

RecyClean – Direct processing of selvedge strips into industrial and building cleaning textiles using the KEMAFIL® process

Objective

Textile production generates clean and easy-to-collect waste in the form of selvedge strips, the properties of which are well known. Instead of recycling it thermally, it should be reused to save resources. One promising approach is the KEMAFIL® process, in which the selvedge strips are bundled into strands and processed directly into wipe covers. This is intended to demonstrate how valuable products can be created from waste. The textile industry is facing the challenge of becoming more sustainable, and innovative processes such as KEMAFIL® can offer solutions here.

Approach and results

The approach was to develop a multi-layered, washable and reusable structure for wipe covers. This structure consists of a working layer and a base layer, each of which fulfills specific functions. The working layer was made from strands taken from the selvedge strips of the textile production chain. It was demonstrated that it is possible to convert the waste products from textile production into high-quality, reusable materials. In addition, a nonwoven-based base layer made from recycled PET was developed. This guaranteed the absorption of a minimum amount of cleaning fluid and thus compensated for the fluctuating properties of the edge strips. As a result, wipe covers made from recycled material could be produced that are on a par with wipe covers made from primary material in terms of cleaning performance.



From the selvedge strip via the KEMAFIL® strand to the surface (Photo: STFI / Dirk Hanus)

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The final report on this project is available on request.

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