KONOBIL THE KIRCHHOFF GROUP MAGAZINE

MACINE MOBILITY SAFE

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C KIRCHHOFF GROUP

"Now I feel safer when I'm in the car," said German Chancellor Olaf Scholz during his visit to the KIRCHHOFF Automotive stand at the IAA Mobility in Munich. <u>Read more on page 010</u>

Content





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Arndt G. Kirchhoff Chairman of the Advisory Board of the KIRCHHOFF Group

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"A Transitioning World"

Dear customers, friends of our companies, and employees,

Looking back on the year 2023, it is clear that our world is in a phase of profound change. Not since after the Second World War, have the challenges and uncertainties we face been so great.

After coping with the global pandemic and the associated impact on societies and economic chains, we are facing a new dimension in the world since Russia's invasion of Ukraine and Hamas' terror in Israel.

While the so-called Vuca world (volatile, uncertain, complex and ambiguous) had previously determined the framework for action in society, politics and the economy, we are now talking about "multipolarity" and observing how Asia (especially China), the USA and Europe are repositioning themselves as Russia is increasingly becoming isolated as the aggressor. In this upheaval, smaller and medium-sized states are increasingly being sidelined, making the possibilities for peaceful co-operation more difficult.

The availability of raw materials, trade restrictions and sanctions, and their impact on inflation are now determining the framework conditions for the

reorganisation of our supply chains. At the same time, policymakers are increasingly considering regulatory approaches such as de-risking and even de-coupling. This is leading to considerable challenges for companies, both in terms of their room for maneuver and the price situation.

In addition, the shortage of skilled labour continues to intensify in many industries and countries. In some regions of the world, the baby boomer generation is retiring, which means that highly experienced employees are leaving. This is exacerbating the shortage of skilled labour and further worsening the competitive environment for companies. The very weak growth in global trade volume of less than one percent in 2023 is making the situation even more difficult.

After the last 30 years, in which the second phase of globalization has led to less poverty and greater prosperity worldwide, we are now faced with the need to create a new regulatory framework. We are discussing the advantages and disadvantages of market-based versus centralized regulatory models. Our goal should be a rules-based global order that takes into account cultural and systemic differences, while aiming to improve global trade and co-operation on pressing global challenges.

The focus here is particularly on the transformation towards the fulfilment of climate targets. In order to achieve these goals, as set out in the Paris agreements for 2050 and in China for 2060, we should focus on the potential of digitalization. Technologies such as artificial intelligence and high-performance quantum computers play a crucial role here. In order to make progress worldwide, it is essential to agree on clear targets for the expansion and definition of common standards.

Another key contribution to achieving climate targets lies in the responsible use of resources. A decisive step towards reducing the consumption of raw materials is the consistent implementation of the principles of a circular economy. This means that all materials used in our products are recycled and reused. This approach not only reduces the need for new raw materials, but also minimizes transport costs and energy consumption.

There is also significant global pressure to implement agreements on commodity trading and the production and supply of renewable energy, including hydrogen. All these endeavors are important prerequisites for halting climate change with its devastating effects on the environment, and therefore on us humans. They also aim to put the world back on a sustainable growth path for the benefit of humanity.

If we look at the companies in the KIRCHHOFF Group, they were able to increase their turnover to 3 billion euros with over 13,000 employees despite the rough waters. The trust of our customers and the performance of our employees enabled an extraordinary increase in sales performance, so that we expect healthy growth in the coming years as well.

In 2023, KIRCHHOFF Automotive was able to make forward-looking investments, drive forward technological innovations, and present these at trade fairs and exhibitions. Even though the past year has not made doing business any easier, we can currently look forward to a good and balanced order situation for new business. Domestic car production is showing an upward trend. KIRCHHOFF Automotive is particularly benefiting from the significant increase in new registrations of electric cars. In recent years, we have focused on the development of safetyrelevant metal structural components, especially with regard to modified car bodies and requirements such as those found in electric vehicles. This is paying off today. This year, many new products and safety structural parts for electric vehicles have been successfully launched on new lines at the European and North American KIRCHHOFF Automotive plants. The focus here was on resource-saving and crashrelevant structural body parts in lightweight

construction for combustion engines and electric vehicles. True to our mission "MAKING.MOBILITY. SAFE.", we gave a preview of our innovations at the IAA Mobility in Munich at the beginning of September. In particular, the exhibited crash management systems made of steel and aluminum with a high deformation capacity and a steel instrument panel carrier with an open shell design, demonstrated how passengers can be optimally protected in the event of an accident. German Chancellor Olaf Scholz was also impressed by this during his visit to the KIRCHHOFF Automotive stand.

In 2023, KIRCHHOFF Automotive continued to invest in technologies and production facilities at its plants worldwide. New presses and modern welding systems were installed in the North American plants. A comprehensive expansion of the plants in Puebla and Querétaro, Mexico, has been launched for the production of body-in-white parts and dashboard supports for new customer programs. As a result of new orders for larger and more complex assemblies, a new construction phase for production and logistics halls was initiated at the Esztergom plant in Hungary at the end of 2022. New logistics concepts are also being realized here for the first time. The award-winning "Digitalization of Production Control" project is being implemented as a best practice in several KIRCHHOFF Automotive plants. Our plant in Shenyang, China, which celebrated its



10th anniversary this year, has been expanded four times in recent years. Most recently, new systems and processes were installed in 2023.

Conscious of our environmental responsibility, we are cooperating with leading steel manufacturers to work together on the development of low-carbon steel for cars and lorries – with promising initial results. Comparisons of ArcelorMittal's recycled and renewably produced XCarb® Usibor1500® steel show equivalent properties in product manufacturing and crash performance to conventionally produced steel grades. The difference is that the new steel grade is made from recycled steel and 100% renewable electricity. KIRCHHOFF Automotive is also strengthening its collaboration with steel suppliers SSAB and ThyssenKrupp in order to reduce CO₂ in car body construction. By using SSAB Fossil-free Steel[™], for example, almost 40% of emissions can be saved in a front bumper – that's 585 tons of CO, per year.



In 2023, **KIRCHHOFF Ecotec** continued to grow with its two core brands FAUN and ZOELLER. Within the FAUN Group, a new FAUN Viatec plant was opened in Grimma, Germany. A new production hall, offices and outdoor areas have been built on 58,000 square metres. In the future, 500 sweepers and kits will leave the factory each year and go into operation worldwide. FAUN Viatec's latest product is the functional and lightweight CITYJET sweeper with a robust sweeper unit and approx. 500 kg more payload than comparable machines - an all-rounder in street cleaning. The British company FAUN ZOELLER UK has been joined by the vehicle hire company C.P. DAVIDSON (CPD), based in Chorley, North West England. The aim is to complement each other's product range, transfer technology and expand the service network. ENGINIUS GmbH, which is part of the FAUN Group, was able to expand its development expertise by acquiring shares in the insolvent Clean Logistics Group. The Clean Logistics Group is a retrofitter of H2 lorries and buses. A large part of the engineering and development team was taken over and is now working in the newly founded ENGINIUS TEC GmbH on the development of drive systems for hydrogen BLUEPOWER vehicles and prototypes. This year in November, the 100th ENGINIUS BLUEPOWER vehicle rolled off the production line and was handed over to the Business Operations in Duisburg, Germany. ENGINIUS is our brand for chassis with hydrogen fuel cell electric drive for climate-neutral goods transport.

Zöller-Kipper acquired a majority stake in the company AMEC in Durres, Albania. By taking over the very well-positioned company, which was only founded in 2020, the Mainz-based manufacturer of waste disposal vehicles and lift systems is securing more capacity in steel construction and relieving the burden on its production companies in Poland, the Czech Republic and Italy, among others, in the manufacturing of components. The aim is to develop the production of individual components and welded assemblies, through to fully assembled, painted and tested kits. A positive side effect is the proximity to the production plant of FARID, another ZOELLER Group company in Italy. The ZOELLER Group is also focusing on the automation and modernization of the production plant in Poland, and the intensification of cooperation with the Swedish company JOAB.

For WITTE Tools, the situation on the tool market appeared to improve over the summer. However, customers' reluctance to buy has been clearly noticeable again since September 2023. However, two successful trade fair participations make us optimistic. At the international construction trade fair "Bouwbeurs" in Utrecht, Netherlands, we presented high-quality tools and innovations, including a heavyduty screw holder and the TOBI® drive system. Both

the new products were well received by existing and potential customers. At the Expo Nacional Ferretera in Guadalajara, one of the most important trade fairs for the hardware, electrical and lighting industry in Latin America, it became clear how much the high quality "Made in Germany" promise of WITTE Tools is appreciated. A 3K injection molding system with automation has gone into operation at the WITTE Tools plant in Hagen. A new mold concept for this system is currently being integrated, which is expected to be completed by the end of the year.

This year, **KIRCHHOFF Mobility** has consistently

further developed existing conversion solutions. Following the successful market launch of our own ProLine kit last year, we have developed a new version of this kit: the ProLine Comfort. The new variant has already successfully passed the static test and is now TÜV-certified. Compared to other kits available on the market, the ProLine Comfort has a relatively long tray and is therefore suitable as a "one-for-all" solution for practically any wheelchair. A cooperation with a German car manufacturer launched this year provides for joint optimization and further development of the tried-and-tested "EasySpeed" hand control. This particularly lightweight hand control is one of the slimmest hand controls on the market. The cooperation will offer many advantages for the customers of both companies, as well as for the companies themselves. The KIRCHHOFF Mobility team has



continued to grow in 2023. This is a positive development and ideal conditions for a good start to the new financial year.

Dear customers, friends of our company, and employees, the management of our group of companies would like to thank you for your loyalty, great commitment and active cooperation. Thank you for your dedication and flexibility, which are in demand during these times. We look forward to continuing our good and successful cooperation.

My sister, brothers, and our families and I, wish you and your loved ones a happy holiday and good fortune in the New Year.

A hearty "Glück auf" ("Good luck")! Yours

(KIRCHHOFF AUTOMOTIVE

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The KIRCHHOFF Automotive exhibition stand at the IAA MOBILITY 2023 in Munich

What Will Move Us Safely, Tomorrow

AUTHOR: SABINE BOEHLE COMMUNICATION AND MARKETING MANAGER KIRCHHOFF AUTOMOTIVE

The IAA MOBILITY is considered the largest mobility event in the world: in autumn 2023, vehicle manufacturers and suppliers showed what will move people safely and in a climate-neutral way tomorrow. At the IAA Mobility 2023, KIRCHHOFF Automotive presented advanced solutions for safe mobility in line with its MAKING.MOBILITY.SAFE. mission.

f.l.t.r.: Arndt G. Kirchhoff, Chairman of the Advisory Board of the KIRCHHOFF Group; Federal Minister of Transport Volker Wissing; Federal Chancellor Olaf Scholz; Dr Johannes F. Kirchhoff, CEO KIRCHHOFF Ecotec; VDA President Hildegard Müller and J. Wolfgang Kirchhoff, CEO KIRCHHOFF Automotive

he IAA Summit in the Munich exhibition halls is the most important industry get-together for all professionals and decision-makers in the mobility sector. Today and in the future, the focus of car body development will be even more strongly on cost-effective and holistic lightweight construction concepts to make vehicles safe. At the IAA MOBILITY, we were

able to show numerous visitors how we have continuously developed and optimised safety-relevant components. Our guests included high-ranking representatives from our customers, associations and politics. Among them was Federal Chancellor Olaf Scholz, who visited the KIRCHHOFF Automotive stand together with Transport Minister Volker Wissing and VDA President Hildegard Müller.



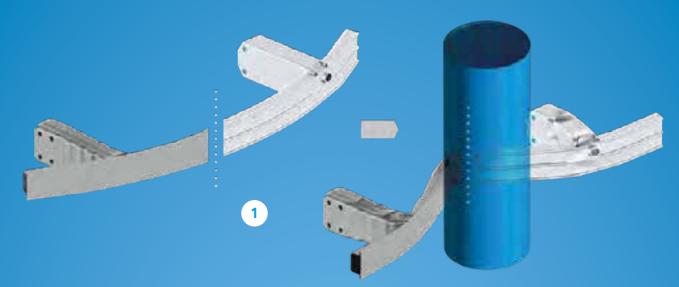


01 A two-day trip to Munich: Our trainees visit the IAA MOBILITY 2023 (read more on page 40) 02 The Chinese manufacturers attracted a lot of attention with their new electric vehicles, both in the Munich exhibition halls and in the city centre. **03-07** High-ranking representatives of our customers, politicians and associations visited our trade fair stand.

