IMA is a sound partner for WerkstoffPlusAuto in Stuttgart

Submittted by Martin Tauber

On February 20-21, 2019, around 150 experts from industry and research discussed current and trend-setting developments in the use of materials in concepts and architectures for cars and commercial vehicles of tomorrow at the WerkstoffPlusAuto conference in Stuttgart. The 9th edition of this series was hosted by the Institute for Vehicle Concepts of the German Aerospace Center (DLR).

(left to right: Stephan Steinacker/Almamet, Martin Tauber/IMA, Horst Friedrich/DLR, Karl Kainer/Helmholtz, Matthias Gruber/Magontec; not pictured: Michael Just/GF, Elmar Beer/DLR)

New vehicle concepts, such as automated, modularized and electrically driven people and cargo movers carrying people or goods, will increasingly determine the way we build vehicles and what materials are used. The technologies that enable such new concepts must increasingly assert themselves not only in functional but also in ecological competition. The demand for so-called green materials is constantly growing.

IMA member Prof. Dr. Friedrich - Director of the Institute for Vehicle Concepts at the German Aerospace Center at the opening of the conference.

Transformation of the automotive industry in focus

Whether multi-material modules for electromobility, materials and construction methods for alternative-powered vehicles or the potential of artificial intelligence, digitization and additive processes in vehicle manufacturing - the varied contributions from business and science focused on the fundamental transformation of the automotive industry, new technological concepts and solutions in the automotive industry foreground. In addition to the optimal use of advanced metallic and fiber-reinforced lightweight materials, the experts also discussed the potential and effects of "green materials", for example wood as a structural material in modern vehicle construction.

IMA members presented in various sessions of the conference

Martin Tauber, IMA European Committee Chairman, also President of the CRM Alliance presented *Raw Materials in Search of Sustainability*. This presentation is also available on the CRM Alliance website and on LinkedIn SlideShare.

Matthias Gruber, Magontec gave an *Overview of environmentally friendly Mg alloys out of the Electrolyses process from Qinghai*.

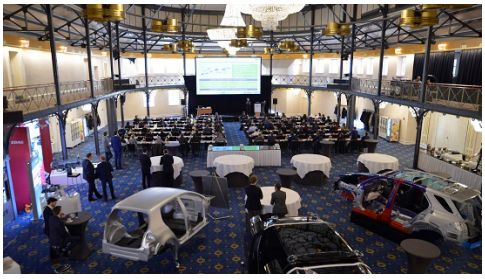
Michal Just presented *Opportunities for Semi-solid pressure die casting*.

IMA member GF exhibited award-winning Mg parts

IMA member Michael Just and colleague at the GF Casting Solutions stand.

Next Generation Car

DLR know-how for the car of the future from concepts, to structures and materials, to networking and vehicle intelligence - DLR's "Next Generation Car" (NGC) collaborative project uses the full spectrum of innovative power and knowledge. At the conference, for example, the DLR researchers provided an up-to-date insight into the subproject "Active Energy Absorbers". The focus is on technologies to specifically influence the energy absorption of crash structures in the front end of an information-networked car in such a way that the acceleration effects on the occupants and thus on the vehicle Injury risk after an accident should be kept as low as possible.



This is of particular interest for the collision behaviour of heavy vehicles with light vehicles or in modular vehicle concepts, such as the Urban Modular Vehicle (UMV) developed by DLR, whose size and weight vary greatly depending on the intended purpose.

In the accompanying exhibition, OEMs and suppliers also presented new, innovative material applications and construction methods. Volkswagen, for example, showed the new version of the technology demonstrator Sedric, Daimler a cutting body based on the new Mercedes-Benz GLE.

IMA is looking forward to the 10th edition next year planned for 18/19.2.2020. https://www.werkstoffplusauto.de/frontend

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