

## Press Release

Wiesbaden, June 11, 2018

### **New tube sheet design for heat exchangers prevents corrosion and leaks**

- Intermediate plate made of silicon carbide for stabilization of gasket seats
- Concept for electronic leak detection

SGL Carbon will present a new patent-pending tube sheet design for silicon carbide (SiC) heat exchangers atACHEMA, the world's leading trade fair for the chemical industry, process technology and biotechnology from June 11-15, 2018, in Frankfurt am Main. Compared with other designs available on the market, this solution offers an optimized seal, a crucial advantage in applications with load changes, where leaks often occur.

In place of an intermediate plate based on PFA-lined carbon steel (perfluoroalkoxy), the new design relies on a SiC intermediate plate. The use of this temperature- and corrosion-resistant material means that problems with the sealing seats are a thing of the past. In addition, the diffusion of the medium is prevented in the intermediate plate, whereby the risk of corrosion is avoided.

A series of tests performed by the company is proof: Even after 100 cycles, there is no sign of leakage. The tube sheet design in batch operation was subjected to continuous temperature fluctuations between -10 and +150°C. "This is a major improvement. When using the systems currently available at the market, leaks are observed already after a few cycles," states Ralph Spuller, Head of Product Management Process Technology, Graphite Materials & Systems Business Unit at SGL Carbon.

The company will also present a concept on electronic leak detection that has been validated in initial lab tests. This innovative system helps increase reliability and protect the environment, as leaks on the main flanges can be identified right away electronically, before the medium is able to escape. When it comes to the new SGL Carbon system, visual monitoring, additional tube sheets and seals are no longer necessary, all of which are still required for detection purposes in current solutions.

We look forward to seeing you at our booth in Hall 4.0, Stand F26.

### **About SGL Carbon**

SGL Carbon is a technology-based company and world leader in the development and production of carbon-based solutions. Its high-quality materials and products made from

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specialty graphite and composites are used in industrial sectors that determine the future: automotive, aerospace, solar and wind energy, semiconductor and LEDs as well as in the production of lithium-ion batteries and other energy storage systems. In addition, SGL Carbon develops solutions for chemical and industrial applications.

**In 2017, SGL Carbon generated sales of around 860 million euros. As of December 31, 2017, the company had approximately 4,200 employees worldwide in 34 locations in Europe, North America, and Asia.**

Materials, products and solutions from SGL Carbon are embedded in the major topics of the future: sustainable mobility, new energies and cross-industry digitization. Further developments in these areas demand more intelligent, more efficient, networked and sustainable solutions. This is where the entrepreneurial vision of SGL Carbon evolves around: contributing to a smarter world.

Further information on SGL Carbon can be found in the Newsroom of SGL Carbon at [www.sglcarbon.com/press](http://www.sglcarbon.com/press) and at [www.sglcarbon.com](http://www.sglcarbon.com).

**Important note:**

To the extent that our press release contains forward-looking statements, the latter are based on information that is available at present and on our current forecasts and assumptions. Forward-looking statements, by their very nature, entail known as well as unknown risks and uncertainties that may lead to actual developments and events differing substantially from the forward-looking assessments. Forward-looking statements must not be understood to be guarantees. Instead, future developments and events depend on a large number of factors; they comprise various risks and imponderables and are based on assumptions that may possibly turn out not to be appropriate. These include unforeseeable changes to fundamental political, economic, legal and societal conditions, particularly in the context of our main customers' industries, the competitive situation, interest and exchange rate trends, technological developments as well as other risks and uncertainties. We perceive additional risks e.g. in pricing developments, unforeseeable events in the environment of companies acquired and Group member companies as well as in current cost savings programs from time to time. The SGL Carbon assumes no obligation and does not intend to adjust or otherwise update these forward-looking statements either.

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