CEO J. Wolfgang Kirchhoff presented the Chancellor with our latest product developments, including a crash management system with high deformation capacity and an innovative instrument panel carrier in shell construction. "The mission of KIRCHHOFF Automotive is to make cars safer," explained CEO J. Wolfgang Kirchhoff to the Federal Chancellor. The alu-minum crash-management-system reduces kinetic energy through deformation. KIRCHHOFF Automotive developed the profile together with Hammerer Aluminium Industries (HAI). What makes it special are the connection points to the side member (see Fig. 1). "In the event of a crash, the system holds without a weld seam failing," explained J. Wolfgang Kirchhoff. This product is therefore a special element for vehicle safety. Another innovation that the Federal Chancellor took a closer look at was an instrument panel beam in shell construction (see Fig. 2). "Most instrument panel beam have a tubular center section, which is very cost-intensive," explained J. Wolfgang Kirchhoff. In addition to the cost savings, the product from

KIRCHHOFF Automotive offers the advantage of allowing functional integration. For example, cables or ventilation guides can be installed. "In addition to these two innovations, we are also showing many other products here that contribute to safety in the vehicle," concluded J. Wolfgang Kirchhoff. The Chancellor then emphasised: "Thank you very much. Now I feel safer when I'm in the car."

The IAA MOBILITY 2023 inspired more than half a million people. In total, almost 750 exhibitors from 38 countries presented over 300 world premieres and innovations at the IAA MOBILITY 2023. Every second exhibitor came from abroad. 3,700 journalists from 82 countries reported on the world's largest mobility event. "This year's IAA MOBILITY was a great success and showed that we are determined that Germany will remain a car country in the future. A car country in terms of the climate, people and prosperity," VDA President Hildegard Müller summarised positively.



Safety in electric vehicles crash-management-systems with high deformation capacity:

Lightweight solution: aluminum crash-management-system

compensate for the high weight of the battery in electric high structural integrity with lightweight construction. In addition to a MAG welding process optimised for

and significantly increase protection against corrosion.



Cost-optimised solution: steel-crash-management system

A strong commitment to the circular economy

AUTHOR: GLENDA LANGE MARKETING ASSISTANT TO THE MANAGEMENT OF KIRCHHOFF ECOTEC

"Our engineers and designers must internalize the topic of the circular economy as early as the product design, construction and development stages, because the materials of a product can only be recycled if I have designed the concept with this in mind from the very beginning," said Dr. Johannes F. Kirchhoff at the Climate Congress 2023 in Berlin.

t this year's Climate Congress of the BDI, the Federation of German Industries, with the topic "How do we win the global race of green transformation?", the Managing Partner of the KIRCHHOFF Group discussed with the participants of the panel talk which investments and rules Circular Economy needs as an industrial strategy. Circular economy means looking at the entire life cycle of a product, from production to recycling. Existing materials and products should be used for as long as possible, repaired and, after the use phase, their materials should be recycled and returned to the raw materials cycle.

In his presentation, Dr. Johannes F. Kirchhoff emphasized: "We live in the world according to the principle of "conservation of mass", which states that "nothing is lost". Thanks to the law of mass conservation, we are able to recycle almost all substances and process materials efficiently. In order to implement these recycling processes, politicians must set clear guidelines and targets and formulate them clearly. The "how" must not be formulated. Openness to technology is the keyword here," said Dr. Kirchhoff in his opening statement.





Openness to technology enables inventors and companies to develop cost-efficient technical concepts. The given framework should offer market players sufficient flexibility, but with clearly defined limits. "It must be possible to put the principle of economic efficiency at the service of ecology. Investments can then be used specifically to achieve these goals, which in turn promotes innovation. The allocation of capital is not affected by ideological "how" requirements, which further supports the achievement of objectives," said Dr. Kirchhoff in the further course of the discussion.

In addition, Dr. Johannes F. Kirchhoff warned of further consequences of "how" specifications of the transformation, for example on prices. He emphasized: "We have to make sure that we keep the sustainability triangle, i.e. the ecological, economic and social branches, in balance. One example: cobalt, lithium and rare earths are needed for rechargeable batteries and electric motors. On the global market, these materials are in the hands of a few suppliers due to monopolistic structures and dependencies, particularly in China - there is no free procurement market. However, they have to be procured at high cost by our import-dependent German production industry due to incorrect "how" technology specifications. If these materials become more expensive, the prices for battery devices, telephones, computers and electric cars will also rise. As a result, our fellow

human beings will no longer be able or willing to afford these products. We are therefore losing the social aspect of sustainability. Ultimately, however, sustainability cannot be successfully implemented without social acceptance."

One solution, according to Dr. Kirchhoff, is to recycle materials: "This supports the availability of materials and reduces dependence on imports. Politicians must promote the circular economy by banning landfills for organic and perhaps also certain mineral materials. This approach has been in place in Germany since 2005 and must be implemented in Europe. Such measures will provide existing and new processing technologies with sufficient material for processing. This supports the availability of materials and reduces dependence on imports.

In conclusion, Dr. Johannes F. Kirchhoff emphasized: "Politicians must create the framework conditions for an industrial strategy that makes the green transformation to a circular economy a success." "Politicians must create the framework conditions for an industrial strategy that will make the "green transformation" to a circular economy succeeds," demands Dr. Johannes F. Kirchhoff during the panel talk.

Panel talk at the Climate Congress on youtube:









SUSTAINABILITY

What a great team. 100 employees work at the plant in Bremen and another 50 engineers in Winsen (Luhe), Brau Potsdam. ENGINIUS wants to grow to 900 people by the end of the decade.

MARKETING & COMMUNICATIONS MANAGER FAUN GROUP

AUTHOR: CLAUDIA SCHAUE

Ambassador for

climate protection

A clean, safe future. That is what we want for our children. And we work towards this every day.

s a manufacturer of zero-emission hydrogen trucks, ENGINIUS is making a decisive contribution to a climate-neutral transport sector. Considering that commercial vehicles and buses account for 26% of emissions in the European transport sector, that is an immense proportion. In Germany, there are 12,000 refuse collection vehicles in operation. 100 of these are powered by fuel cells.

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The emission-free waste collection started in December 2021. That was the time, when ENGINIUS CSO Burkard Oppmann handed over the first H2 refuse truck to the Wirtschaftsbetriebe Duisburg. Now, almost two years, one company foundation, one relocation and 99 BLUEPOWER refuse collection vehicles later, Burkard Oppmann, together with the ENGINIUS team, handed over the hundredth refuse collection truck with a fuel cell. The truck was once again accepted by the hydrogen pioneers from Duisburg. But it's not just Duisburg that is getting behind the clean wheel. Many cities and local authorities are already disposing of waste quietly in the coalfields. For example at the Brandenburg Gate in Berlin, the Hofburg Palace in Vienna, in Freiburg, at the Atlantic coast, at the Goethe monument in Weimar, in England or on the North Sea coast in Cuxhaven waste collection operates environmentally friendly.

For the transport transition and the switch to alternative truck fleets to succeed, we need reliable framework conditions. Hence the appeal to the German government to continue to provide funding for the market ramp-up of hydrogen and the expansion of refuelling and infrastructure. The fact that the ENGINIUS way has arrived in Berlin, State Secretary Hartmut Höppner said at the the anniversary handover: "Your vehicles are ambassadors of climate protection and confidence. They prove that hydrogen works on the road."

Committing to a clean, sustainable future is an enormous and fantastic task that the 150 engineers take on every day. Because each H2 refuse truck saves 150 kg of CO_2 every day – that that's a whole 240 tonnes of CO_2 per vehicle over a period of eight years. ENGINIUS CEO Thorsten Baumeister on the special milestone: "What you are doing is unique and I am proud of what we have achieved together."

Handover of the 100th ENGINIUS BLUEPOWER to Wirtschaftsbetriebe Duisburg, from left: Patrick Hermanspann (CEO FAUN Group), Mirco Wagner (Head of Materials Management at Wirtschaftsbetriebe Duisburg), Burkard Oppmann (CSO ENGINIUS & FAUN Managing Director), Angelo Lombardo (Head of Technical Services at Wirtschaftsbetriebe Duisburg), Thorsten Baumeister (CEO ENGINIUS), Hartmut Höppner (State Secretary from the Federal Ministry of Digital and Transport), Florian Brandau (CTO ENGINIUS), Matthias Kohlmann (CFO FAUN Group) and President of the Stade Chamber of Industry and Commerce) and Andreas Heyer (Managing Director of Bremen Economic Development)



1010

#ENGINIUSway





FRERERERF

Left: The new demonstration truck from Zöller-Kipper: BLUEPOWER MEDIUM X4 with EPSILON 2600 lifter. **Below:** The first hydrogen-powered BLUEPOWER waste collection vehicle in Vienna, which has helping to keep the city clean since May 2023.

AUTHORS: PATRICK TAUTZ, PROCUREMENT MANAGER BOUGHT IN PARTS KIRCHHOFF AUTOMOTIVE DR. KATHARINA ESLEBEN, MANUFACTURING ENGINEE KIRCHHOFF AUTOMOTIVE

We Use "Green" Electricity

We have been working continuously for years towards our goal of becoming "green". Almost all European KIRCHHOFF Automotive plants are already equipped with green energy. According to our strategy plan, all plants in China and North America will follow in the next few years, and by 2030 at the latest.

What options does a company have to be 100% supplied with green energy?

1. The purchase of "green" electricity: many energy suppliers offer both sustainably generated energy, energy from renewable sources, and traditionally produced energy. The promise that you can still get green electricity refers to the financial and legal support for renewable energy sources, not to the actual flow of electricity from the socket. Green electricity certificates are purchased by the energy suppliers on the trading market and originate from real plants (usually wind/solar power). The operators/ owners of the production power plants promote the expansion of renewable energies by investing in new plants, in the expansion and extension of existing plants, or in ecological measures. Each certificate has a guarantee of origin and can only be used once. Once the certificate has been used, it is invalidated in the register of origin.

2. On-site PPAs (Power Purchase Agreements): for suitable hall roofs, photovoltaic systems are installed on the roof in order to reduce electricity procurement costs. The manufacturer of the system can either supply, install and maintain it, or act as the operator of the photovoltaic system. The latter then corresponds to a PPA.

For our plant in Esztergom, Hungary, we are planning to purchase a photovoltaic system as a pilot project, which we will then operate independently. We will be able to use the first electricity generated by this system in 2024. Before planning began, we had an intensive exchange of information with those responsible at FAUN, another company in the



KIRCHHOFF Group. FAUN already operates its own photovoltaic systems. The system planned for our Hungarian production plant will use monocrystalline glass-foil solar modules, which are characterized by their high efficiency and low weight. In addition to technical requirements, such as mounting by means of elevation and ballasting to prevent roof damage, legal requirements must also be taken into account. Questions such as whether electricity may be fed into the grid in the event of overproduction, or which power limit (kWp) of the photovoltaic system is permitted locally, must be clarified in advance.

Based on our experience, we check which other KIRCHHOFF Automotive plants use the photovoltaic systems economically and sensibly. As a rule, such systems cover 5-10% of a plant's energy requirements.

3. Location-independent PPAs: this business model allows energy to be purchased from wind farms in the North Sea or solar parks in Spain, for example. We are currently investigating whether this business model can be applied to our plants. As this model generally requires a minimum purchase volume of around 5,000 MWh per year, smaller national companies are not eligible. In addition, a long-term price commitment of 10 years is required.

We are currently working on the most optimal energy concept for each national company. A mix of the three alternatives mentioned above will reflect future energy procurement, in order to position KIRCHHOFF Automotive sustainably and efficiently in the energy sector.



