PRESS RELEASE

AZL Aachen GmbH

Aachen/Germany
February 16th, 2016

AZL establishes a Workgroup on High-Performance SMC

AZL Aachen GmbH has established a Workgroup on High-Performance Sheet Molding Compound (SMC). Within an initial AZL Workshop more than 60 participants from the industry – including several automotive OEMs such as Audi, BMW, Ford, Hyundai, MAN, Toyota and Volkswagen – defined research and development topics for the future AZL Workgroup.

At last year's AZL Annual Partner Meeting, the AZL Partner Companies had indicated SMC as a major topic to increase collaboration. Following this request, AZL organized the initial Workshop, in which experts from companies, such as Plastic Omnium, BYK-Chemie, Menzolit, Polynt, Huntsman, Polytech Composites, 3M or Henkel, discussed the potential of SMC for the lightweight industry. The workshop was initiation and coordinated together with Plastic Omnium and BYK-Chemie.

Mark Zimmermann, Product Line Director of the Plastic Omnium Auto Exterior Division: "To future-proof SMC, we need performances comparable to other materials such as Aluminum as well as SMC applications suitable for class A surfaces. We are looking forward to regularly working with the AZL Partner Companies and Institutes on this next generation of High-Performance SMC in the Workgroup."

In comparison to other materials, SMC is determined by a high number of interdependencies between material and processes which are both challenge and potential. Especially the adaption of the material formulation concerning processing and application offers great potential to improve the efficiency.

Dr. Götz Krüger, Head of Special Project "Advanced Composites" at BYK-Chemie GmbH: "Our specialties contribute in nearly all SMC formulations to improved processing and part performance. Due to the increasing relevance of new carbon fiber reinforced and density-reduced SMC types, the close collaboration between material science, production technology and end-users within the workgroup will offer a lot of potential for innovation to increase the competitiveness of SMC against other lightweight materials".

The participants defined material characterizations of various SMC types, methods for fast and reliable predesign of components and processes, an improved bonding of reinforcing fibers to the resin matrix as well as the development of new resins as most important subjects for future research and development activities.

Dr. Kai Fischer, Managing Director of AZL Aachen GmbH and Scientific Director at the Institute of Plastics Processing (IKV): "In the context of cost-effective lightweight production, SMC materials and products have been one major topic within more than three decades of research at RWTH Aachen University, especially at the IKV. The initiation of the workgroup in combination with the beginning installation of the 1.800 t press system of Schuler Pressen GmbH at the Aachen Center for integrative Lightweight Production, will be an important milestone to further improve the cost and lightweight potential of SMC."

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The newly established AZL Workgroup will meet regularly to continuously work on these topics. To start with, AZL will propose a study to benchmark available simulation software as well as a Joint Partner Project to develop a tool box for material characterization of various SMC types. Furthermore, a concept to present the Workgroup activities with a Business Platform will be presented at the next meeting.

Dr. Michael Effing, Senior Advisor of AZL Aachen GmbH: “For many years, Sheet Molding Compound (SMC) has been a first choice lightweight solution for replacing metal parts. Due to its unique cost performance on the one hand and the need for further weight savings to significantly reduce CO_2 emissions on the other hand, the SMC technology is currently undergoing a new success. We are happy that our AZL Partner Network as well as a great number of industrial lightweight experts agree on the potential we see in SMC and have joined our initiative.”

The next meeting of the AZL workgroup will be on June 30th, 2016 and will be exclusively for AZL Partner Companies.

Participants of the initial AZL Workshop on “High-Performance SMC” in Aachen:
3M Deutschland GmbH, A. Schulman GmbH, Aliancys Deutschland GmbH, Ashland Performance Materials, AUDI AG, BASF SE, BENTELER SGL Composite Technology GmbH, BMW Group, BYK-Chemie GmbH, CANNON Deutschland GmbH, CANNON Ergos, Christian Karl Siebenwurst GmbH & Co. KG, Conbility GmbH, Connectra Global KB, Covestro Deutschland AG, Evonik Industries AG, Fagor Arrasate S. Coop., Faurecia Automotive Composites, Ford Research & Innovation Center Aachen, Gurit UK Ltd, HELM AG, Henkel AG & Co. KGaA, Huntsman, Hyundai Motor Europe Technical Center GmbH, ika at RWTH Aachen University, IKV at RWTH Aachen University, ITA at RWTH Aachen University, Mahr Metering Systems GmbH, MAN Truck and Bus AG, Menzolit GmbH, Mitsubishi Rayon Europe GmbH, Mubea KG, Plastic Omnium Auto Components GmbH, Polynt Composites Germany GmbH, POLYTEC COMPOSITES GERMANY GMBH & Co. KG, Schmidt & Heinzmann GmbH & Co. KG, SGL TECHNOLOGIES GmbH, Toyota Motor Europe NV/SA, Volkswagen AG

At the initial AZL Workshop, more than 60 participants from the industry, representing the complete value chain from material suppliers to automotive OEMs, discussed the potential of SMC for the lightweight industry.

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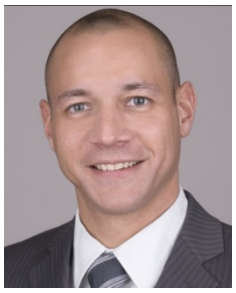

Dr. Kai Fischer, Managing Director of AZL Aachen GmbH and Scientific Director of the Institute of Plastics Processing (IKV) at RWTH Aachen

Dr. Michael Effing, Senior Advisor of AZL Aachen GmbH and initiator of the AZL Workgroup on High-Performance SMC

Mark Zimmermann, Product Line Director of the Plastic Omnium Auto Exterior Division

Dr. Götz Krüger, Head of Special Project „Advanced Composites“ at BYK-Chemie GmbH

About AZL:

The worldwide unique lightweight competence network Aachen Center for Integrative Lightweight Production (AZL) of RWTH Aachen demonstrates significant lightweight expertise in research and development. The objective of the AZL is the transformation of lightweight design in mass production. With its partner institutes active in various fields of lightweight production technology (totally over 750 scientists and 1,100 graduate assistants) on the RWTH Aachen Campus, AZL regroups all the required know-how to help the composites industry develop tomorrow’s lightweight production technology. As a service provider partnering

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with companies in the field of lightweight production technology, AZL Aachen GmbH offers industrial services in engineering, consultancy and project management, networking and human resources marketing, among others. The AZL Partner Network consists of about 60 industrial partners representing the entire lightweight production value chain from the raw material producer, over molders, manufacturing equipment suppliers, Tier 1 and Tier 2 to OEMs, from SMEs to large multinational corporations, from Germany to Mexico, China or Japan.
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