the new MICROPRESS generated such massive interest especially for areas with restricted access. This was reflected in a huge increase in demonstration requests and specifications for future tenders.

With a full range of new and technologically advanced features covering both operational and environmental issues, the new VIAJET 6 was an impressive addition to the show. These advances include increased body volume, air recirculation (which no other sweeper manufacturer offers), increased water tank volume and the latest in donkey engine technology. Once again the increase in demonstration requests has been phenomenal.

It just shows that with hard work and a great team FAUN ZOELLER (UK) Limited can create the perfect stage to showcase the product and also deliver technologically advanced products that UK customers now require.

Marshall Fleming



What's new at FAUN ZOELLER UK

EVOPRESS with Lifter ROTARY 3

- new design
- short overhang
- larger body volume and greater payload

MICROPRESS

- small size
- 2 tonne payload
- good access capabilities

VIAJET 6 STREAMLINE

- new design
- air circulation system
- more water volume
- different types of donkey engines



MGMS-BD prevent vehicles from getting bogged down in challenging terrain

Coming soon

FAUN TRACKWAY engineers have developed a new flexible portable roadway beam dispenser.

There's hardly a week goes by without news of another country slashing its defence budget, and our conversations with militaries show they're caught in a balancing act between bolstering their expeditionary capabilities and operating within ever more tightly squeezed resources.

What came out of our discussions was the need for defence manufacturers to provide quality, cost-effective products that can be adapted to suit different environments across the world.

In response, FAUN TRACKWAY's team of expert engineers has developed a flexible portable roadway beam dispenser to suit all lightweight vehicle mobility needs.

Based on our popular Medium Ground Mobility System, the MGMS-BD is a dispenser system that facilitates the rapid deployment and collection of different lengths of military-grade Trackway. It can be fitted to a wide range of front-end loaders, which means armed forces shouldn't have to invest in a dedicated vehicle.

Like the other mobility solutions in our portfolio, the MGMS-BD will prevent vehicles from getting bogged down in challenging terrain, and is particularly suitable for beach landings.

A standout feature of the MGMS-BD is its rotating head, allowing the system to be rotated 180 degrees so the plant can fit through smaller gaps, further aiding forces' manoeuvrability.

While the rotating system is clearly a huge benefit in combat scenarios, for those who don't need this level of capability, FAUN TRACKWAY is launching the MGMS-BD LITE, a lighter, cost-effective option.

We're anticipating there to be wider appeal for this product from the civilian market, being a competitively priced way of laying temporary roadways when protection is needed for the ground below, such as utilities and construction.

Both the MGMS-BD and MGMS-BD LITE will launch in March 2014 – watch this space for more details.

Rachel Roberts

On Track

One of the major events in the TRACKWAY team calendar is the Association of United States Army (AUSA) exposition in Washington D.C. Taking place every October, it brings together armed forces personnel with leading defense manufacturers, engineers and suppliers.



AGMS mounted on a armored Volvo at MACK stand

Even before setting up an office in Washington in 2011, North America was highlighted as a significant growth market for FAUN TRACKWAY USA. As a result we are always keen to show our faces on the defense show circuit, to build existing relationships and forge new ones. At last year's AUSA we launched our Adjustable Ground Mobility Solution (AGMS) to much fanfare. In 2013 we were back, bigger and better than ever, showing off the AGMS once again with the help of Mack Defense, an American defense company.

Throughout the show the AGMS was mounted on an armored Volvo L180G wheel loader at Mack's stand. Hundreds of delegates dropped by to learn more about this adaptable equipment and how the portable roadway can be

quickly and efficiently deployed from the AGMS using the Volvo wheel loader as the launch vehicle. When it was launched last autumn, the AGMS set a meaningful precedent for defense engineers looking to increase forces' ground capabilities through flexible products.

Fitting to a wide range of front-end loaders commonly used by armed forces, the AGMS opens up the choice of vehicles able to deploy portable roadway systems, offering a cost-effective solution to navigating challenging terrain. The system can be adapted for use with both MLC 70 TRACKWAY – the multi-terrain system for tracked and wheeled vehicles up to and exceeding 70T – and MLC 30 TRACKWAY – which is typically used in beach-landings to

offer mobility of wheeled vehicles up to and exceeding 30T. This technology was developed after extensive consultation with a number of U.S. expeditionary forces who are all looking to improve the efficiency of their operations.

