

Press r e l e a s e

Collaboration for innovation – vehicle structures

Bertrandt and SGL Group present

“Carbon Carrier” – the technology avant-garde

(Ehningen/Meitingen, November 23, 2017) Bertrandt and SGL, in a collaborative initiative, have developed an unprecedented integrated concept for innovative interior structures based on composite materials – the “Carbon Carrier” – the technology avant-garde. Ready for large-scale production, the “Carbon Carrier” combines lightweight fiber compounds and integrated functionality, and is the perfect example of use of material mix in the automotive industry.

In lightweight construction, carbon fiber-reinforced plastics (CFRP) play a major role. Bertrandt and SGL Group have combined their complementary expertise to demonstrate the potential of this material group. The objective was to develop a groundbreaking technology ready for large-scale production that offers new configuration and design options for vehicle interiors.

An OEM-neutral body draft created at Bertrandt served as the basis for the development of a functional package model for the front vehicle interior of a convertible or coupè with electric drive. The model includes all major function and trim components of a conventional instrument panel. In addition, the carrier features a newly developed design language, which will help visualize central load paths and CFRP elements for drivers. Structural components were also redesigned, giving the interior a more free, light and floating impression.

“While designing the Carbon Carrier, we made sure that the components, technologies and assembly concepts used, were ready for large-scale production either now or in the near future. For electric vehicles in particular, reduced weight means a greater range,” states Michael Hage, Head of Body Development/CAE at Bertrandt.

The major challenge in developing the Carbon Carrier was to find the optimal configuration of matrix and fiber material, fiber length, portion and orientation, layer structure and process technology that meets a wide range of requirements. The body draft is an exemplary non-exclusive mounted structure, for which, SGL Group not only shared its material and process expertise, but also its experience in large-series component production. An optimal material mix as well as the production technology were devel-

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oped at the Lightweight and Application Center (LAC), where lightweight solutions are designed for large-scale production. “The combined expertise of Bertrandt and SGL Group along the entire product development process was incorporated into the Carbon Carrier – from the concept phase, to design and automated large-scale production,” reports Dr. Andreas Erber, Head of the Lightweight and Application Center of the SGL Group.

This Carbon Carrier features a high degree of innovation and reveals realizable structures in modern vehicle concepts. The acquired expertise will be applied in further collaborative initiatives as well as in future Bertrandt and SGL Group customer projects.

About Bertrandt

As a leading European development specialist, Bertrandt is in the areas Automotive, Motorcycles, Commercial Vehicles, Aerospace as well as Mechanical and Plant Engineering, Electronics, Energy, Shipbuilding and Medical Technology a reliable partner for current and future projects in all areas of research and development. The company offers each customer a comprehensive range of services with tailored, integrated solutions along the entire product development process. Customers benefit from the expertise of the entire company thanks to the cross-group specialist department structure and local subsidiary-oriented market cultivation.

A total of 13,000 employees at 54 locations worldwide stand for profound expertise, future-proof project solutions and a customer focus. In fiscal year 2015/2016, Bertrandt generated a revenue of 992.7 million euros. The company’s headquarters is located in Ehningen, Baden-Württemberg, Germany.

For more information on Bertrandt, visit: www.bertrandt.com.

About the SGL Group – The Carbon Company

The SGL Group is a leading manufacturer worldwide of products and materials made from carbon. The extensive product portfolio ranges from carbon and graphite products, carbon fibers all the way through to composites. The SGL Group’s core expertise comprises the control of high-temperature technologies as well as the deployment of many years’ application and engineering know-how. This is used to exploit the company’s wide materials base.

The SGL Group’s products are deployed in the automotive and chemicals industries as well as in the semiconductor, solar, LED industry segments and in the field of lithium-ion batteries. Carbon-based materials and products are also used in wind energy, aviation and space travel as well as in the defense industry.

With 34 production locations in Europe, North America and Asia as well as a service network in over 100 countries, the SGL Group is an enterprise with a global

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orientation. In the 2016 financial year, approx. 4,000 employees generated 769.8 million euros in sales revenue. Its Head Office is based in Wiesbaden / Germany.

For more information on the SGL Group, visit: www.sglgroup.com/press

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