

Biogenic Heavy Tows based on hemp bast bark for textile lightweight products

bHT
biogene Heavy Tows
futureTEX

SÄCHSISCHES
TEXTIL
FORSCHUNGS
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Objective of the running R&D-project is the processing of hemp bast bark to obtain unidirectional as well as multidirectional non-crimp fabrics for the manufacture of high-performance composite parts. The project focus is aiming at the best possible mechanical properties by processing the hemp material without damage during the fibre treatment to transfer the initial performance of the natural fibre plant into the laminate. Ambition of the project team is to reach a mechanical performance comparable to glass fibre laminates.

The project covers the whole process chain

- Development of customized fibre harvesting and fibre treatment processes without essential fibre damage
- Sizing of the bast segments and joining them to obtain continuous fibre material
- Development of a technology to manufacture two-dimensional fibre materials like non-crimp fabrics
- Qualification and validation of biogenic polymers to be used as matrix for the hemp bast bark fabrics to manufacture bio-based composites
- Design and manufacture of bio-composite demonstrators to verify and assess the newly developed technology
- Definition of recycling concepts for the production waste and end-of-life products composed of hemp bast bark and biogenic polymers



SCHMIETEX
ENGINEERING
European Textile Machinery



Hemp bast bark

Two-dimensional fibre materials
like non-crimp fabrics

Bio-composite demonstrator

zwanzig20
PARTNERSCHAFT FÜR INNOVATION

GEFÖRDERT VOM

 Bundesministerium
für Bildung
und Forschung

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Land der Ideen

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