Commenting on the partnership, Ryan Werling, Senior Director – Defense Sales and Marketing for Mack Defense, said:

"We are committed to working with manufacturers and suppliers to the defense sector to offer a complete solution to modern armed forces' mobility needs. In FAUN TRACKWAY USA I'm pleased to report we have a like-minded partner, whose product offering nicely complements our own."

Rachel Roberts

Made in Germany

FAUN ZOELLER UK has moved their production of refuse collection vehicles to Germany.



L.t.r.: Sven Butteltmann (Internal Export Sales), Michael Grams (Internal Export Sales), Adrian Ward (Operations Director FAUN ZOELLER UK), Neil Wigley (Supply Chain Manager FAUN ZOELLER UK), Andy Rowley and Paul Rowley (Firow Directors), Phil Roberts (Corporate Account Manager FAUN ZOELLER UK)

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For over twenty five years Firow Limited has been a leading supplier in the UK for both contract and spot hire municipal vehicles. In 2012 they placed an order for five 22 m³ VARIOPRESS with ZOELLER OMEGA Lifters mounted on a Mercedes Benz 6 x 4 Econic chassis. As the Firow order was one of the first to be completely built in Osterholz for the UK market, Phil Roberts, FAUN ZOELLER's Corporate Account Manager, thought it would be the ideal opportunity to take Paul & Andy Rowley, Directors of Firow, over to our state of the art production facility in Osterholz-Scharmbeck, not only to sign off the vehicles but also to actually see their brand new additions to their fleet during the new build process. Adrian Ward, Operations Director of FAUN ZOELLER explains "We have just moved our production to Osterholz-Scharmbeck to simplify the sup-

ply chain, which not only significantly reduces the carbon footprint, it also ensures continuity as we now assemble the chassis, the lift and the body at just the one site with a highly skilled workforce who are able to produce in excess of 100 vehicles each and every month". During the tour of the facility the Firow guests were shown how the new advances to the production line, for example the robotic welding, ensures that the build quality is of a consistently high standard for each and every vehicle we produce. Paul Rowley said "We would like to thank Phil and his colleagues in Germany for a very informative visit and the exceptional hospitality offered to us throughout our stay in Bremen".

Firow Limited carried out a full evaluation of both service support and maintenance and their existing fleet

of RCV's and have once again opted for FAUN ZOELLER to supply their next order for RCVs and this year ordered a further four New VARIOPRESS to complement their existing contract and spot hire fleet. Andy Rowley said "the first five vehicles have been so popular with our customers that we made the decision to expand our fleet further, we were extremely impressed by the quality of the product and we are keen to continue and grow our relationship with FAUN ZOELLER".

Phil Roberts, Corporate Account Manager reiterated that the visit was a great success and that he was looking forward to a long and fruitful relationship with Firow Limited.

Marshall Fleming

Patent Ochsner Bucket 2.0

To generate new markets and to reach out to the many fans of the Patent Ochsner Bucket, (POK) you can now find it on the internet and in social media such as facebook and pinterest.



One bucket for all. POK in social media.

POK@ONLINE SHOP

www.patent-ochsner.de is the address of the new, fresh online shop for the designer bucket. In three languages (German, English and French) with just a few clicks, fans can access all information about the new edition of the classic from Ochsner.

- The entire range clearly laid out
- Chic design
- User-friendly
- Quick and easy ordering process
- "Trusted shop" certification
- Variety of payment methods

POK@SOCIAL MEDIA

Facebook, Twitter or Pinterest. Social media is now used on a daily basis. Everything can be viewed, commented on and "liked". POK wants to be a part of the conversation and be a standard fixture in your home and garden. POK is wherever its target group is. From now on the various use-scenarios will be posted on Pinterest* and Facebook. Click to get involved....

Claudia Schaeue



www.facebook.com/patent-ochsner.kuebel



www.pinterest.com/patent-ochsner/

*PINTEREST

Is a social network for photos and the platform with the greatest growth rate in recent months. Photos are published and distributed on virtual pin walls.