Joint Development for Lower **Emissions**

The Research and Development team and the Hotforming Competence Team at KIRCHHOFF Automotive regularly research and investigate new materials at an early stage, before they are available for series production. The focus here is on the continuous further development and CO₂-neutral production of safety-relevant metal structures. >

AUTHORS: MARKUS LÖCKER, TECHNOLOGY DEVELOPMENT SPECIALIST KIRCHHOFF AUTOMOTIVE ROLF SCHWARZER, APPLIED RESEARCH SENIOR SPECIALIST KIRCHHOFF AUTOMOTIVE



025

Demonstrator tool for a door impact beam to compare different cold-formable new high-strength steels. Sheet metal blanks made from the ArcelorMittal steels Fortiform[®] 980, 1050, 1180, and 1270 have already been formed on it.

1000



To this end, KIRCHHOFF Automotive works together with various major steel manufacturers. As part of the long-standing, continuous cooperation with ArcelorMittal, the KIRCHHOFF Automotive development centers have recently tested and positively evaluated several steel grades.

First, we tested the properties and use of ArcelorMittal's Usibor®1500 with XCarb® recycled and renewably produced substrate, and compared it with the properties of the series material Usibor®1500. This environmentally friendly pre-material is produced from at least 75% recycled steel and 100% renewable electricity in the steelmaking process. In order to validate the comparison of process control and material properties for future series production with XCarb® recycled and renewably produced material, we manufactured and tested various series components at our sites in Iserlohn and Gliwice. In the first step, press-hardened parts were processed from mono-blanks and examined in the laboratory using tensile tests, hardness measurements, plate bending tests, AlSi layer tests, hydrogen measurements, and contact resistance

measurements. All results show that the XCarb® recycled and renewably produced material has the same properties as the Usibor®1500 series material. After the results were positive, we produced patched components and tested them in the laboratory. Here too, the material properties after press hardening showed an excellent match; so, KIRCHHOFF Automotive decided to release the XCarb® recycled and renewably produced material for the production of series components. The first OEMs will integrate the new material into their body structures as early as 2024, thus taking a further step towards decarbonization.

KIRCHHOFF Automotive and ArcelorMittal have signed a Memorandum of Understanding, in which the development of steel solutions for cars and trucks using low-carbon XCarb® recycled and renewably produced steels is only the first step in a joint journey towards carbon neutrality.

02

026

Use of ArcelorMittal's XCarb® recycled and renewable steel in side members (01) and in an A-pillar with sill (02).

rial properties in terms of formability and crash performance of ArcelorMittal's Fortiform® steels, compared to conventional steel such as DP600. thickness not only leads to a reduction in the weight of the product, but also a reduction in emissions in the long term.

ent demonstrator tool for a door impact beam. This tool can be used to compare different cold-formagrid was applied to some sheet metal blanks and

Applied Research Senior Specialist. Markus Löcker, Technology Development Specialist, adds: "Together

three-point bending tests

A second project involved evaluating the mate- compared with the simulation. The material cards provided by ArcelorMittal were used for the forming simulation. Quasi-static three-point bending in Attendorn, Germany, and the measured forcedisplacement curves were compared with the simu-





AUTHORS: MICHAEL RANK, GLOBAL EXECUTIVE VICE PRESIDENT PROCUREMENT KIRCHHOFF AUTOMOTIVE UWE HADWICH, GLOBAL DIRECTOR PROCUREMENT KIRCHHOFF AUTOMOTIVE

SAVE 40% CO₂ WITH EMISSION-FREE STEEL

KIRCHHOFF Automotive. When it comes emissions in the production of a front bumper.

We are becoming more sustainable through our own activities and high-performance teel is the main component of cold-formed suppliers. On the way to a green future, KIRCHHOFF Automotive is strengthening its cooperation with steel supplier SSAB to reduce CO, in body construction.

The new type of steel is used, for example, in the picture on the right). This consists of various individual beam and locking plate. The crash boxes, the lower forming process, with the individual parts weighing between 300 g and 1.3 kg. The SSAB steel currently used that's 585 tons of CO, per year. ■



INTERVIEW: ANNA SZKLARZ GLOBAL DIRECTOR CORPORATE SOCIAL RESPONSIBILITY AND SUSTAINABILITY KIRCHHOFF AUTOMOTIVE

One of the most important points is our progress in reducing our carbou footprint. Since 2019, KIRCHHOFF Automotive has reduced its overall emissions by 39%.

Andreas Heine: Can you tell us some of the key points from the report or notable achievements from 2022?

Anna Szklarz: We reached several important milestones in 2022, which exemplifies our commitment to environmental protection and resource conservation. We want to manage and develop our company sustainably. Our plants are required to introduce and maintain an environmental management system and ensure that all employees receive appropriate training. We also develop partnerships with suppliers who share our commitment to sustainability and focus on the entire supply chain.

We also recognize that measurement and reporting are essential to assess the effectiveness of our initiatives and demonstrate transparency to our stakeholders. To measure our progress in carbon reduction, we use key performance indicators and metrics to track our emissions reductions, energy efficiency improvements and the introduction of renewable energy sources.

One of the most important points is our progress in reducing our carbon footprint. We have made progress in reducing our carbon footprint through energy efficient practices and are working to source a higher percentage of our energy from renewable sources. Since 2019, KIRCHHOFF Automotive has reduced its overall emissions by 39%. CO₂ intensity, measured in CO₂ emissions per 1 million euros of net sales, has also fallen by 40% since then. In the year under review, the company's turnover rose by 28%, while total energy consumption only increased by 10%.

Sustainability – a Core Value

The KIRCHHOFF Automotive Sustainability Report 2022 provides a comprehensive overview of our strategy, goals and performance in terms of sustainability. Anna Szklarz, Global Director Corporate Social Responsibility and Sustainability, gives an insight into the current report in an interview with Andreas Heine, Global EVP Communication & Marketing.

K>MOBIL 61



Anna Szklarz, Global Director Corporate Social Responsibility and Sustainability, in conversation with Andreas Heine, Global EVP Communication & Marketing.





KIRCHHOFI

- → The pilot development for a CO, reduction roadmap at each operating site
- \rightarrow The expansion of an energy management system in accordance with ISO 50001 to all locations
- The development of a global energy monitoring

Take a look at the entire sustainability report here: www.kirchhoff-automotive.com/deEN/sustainability



Andreas Heine: What about social aspects? Is there anything new to report here?

Anna Szklarz: We look after the well-being of our employees by investing in their training and development, and we constantly strive to provide secure, high-guality jobs at the locations where we operate. Our HR policy is geared towards longterm employment and the development of talent. One of our greatest achievements in this area is the KATE program (KIRCHHOFF Automotive Talent Education), which includes both the selection of potential candidates and their development program according to established standards. By the end of 2022, 98 of our employees had taken part in the program. Almost every other participant was subsequently promoted to a higher position.

Andreas Heine: How can individuals or organizations interested in KIRCHHOFF Automotive's sustainability initiatives find out more about our achievements?

Anna Szklarz: The report is available on our company website. You can also follow us on social media, where we post interesting facts about our ESG activities. Our corporate communications team is always available for inquiries or potential partnerships. You can also reach us via the contact information on our website.

Andreas Heine: Thank you, Anna, for these insights into KIRCHHOFF Automotive's Sustainability Report 2022 and the company's commitment to sustainability.

A CLEAN WORLD FOR OUR CHILDREN

Sustainability as part of the corporate philosophy.

ustainability, with the pillars of ecology, economy and social responsibility, has been practised with commitment in the KIRCHHOFF Ecotec Group for years. As a medium-sized family business, sustainability is a high priority for our activities. Above all, we have our children and future generations in mind. We develop technological concepts and produce trucks that are important pioneers of the circular economy worldwide. In this context, social and ecological responsibility is a matter of course for us. We therefore regularly organise projects and initiatives in which we actively involve our employees and their families.

Against this backdrop, Managing Partner Dr Johannes F. Kirchhoff, the Environmental Social Governance (ESG) teams and the management of FAUN and ZOELLER met for a further sustainability workshop to anchor new and future sustainability aspects in the company. We drive the change.





AUTHOR: MATILDA HEIDORN PROJECT MANAGER **HYDROGEN & INFRASTRUCTURE FAUN**



Apprentices Dancing on Instagram? Not Quite.

n view of changing trends in social media, we profile. With a variety of content ranging from trainees and young specialists.

implementing the content on our KIRCHHOFF cialists. To this end, ideas are exchanged and editorial Automotive career Instagram account. To see our content is planned in regular content meetings. The content, follow us on Instagram (@kirchhoff_karriere) or scan the QR code to go directly to our Instagram independently in order to provide authentic insights

at KIRCHHOFF Automotive have set up a trainee entertaining and authentic insights, such as followeditorial team on Instagram to specifically reach me-arounds, to explanations of terms and training the younger generation, especially potential testimonials, to informative posts about training build our own community and position KIRCHHOFF Our trainees are responsible for planning and Automotive as an attractive employer for future speinto our company, various training professions, and everyday working life.

> The respective HR departments on site support the Communications department in coordinating the appointments with trainees and creating content. The pilot project initially started at the Iserlohn site and will soon be rolled out at the Attendorn site.





@kirchhoff_karriere) n the QR code to go AUTHOR: ELSA GEBEHENNE SOCIAL MEDIA MANAGER KIRCHHOFF AUTOMOTIVE

Our apprentices are the creative minds behind our new KIRCHHOFF Automotive career Instagram account. Here, they not only report on their day-to-day work, but also offer entertaining content and authentic insights into our company.

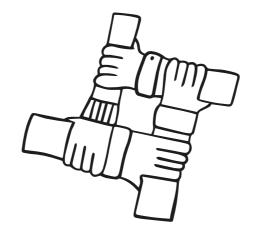




AN EXCITING JOURNEY BEGIN S<u>U</u>

At KIRCHHOFF Automotive's German locations, 18 apprentices started their journey into the world of work at the beginning of August. Getting to know each other, gaining lots of new impressions and developing team spirit - that's what the trainee induction days at Lake Möhnesee were all about this year.

AUTHOR: ELSA GEBEHENNE SOCIAL MEDIA MANAGER KIRCHHOFF AUTOMOTIVE







he trainees experienced exciting days with lots of team activities. The cheerful job guessing game was particularly fun. They presented their job descriptions to each other through creative group work. While one group presented painted tools and work equipment with typical gestures, the others had to guess which profession they were training for.

DEAR NEW TRAINEES, we wish you an exciting and successful training period in which you learn a lot and have fun. A warm welcome to you: Yasin, Kaan, Leonie, Phil, Martin, Hannah, Romeo, Felix, Elif, Boris, Leon and Leon, Christian, Julian, Philipp, Nils, Antonio, and Kai!

EMPLOYER BRANDING

BE OPEN AND COMMUNICATE! SEIZE OPPORTUNITIES,

ONE HIGHLIGHT OF THE INDUCTION DAVS IS "MEET THE BOSS"



01-03 A rope exercise and archery were all about sporting skill.



One highlight of the induction days was "Meet the Boss". This gave the new trainees the opportunity to meet a manager from the company right at the start of their training, where they could ask questions that they might otherwise never have had the chance to ask.

This year, Arndt G. Kirchhoff, Chairman of the Advisory Board of the KIRCHHOFF Group, visited our new trainees at the Iserlohn, Attendorn and Hagen sites as a surprise guest during their induction days at Lake Möhne. The highlight of the meeting was the personal Q&A session, during which the trainees were able to get to know Arndt G. Kirchhoff better. The questions were noted down on small cards shortly before the visit. The special thing about this is that the trainees were allowed to ask about anything that interests them. For example, they wanted to know: "Do you have pets?", "What was your best experience?", "What are you particularly proud of?", "What is your next big goal?", "How do you deal with failure?" and "Where do you see the company in 10 years' time?".

Finally, Arndt G. Kirchhoff called on the trainees: "Seize opportunities, be open and communicate! Find tasks and activities that you enjoy and approach your trainers if you have any problems."

The conclusion of our trainees: "It was a unique opportunity to talk to Mr. Kirchhoff and get to know the other trainees in a relaxed atmosphere."

FIND TASKS AND ACTIVITIES

038

THAT YOU ENJOY!



Roland

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<u>One</u>

GROU

OF US



"I'm delighted," says Stefanie Ott, Director Human Resources. She has been honored **2 7** with the Mission Female Award. The cross-industry network "Mission Female" is committed to female empowerment, inclusion, diversity and equality, and takes a public stance in business, politics and society in order to establish diversity across hierarchies in the long term. "Only companies that focus on diverse teams are best equipped for the future.", says Stefanie Ott. For her it is important to create a networked and collaborative environment for the HR teams in Europe and Asia, in which the teams can learn from each other, work together in a network and help shape the future of KIRCHHOFF Automotive.

