



**AUTOMOTIVE
ENGINEERING
EXPO 2019**

**CAR BODY
PROCESS CHAIN**
FROM CONCEPT TO FINAL ASSEMBLY

Nürnberg, Germany
4–5.6.2019

PRESS RELEASE

May 2019

Lighter, safer, more efficient?

New bodies are optimized for typical crash situations right from the initial development stage. The aim is to protect the occupants from all forces acting on the vehicle in an accident. Of course, this also applies to lightweight construction. Due to legal requirements, the focus for a long time was on reducing weight: the lighter the model, the lower the fuel consumption and CO2 emissions. But the emergence of alternative drive systems seems to take the pressure off the weight debate. The questions now are: How can the body be designed more cost-effectively without compromising safety? Do materials such as new Advanced High Strength Steels (AHSS) contribute with their strength to structural components now becoming more cost-effective?

The AEE – AUTOMOTIVE ENGINEERING EXPO answers these questions on June 4th and 5th at Nuremberg exhibition centre in the show's Innovation Park, where Renault, for example, is showing the lightweight body of its newly launched Alpine sports car. It consists of 96 percent aluminium and weighs just over one ton at a length of 4.18 metres. Jaguar Land Rover also relies on the light metal: the electric SUV "I-Pace" features an almost pure aluminium body, offers rapid 400 hp and a range of more than 500 kilometres. BMW is showing a lightweight product made of CFRP, namely the roof of the 8 Series Coupé, which is manufactured using a new wet-pressing process and can thus be produced much more cheaply.

Combining hot and cold forming

The Spanish forming specialist Gestamp presents a hinge column produced using the "Ges-Multistep" manufacturing process. The process combines cold and hot forming of sheet metal parts made of zinc-coated boron steel.

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NÜRNBERG MESSE





A high-speed process that provides better corrosion protection even for complex geometries. To be seen during the Guided Tours and at a presentation in the AEE Congress:

“Multistep hot stamping process, a revolutionary lightweighting technology”

04.06.2019, 11:00 - 11:30 am.

Steel innovations for tomorrow's cars

To make vehicles lighter, safer and cleaner, steel specialist ArcelorMittal is presenting a whole range of highly innovative steel products in Nuremberg. The steel grades for hot stamping "Usibor 2000" and "Ductibor 1000" make the vehicle fleet lighter, while the new AHSS steels for cold-pressed automotive parts, "Fortiform", offer high strength and excellent formability. Further offers include the steel series for electric mobility "iCARE", which is already used by several OEMs.

ArcelorMittal, Hall 12.0 / Stand 12-423.

That's what Jaguar Land Rover says:

“It will continue to be important in the future to reduce the weight of vehicles and avoid emissions. That's why we at Jaguar Land Rover continue to prioritise lightweight technologies. It is important that the right material is used in the right place, whether aluminium, UHSS, carbon fibres or other materials. With the Tucana research project we are leading, we are committed to developing cost-effective and scalable carbon fibre solutions that will improve vehicle performance over time.” Andrew Foster, Chief Engineer Body Complete, Jaguar Land Rover

The Jaguar Land Rover I-Pace, along with all body-in-whites, components and parts, can be seen at the Innovation Park, Hall 12, stand 12-329. The Innovation Park is also the start and end point of the Guided Tours, which start daily at 10 and 14 o'clock.



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