EGA | **Acquisition of Hanover-based Leichtmetall**

Emirates Global Aluminium (EGA) has announced that it has acquired the German aluminum recycling company Leichtmetall. Leichtmetall is a European specialty foundry with production that includes high-strength, large-diameter billets and high proportions of secondary aluminium. EGA will acquire 100 % of the company's shares. At its Hanover site (Germany), Leichtmetall produces up to 30,000 t of aluminum billets a year, with secondary aluminum making up around 80 % of the output material. EGA currently exports more than 600,000 t of primary aluminum a year to Europe.

© EGA

Abdulnasser Bin Kalban, Adel Abubakar (both EGA), Steffen Görig (Quantum Capital Partners) and Thomas Witte (Leichtmetall) (f. l. t. r.)

ZF | **Rebranding of Passive Safety Systems Division**

© ZF

Rudolf Stark

ZF Group has made public the rebranding of its Passive Safety Systems division to ZF Lifetec. The new branding is part of the ongoing legal separation of the Passive Safety Systems division, which produces airbag, seat belt, and steering wheel systems at 46 locations in 18 countries. "Our new ZF Lifetec brand combines our mission of saving lives with our technology-driven approach. We are aiming for growth, driven by automotive megatrends and globally rising levels of safety regulations," said Rudolf Stark, head of the brand.

MdynamiX | **Strategic Cooperation with the IMM**

MdynamiX has entered into a strategic partnership with the recently founded Institute for Humans and Mobility (IMM) at Munich University of Applied Sciences. The collaboration will offer the institute access to a broader industry network. For the development service provider MdynamiX, IMM's expertise in the field of transportation design is important. As Peter Pfeffer, the CEO of MdynamiX, explained: "We are pleased to have IMM on board as an expert scientific partner for the successful implementation of projects in areas such as ADAS, vehicle dynamics, and NVH."

© MdynamiX | Elmos Photo-Design

Peter Pfeffer

Porsche | Applied Intuition | **Joint Software Development**

© Porsche

The car maker Porsche and the automotive software specialist Applied Intuition have entered into a strategic partnership. Their common goal is to implement joint developments in different fields of automotive software. The aim of the partnership is to increase software ownership and to reduce dependencies on the suppliers of black-box solutions, thus lowering the level of complexity and raising implementation speed. This will provide Porsche with access to comprehensive expertise to develop, deploy, and update vehicle software.

Goodyear | **New Simulation Center in Luxembourg**

Goodyear has officially opened its new simulation center in Luxembourg, which is equipped with a DiM250 Dynamic Driving Simulator developed by the company VI-grade. The center is designed to enhance Goodyear's collaboration with OEMs and support tire performance through personalized product development. A virtual tire development process can test and validate tires for car models that do not yet exist. This provides speedier production and ensures that tire modifications can be made during the development process in order to suit the vehicle's needs. The use of simulated driving means that fewer physical tires need to be produced and the manufacturing process can be speeded up. According to calculations, this will save an average of 13,000 tires and 97,500 km of physical tire testing.

© Goodyear

Mandy Arendt, the Mayor of Colmar-Berg, Romain Hansen (Goodyear) and Lex Delles, Minister of Economy, SME, Energy, and Tourism in Luxembourg at the official opening (f. l. t. r.)

Mayer TechConcepts | **LEDs and Textile Heating Systems for Seats and Doors**

© Mayer TechConcepts

At the Techtextil trade fair in April 2024 in Frankfurt am Main (Germany), Mayer Tech-Concepts presented three products for state-of-the-art vehicle interiors. The first is a car seat covering consisting of Alcantara on a polyester microfiber basis and imitation leather. The Alcantara upholstery is printed with small lilies and red quilted lines. The imitation leather covering the headrest is decorated with a large lily in relief that is backlit with LEDs. The illuminated side bolsters of the seat include controls for the backrest and lumbar support. The second exhibit is a seat with a special edge. It has a dirt-resistant 3D surface consisting of a product known as Cerapur, which is a ceramic hard coating that can be applied to stretchy materials and to non-elastic substrates. The third development that was on display at the trade fair is a textile material printed with a 3D heating paste made from carbon nanotubes. This is a textile surface heating system that can easily be operated by touch because the sensors are also printed on the fabric.