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SOCIAL MEDIA MANAGER KIRCHHOFF AUTOMOTIVE

A Highlight During The Training Programme

The destination of this year's trainee trip was the IAA Mobility in Munich, Germany. The visit to the world's most important mobility exhibition was a special experience for the trainees.

he group of around 50 trainees from the Attendorn, Hagen, and Iserlohn sites spent two days in the Bavarian capital. The program included dinner at the famous Hofbräuhaus, a tour of the KIRCHHOFF Automotive stand, and a trainee competition in which guestions about the IAA Mobility and KIRCHHOFF Automotive had to be answered. They also got to visit to the "Open Space", which were exhibition areas in Munich's city centre where the trainees were able to find out about innovative mobility concepts and test drive e-scooters, e-bikes and cars on test tracks.

The trainees tell us what impressed them and what they liked best.

"The trainee trip to the IAA Mobility in Munich is definitely a highlight of the training programme. The trade fair itself was much bigger than expected - totally impressive. We had a bit of time to look around the exhibition centre and pick up a few promotional gifts. Then it was on to the tour of our stand and the trainee rally. We thought our own stand was one of the most beautiful in the exhibition halls. After a quick snack and a short photo session on our stand, we went to the "Open Space" in the city centre to explore the stands of the major car manufacturers. It was a great opportunity to spend time with the other trainees and see our stand in real life."

LAURA KONRAD, ELINA RÜSCHENBAUM, SOPHIE GÜNTHER, CHARLOTTE HECKMANN







"At the IAA Mobility, I found it particularly exciting to see the further development of cars." LEON LÌGUS



"I found the IAA Mobility very interesting, as there were all kinds of different cars and more to see, such as racing simulators. I also liked the fact that suppliers like our company or those who completely rebuild and modify vehicle interiors were there" LEON ROSENTHAL



JULIAN OSTROWSKI



"At the IAA, I was able to get to know new models from already established car brands as well as completely new brands. We were told a lot of new things about electromobility and our role in the industry. Julian and I learned that not every car needs a door handle to get out - there are now buttons that open the door automatically. Since then, we no longer close car doors without first learning how to get out again. I also thought it was really good to get to know the apprentices with more years of experience during the trip"

LEONIE BARTZIK



"I was able to visit the IAA in Frankfurt and the NKW IAA in Hanover during my first apprenticeship. The IAA Mobility in Munich was new territory for

the trainees from the first two years of my apprenticeship, and for me too. We found a huge Ferrari model made of Lego, and the tuned vehicles from JP Krämer were particularly cool. We had a look at the vehicles for which we produce parts at some of the manufacturers. A new so-called SuperCar could have come from a futuristic racing game. Another highlight was a ride in a latest-generation electric car. During a test drive, we were able to use voice assistance systems to operate the radio, windows and temperature settings. The vehicle could be switched to autonomous mode at the touch of a button. It felt strange to suddenly be on the road without a driver. We had never heard of the manufacturer before, but the car was impressive." PAUL STEINBERG

"The IAA is a fascinating opportunity to experience the top achievements of the automotive industry up close. This is where innovation and technology meet a passion for mobility. As visitors to the trade fair, we feel inspired by the visionary ideas and the latest vehicles that will shape the way we get around in the coming years. We are thrilled by the new concepts presented. It's exciting to see how the industry is continuously evolving to provide greener and smarter solutions for the mobility of the future."

Nick Saldow, FLORIAN SCHEIDT, CEDRIC KLEIN, TOBÍAS HEÍDASCH, ROBÍN ECKHARDT UND CAN TURAN



ELIF KOYUNCU









"I thought the IAA was very cool. Above all, as a visitor, you learned a lot about electric cars and motors. I also parand even sit in them to get a small impression. It's amazing how much influence KIRCHHOFF Automotive has in the automotive industry. I would love to go there again to see the latest and most modern innovations





New kids on the FAUN block. "Freshman meeting" of the FAUN trainees from Germany this year.

BLOCK

Young talents are demanding. With their school leaving certificate or degree, they are spoilt for choice: Jobs today should be meaningful, purposeful, sustainable and socially responsible. Fair enough! Few people realise that this is exactly what they find in waste management.

AUTHORS: PENNY JOHNSON, NATIONAL HUMAN RESOURCES MANAGER SUPERIOR PAK CATHERINE KINGS, EXECUTIVE ASSISTANT FAUN ZOELLER UK CLAUDIA SCHAUE, MARKETING & COMMUNICATIONS MANAGER FAUN GROUP

aving the environment and climate as a profession? Of course! And in a very tangible way with recycling management, street sweepers, refuse collection vehicles and lifters. The KIRCHHOFF Ecotec companies are pretty cool despite or because of their down-to-earth attitude. Owned by the KIRCHHOFF family for four generations, our actions are characterised by recyclable materials, craftsmanship, vehicle technologies and the circular economy. And this is how we currently inspire 150 trainees at KIRCHHOFF Ecotec.

In Germany, young people can start their career at ZOELLER and FAUN via an industrial or commercial apprenticeship or a dual study programme, for example in logistics management.

How attractive are we as an employer? Ina Reiners, Training Manager at FAUN for commercial trainees, enumerates:

WE TAKE PART IN CAREERS ORIENTATION EVENTS:

SCHOOL FAIRS: At our booth, kids can spin the wheel of fortune for prizes or even test their metalworking skills and make their own aluminium name tag

Exciting FACTORY TOURS: School classes can adventure FAUN and get information about the company and training with us.

MINT PROJECTS: School groups with a particular interest in MINT (maths, IT, science and technology) come to us and get to know the world of FAUN.

GIRLS & BOYS DAY - a day at FAUN: tour, work in the training workshop and a FAUN rally with treasure hunt

FOR THE LITTLE ONES: kindergarten visits with refuse collection vehicle



Every year: honouring the best trainees. In 2022, the following received a bonus by the FAUN Management, works council and Training Management: Michelle Ponka (3rd from left, graduated as an industrial clerk); Mika Wohltmann (5th from left, graduated as an industrial clerk) and Önen Aslan (7th from left, graduated as an electrician for industrial engineering)

FISH IN THE NET AND THEN:

- A tablet worth 500 euros as a gift for new FAUN trainees
- Trainee award as an incentive for good vocational school performance (best trainee 1,500 euros / second best 1,000 euros / third best 500 euros)
- Trainee projects and events outside of everyday training, e.g. building harvest wagons, environmental campaigns in the spirit of sustainability, getting a taste of the trade fair atmosphere at IFAT Munich, Germany-wide trainee events with activities such as laser tag and a hot seat with management
- really well received by the young stars and set us apart from other companies
- Currently only valid for commercial trainees: voluntary training to become a European business administrator (m/f/d), combined with a three-week internship abroad in the EU within the KIRCHHOFF Group

The German dual training system is unique. In other countries you enter the world of work as a trainee, graduate or into the world of work via mentoring programmes. Two examples from the UK and Australia from our subsidiaries.

POWER UP -WITH MENTORING PROGRAMMES

We set up the mentor scheme 4 years ago in co-operation with Trinity High Schoolin Redditch. Despite the pandemic and all the complications of education, access to the learners and the demands of the business leaders, the scheme still carried on. In August this year the scheme achieved CIO status (Charitable Incorporated Organisation) and also achieved ILM (Institute of Leadership and Management) for the mentor training scheme.

The POWER UP MENTOR FOUNDATION in August had 42 trained mentors and plan for significant growth • New Year's party and the ECOTEC ski trip are to 70 towards the end of the year. Louise Laxton, the careers lead at Trinity High School said; "The Power-up mentoring scheme is beneficial to students in many ways. It links the world of business on many levels to school and education. The students get an insight into the world of work and career path ways beyond school. The scheme builds relationships between local business's that often have links to other countries and sites in the UK to students about to embark upon the next stage of their education or career pathway. The mentoring scheme offers another strand of support, knowledge, and skills from the business world."

> As founder and ambassador of the scheme, FZ UKs Managing Director Simon Hyde explained;



"I am thrilled and delighted with this achievement. The team and all involved have shown great passion and desire to help the younger generation. I'm excited about the future plans and the expansion of the programme across the county. It's great that a lot of the other local business people share the same passion and desire; after all, these students are the future working generation!"

POWER UP – EVEN DOWN UNDER

In Australia, the Superior Pak team also focuses on the early exchange between school and the world of work. Superior Pak and Kepnock State High School in Bundaberg have entered into a trade partnership program that is committed to providing high quality learning opportunities for students that will benefit our wider community, businesses and industries. This program strengthens our connection with local schools and students and allows us to work with the school and help develop these young people to be ready for the next stage of their lives, entering the workforce. The partnership develops work readiness skills within the students such as respect to fellow staff and customers, accountability within their respective job areas, the ability to effectively and efficiently work as a team and communication. The program also sees some great results for our employees with the opportunity to develop mentoring skills and developing the skill set of future trades people in the industry. The program involves a site visit from the students and their teachers and three Superior Pak trades people visiting the school and mentoring the students each week to





Above: Committed to the next generation in the workplace (from left): Mark Ridings, Simon Hyde, Finlay Heath, Darren Houlcroft, Julie Dyer and Claire Claire Merritt from the Power up mentoring programme.

Below: POWER UP in Down Under. The mentoring team from Superior Pak with young people from Kepnock State High School.

Getting started in waste disposal vehicle construction? Your way to the **ZOELLER** Group



develop their welding skills and provide real life work experience for the students. Next year will see a larger program and exposure to other trades to encourage students in to a trade and manufacturing career.

"The training is really varied and WE ARE A GREAT TEAM. TOGETHER WE CAN THEORETICAL KNOWLEDGE DIRECTLY PUT INTO PRACTICE."

Raoul Gönner, 2nd year trainee industrial clerk at Zöller-Kipper GmbH

AUTHORS: CHRISTIAN ARENS, SALES DIRECTOR EVA RADEMACHER, COMMUNICATION AND MARKETING SPECIALIST

Top Performance

For this and for high product quality, several customers have honoured KIRCHHOFF Automotive.

> KIRCHHOFF Automotive was one of only two companies to receive the **award for** award together with Vice President of Sales Outstanding Quality from Mercedes-Benz. The award ceremony took place as part of the Supplier Circle on June 19, award and the associated recognition for our ity. KIRCHHOFF Automotive received the obligation for us to continue supplying our The award reflects the partnership-based in the central departments, and of course, cooperation between Mercedes-Benz and the production plants, who have made this KIRCHHOFF Automotive.

high level of personal commitment.")





in Suzhou, China was honored with the Li Auto Best front and rear bumpers, and cross members for the Quality Excellence Award to the plant in North responded immediately by increasing its supply capac- part of the team that helps ensure our customers ity. Li Xiang gave us high praise for this: "KIRCHHOFF in demand from Li Xiang and takes the initiative to manufacturing plants as we continue to navigate Steve Liu, Plant Manager of KIRCHHOFF Automotive in Suzhou, emphasizes: "This award means a lot to us. It is not only a high recognition of our product and





Lucian Maduta, Plant Manager in North York, is delighted to receive the GM Supplier Quality Excellence Award: "We are very honored to receive this award. This recognition rein-forces our commitment to delivering outstanding quality and

KIRCHHOFF Automotive in Mielec, Poland was honored by Hyundai CZ with the Award of Appreciation. Changki Lee, President and CEO of Hyundai Motor Manufacturing Czech, thanked the production for the new Hyundai Kona Sx2e model.

Customer Subaru of Indiana (SIA) also recognized the Commodity Leader Award and the Superior Excellence Performance Award. The Commodity

President of SIA, said: "It's great to know that our ppliers share the vision and commitment to quality suppliers, 35 have shown the tremendous commit-



AUTHORS: ANNA KUBASZEK, COMPLIANCE SENIOR SPECIALIST - LEGAL COUNSELLOR AGNIESZKA FILIP, GLOBAL DIRECTOR GOVERNANCE RISK COMPLIANCE

The new German Supply Chain Act comes into force on January 1, 2024. It is primarily concerned with strengthening human rights and environmental protection throughout the supply chain. For KIRCHHOFF Automotive, compliance with the regulations listed is not just a legal obligation, but an integral part of our corporate culture and values.

