



CFC containing ceramics for applications of up to 1,325 °C

The abbreviation CFC means carbon-fibre reinforced carbon. Along with common charging trays made of heat-resistant steel or steel casting, charging racks made of CFC have secured a solid position in the field of inert gas and vacuum heat treatment during the last 15 years. Considering all well-known advantages, it may be highlighted that they are non-warping and may thus last for up to 10 years. Furthermore, the exact and reproducible positioning of parts on a plate which is stable with regard to form and position enables the automatic loading. For the user, these advantages result in an increased process reliability and productivity (cycle time, product value). Therefore, the application range of CFC charging trays will be further increased in future.

However, for applications above 1,050 °C, it has to be considered that local melting may occur in case of direct contact between the metal components and the CFC as a result of the carbon diffusion. Due to the process-related influences, conventional CFC trays here reach their technical limits.

In autumn 2014, Graphite Materials GmbH has united its system solutions for CFC racks up to 1,325 °C under the brand name DuComGRID. By combining at least two different materials (**Dual Components**), a new material functionality is created with a resulting increased field of application. To this end, the CFC base material is complemented in accordance with user specifications either by a coating or by elements made of ceramics or refractory metals. Graphite Materials GmbH designs and manufactures DuComGRID solutions from the idea to the finished component for charging weights of up to 5,000 kg. As system supplier for high-temperature applications, the product portfolio is completed by graphite components, furnace insulations and an inspection service for heating chambers.

Graphite Materials GmbH

www.graphite-materials.com

Hall 9 / Booth F02