The Finance team of FAUN and ZOELLER

Working the numbers

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— The expansion efforts of the FAUN group and the development of new markets require a first-class functioning commercial infrastructure and a closely networked financial team. With this in mind Peter Höning, managing director of FAUN Umwelttechnik and CFO of the FAUN Group bid us welcome to the third FAUN Finance Conference.

“We use this conference as a platform to inform, share ideas and learn from one another.” said Peter Höning in introduction. All members of the company and the subsidiaries of the group who are responsible for finance participate in the Europe-wide conference. Peter Höning explains why: “Nearly all commercial processes require group-wide control in Europe. We need to address ways in which we can work even more efficiently and more effectively both locally and at group level. We can then cut out existing weaknesses and grow healthier as a result. I see the conference as an ideal vehicle for this.”

For the first time therefore, colleagues from the ZOELLER Group took part.

Conference themes:

- Future local and central financing structures
- Compliance & risk management
- Auditing & annual report
- Budgeting & forecasting

The colleagues use the network, which has developed gradually since the first conference, for their daily work. “We all need to pull together so that we can offer first-class financial services to

the operative areas within the group. Therefore I would like us to be better equipped to develop strength from the improved combination of the local individuality of individual organisations with the stability and solidity of the overall group”, concluded the finance director.

Claudia Schaeue

What's up?

How do you operate a refuse collection vehicle? This was the question underlying the information day "Getting to know the FAUN products" for trainees and interns of FAUN Umwelttechnik in Heilshorn.



The FAUN Umwelttechnik trainees with their training tutors Kyra Luthe (5th from l.) and Torben Hedenkamp (2nd from l.) and Maik Groß (left)

Maik Groß, responsible for education and training on refuse collection vehicles at FAUN, took charge of explaining the FAUN products in detail to the youngest members of the FAUN team. As well as the practical experience gained in the respective specialist departments during vocational courses and the theoretical knowledge acquired by the trainees at the business college, the FAUN-specific specialist knowledge is important for the everyday work of employees. Personnel manager Marc Grube: "We want our successors to be well-trained and able to apply their knowledge. To understand our products and to be able to provide our customers with good advice you

need to learn about the technology in more detail and to operate our vehicles at least once on your own!"

The product training therefore explained the FAUN Control System (FCS) in extensive detail. There was also a further focus on the area of research & development. A presentation of the development history of the FAUN DUALPOWER was accompanied by talks about specialist technical features and current development ideas. At the end, trainees got to drive a refuse collection vehicle. The product training was enthusiastically received by the participants and further training for FAUN employees is therefore planned.

Eight...

... new apprentices started their training at FAUN in autumn 2013. Over the next few years they will be trained as mechatronic engineers, construction mechanics, warehouse logistics specialists and industrial managers. A total of 39 trainees and dual students are currently studying at FAUN Umwelttechnik.



www.facebook.com/faunkarriere

Claudia Schaeue





 **ZOELLER**
KIRCHHOFF GROUP



Technik entscheidet.

92-99



A partnership for over 40 years!

STUMMER Kommunalfahrzeuge hands over its 2,000th refuse collection vehicle using compression to Hettegger Entsorgung Schwarzach/St. Veit.



Georg and Anna Hettegger (Hettegger Entsorgung GmbH, St. Veit/Pongau) also Johann Streif (Managing Director, STUMMER Kommunalfahrzeuge) at the vehicle handover of two new STUMMER refuse collection vehicles using compression.

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The weather was perfect for the handover of the 2,000th refuse collection vehicle using compression of the Medium XL series, sold by STUMMER Kommunalfahrzeuge.

The STUMMER Medium XL, mounted on a Mercedes-Benz Antos, is also the first refuse collection vehicle with the Euro 6 engine for the Hettegger company.

At the same time a STUMMER Medium XL City, mounted on a MAN TGS was handed over, with full STUMMER signwriting designed by Salzburg artist Gerald Herrmann.

Since 1955 the Hettegger disposal company, based in Pongau, Salzburg,

has worked towards protection of the environment.

The company is managed in the 3rd generation by the brother and sister team of Anna and Georg Hettegger. "With our 40 vehicles we deal with the waste





The 2,000th STUMMER refuse collection vehicle using compression on an MB Antos 6, in front of the "Buchberg Kircherl" in Bischofshofen, first mentioned in 1370.

disposal of the entire Pongau district, and parts of the Salzburg Pinzgau district. Our 60 employees work in the sectors of municipal, biological, recycling and valuable materials collection. The commercial and industrial waste sectors are also particularly important for us."