Due Diligence in the Supply Chain -**We Care**

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ver a year ago, we expanded our risk management system to include human rights and environmental aspects. In our comprehensive risk assessments, responsible procurement, labor practices and environmental management are considered critical areas that must be regularly assessed and reviewed by the corporate departments and all locations worldwide. We conduct complex due diligence on our suppliers to ensure that they comply with international standards. In addition, we continuously monitor our supply chain partners and practices to prevent, identify and mitigate risks should they arise. We have developed comprehensive contingency plans to properly address potential disruptions and vulnerabilities in our supply chain to ensure business continuity. We have appointed Roxana Hinzmann (Global Director HR KIRCHHOFF Automotive) as our Human Rights Officer to oversee supply chain due diligence and reporting

With these activities, we ensure due diligence of our business activities, suppliers and other business partners covering the entire supply chain of KIRCHHOFF Automotive. By aligning our risk management system with the principles of the Supply Chain Act, we also help to promote responsible and ethical business practices that benefit our company, our partners and society as a whole.

Get in touch!

Our commitment to ethical business practices is based on a culture of openness and accountability where everyone feels empowered to report potentia or actual violations. These reports may include criminal behavior, unfair business practices, humar rights violations and environmental violations at KIRCHHOFF Automotive or within our supply chains. We offer appropriate reporting channels for this, which are open to all employees, customers, suppliers and other stakeholders. Our complaints management is based on the legal provisions and the requirements of the automotive industry and guarantees the anonymity of the whistleblower Investigations are carried out by independent, qualified persons with the utmost confidentiality and fairness.

KIRCHHOFF Automotive guarantees that no retaliation will be taken if the report is made in good faith and that the protection of personal data is guaranteed in accordance with applicable laws.

Further information can be ound on our website:: vww.kirchhoff-automotive com/enEN/compliance/ organization-reporting-channels

Your contact persons:

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AUTHOR: KLAUS LAWORY VICE PRESIDENT PROCUREMENT

Praise for Quality and Reliability

The last few months and years have taught us that we do not always have unlimited and immediate access to everything. Especially for companies like us that deliver their products just in time, reliable suppliers are a part of our success. That is why we honor the best suppliers of our plants in Asia, North America and Europe every year for their outstanding quality and reliability.

uality products, efficient delivery, good service and intensive development of technical skills are the key factors for KIRCHHOFF Automotive when selecting the "Suppliers of the Year," explained Klaus Lawory, Vice President Procurement.

The best European suppliers of the year were honored at our site in Ovar, Portugal for their extraordinary performance and excellent cooperation:

- SSAB from Scandinavia in the Raw Material category
- SOM Fasteners from Turkey in the Purchased Parts category
- NIDEC Arisa from Spain in the Capital Goods and Tools category

As host, Armindo Jales (Managing Director of Administration in Portugal) praised the reliability and flexibility of the award-winning suppliers during the critical supply situations caused by the pandemic and other events in recent years.

of innovation!"

Klaus Lawory expressed his thanks on behalf of all KIRCHHOFF Automotive teams for the excellent cooperation, and emphasized the importance of strong relationships: "In addition to excellent delivery performance, it is also important that we set the course for sustainability and CO, reduction together. We are counting on your full support, transparency and lots

the substance of stars to be and

Our best suppliers of the year in Asia include:

- Shenyang Oukai Metal Products Co, Ltd in the Raw Material category
- Tianjin TianqiMo Zhitong Technology Co, Ltd in the Purchased Parts category
- Zhejiang Baojie Mould Technology Co, Ltd in the Capital Goods and Tools category

"The good performance of our company in China is also based on the support of excellent resources. Good suppliers not only offer competitive prices and high-quality services, but also contribute to improving the competitiveness of our products," said Wen Leyendecker, Managing Director of KIRCHHOFF Automotive China, in praise of the award-winning suppliers.

At the award ceremony in Richmond Hill, Ontario, Canada, seven outstanding suppliers of our North American plants were awarded the title "Supplier of the Year 2023":

- Riverview Steel in the Raw Material category
- **Canada Tubeform in the Purchased Parts** category
- Powder Cote II in the Supplier category
- **Buddy's Upstate Logistics LLC in the Logistics** category
- Tri-Tech Fixtures LTD in the Capital Goods and **Tools category**
- Mosmex received the Mexico Excellence Award
- APhase LL Inc. in the Prototype Services category)

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Center: Center: The best European suppliers of the year, steel supplier SSAB, SOM Fasteners and press supplier NIDEC Arisa were honored at our site in Ovar, Portugal for their exceptional performance and excellent cooperation. Below: In front of the plant building in Suzhou, China, our Purchasing team with the best suppliers of the year in Asia were: Shenyang Oukai Metal Products Co, Ltd in the Raw Material category; Tianjin TianqiMo Zhitong Technology Co, Ltd in the Purchased Parts category and Zhejiang Baojie Mould Technology Co, Ltd in the Capital Goods and Tools category.

"We must not forget that we have all been through tough times during the difficult years of COVID-19. We greatly appreciate your support. This is reflected in the fact that there have been no failures by our supplier base in these two years," said Jim Montagano (former EVP Operations), praising the suppliers.

Top: At the award ceremony in Richmond Hill, Ontario, Canada: seven outstanding suppliers from our North American plants were awarded the title of "Supplier of the Year 2023".

RCHHOFF



KIRCHHOFF

AUTHOR: ADRIANA PINHO HR BUSINESS PARTNER

Two Anniversaries, One Success Story

- that is KIRCHHOFF Automotive in Portugal. The location with plants in Ovar and Cucujães has now celebrated their 60th anniversary and 30 years as part of KIRCHHOFF Automotive.)

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Wolfgang and Arndt Kirchhoff, together with Armindo Jales and Hugo Ferreira, cut the anniversary cake on the occasion of the 60th anniversary and 30 years of affiliation with KIRCHHOFF Automotive.

KIRCHHOFF AUTOMOTIVE

his success story began in 1963, when there was still no automotive industry in Portugal. A group of Portuguese industrialists from the light metal construction sector decided to set up a company to manufacture forming tools and founded the company Gametal-Metalúrgica da Gandarinha, Lda. on June 12, 1963. From the 1970s onwards, the company expanded its product range and also manufactured formed parts for the automotive industry. The Portuguese locations have now been part of KIRCHHOFF Automotive for 30 years.

At the anniversary celebrations, CEO J. Wolfgang Kirchhoff emphasized the importance of the two plants in Ovar and Cucujaes for KIRCHHOFF Automotive: "I am very grateful to see the great work you are doing here in Portugal. We have the latest technologies here, such as transfer presses and hot forming, and all kinds of the most modern joining techniques, like laser welding. You are at the cutting edge of technology here. Even better is how you operate these technologies. A big thank you!"



Around 400 employees and 900 family members came with their families to celebrate together in the warm summer weather. The agenda included speeches by the Kirchhoff family and the managing directors, the presentation of the Excellence Awards, and the recognition of long-standing employees. Finally, there was a birthday cake and performance by the Tribal Samba School. Food and drinks were served at 20 stands, which had been prepared, decorated and organized by employees from various departments.







"We would like to thank you for being here, for proudly wearing the KIRCHHOFF Automotive shirt, and, above all, for enjoying the day, because the day is 100% for you," said Managing Directors Hugo Ferreira and Armindo Jales. Arndt G. Kirchhoff, Chairman of the Advisory Board of the KIRCHHOFF Group, added: "I would like to thank you all for your daily commitment, attitude and cooperation. We are happy and proud that we can celebrate this success story with all of you today."



The commemorative publication on the anniversary of the Portuguese locations can be found here: www.kirchhoff-automotive. com/usEN/media/downloads





AUTHOR: ADRIANA PINHO HR BUSINESS PARTNER

That's what former Portuguese Prime Minister Dr. António Costa was convinced of this during his visit to the KIRCHHOFF Automotive plant in Ovar, Portugal. He toured the hot forming plant, which was built in 2019 with government funding, and learned how accident-free production with 100% quality is possible, through personal discussions with employees.



uring the press conference, the Prime Minister praised the good company organization and structure, the high technical level, and the modern equipment. He emphasized the strong influence that the automotive industry has on the region. He also said that the country needs more companies like KIRCHHOFF Automotive: "If you have the goal of growing 5% per year and exceed this target, we, the country, will continue to grow with you! Your resilience is very important for the preservation of jobs, for the growth of exports and the country. I would like to thank you because this is a sign of confidence for the whole country. If companies are happy with their investment and have the prospect of increasing their investment, this is a great sign of confidence for our future."

"The country will continue to grow with you"



AUTHOR: ARMIN BERTHOLD

In recent years, various factors have led to a gradual reduction in manual activities and the increase of automated production at KIRCHHOFF Automotive.

The Degree of Automation

Increases

A high degree of automation in the production of a battery underride protection: various production rocesses are fully automated via interlinked pro-

New products, such as battery underride protection, require a higher degree of automation due to their size and quantity. Various production processes are fully automated via interlinked production lines, including washing, loading the welding equipment, and removing the product from the welding system and placing it in the customer's container.

K>MOBIL 61

GLOBAL EXECUTIVE VICE PRESIDENT MANUFACTURING ENGINEERING

nanges in the product portfolio, new customer requirements in terms of logistics, increasing quality demands and a shortage of labor require more automation. The first automation measures have already been implemented in production at our European locations. Automated guided vehicles have been in operation in the hot forming and welding shops for some time now. A total of five transport robots, also known as AGVs (automated guided vehicles) with a load capacity of up to 1,500 kg and a tractive force of up to 3,000 kg, are used at the two hot forming plants at the KIRCHHOFF Automotive site in Iserlohn, Germany. Guided by a virtual map and laser navigation, the AGVs complete the transfer of empty and full containers. This is requested either by machine operators or directly by an automated welding system. Following the successful introduction of the transport robots, we are also planning to use them at our new paint shop in Querétaro, Mexico, starting in 2025.

With this technology, we will also be able to supply the next generation of our welding systems with individual parts, as well as pick up customer or paint racks filled with finished welded products.



KIRCHHOFF Automotive also relies consistently on modern technologies in regards to quality assurance measures. For example, at our plant in Waverly, USA, weld seams on a dashboard support for our customer Honda can be tested inline. The geometry of finished products can also be measured inline. These techniques increase and stabilize the quality of our products.

Further automation can be found at the outlet of our transfer presses. Flexible concepts with corresponding camera visualization detects the component position on the normal conveyor belt, and adjusts the gripper position of the feeder in a matter of seconds. With extremely low set-up effort and without additional specific devices, this concept enables most 2D and flat 3D components to be stacked.

Today, KIRCHHOFF Automotive is already well positioned with regard to changing framework conditions and the resulting need for automation in production. In the future, we will continue to drive forward automation at all our sites in order to be able to supply our customers with high-quality and sustainably manufactured products, and to offer our employees interesting jobs.

Left/below: Modern technologies are used for quality assurance. For example, weld seams or the geometry of finished products are checked and measured inline.



corresponding camera visualization.



Automated guided vehicles in use at the Iserlohn/Germany plant.



Future-Oriented Manufacturing

AUTHORS: TOBIAS HALBE, ENGINEERING MANAGEI TIMO MÜLLER, MANUFACTURING ENGINEERING MANAGER (PLANT)

t the Iserlohn plant, an automated robot system for projection welding fasteners is being used for the first time. A worker first places the individual parts on the infeed conveyor belt (semi-automatic machine); the component position is automatically recognized and a robot gripper removes the individual parts from the belt before they are processed on the projection welding machine, before being placed on the outfeed conveyor belt or stacked in internal containers.

The number of nuts varies depending on the component variant. The nut feeder for projection welding is a special feature of the system. Unlike conventional systems, a separate feeder is not used for each nut type, but a universal, fully automatic feeding system that recognizes the position of the different nuts controls the feed. "With the semi-automatic machine, we can manufacture products with fasteners in a highly automated and economical way," says Ron Bigell, Operations Manager of Processing in Iserlohn.

