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Press Release

Coperion and RenCom AB

RenCom starts the production of its durable biomaterial with ZSK technology

Stuttgart, February 2021 – Swedish innovation company RenCom AB announced the start of production of RENOL®, an innovative thermoplastic biomaterial that can be used to replace fossil-based plastics. Following comprehensive studies in Coperion's extrusion test lab in Stuttgart, Germany, RenCom and Coperion have developed the innovative extrusion process of RENOL®, a lignin-based material. Using Coperion's ZSK twin screw extruder technology lignin can be transformed into durable, reusable biomaterial.

Coperion has delivered a ZSK twin screw extruder, gravimetric feeders, a strand pelletizing system, a lignin bag dump station and a big bag station to RenCom. The system has now been successfully commissioned and production has already started, according to schedule. RenCom will be able to produce more than 1,000 tons of RENOL® per year.

Extrusion technology for future-oriented biomaterial

RenCom's patented technology is based on lignin, a by-product from the forest industry, transforming it into a high-performance renewable material that is able to replace plastics. Renol® can be used in ratios up to 50 % in applications such as films (shopping bags, mulch films or retail bags), injection molding (furniture and automotive parts) and as an infill material for artificial football pitches replacing toxic and non-degradable rubber. It can be used directly in existing production infrastructure without any modifications to machines or methods. With a very low carbon footprint and water consumption, and with high mechanical and physical properties, RENOL® is a powerful solution for replacing and reducing the use of fossil-based plastics.

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Coperion has in cooperation with RenCom designed a complete extrusion system comprising a ZSK Mv PLUS -co-rotating twin screw extruder as well as auxiliary equipment. The ZSK Mv PLUS series unites an optimally balanced large free screw volume with high screw speeds and a high specific torque. Thanks to the deeply cut screw flights thermal stress on the raw material is very low and product processing is very gently.

Partnership of two innovative companies

The comprehensive studies in Coperion's test lab and the realization of the extrusion system for the production of RENOL® has been the beginning of a successful partnership between RenCom and Coperion.

"We are very happy to be able to support this innovative company on their exciting journey. We see big potential for their lignin-based product decreasing the carbon footprint by substituting fossil-based plastics. We are proud to support the production of their sustainable products", comments Peter von Hoffmann, General Manager Business Unit Engineering Plastics & Special Applications at Coperion.

"We, at RenCom, are very proud that the ZSK extruder has started. We are now in a position to produce RENOL® in large quantities and thus make a major contribution to the challenges with fossil-based plastics. We are excited to start our production and supply our customers with hundreds of tons of material", says Johan Verendel, RenCom's Chief Technical Officer.

About RenCom

RenCom is a Swedish innovation company that transform lignin, the most abundant unused biopolymer on earth, into a renewable and functional biomaterial called RENOL®. RenCom aims to supply the plastic industry with high performance granulates that will be converted into plastic bags, packaging materials, bottles, or injection molded pieces. The material has been tried out by several partners in the plastic field and the end products, containing RENOL®, will be on the market already year 2021. For more information visit www.lignin.se.

About Coperion

Coperion is the international market and technology leader in compounding and extrusion systems, feeding and weighing technology, bulk materials handling systems and services. Coperion designs, develops, manufactures and maintains systems, machines and components for the plastics, chemicals, pharmaceutical, food and minerals industries. Within its three divisions – Polymer, Equipment & Systems, and Service – Coperion has 2,500 employees and nearly 30 sales and service companies worldwide. For more information visit www.coperion.com or email info@coperion.com.

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<https://www.coperion.com/en/news-media/newsroom/>

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From wood to biodegradable thermoplastic biomaterial RENOL®

Image: RenCom, Knivsta, Sweden



RenCom has chosen Coperion's ZSK twin screw extrusion technology to enable the production of RENOL®.

Image: Coperion, Stuttgart

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RENOL® big-bag filling station from Coperion

Image: RenCom, Knivsta, Sweden