Services

Textile Testing Methods

- Size content of ceramic fibers acc. to DIN EN 1007-1
- Linear density acc. to DIN EN 1007-2
- Filament diameter acc. to DIN EN 1007-3
- Determining the tensile properties of filaments at ambient temperature acc. to DIN EN 1007-4
- Determination of the tensile properties of fibers within a multifilament tow at ambient temperature acc. to DIN EN 1007-5

For additional testing methods please refer to our directory of services on the homepage.

Technical Facilities

In our technical facilities we provide the equipment of traditional textile production processes (weaving, braiding, warp and weft knitting as well as nonwoven technology) for development projects.

Material Valuation

- Analysis via Digital Microscopy
- Differential Scanning Calorimeters (DSC)
- Infrared (IR) Spectroscopy

The Fraunhofer HTL is certified according to ISO 9001:2008

Please feel free to contact us:

Fraunhofer-Center for Textile Fiber Ceramics TFK
Kulmbacher Straße 76
95213 Münchberg
Germany

www.awz-tfk.de

Prof. Dr. Frank Ficker
Tel.: +49 9281 409-8570

Alexandra Luft
Tel.: +49 9281 409-8615
alexandra.luft@isc.fraunhofer.de
Overview

The Fraunhofer-Center for Textile Fiber Ceramics TFK in Münchberg is a cooperative venture between the Fraunhofer-Center for High Temperature Materials and Design HTL in Bayreuth as part of the Fraunhofer-Institute for Silicate Research ISC in Würzburg and Hof University of Applied Sciences. The Fraunhofer TFK uses the existing competences and technical facilities in the field of textile fiber processing and testing and transfers textile processing techniques on ceramic fibers.

Together with the Fraunhofer HTL, projects and services for developing ceramic fiber composites covering all process steps from the fiber to the finished CMC-parts are feasible. This continuous process chain is supposed to address national and international companies from all sectors, from material production to material application.

Ambition

During the last decade the processing of textile fibers into 2D and 3D structures developed rapidly by the implementation of new technologies. Those innovative production methods are now transferred on inorganic fibers to exploit new applications.

The biggest challenges for commercial success are the high costs of the fibers and of the processing steps. The Fraunhofer-Center for Textile Fiber Ceramics TFK is working on the development of methods, which are cost-effective and capable of series production to be used for processing inorganic fibers to load-conform 2D and 3D structures.

Fraunhofer TFK offers a range of services according to market requirements and customer requests. Our aim is to successfully perform research activities in close collaboration with companies.

Services

The Fraunhofer-Center for Textile Fiber Ceramics TFK is able to examine, test or process ceramic fibers such as SiC and Al₂O₃, as well as carbon, glass and basalt for a huge variety of purposes.

Focused dialogues identify the customers’ requirements and objectives and define the common approach. An appropriate offer will subsequently be prepared and realized after the order confirmation. Depending on the requirements, the customer receives an examination report and / or a presentation of the results including its interpretation. Further options include the development of customer-specific solutions and the initiation of R&D-projects.

The processing of ceramic fibers can also be realized within the scope of development projects.

In addition, we provide training courses and seminars about textile processing methods.