Highly automated processes are also replacing previous manual activities at the Attendorn plant. Two semi-automatic and two fully automatic machines have been installed (picture left) and designed for new projects for various customers. The concepts of the systems differ greatly from the solutions and approaches implemented to date. Our Program Management, Manufacturing Engineering (ME) Center, Process Planning and local ME departments worked closely together to request and commission the systems under the given framework conditions, and successfully implemented the project with the support of suppliers, some of whom were new.

KIRCHHOFF Automotive will use the experience and knowledge gained from this project for future system concepts and further development of the systems together with suppliers.

New semi-automatic and fully automatic machines at the German sites ensure greater efficiency and optimization of production concepts.



An automated robot system for projection welding of fasteners is being used for the first time at the Iserlohn site.

On October 30, the KIRCHHOFF Automotive plant in Shenyang, China celebrated its 10th anniversary. Almost 100 guests attended the celebration in the new factory hall, including high-ranking representatives of our customers, authorities and suppliers.

Ten Years Together — **A Successful Future Ahead**



he plant in Shenyang has grown rapidly over the past 10 years. After its founding in 2013, series production of the first project, a dashboard support for GM, began. A second production hall was added to the plant in 2016. CNC control technology was introduced in 2017. Series production for BMW's first front-end project also began that year. By December 2021, the Shenyang plant expanded its production area by 4,275 m² to install a new 1,600-tonnes servo transfer press and realize new projects with BMW. Just one year later, the Shenyang plant was expanded by a further 4,275 m² to meet the growing logistical requirements. Since 2023, the HV plant has been producing clasp and shear panel assemblies as well as a front axle carrier for the BMW iX1 and other derivatives for the first time. A fourth production hall was completed in August 2023. Today, over 200 employees work at the KIRCHHOFF Automotive plant in Shenyang.



CEO Wolfgang Kirchhoff addressed the day and night shift employees early in the morning. In his speech, he thanked everyone for their commitment and great contribution to 10 years of successful plant development in Shenyang. At the end, there was a group picture together.

"For the chassis and body parts business, we need such a strong and professional partner. In this regard, we believe that KIRCHHOFF Automotive is an excellent partner who will continue to bring BMW's core competencies to the market and grow with us. Ten years ago, our cooperation began with crash management components for the 5 Series, which were then used in other derivatives. The celebration of the 10th anniversary of the KIRCHHOFF Automotive plant in Shenyang reflects the successes of the past years for BMW/BBA and KIRCHHOFF Automotive", said Ingo Kraus, Vice President Purchasing, QMP Powertrain, High Voltage Battery, Driving Dynamics of BMW China.

In additional guest speeches, Wang Linxiang, Director of Dadong District; Zhang Lin, Vice President of VDA China; Zhu Zhenyou, General Manager of Jiangsu Beiren; and Hendrik Barkeling, Consul of the German Consulate General emphasized their sincere appreciation for the fair cooperation, rapid development and continuous innovation performance of KIRCHHOFF Automotive in Shenyang. In his speech, Wolfgang Kirchhoff thanked everyone involved in this successful plant development for their effort: "The reaction of our customers and partners shows us that we are on the right track and will continue to grow with them."



01 Even the dancers were dressed in KIRCHHOFF Automotive corporate colours. 02 Host Wen Leyendecker, Managing Director of KIRCHHOFF Automotive China, welcomed the guests and guided them through the program. 03 Shenyang plant manager Jimmy Gu tells Wang Linxiang, Director of Dadong District, about the rapid development of the KIRCHHOFF Automotive plant in Shenyang. 04 f.l.t.r.: Managing Director of KIRCHHOFF Automotive China, Wen Leyendecker, CEO Wolfgang Kirchhoff and Hendrik Barkeling, Consul General of the Federal Republic of Germany in Shenyang. 05 Almost 100 guests attended the 10th anniversary celebration in the new, festively decorated factory hall.







More than Just a Networking **Opportunity**

In recent months, KIRCHHOFF Automotive employees from Sales, Quality and Procurement have presented the company at various customer events and initiated important steps for future collaboration.

The 24th annual Stellantis Supplier Diversity Matchmaker event in Auburn Hills, Michigan, USA, focused on an in-depth discussion of Stellantis' diversity roadmap. Suppliers from various categories such as logistics, engineering, quality control, storage systems, fastener applications, stamped parts and recycling solutions exchanged ideas. Here, Josh Forquer, Sumit Dutta (Vice President Procurement) and Robert Ozella (Suplier Quality Supervisor) gained valuable insights into the strategic direction and successes of Stellantis. Sumit Dutta and Robert Ozella agreed: "This Stellantis supplier event provided an excellent platform to foster collaboration, networking and knowledge sharing between industry leaders from around the world. It demonstrated the company's commitment to diversity."



Tagore (Engineering Manager) and Piotr Kuter (Program Manager) met potential service providers and partners who could help strengthen our supply chain.

t the **BMW Supplier Diversity Xchange** in Greenville, South Carolina, USA on August 2, 300 participants from 240 BMW supplier companies came together to exchange ideas and present their expertise. For Josh Forquer (Executive Vice President Sales and Technical Development), Rajesh Tagore (Engineering Manager) and Piotr Kuter (Program Manager) who attended, it was more than just a networking opportunity. "Here, we were able to meet potential partners who are willing to respond to our specific needs and can help us as we continue to build our supply chain," said Rajesh Tagore.

This can play a crucial role in strengthening our supply chain in the areas of raw materials, fasteners, cathodic dip coating, quality control, logistics and more - all critical components in our manufacturing process. We need reliable suppliers to guarantee the efficiency and quality of our business. "Building strong, strategic partnerships with suppliers is essential to our success. This event has provided us with a number of opportunities to do so," commented Rajesh Tagore.

AUTHOR: LAUREN O'BRIEN COMMUNICATION AND MARKETING SPECIALIST



The 24th annual Stellantis Supplier Diversity Matchmaker event provided a great opportunity to connect with suppliers from different categories.

AUTHOR: CELINE NEURE MARKETING

Accessibility Redefined: KIRCHHOFF Mobility Impresses at REHACARE 2023

The exhibition of the Volkswagen Caddy 5 Maxi, which was equipped with the innovative NIVO ProLine rear cut-out and a side wheelchair loading system, was met with great interest.



workshop replacement vehicles at all KIRCHHOFF Mobility branches. **You can** find more information here:

www.kirchhoff-mobility. com/produkte/mietfahrzeuge/mietfahrzeuge

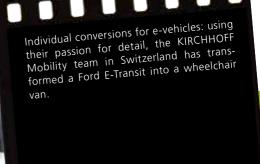


EHACARE is one of the most important trade fairs for rehabilitation and care worldwide, and takes place annually in Düsseldorf. It stands for innovative products and services that make life easier for people with limited mobility, chronic illnesses and special care needs.

This year's participation in REHACARE 2023 was a complete success for KIRCHHOFF Mobility. From September 13-16, the company presented innovative vehicle conversions and solutions for people with limited mobility. Visitors were particularly impressed by the new NIVO ProLine rear cutout, which impresses with its ergonomic bath floor design and a generous bath width of 82.5 cm.

In addition to the Volkswagen Caddy, KIRCHHOFF Mobility also presented other vehicles for the outdoors. These included the Opel Combo Life XL, also with a rear cut-out and various driving and operating aids, as well as a Ford Transit with a ramp and an aluminum system floor that can transport up to four wheelchair users.

Holger Pape, Managing Director of KIRCHHOFF Mobility, was extremely satisfied with how the trade fair went: "Not only numerous regular customers, but also many new faces found their way to our stand. REHACARE offers an excellent platform to present our wide range of solutions for people with mobility impairments, and for making direct contact with our customers and interested parties. We are already looking forward to next year!"



New at KIRCHHOFF Mobility:

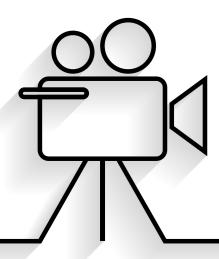
E-vehicle conversions. KIRCHHOFF Mobility has been offering individual conversions for e-vehicles for some time now. The transporter. The vehicle offers space for a total of nine people, including four seats for people with mobility impairments

> 100% INCLUSION 100% ELECTRIC 100% COMMITMENT



KIRCHHOFF Mobility's participation in REHACARE was a great success: the exhibition of the Volkswagen Caddy 5 Maxi with a rear cut-out and side wheelchair loading system was met with great interest.

"A conversion, that suits me"



Shooting day in Hilden: last summer we were filming a new video project that took place at the headquarters of KIRCHHOFF Mobility in Hilden. The aim? A short but meaningful image film about KIRCHHOFF Mobility that appeals to all target groups from interested parties, to applicants and customers, to the company's own employees.



Customer advisor Adem Okutan on the way to the new vehicle. "Adem Okutan gave his all so that I could drive my finished Ford Focus for Christmas, and he kept his promise," says Denise.

31:00 HD 🚺 💶 💽 Denise in her new converted Ford Focus

AUTHOR: SOUSCHA NETTEKOVEN-VERLINDE MARKETING

KIRCHHOFF Mobility attached particular importance to the authenticity of the footage and therefore decided against using professional actors. Instead, the video was filmed with the company's own customer advisors and two female customers in one of the seven KIRCHHOFF Mobility branches. The two customers in the video, Denise and Sylvia, had their vehicles converted by KIRCHHOFF Mobility just over a year ago.

Denise calls her conversion from KIRCHHOFF Mobility a "Christmas present" - in the truest sense of the word. In search of good advice, she made an appointment with customer advisor and conversion specialist Adem Okutan at KIRCHHOFF Mobility in Hilden.

A suitable conversion solution was guickly found, tailored to the needs of smaller people or people of short stature. "Adem Okutan gave his all so that I could drive my finished Ford Focus at Christmas – he kept his promise. I am very happy with the conversion because it suits me," says Denise. She can now drive in comfort thanks to a special car seat with individual seat adjustment, a pedal raiser and an electric tailgate opener with a foot sensor and remote control.

Sylvia was also looking for a suitable conversion solution. She came across KIRCHHOFF Mobility on the Internet. Like Denise, she also had her vehicle, an Opel Combo, converted at the KIRCHHOFF Mobility branch in Hilden. The Combo was equipped with specially selected conversion solutions for people with contergan impairment. Among other things, a digital driving and steering system, and a touch display for operating the secondary vehicle functions were installed. Sylvia is very happy with her "customized car", which was the most important reason for her to take part in the video.

Take a look at the new image film from KIRCHHOFF Mobilit on YouTube now:





Sylvia had an Opel Combo converted at KIRCHHOFF Mobility and says: "I was pleasantly surprised by the friendliness of the people at KIRCHHOFF Mobility. I know from my own experience that friendly interaction with customers is not always a given."



Sylvia in her new converted Opel Combo.



Latin America **Appreciates What is** "Made in Germany"

One of the most important trade fairs for the hardware, electrical and lighting industry in Latin America is the Expo Nacional Ferretera. Our team from WITTE Tools was not only represented with its own stand at the trade fair in Guadalajara, Mexico (September 7-9), but Martha Sobek, Sales & Marketing Latin America, was also present at the specialist conference for women in the tool industry at the same time.

AUTHOR: MARTHA SOBEK SALES & MARKETING LATIN AMERICA

"

"The Expo helps us to understand the needs of the Latin American market. The focus here is on direct contact with end customers. They are looking for special solutions and learning about improving processes, such as avoiding downtime on screwdriving machines by using long-lasting bits," explains Martha Sobek. "The market's quality control requirements are high, especially in the automotive industry. In terms of the number of vehicles produced, Mexico ranks 7th in the world with 3.51 million (2022) (source: eleconomista.com.mx). Our good quality "Made in Germany" promise is highly valued here."

At the trade fair, the WITTE Tools team was part of the German Quality Tools Group. This association of leading tool brands made in Germany presented its products and solutions for the tool market at its own stand. "The response was very positive; we were able to make many interesting contacts and initiate business," says Martha Sobek. She also took part in the specialist conference for women in the tool industry, which was held parallel to the trade fair. Here, she gave a presentation on "Personal Branding in the Hardware Industry" and spoke about how in today's increasingly competitive and globalized world, a strong personal brand can make all the difference when looking for a job, in business, networking and building lasting relationships.

