

SGL Group supports innovative pavilion installation based on fiber composite structure at Victoria and Albert Museum in London

- Installation demonstrates automated and creative use of composite materials
- 50k carbon fibers from SGL Group used in robot-controlled fabrication process

Wiesbaden / London, June 30, 2016. As part of its first ever Engineering Season, the Victoria and Albert Museum (V&A) in London has unveiled an architectural installation developed by a team from the University of Stuttgart's Institute for Computational Design (ICD) and Institute of Building Structures and Structural Design (ITKE). Called "Elytra Filament Pavilion", the installation is based on a robotically fabricated fiber composite structure and is displayed in the Museum's John Madejski Garden. With robot assistance, the Pavilion will "grow" during the course of the V&A Engineering Season, which runs until 6 November. SGL Group gave optimum support to the fully automated fabrication approach by supplying its SIGRAFIL® 50k carbon fibers for the installation and assisting the project team with material expertise and advice.

"We are delighted to contribute our materials and expertise to support Stuttgart University's very striking exhibition project for V&A's special "Engineering Season". The installation impressively demonstrates the wide-ranging potential for innovative application of composite materials. It also shows the high degree of automation that is now possible in the industrial production of components from composites," enthused Andreas Wüllner, head of SGL Group's "Composites – Fibers and Materials" Business Unit.

The SIGRAFIL® 50k fibers used in the installation represent a new generation of industrial carbon fibers specially suitable for automated production processes. Among other applications, the fibers are used as standard in the BMW i3, i8, and new 7 series. They are produced in the world's largest and most modern carbon fiber plant at Moses Lake in the US state of Washington. Composites (especially material solutions based on carbon fibers) offer outstanding properties such as light weight, high durability, and corrosion resistance. These characteristics make them excellent materials for many new applications across a wide variety of industries from the automotive, aerospace, and wind energy sectors to other areas such as pressure vessel manufacture and construction.

"We would like to thank SGL Group very much for supporting the project and for their long-standing partnership. The project represents a further step in the development of robotically fabricated fiber composite structures for construction," said Moritz Doerstelmann, project manager of the architectural installation.

The *Elytra Filament Pavilion* is the result of a number of years' research into the integration of architecture, construction engineering, and bionic structures, which has been carried out at the Institute for Computational Design and the Institute of Building Structures and Structural Design at Stuttgart University. The project shows how the principles of biological fiber structures can be applied to architecture through computational design and fabrication methods. Inspired by the forewing shells (*Elytra*) of flying beetles, the innovative structure of the Pavilion consists entirely of robotically fabricated glass and carbon fiber elements. These create both an extremely lightweight, high-performance structure and fascinating architecture.

For further information and videos on the "Elytra Filament Pavilion", please visit <https://www.vam.ac.uk/exhibitions/elytra-filament-pavilion>.

About SGL Group – The Carbon Company

SGL Group is one of the world's leading manufacturers of carbon-based products and materials. It has a comprehensive portfolio ranging from carbon and graphite products to carbon fibers and composites. SGL Group's core competencies are its expertise in high-temperature technology as well as its applications and engineering know-how gained over many years. These competencies enable the Company to make full use of its broad material base. SGL Group's carbon-based materials combine several unique properties such as very good electrical and thermal conductivity, heat and corrosion resistance as well as high mechanical strength combined with low weight. Due to industrialization in the growth regions of Asia and Latin America and increased substitution of traditional with innovative materials, there is a growing demand for SGL Group's high-performance materials and products. Products from SGL Group are used predominantly in the steel, aluminum, automotive and chemical industries as well as in the semiconductor, solar and LED sectors and in lithium-ion batteries. Carbon-based materials and products are also being used increasingly in the wind power, aerospace and defense industries.

With 40 production sites in Europe, North America and Asia as well as a service network covering more than 100 countries, SGL Group is a company with a global presence. In 2015, the Company's workforce of around 5,700 employees generated sales of €1,323 million. The Company's head office is located in Wiesbaden.

Further information on SGL Group can be found in SGL Group's newsroom at www.sglgroup.com/press or at www.sglgroup.com.

About the V&A

The V&A is the world's leading museum of art and design with collections unrivalled in their scope and diversity. It was established to make works of art available to all and to inspire British designers and manufacturers. Today, the V&A's collections, which span over 5000 years of human creativity in virtually every medium and from many parts of the world, continue to intrigue, inspire and inform.

vam.ac.uk

For further PRESS information and images on the V&A's Engineering Season please contact Laura Mitchell in the V&A press office on +44 (0) 20 7942 2503 or email l.mitchell@vam.ac.uk (not for publication).

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