## FEV | **Sensing Partial Electric Discharge**

FEV has developed PD-HVX (Partial Discharge – High Voltage X), a solution for the early detection and prevention of partial discharge in high-voltage electric drive systems. The phenomenon of partial discharge is a local electric spark-over that can occur at voltages above 600 V and can lead to damage to the insulation and, in the worse case, can result in irreparable damage to the whole vehicle. The solution uses established measuring systems with specially developed sensors that are employed for qualitative measurements in electric drive systems. This enables customers to identify partial discharge during the development phase and take the necessary action. PD-HVX uses electromagnetic frequency analysis to measure the electromagnetic fields around the drive unit. The software then uses the measurement results to determine whether partial discharge occurs within the drive unit during operation.
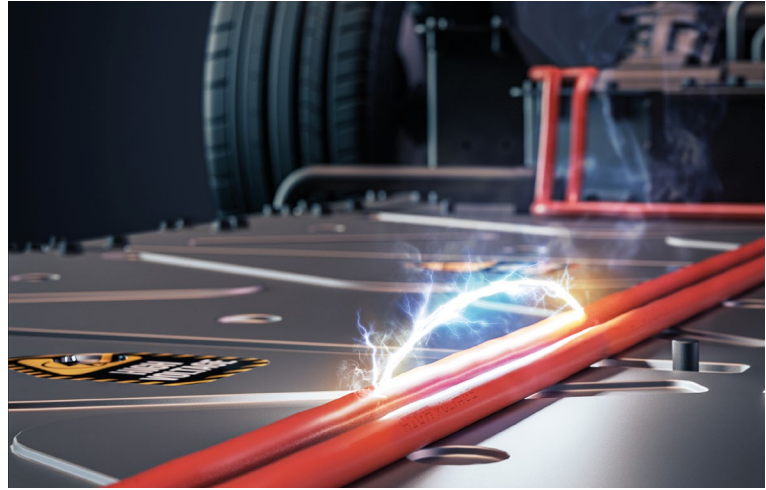

© FEV
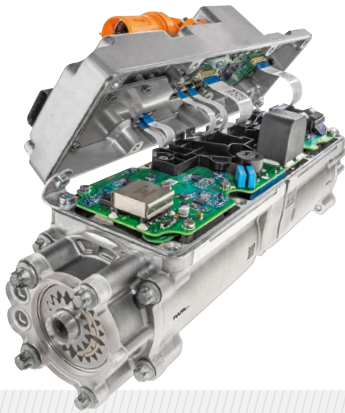
© Rapa

Rapa | **Chassis Control for Porsche**

Rapa has unveiled the second generation of its Motor Pump Unit for fully active chassis control, which will be used for the first time in the hybrid versions of the third model generation of the Porsche Panamera. It is based on a permanent magnet synchronous motor (PMSM) with a significantly increased power density. The PMSM is designed as a modular system with only one variation of the twelve stator windings and can be adapted to the usual on-board electrical system voltages, covering nominal voltages of 400 and 800 V. Due to an increase in the slot fill factor for the copper windings as well as other modifications, the size of the motor has been reduced by 40 %.
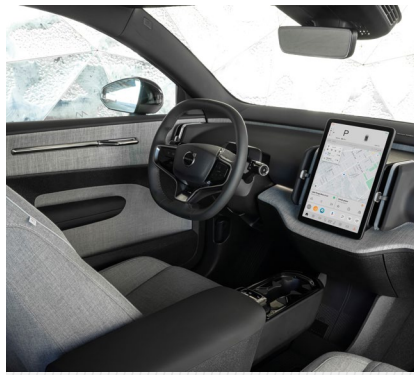
© Ecarx

Ecarx | **Modular Software Platform**

Ecarx has developed and implemented the Cloudpeak software system to meet the requirements among automotive manufacturers for software-defined vehicles. Based on the Android Automotive operating system and Linux, Cloudpeak is a flexible, modular platform created to provide OEMs with a foundation for infotainment and driver assistance systems. One of the first applications for the system is Volvo's EX30 fully electric SUV. The system's 5G connectivity operated from a 12.3" touchscreen and over-the-air software updates provide a host of cloud-enabled features.

© Enes Kucevic | BMW | ZKW

ZKW | **Lamps for the BMW XM**

ZKW supplies particularly narrow front and rear lamps for the BMW's XM SUV. At the front, the dark, high-resolution LED headlamps blend harmoniously into the car. The rear of the SUV features all-round LED lamps with separate controls. Implementing this project presented the engineers with major challenges, as a special light guide concept needed to be developed due to the low height of the headlamp. ZKW developed a split front light with two high-resolution LED modules that integrate headlamps with low beam and high beam as well as daytime running lamps with LED light guides for position lights, direction indicators, and side-markers (for the US version).

DoubleSlash | Marquardt | **Digital Key System**

Software specialist DoubleSlash and the mechatronics expert Marquardt are launching Digital Key. The system combines hardware and software components and complies with the standards of the Car Connectivity Consortium (CCC). The modular solution provides efficient, secure, and convenient access to the vehicle via a smartphone. With its flexibility and variety of functions, such as creating, sharing, and revoking driving authorization, the new system opens up completely new possibilities for all customers and OEMs in the automotive and commercial vehicle sector, as well as for car rental companies and fleet operators. While Marquardt contributes its modular PnD3 driving authorization system to the partnership, DoubleSlash provides the software for Digital Key services with all the necessary interfaces to the vehicle-OEM and smartphone-OEM-backend.

© Marquardt

Vibracoustic | **Air Springs for the Audi e-tron GT**

© Vibracoustic

Vibracoustic is supplying the air springs, consisting mainly of four plastic components, that are installed in the Audi e-tron GT sports car. The system has three switchable air volume chambers, enabling it to generate four different stiffness levels to match the driving situation. The more chambers are activated, the lower the stiffness is and the higher the comfort level becomes. The air springs can switch between four modes, ranging from a comfort mode, using all of the chambers' volumes, to a very dynamic mode, which uses the smallest volume and more than doubles the stiffness. The system also utilizes body and wheel acceleration sensors to enable individual damper control at each axle, adapting the springs according to driver input and the road surface. The air spring system can also adjust its height above the road based on the driving situation and speed, moving between a total range of 60 mm.