The conferences provided a platform for exchange and networking for women working in this traditionally male-dominated sector. The presentations, workshops and discussions covered topics such as career development, leadership skills, innovation and sustainability. "I was very happy about the exchange with the audience at this event. I was able to answer questions about dealing with customers or colleagues - or give recommendations on sales literature, which I love to read and also like to give as gifts," says Martha Sobek.

The durable WITTE tools can be found in the following cities in Mexico:

- » Ciudad de México y Puebla: Ferreshop
- » Ciudad de México: Herramientas Regia
- » Querétaro: Eurotools
- » Guadalajara, Hermosillo, León: Coi Innovacion
- » Mazatlán, Culiacan: Sumimaz

Screwdriving solutions "Made in Germany" since 1785. Scan the QR code and download the current WITTE Tools catalog:





Betsy Campos, Sales Manager of COI Innovacion with a visitor. COI is a tool distributor with branches in Guadalajara, Hermosillo and Leon, Mexico.



The CITYPOWER can be fuelled with hydrogen Together with the winning team from Hy City and electricity from renewable energy sources, meaning that no greenhouse gases are emitted locally. The prototype for goods and freight transport will be trialled as a two-axle vehicle in 2025. With a payload firmation of its ongoing commitment to sustainable of nine tonnes, a range of 500 kilometres and a refuelling time of just thirty minutes - 32 kilograms of hydrogen can be carried – it is a powerful vehicle.

Every two years since 2003, this prize has honoured exemplary projects that focus on innovative, sustainable environmental initiatives and climate protection measures. Florian Brandau, Technical are already 100 vehicles of the BLUEPOWER type, Managing Director of ENGINIUS, says: "It is a recognition that not only makes us happy, but also the road. encourages us to continue being 'a little bit crazy'. Otherwise it would not be possible to continue on the ambitious but necessary path towards an emission-free future."

ENGINIUS was selected from 19 applications in

special project: the CITYPOWER, our new concept

was not only an honour for ENGINIUS, but also con-

innovation.





The Bremen Environmental Award (BUP), sponsored by Bremer Aufbau Bank (BAB - the development bank for Bremen and Bremerhaven), enables us to present our vision and our project to a wider audience. We are grateful for this form of visibility. from left: Ralf Stapp (Chairman Managing Director BAB), Florian Brandau (CTO ENGINIUS), Matilda Heidorn (Project Manager Hydrogen & Infrastructure FAUN Group) and Kathrin Moosdorf (patron of the BUP and Senator for the Environment, Climate and Science Bremen) Photo: BAB/Michael Bahlo

A bit AUTHOR: CLAUDIA SCHAUE MARKETING & COMMUNICATIONS MANAGER FAUN GROUP

ENGINIUS has made it to the final of the Bremen Environmental Award (BUP) with its hydrogen trucks. A recognition for the entire team and all those who believe in hydrogen.

For Matilda Heidorn, Project Manager Hydrogen October as a finalist for this year's BUP with a very & Infrastructure at FAUN, the award for this new product is a great recognition for the years of work for climate-neutral transport for heavy and medi- behind the sustainably powered vehicle.

> ENGINIUS is one of the world's first suppliers of battery-electric trucks with fuel cells. There the chassis used for refuse collection vehicles, on

> > The CITYPOWER will be launched as a prototype in 2025. Not only does this truck travel CO₂-free, but it also represents a low-noise and low-odour alternative to conventional diesel trucks.



Test rig for the strength of tailgates



he user-friendliness of municipal vehicles and the safety of the teams and the public are immensely important and part of our daily work. Innovation and guality play a central role and are success factors for our products. So that this works right from the start, we are bundling activities in the new Quality Excellence Centre (QEC) of the TEC Centre.

In 2020, the idea was born to create a dedicated prototype centre for all KIRCHHOFF Ecotec Group products, where we can carry out tests under real conditions. Because the prototyping has priority, but there is often no space in the production plants. However, the technology centre should not only create prototypes, but also to take the concept even broader in terms of content. And so the Quality Excellence Centre (QEC) was born.

Mission: To carry out tests in a laboratory environment under real-life conditions.

Vision: Products do not go into series production without appropriate tests.

> In the new Polish QEC, with an area of almost 1,000 square metres, we carry out tests on telescopic cylinders for superstructures, check the stability of entire superstructures and work on research and development projects of the Ecotec Group. We also develop measurement methods and analyse data in order to further improve the quality and reliability of our products. The results are incorporated into the products of the entire Group.

> As a next step, we are planning to build a large, universal test station for hydraulic components, such as hydraulic cylinders, pumps and hydraulic valves. These tests also take place under reallife conditions, but in a significantly shorter time compared to tests on real vehicles. This is how we make our vehicles "ready for the future". 🔳

Quality Excellence Center – Refuse collection vehicles on the test bench

AUTHOR: ANDRZEJ SYGIEL DIRECTOR TEC-CENTER KIRCHHOFF ECOTEC



The new regulations in DIN EN 1501-1:2021 are aimed at even more safety and functionality for the operators and the population. To ensure that new components and requirements work, the products undergo thorough testing.

KIRCHHOFF ECOTEC

Uiiii, Author: Mario Ringl Faun Sales Director Faun Cleaning Division that goes off

On the quietest and cleanest roadtrip of Germany this year were Steffen Hofmann and Andreas Becker with the electric VIAJET 6E on a Designwerk chassis.

GLANZEND SAUBER

OHNE CO,

electric motors.

sweeper hums quietly along the A4 motorway. The usual rustling of the brushes and the sucking sound of the blower can be heard. Otherwise, the vehicle is as quiet as a whisper. The VIAJET 6E (E for electric) on a Designwerk chassis manages entirely without a combustion engine. Steffen Hofmann (FAUN Viatec test pilot) switches off the sweeper and steps on the power pedal - uiiii it's going off. The chassis pulls off like a car – no wonder with an output of 500 kW (the batteries are located behind

The suction and sweeping performance is 100% comparable with the diesel-powered VIAJET 6. During development, the aim was: "What a diesel engine can do, an electric one must also be able to do". Energy-hungry options have been dispensed with and the electrically driven fan, the biggest energy guzzler to date, has been optimised. The brushes, the water pumps and the movement functions of the hopper are supplied with oil via a small electro-hydraulic unit. Like all VIAJET sweepers, the lifting and swivelling functions of the sweepers are pneumatically controlled. The sophisticated control system ensures economical sweeping. At the touch of a button, it is also possible to utilise the full potential and to vacuum up loose paving stones.

With an energy storage system of 450 kWh, the driver can always drives for eight to ten hours without intermediate charging and does not have to fear of not making it back to the depot. Charging is possible with AC (alternating current) with up to 22 kW or DC (direct current) with 150 or optionally 350 kW. This means that a battery that has been discharged to 10% SOC (state of charge) in approx. one and a half to three hours fully charged again with

the cab to optimise the centre of gravity) and four

a high-power charger (HPC). With AC, the charging process from 10% to 80% can take up to 15 hours.

After the end of the tour, the first bookings fluttered in at the FAUN Viatec factory in Grimma. Clean orders.

THUN







FAUN ZOELLER UK enters the hire business with the takeover of vehicle professional CPD. The fleet already comprises 130 collection vehicles.

ver the years, growth has been steady and profitable with many changes, which is the only real constant at the company. Product development has helped us improve our market share in the UK and secured many new customers who had previously never dealt with FAUN ZOELLER UK.

Always working to expand and capitalise, we were delighted to announce the acquisition of C.P Davidson based in Chorley, Lancashire. Simon Hyde, Managing Director FAUN ZOELLER UK, said: "We are thrilled to finally announce that we can bring CPD into the company. Another family business that has a tremendous reputation for excellent service particularly in the service arena, which will only compliment the offering of FAUN ZOELLER UK."

CPD is no stranger to the group as they have been the UK agent for SEMAT for many years who are of course part of the ZOELLER Group in Germany. It is a perfect match for both businesses to come together. Philip Davidson added; "While this choice was not easy, we firmly believe it is the best course of action for the future of our company and all of our valued employees. FAUN ZOELLER is a highly reputable and leading waste management company specialising in

Not many weeks after the announcement, both management teams were quick to get into action and as a first step investment is already in place to expand the fleet. Initially this is for the traditional 26t municipal and commercial specification with the FAUN VARIOPRESS and combination of the 359-trade lift and Rotary split level. The expansion programme will continue with the of the KIRCHHOFF Ecotec group and its range of products; so watch this space.

manufacturing high-specification waste collection vehicles and bin lifters. FAUN ZOELLER has expressed a strong interest in expanding their operations, and they are dedicated to maintaining the same level of quality service that our customers have come to expect from us. We firmly believe this change presents exciting new opportunities for our company and employees."

K>MOBIL 61

Rocket start

Hei og velkommen to FAUN Norge.

AUTHOR: CLAUDIA SCHAUE MARKETING & COMMUNICATIONS MANAGER FAUN GROUP



metres outside Oslo, and the number is growing.

TENK GRØNT. TENK BÆREKRAFTIG. TENK ROTOPRESS.

www.faure-norge.com

The team is responsible for sales, service and spare parts sales of FAUN refuse collection vehicles and sweepers as well as Meiller Kipper tipper trucks in Norway. It not only inspects commercial vehicles, but also offers maintenance and general inspections for trucks and other commercial vehicles. The team has acquired the licence for this.

As a newcomer to the market, FAUN Norge won some of the most important tenders in Norway, including the order for 21 VARIOPRESS for Oslo, including full-service maintenance contracts for four years. Deliveries will start in spring 2024. The young company led by Konstatin Polinger as Operation Manager has thus got off to a real rocket start. As a partner for the Nordic capital, FAUN Norge not only has to fulfil environmental requirements, but also demonstrate a training quota of 10%. Polinger is particularly looking forward to this task. The icing on the cake for the second financial year was the order from Stavanger for four ROTOPRESS refuse collection vehicles on an electric Designwerk chassis. The municipality of Stavanger already has three of the drum vehicles in use. Next year, a VIAJET 6 on a Scania chassis will be travelling even further north. This will be the first sweeper in Norway to be powered by climate-neutral biogas (CBG).

Konstantin Polinger has been living in Norway with his family for ten years and not only knows the Nordic waste disposal industry, but also the country and its people. The best prerequisites for successful co-operation.

089

onstatin Polinger started out alone with FAUN Norge last year. He was supported by his FAUN colleagues Thomas Hoffmann and Lucas Dörr, who are experienced in sales and export. There are now 13 employees working in the workshop in Skedsmoskorset, 15 kilo-

> stantin Polinger. Operation FAUN Norge, with wo Managing Directors Lucas nd Thomas Hoffmanr





"You can't hear it, you can't smell it and yet all the rubbish bins are empty. And it's sustainable, 100% electric." With these words, FAUN AUSTRIA Managing Director Herbert Utz summarises the demonstration tour of the VARIOPRESS on an e-Econic chassis through Austria."



AT A WINE TAVERN OR HERE I ON THE DANUBE IS A MUST.

AUTHOR: HERBERT UTZ MANAGING DIRECTOR FAUN AUSTRIA

he cleanest Austria tour started at the new FAUN AUSTRIA plant in Stockerau. Then the truck was off to the home municipality and the district capital Korneuburg, followed by the beautiful Wachau wine region, where, for example, the Brantner company also put the vehicle through its paces in the area.

The result is impressive. After ten tonnes collected, the vehicle still had 50% battery capacity. So the calculation works out: 10 tonnes of recyclables + 50% battery capacity = 100% electric.

The e-Econic has a battery capacity of 300 kWh. In the meantime the VARIOPRESS 523H with the ZOELLER automatic presented in all federal states and numerous customers, private waste disposal companies, cities and municipalities from Lake Neusiedl to Lake Constance have tried and tested the truck. Some customers still have the pleasure ahead of them.

Summary of all test drives: 90% of the waste collection tours were driven and disposed without intermediate loading. The future of disposal is electric.

The man

AUTHOR: JOSIANE ROYER ASSISTANT TO MANAGING **DIRECTOR & COMMUNICATIONS** FAUN ENVIRONNEMENT

and the sea

FAUN Environnement is committed to the cleanliness of the oceans and supports the sailor and environmentalist Adrien Simon and thus also the organisation Plastic Odyseey.

drien Simon is an enthusiastic sailor and committed environmental activist. "When I decided to sail in the Mini Transat, I wanted to realise more than just a simple race. It was very important to me that my actions were sustainable. The Plastic Odyssey association is a project run by merchant navy officers like me who are committed to cleaning up the oceans. These values are also important to me in my everyday life."