"The strongly fluctuating waste quantity in the winter sports locations of the region is a great challenge to our logistics, personnel and vehicle fleet", according to Georg Hettegger. In order to get a better grip on this problem, in 2009 the introduction of a weighing and identification system was begun. "Today almost all of our municipalities are connected to this system. The householder receives an invoice of the charges to be paid, depending on the quantity involved", explained Anna Hettegger.

The partnership between STUMMER and Hettegger goes far beyond a normal customer-supplier relationship. "When we are testing new developments, the Hettegger company are always pleased to help. We get the results at first hand and are thus very close to the customer", says STUMMER Managing Director Johann Streif.

His pride is obvious: "2,000 Medium XL-series refuse collection vehicles using compression, a high market share in Austria, good market positions in the export countries Switzerland, Slovenia and Hungary and highly motivated employees who know what we as a company and as people stand for, that is the foundation of our success and a good basis for another 2,000 units", reports Johann Streif, which he will bring onto the market together with his team.

Johann Streif



The STUMMER Medium XL City was specially acquired for the tourist region of Gasteiner Tal. High performance capacity and incredible manoeuvrability are the key features of this vehicle.

“We can also do it quietly!”

STUMMER Kommunalfahrzeuge Bischofshofen delivers the first Plug-In-Hybrid refuse collection vehicle using compression in Switzerland.

Plug-In technology in use

Particularly in urban areas, the noise and environmental load caused by heavy commercial vehicles and their superstructures can represent a major problem both for people and the environment. “Work functions which have previously been driven by a diesel engine can now be replaced by electrical work functions”, as Johann Streif of STUMMER Kommunalfahrzeuge knows, and then continues to the proof: “Together with our partners, the Danish firm Banke, we have produced the first Full Hybrid Plug-In refuse collection vehicle for Switzerland. Our customer decided on a Volvo Hybrid chassis in conjunction with our refuse collection superstructure ‘Medium XL City’ and our Plug-In technology.”

Emptying and compaction completely silent

“The emptying of waste containers and the compaction of the refuse, also travel to the next container, take place completely silently”, explained Streif, not without a note of pride, “Superstructure and HGV operate in E-mode.”

With respect to the “Road Transport of Goods” he listed the advantages of the futuristic technology:

- At least 15 tonnes CO₂ saving per year and vehicle
- At least 20% fuel reduction per tonne of compacted refuse
- Completely silent emptying and compaction of the refuse
- Massively improved working conditions for driver and loaders
- Lower noise levels permit collection at night
- Better utilisation of the vehicle due to multi-shift operation
- Less traffic obstruction in inner-city areas

Technology in detail

The modular drive system consists of an electronic control module, a battery module and a hydraulic unit. The complete system is fitted between superstructure and cab, which loses around two cubic metres of superstructure volume. The Plug-In system is designed in such a way that the superstructure can be electrically operated over a period of eight hours of use, or two full loads. Should the battery capacity not prove sufficient, collection can continue using the conventional drive train of the vehicle. “The switchover takes place automatically, we guarantee a service life of at least five years for the batteries”, explained Streif. In addition to the direct energy and environmental improvements, the electrification of these works also represents an increased use of sustainable energy sources, since the batteries of the superstructure can be charged economically overnight using off-peak electricity. According to Streif, the charging time is approximately six hours.

Incidentally, it has not yet been possible to sell any systems in Austria, Streif notes regretfully. On the other hand, in Switzerland the second system will be delivered in the next few weeks. The greatest sales success is being celebrated in the far North, as Streif says in conclusion: “In Scandinavia 35 vehicles are already running with our superstructures and the Plug-In system!”

Johann Streif



The first STUMMER-Plug-In-Hybrid refuse collection vehicle is ready for use on Swiss roads.

The new generation HALLER SLF Side Loader

— HALLER Benelux B.V. was founded in the Netherlands in 1991. The company, which is part of the ZOELLER Group and is based in Hedel, Netherlands, produces and sells HALLER and ZOELLER products and provides all maintenance services.



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With 23 employees, between 60 and 70 superstructures are delivered annually. HALLER Benelux B.V. has a very good reputation for quality and service. In order to maintain this excellent reputation, new concepts in service and marketing are being developed for the coming years.

