Dutch and Turkish partners join forces to kick off pilot production to turn used textile into new textile

Subheading: One step closer to a circular textile chain

Enschede, 9 April 2020 - SaXcell, a spin-off from Saxion University of Applied Sciences in the Netherlands, will set up a pilot programme in a new production facility to create high-grade textile out of used textile. In a pilot plant in the East of The Netherlands, a sustainable recycling process is used to turn old cotton fibres into new cellulose fibres, called SaXcell. With a production output of 100 kilos of fibre pulp per day, this marks the first time that this process is utilised on a larger scale. This has been made possible by a consortium of investors who have signed a shareholder agreement on 9 April, thereby allowing the production of SaXcell to begin.

SaXcell is a collaboration between Saxion University of Applied Sciences, the five inventors, Sympany, WeVoTex and three Turkish textile companies: Ugurlular, Modeko and Selin Tekstil. Signing the agreement has made all partners co-owners of SaXcell B.V. Each shareholder is responsible for part of the textile production chain. Together, they create a circular process from post-consumer textile to recycled textile. SaXcell was founded in 2015 by Saxion and the 5 inventors where the research began that led to the development of this fibre.

From used textile to high-grade new textile
SaXcell's innovative process is used to produce a new cellulose fibre: the old cotton cellulose is turned into a raw material (pulp) that is used for the production of new textile fibres. The first step is collecting used textile. Producing 100 kilos of pulp requires the same amount of old textile. This material is provided by textile collector Sympany and textile producer WeVoTex. This textile is first broken down into small particles. Next, SaXcell's recycling process is used to produce the pulp. The output material is then shipped to Turkey, where the partner organisations use a wet spinning process to make yarn and cloth.

What makes the SaXcell fibre unique is the fact that its quality is better than that of the input material, i.e. the cotton fibre. The entire chain - from the supply of raw materials and the production of the fibres to the manufacture and sale of the new textile - is organised by the parties involved in the alliance.

Sustainable result
In the Netherlands alone, 145 million kilos of textile is discarded every year. About 65% of this material is suitable for recycling. The recycling process is better for the environment than the production process of cotton. It requires no agricultural land, pesticides or insecticides and uses less water. Furthermore, most of the solvent that is used during the recycling process can be reused. The SaXcell fibre itself can also be recycled over and over again. The result is an environmentally friendly, 100% recycled and endlessly recyclable product.

Saxion Cellulose
The expertise for chemical recycling comes from Saxion University of Applied Sciences' Sustainable & Functional Textiles professorship. The name of the new fibre was developed there: SaXcell is short for Saxion Cellulose. It has taken the developers five years to reach this new phase: the construction of a pilot plant. During the two-year pilot phase, SaXcell will produce circa 25 tons of pulp per year. During this period, Saxion will stay involved in the research. The educational institution will also invest in laboratory facilities that are needed to develop the production facility. Afterwards, a new investment round to scale up the production will follow.

The following parties take part in SaXcell:

Saxion
Gerrit Bouwhuis BV
BMA Techne BV
Flio Engineering
Jens Josef Oelerich
Agrawal Ecolabs
Sympany
WeVoTex BV
Ugurlular
Modeko
Selin Tekstil

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