Adrien Simon, sailor and environmentalist at the Mini-Transat: "I am proud to carry the FAUN colours across the Atlantic and beyond." The Mini-Transat is the school of ocean racing: 4,050 nautical miles solo on small boats just 6.50 metres long! The regatta has been held every two years since 1977. In 2023, 300 skippers took part.



(FAUN

Adrien Simon and Etienne Blaise, Managing Director of FAUN Environnement, met during the search for a suitable partner. They talked a lot about FAUN's values and the synergies that could be created with the sailing project and the environmental campaign. As part of the planning process, the sailor visited the FAUN plant in Lambesc in the south of France and spoke to the team. A lively exchange about the everyday life of a sportsman and a vehicle manufacturer ensued. What they all have in common: environmental protection. It was therefore obvious for FAUN Environnement that we would support Adrien and Plastic Odyssey for two seasons.

On World Clean-up Day organised by The Sea Cleaners, Adrien and the team, supported by the two FAUN vehicles CYCLONÉA and CÌTANÉA, lent a hand and cleaned the beach in the Atlantic town of Les Sables d'Olonne

AUTHOR: KRISTINA LERCH EDITORIAL OFFICE ZÖLLER-KIPPER GMBH

WILLKOMME

Participants at the annual conference of the Association of Austrian Waste Management Companies (VOEB) were treated to a very specia start this year. STUMMER Kommunalfahrzeuge hosted a gala evening at its factory premises in Bischofshofen. Waste collection vehicles and machines made room for around 350 guests from the waste industry, politics and the community in factory hall 4.

Splendid setting for enjoyment and hot topics

"It was great to feel the solidarity of the industry and to talk about the challenges of the future together," says STUMMER Managing Director Johann Streif. "After all, good ideas don't just emerge around the conference table." Dr. Johannes F. Kirchhoff (Managing Partner of the KIRCHHOFF Group) summed up what is most important: "The aim of our work in waste management is to bring all materials into a cycle and let as little as possible go to waste".

A statement for the future

At the STUMMER site, solutions to the industry's most pressing issues are already being impressively implemented: fossil fuels have given way to district heating from biomass, for example, and electricity is 100 percent self-generated via a photovoltaic system. These and other measures are also intended to make a statement: for climate protection and resource conservation.







Above: Venue for the gala: factory hall 4 in a festive setting. Below: The solidarity on stage symbolizes the solidarity of the industry. F.I.t.r.: Johann Streif (Managing Director STUMMER), Robert Streif (Operations Manager STUMMER), Gabriele Jüly (President of the VOEB Board), Dr. Johannes F. Kirchhoff (Managing Partner KIRCHHOFF Group), Hansjörg Obinger (Mayor of Bischofshofen)

Growth for the MA 48 vehicle fleet - three of the five vehicles handed over in October 2023

from Stories Vienna

The entire vehicle fleet of the City of Vienna is to be converted to alternative drive systems in the coming years. When it comes to e-mobility, STUMMER has already impressed with the X2 body. Now the first hydrogen-powered waste collection vehicle is in operation in the city.

AUTHOR: SABINE KÄMPER EDITORIAL OFFICE ZÖLLER-KIPPER GMBH

o exhaust fumes and no diesel humming - at least as far as waste collection is concerned, the summer of 2023 was quiet Not only clean, but also safe and low-emission on the Danube Island. eye contact with passers-by and cyclists is possible, The ENGINIUS BLUEPOWER with STUMMER MEDIUM and the driver has an all-round view when setting off and low-emission on the Danube Island. An additional plus: thanks to the low-floor cab, in Vienna's most popular recreational area since May. This makes Municipal Department 48, MA 48 for short, which is responsible for waste management "We are testing additional technology here so that and street cleaning, one of the pioneers in Austria. we can draw on practical experience for future purchases," says 48er department manager Josef Thon. The drive, waste compaction and bin emptying are all electric. On board as a range extender are two "The future will show which alternative drive type hydrogen or electric vehicle - is actually the most suithydrogen fuel cells with 30 KW each. They charge the battery (capacity 85 kWh) while driving, which in turn supplies energy for the electric motors. This gives the vehicle a range of around 160 kilometers. It is fueled Two years ago, the Viennese tested a STUMMER X4 on a MAN chassis. "The very low overhang makes with green hydrogen and the electricity comes from the vehicles extremely maneuverable. The completely the 48's own photovoltaic systems. Compared to a combustion engine, this saves up to 52 tons of CO₂

new hydraulic system not only saves energy, it also compacts the load so efficiently that up to 6.5 tons can be loaded instead of 4.5 tons for plastic or cardboard packaging," explains STUMMER Managing Director Johann Streif. Vienna was impressed by the vehicles and the STUMMER service and won them over as a new major customer. "After Budapest, this is the second metropolis that we have been able to convince of our products and services. A real milestone for STUMMER," says Streif happily. Five vehicles were already delivered in October 2023, and 26 more have been ordered for 2024.

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K>MOBIL 61

hat began over 30 years ago with four welders as an "extended workbench", is now a successful player in the waste management industry. With around 280 employees, ZOELLER Systems, based in Ricany, is currently the most important supplier and producer of final assembled lift units and parts for all types of lifts for the ZOELLER Group. Markus Dautermann reports about the future plans for the Czech company.

proud of?

Markus Dautermann: Of our joint achievement. ZOELLER Systems has a great team and a strong and stable management team which can draw on decades of experience. We always pull together and have mastered every challenge so far, which is reflected in our extremely successful market development in the Czech Republic.

What is so remarkable about it?

What are your plans for the next 30 years?

Markus Dautermann: Our focus is on digitalization and automation. We currently have six welding robots, one handling robot and a painting robot, the highest level of automation within the ZOELLER Group. Our particular USP is the painting robot.

What makes this robot so special?

Markus Dautermann: Painting large surfaces with a robot is easy. Lifters, on the other hand, have many nooks and crannies. This is a challenge because over 6,000 lines have to be programmed. Nevertheless, we decided to go for it three years ago. We now paint 90 percent of our lifters with the robot. That means progress and a competitive advantage.

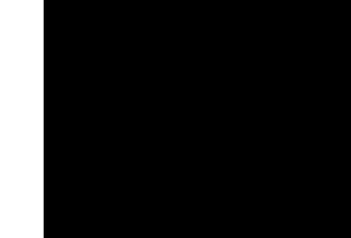
Back to your plans

Markus Dautermann, COO ZOELLER

Group und CEO ZOELLER Systems

Markus Dautermann: The aim is to achieve global cost leadership. Thanks to our currently unrivaled level of automation and production volume, which we also achieve through the production of loading units for FAUN and for ZOELLER X2 and X4 bodies, the chances are very good. To achieve this, we will continue to drive forward automation and ensure a continuous gain in expertise. If we remain agile and continue to develop, we can achieve this goal.

Thank you very much for the interview!



AUTHOR: KRISTINA LERCH EDITORIAL TEAM ZÖLLER-KIPPER GMBH

Major plans for the future

ZOELLER Systems strives for global cost leadership. K)MOBIL spoke with Markus Dautermann, COO ZOELLER Group and **CEO ZOELLER Systems.**

Looking back over the past years, what are you particularly

Markus Dautermann: In addition to our role as the main supplier within the ZOELLER Group, we also supply the Czech and Slovakian markets and have been able to build up very strong customer relationships there. Today, we generate 25 percent of ZOELLER Systems' turnover in these markets.

K>MOBIL 61

J ALLROUNDER GERHARD WEISS-MAGURA SWAPS HIS DESK FOR A KAYAK.

Gerhard's journey began in 2001 as an office sales manager at Haller Umweltsysteme and continued at ZÖLLER-KIPPER after the takeover. During this time of business consolidation, he did pioneering work - "Order handling, software solutions, everything had to be rethought." This was followed by tasks for the internal sales organization, marketing and the consignment area, which he significantly expanded as division manager in recent years. Now new adventures are waiting: kayaking, fitness, photography, city trips and time with friends. What he will miss: "Definitely the collaboration with my dedicated colleagues!"

An excellent trade fair presentation AUTHOR: EWA MAJ MARKETING EKOCEL

At the international trade fair for environmental protection POLECO in Poznan, the

Polish ZOELLER subsidiary EKOCEL was able to shine in several respects.



Sosnowy (Managing Director EKOCEL) with jury member Prof. Dr. hab. Andrzej Mizgajski. Right: All good things come in threes ...

medal at the end of the trade fair. There was also the economic development.

"Development of hydrogen technology and electrifi-

At ZOELLER TECH, four welding robots now ensure weld seams of the highest precision.

Full process automation has already been completed, including prefabrication. An additional laser cutting machine was purchased for this purpose. In addition, the machines were connected to a joint automation and storage system, which significantly increases the proportion of work carried out simultaneously.

The new additions to the team: Robot colleague

ZOELLER TECH in Poland successfully utilizes robots and automation

for additional speed, precision and reliability.

AUTHOR: KATARZYNA STERNE CEO ASSISTANT/ MARKETING & COMMUNICATION ZOELLER TECH Another important step in the automation of production is the gradual robotization of the welding line and equipping it with modern welding robots. After all, a highquality weld seam produced by a professional will never achieve the precision required in many industries. ZOELLER TECH therefore began optimizing the entire welding line in 2022. Starting with the selection of the supplier, adapting the production line, specifying the quantity requirements, carrying out trials, tests and technical approvals, through to the installation of four welding robots. In particular, the aim is to increase production output of the top products in the X family - MEDIUM X2 and MEDIUM X4.

The new welding line is scheduled to start regular production at the beginning of February 2024. The team is convinced that automation will further strengthen its competitiveness on the global market. Because, according to ZOELLER TECH: "We know how important speed, precision and reliability are, especially in our industry."

arger production capacities, higher productivity - this is the goal that ZOELLER TECH's production facility in Rekowo Górne has been pursuing since its expansion in 2020. Successive robotization and automation of the individual production workstations is intended to further increase efficiency and optimize production processes.

Welding seams - one like the other

KIRCHHOFF ECOTEC



They still have big plans, f.l.t.r.: Rainer Rohler (CEO ZOELLER TECH), Fredrik Börjesson (Sales Manager RCV JOAB), Stefan Hartzén (CEO JOAB), Peter Olsson (owner JOAB), Thomas Schmitz (CEO ZOELLER Group), Krzysztof Sosnowy (Export Manager ZOELLER TECH).

To be continued

AUTHOR: KATARZYNA STERNE **CEO ASSISTANT / MARKETING & COMMUNICATION ZOELLER TECH**

The three companies ZÖLLER-KIPPER, ZOELLER TECH and JOAB have been working together as partners since 2014. A testament to first-class teamwork across national borders. Now Germany, Poland and Sweden have said yes to each other again, so to speak.

> roducing together and driving forward innovations for a clean tomorrow together - with ZÖLLER-KIPPER, ZOELLER TEC Hand JOAB, this is going smoothly. That is why the production of vehicles and the development of new and environmentally friendly solutions for customers in the waste disposal sector will continue to go hand in hand until at least 2033. When the collaboration with JOAB, a Swedish manufacturer of vehicle bodies for municipalities, began in 2014, nobody expected ZOELLER products to be so successful in the Nordic countries.

On the road to success

with waste separation

Today, the three companies can proudly look back on nine years of cooperation, which has enabled them to jointly build and market around 1,400 units on the Nordic market. More than half of these are of the ANACONDA TWIN type. This is a two-chamber vehicle for the collection of household waste with two separate inlet flaps and a split hopper. This prevents the mixing of different materials in the individual chambers.

Trust in the leading role

CEO of ZOELLER TECH Rainer Rohler summed it up very aptly: "We are delighted that the cooperation has been extended for another ten years. In all these years of developing, improving and producing our vehicles, we have built something together that is far more valuable than a contract on paper - friendship and trust! Trust in business is what makes successful relationships. The so-called gentleman's agreement to move forward, look ahead and make the best of every situation."

Merry Christmas and a Happy New Year!



