

COMPOSITES EUROPE 2017

LIGHTWEIGHT AUTOMOTIVE CONSTRUCTION PROPELS USE OF FIBRE-REINFORCED PLASTICS



- Market study “Lightweight Construction as Innovation Factor”:
Presentation at COMPOSITES EUROPE
- 21 September: Focus Day Automotive

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No other industry has drawn more public attention to glass- and carbon-fibre reinforced plastics (GFRP/CFRP) than the automotive industry. Next to the aerospace industry, it's one of the innovation and growth drivers for composites. The great significance of composites for the automotive industry must be credited to the continuing lightweight construction trend. From 19 to 21 September, COMPOSITES EUROPE in Stuttgart will show how the composites industry can support automakers and their suppliers in this area. Programme highlights include the Focus Day Automotive and the Lightweight Technologies Forum.

Presentation of the study “Lightweight Construction as Innovation Factor”

When it comes to composites in the automotive sector, modern lightweight construction is the No. 1 topic, according to industry expert Rainer Kurek, CEO of AUTOMOTIVE MANAGEMENT CONSULTING GmbH (AMC) from Penzberg near Munich. After all, he says, it comprises all the aspects of lightweight automotive construction – from concept, functions and joining technologies to materials. The training and consulting company specialises in auto-industry strategies, processes and structures; together with COMPOSITES EUROPE organiser Reed Exhibitions, they will, on 21 September, present the study “Lightweight Construction as Innovation Factor” (“Leichtbau als Innovationsfaktor” in the original German), which takes a holistic and detailed look at the issue. “Created in cooperation with Reed Exhibitions, the market study ‘Lightweight Construction as Innovation Factor’ synthesises the German automotive industry’s knowledge from nearly 150 years of experience”, explains Kurek. “Against the backdrop of increasing environmental and climate-protection requirements, a fragile energy supply and the resulting more stringent resource-conservation targets, it serves to sustainably enhance and strengthen Germany’s role as a centre of innovation.” The developer says he used to think in terms of materials first, but “design engineers today approach lightweight construction with an integrative mindset – with other joining



and production technologies as well as with new materials. These days, the typical tasks we get from OEMs are almost always based on integrative lightweight construction.”



Positive outlook

With about a third of the GFRP materials produced in Europe being used in the transport sector, innovations and the current development status of composites for the automotive market will be emphasised in the exhibition halls of COMPOSITES EUROPE 2017, as well. The future looks bright, according to Composites Germany’s latest market survey. No fewer than 46 per cent of responding companies expect this segment to grow. Only 15 per cent anticipate a downturn. The automotive industry isn’t just one of the biggest buyers of thermoplastic composites, it’s also a major purchaser of thermoset materials like SMC. Exhibitors such as Saint Gobain Performance Plastics, capricorn COMPOSITE, Lange+Ritter, SGL TECHNOLOGIES GmbH, ARKEMA France, Cevotec and EMS will be onsite to address the automotive industry’s composites requirements.

Theme day for “motorists”:

Focus Day Automotive

What’s more, the entire third day of the trade fair – dubbed the Focus Day Automotive – will be dedicated to visitors predominantly interested in composites for the vehicle industry. A free one-hour guided tour at 11 am on 21 September, for example, will give visitors a comprehensive overview. Stops include the stands of industry-leading companies such as Evonik Industries, Huntsman, the Institute of Aircraft Design at the University of Stuttgart, PHP Fibers, Toho Tenax Europe and Vosschemie. Since the number of participants is limited, it would be advisable to register in a timely manner by visiting:

www.composites-europe.com/guided-tours.



The subsequent Automotive Business Lunch taking place at the stand of sponsor Hexion (Hall C2, BO6) at 12 pm will provide an excellent networking opportunity. In addition, expert lectures at the COMPOSITES Forum in Hall 6, Stand B76, will cover automotive basics, trends and innovations. Admission is free of charge for trade fair visitors.



Hybrid lightweight construction: The best from different material worlds

Hybrid lightweight construction, which combines metallic materials with composites, is another trend in automotive engineering, as Kurek confirms. In his estimation, it's imperative to intelligently leverage the strengths of each respective material. "We need to think very carefully about how the different materials can be used in line with the required strength." Composites, for instance, are great at absorbing tensile forces, while metallic materials are better suited for compressive forces." This is exactly the issue Kurek sees as COMPOSITES EUROPE's most critical task: "Even with composites, we long ago moved from 'either-or' to 'both'. Metallic materials have a right to exist just as composites do."

That's why the Lightweight Technologies Forum at COMPOSITES EUROPE will provide answers to questions revolving around lightweight construction with other materials like aluminium or steel. The combined exhibition and presentation forum featuring exhibitors such as Kunststoffwerk AG Buchs, Linn High Therm, Schütze, OCSiAL Group, Hexcel Composites and ar engineers will serve as the cross-material interface between metal and composite technologies in structural components.



Trade fair opening event: 3rd International Composites Congress (ICC)

Kicking off COMPOSITES EUROPE 2017 on 18 and 19 September 2017 will be the “3rd International Composites Congress (ICC)” hosted by the trade association Composites Germany in Stuttgart. Current trends, new applications and technologies, and a comprehensive overview of market developments in Europe and worldwide will be the centre of attention at the 3rd ICC. This year’s partner country, South Korea, will be represented with several exclusive speakers.

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