PRESS RELEASE

IKV to attend IAA again in Frankfurt

IKV will present research on automotive construction on the joint NRW stand

Aachen, July 2017 – A large number of research projects at the Institute of Plastics Processing (IKV) in Industry and the Skilled Crafts at RWTH University are focused on plastics in automobile construction. At the upcoming IAA 2017 – the 67th International Motor Show to be held from 14 to 24 September in Frankfurt, Germany – IKV will present some of these projects on the joint North Rhine-Westphalia stand in Hall 4.

Under the motto "Automotive-Land Nordrhein-Westfalen", the Ministry for Economics, Innovation, Digitisation and Energy of the State of NRW will bring together eleven institutes and companies from NRW on the joint stand. The experts from IKV will present their current research for the automotive industry and its implementation in practice.

At the IAA, IKV will bundle its research topics in the field of automotive into four main areas, namely: Development of hybrid parts, solutions for lightweight construction, product development with complex materials, and process development in injection moulding. IKV scientists will illustrate these topics on four "themed islands" with the help of exhibits and presentations.

The "Development of hybrid parts" area will cover the customised production of functionalised thermoplastic FRP lightweight parts through combination with additive manufacturing, the integrated thermoforming and backmoulding of sheet metal in the injection moulding tool, and the design and production of hybrid plastic/metal structural parts, based among other things on the example of a near-series production front-end.

"Solutions for lightweight construction" are varied and inherent to plastics. Under this aspect, IKV will present research topics from the field of fibre-reinforced plastics (FRP). Specifically, there will be an interactive repair workshop of the future for electric vehicles built with CRP as part of the project "Leading technologies for SMEs", the efficient production of complex FRP components by 3D fibre spraying with local TowPreg reinforcement, and the prediction of the damage behaviour and design of fibre-reinforced plastics in the event of a crash and under fatigue stress.

In the third area, "Product development with complex materials", IKV will demonstrate the integrative simulation of the mechanical behaviour of short and long fibre-reinforced thermoplastic parts, material and process development for the production of mobile fuel cells with plastics-based bipolar plates, and the direct and indirect additive manufacturing of plastics parts.

The fourth topic "Process developments in injection moulding" will cover the production of complex plastic optical components, taking as an example an LED primary optic made of liquid silicone rubber (LSR) and the multi-layer process, as well as the integrated metal/plastic injection moulding process and the "ProFoam" physical foam injection moulding process.

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About IKV

IKV, the Institute of Plastics Processing at RWTH Aachen University, is Europe-wide the leading research and education institute engaged in the field of plastics processing enjoying outstanding reputation. More than 300 staff are employed in finding solutions to problems connected with processing, materials technology and part design in the plastics and rubber industries. IKV's close contacts with industry and science, together with its outstanding facilities, enable cutting-edge research in plastics technology and ensure that students benefit from a comprehensive, practically oriented course of study. Plastics engineering graduates from IKV are thus sought-after experts in industry. In organisational terms, IKV is divided up into the four specialist departments of Injection Moulding, Extrusion and Rubber Technology, Part Design and Materials Technology, and Composites and Polyurethane Technology. The institute also takes in the Centre for Analysis and Testing of Plastics, and the Training and Further Education department. IKV is run by an Association of Sponsors, which currently has a membership of about 290 plastics companies from all over the world. Univ.-Prof. Dr.-Ing. Christian Hopmann is Head of the Institute and Managing Director of the Association of Sponsors. He also holds the Chair of Plastics Processing at the Faculty of Mechanical Engineering at RWTH Aachen University.

Photo in high resolution to find on our website together with the press release at
www.ikv-aachen.de/en/news

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Automated and resource-efficient production of thermoplastic composites for lightweight applications in the automotive industry, based on the example of a seat structure (Photo: Fraunhofer ILT)