

## **BIOTEX – BIONIC DESIGN AND TEXTILE PRODUCTION PROCESSES FOR THE COST-EFFICIENT MANUFACTURE OF OPTIMISED FIBRE COMPOSITES**

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### **ABSTRACT**

In the Cetex work package the freely programmable laying of groups of fibres was formulated, aiming at the reduction of waste and the increase in productivity compared to the embroidering technology.

The activities created the basis for a defined laying of reinforcing fibre layers at laying angles of 0° to more than 80°. The fixation of the fibre layers is realised in the knitting position over the entire working width with slide needles by means of the stitching principle. The density of the fibre layers can be varied in the range of the ratios of 1:2 to 1:4. In addition to the laying of fibrous reinforcements, possible ways for laying tape structures were found, too.

In April 2007, a patent application concerning this complex of problems was filed at the Patent Office in Munich.

Together with the company Saertex samples for a demonstrator component of the company Daimler were produced in several test series.

### **Acknowledgement**

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**We offer the production of samples to interested parties. More information you may find here:**

[http://www.cetex.de/html/institut/eng/research/transfer\\_biotex.htm](http://www.cetex.de/html/institut/eng/research/transfer_biotex.htm)