Since 1997, the Hedel employees have been trained specialists in the construction of side loaders. So far, over 200 side loader superstructures have already been delivered. Recently the first HALLER/ZOELLER SLF was delivered to the Saver company one of the first side loader customers of HALLER Benelux B.V.

In the first half of this year, a new phase began in the SLF side-loader sector. After many years of importing parts for the previous SLF from Australia, in Spring this year the first kits were produced in Germany, in order to be able

to produce the new superstructures in the Netherlands. This new SLF development was a very successful and cooperative joint venture between ZOELLER-KIPPER GmbH (lifter technology in Mainz and superstructure technology in Berlin) and HALLER Benelux



B.V. Hedel (experience and manufacture). These new SLF developments are now even better and easier to adjust, for the efficient emptying of 2-wheel containers. Both joystick and monitor have been improved, giving even more

opportunities for deployment of the SLF. Where in the past there was only one gripper, there are now also options for diamond and comb lifts.

The experience and remarks of customers over the last 15 years have been incorporated into the development of the product. In addition, intensive work has been carried out on the improvement of strength and quality, in which context a reduction in unladen weight has also resulted in lower fuel consumption.

HALLER Benelux B.V., with its extremely well-positioned product range, has every confidence in the future. This means that more and more ZOELLER and HALLER products are finding their way onto the Netherlands market.

Johan Dingemans

Gold medal and innovations

“Finance of environmental protection in Poland” was the leading topic of this year’s POLEKO/KOMTECHNIKA edition.



Machines, devices and technologies dedicated to environmental protection, as well as matters concerning public utilities, were the main concepts of the 4-day POLEKO/KOMTECHNIKA fair in Poznań halls – the biggest conference facility in Poland. The POLEKO/KOMTECHNIKA fair has been held annually since 1989 so this year’s edition was the special 25-year anniversary.

A survey of the machines and equipment from all over the world presented during the POLEKO/KOMTECHNIKA was undoubtedly an occasion to compare technologies, quality, creativity

and realization. In total, at POLEKO/KOMTECHNIKA offerings from over 600 companies from Poland, Austria, Belgium, Czech Republic, Finland, France, the Netherlands, Canada, South Korea, Lithuania, Germany, Norway, Switzerland, Sweden, Hungary and Italy were shown.

Participation in such a venture is a great opportunity to introduce our innovations but also confirms our belief that we are able to meet the changing needs of the market. The new types of RCV bodies – XLS SPLIT and SLF Side loader presented during this year’s fair

edition aroused considerable interest and confirmed that our current motto “Technology decides” determines the direction of further development.

However the greatest achievement was the gold medal for the lifter 2301 DELTA Premium, which is successfully used in our superstructures.

Rainer Rohler



Revolution in the Polish waste industry

— The almost-expired calendar year of 2013 was a very eventful year of change for the Polish municipal sector, due to the change in the law introduced on 1 July.

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On the basis of this change in law, now all households in Poland are obliged to separate their waste. Checks will be imposed on cheap waste disposal and fly-tipping.

lifter, in comparison to the non-divided manual low-level lifter previously used in the market, has led to a significant increase in efficiency.

Sales record

In the fiscal year 2013, the Polish-based company group ZOELLER TECH Sp. z o.o., for the first time since its foundation in 1997, will sell more than 200 vehicles of the FAUN and ZOELLER brands in Poland. This means an overall market share of significantly above 80 %.



Disposal companies must prove compliance with statutory minimum standards in order to be able to participate in city and municipal tenders. This means a complete reorganisation of the registration and collection of waste.

Due to the now mainly connected disposal areas, the technical demands on vehicle technology required for waste disposal have also changed. In particular, the use of ZOELLER automatic

Whether or not the changeover to the more stringent Euro 6 emissions standard will also lead to a special business cycle in the acquisition of refuse collection vehicles remains to be seen.

Rainer Rohler



Picture above: MEDIUM XL with ZOELLER Lifter System SK350 with container washing system LCV2 | Picture centre: MEDIUM XL with ZOELLER Lifter 2301 | Picture bottom: MEDIUM XL with ZOELLER Lifter System 169 for Dubai.

Merry Christmas
and a Happy New Year!

