

SGL Group ceramic component reaches Jupiter's orbit in Juno spacecraft

- Instrument carrier made of carbon fiber-reinforced silicon carbide (C/SiC) meets most demanding requirements

Wiesbaden, July 20, 2016. At the beginning of July and after a five-year journey in space, the NASA's Juno spacecraft entered orbit about Jupiter, the largest planet in the solar system. Jupiter's environment is characterized by very intense radiation, which makes very high demands on spacecraft systems and materials. On board the Juno spacecraft is a critical ceramic component based on carbon fiber-reinforced silicon carbide (C/SiC) made by SGL Group.

The Juno spacecraft is equipped with highly accurate measuring devices. The extremely stiff sensor carrier for the magnetometer ("Magnetometer Optical Bench") has been made from the SGL Group's optimized SIGRASIC material. It combines the non-magnetic properties needed for researching the magnetic field with the extremely demanding requirements of aerospace engineering: high thermal resistance, low density, high stiffness and strength, as well as excellent temperature, radiation and thermal-shock resistance. Moreover, low thermal expansion paired with high thermal conductivity is especially beneficial for ensuring the high mechanical stability required of this component under the extreme environmental conditions at Jupiter.

SGL Group is a pioneer in the development of the material class carbon fiber-reinforced silicon carbide (C/SiC). A well known application is the carbon-ceramic brake disc which was fitted as standard in Porsche GT2 since 2002. Today this carbon-ceramic brake disc is used in many high-performance sports cars.

Through targeted development and superior performance of the C/SiC material class, a lot of other applications for this material have materialized to date. These include C/SiC clutch discs in race cars, components for wear resistant industrial applications such as pump parts, bearing parts and charging racks, and components with complex shapes for ballistic protection (armor) and other friction applications in industry.

The potential of the high-tech material C/SiC is far from exhausted and will be continuously developed at SGL Group's central research and development facilities, offering customized solutions for specific customer needs.

SIGRASIC® is a registered trademark of the SGL Group companies.

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.

Important note:

This press release may contain forward-looking statements based on the information currently available to us and on our current projections and assumptions. By nature, forward-looking statements involve known and unknown risks and uncertainties, as a consequence of which actual developments and results can deviate significantly from these forward-looking statements. Forward-looking statements are not to be understood as guarantees. Rather, future developments and results depend on a number of factors; they entail various risks and unanticipated circumstances and are based on assumptions which may prove to be inaccurate. These risks and uncertainties include, for example, unforeseeable changes in political, economic, legal, and business conditions, particularly relating to our main customer industries, such as electric steel production, to the competitive environment, to interest rate and exchange rate fluctuations, to technological developments, and to other risks and unanticipated circumstances. Other risks that in our opinion may arise include price developments, unexpected developments connected with acquisitions and subsidiaries, and unforeseen risks associated with ongoing cost savings programs. SGL Group does not intend or assume any responsibility to revise or otherwise update these forward-looking statements.

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