

## **“Rope-Cycling” mit EREMA**

### **Recycling technology with double filtrations for clean tech startup Healix**

**A closed-loop solution for plastic fibre waste from fishing, shipping and agriculture - this is the challenge accepted by Healix, a cleantech startup founded in Maastricht (NL) in 2021. Marcel Alberts knows what he is talking about when he describes this challenge. That is because the company's founder and CEO has a great deal of experience in manufacturing and distributing high-performance fibres, most recently as founder and managing director of a well-known producer and supplier of high-strength industrial yarns for ropes, cords, conveyor belts, geotextiles and of high-performance fibres for many other special applications.**

"Starting Healix was a project close to the heart for me because I want to contribute to a circular solution for this type of plastic waste that otherwise pollutes the sea or ends up in landfills. It's fair to say that the Corona crisis helped me turn this project into reality," says Marcel Alberts, explaining how he came to sell a majority share of his company and invest in a new project focused on recycling. "I had more time to think and was keen to build something up again. Following intensive discussions with former customers, suppliers and partner companies, I realised that recycling plastic fibres is still a missing link in the value chain in many areas." This is also the view of the companies Healix already has on-board as customers, including the Tama Group, manufacturer of ropes and cords for farming, LC Packaging, producer of flexible transport packaging, the Hendrik Veder Group, a supplier of maritime fibre rope solutions and The Ocean Cleanup, a Dutch initiative to rid the oceans of plastic waste. Ohad Peled, Raw Materials Technical Manager in the Tama Group, confirms their perspective: "We are always looking for innovative solutions to reduce the proportion of virgin materials in our products and to further increase the use of recycle in our production processes. That's why we're working with Healix."

#### **High moisture under control**

At its site in Maastricht, the company now collects, sorts, shreds, washes and processes used PP and HDPE ropes from fishing and farming, with the aim of turning them back into a raw material for useful new products. An EREMA INTAREMA® 1714 TVEplus® recycling machine with double filtration proved to be the technological enabler following trials with systems from several plant manufacturers. "This machine proves itself in all applications where the best filtration and degassing performance are required due to the input material," explains Robert Wahlmüller, the

Sales Manager at EREMA who works closely together with Healix then. The material tests for Healix were carried out at EREMA's customer centre in Austria and at EREMA's customer Clean Plastic Finland. The tests demonstrated that with its 3-fold degassing the INTAREMA® TVEplus® is the best machine for handling the high moisture levels of up to 10 percent and the low bulk density that the material has after washing.

### **Combination of laser and backflush filters**

"We also tested different systems and combinations with regard to filtration performance. The specified requirement was to achieve the filtration fineness necessary for a closed-loop fibre-to-fibre application, because the Healix recycled pellets needed to be fed back into the production of baler twines, nets and ropes," says Wahlmüller. The double filtration system consisting of an EREMA laser filter with a filtration fineness of 70 to 90 µm and an EREMA SW RTF® backflush filter with a filtration unit of 60 µm, through which the melt flows prior to hot die-face pelletising, produced impressive results.

"If we could feed this straight back into fibre production, the loop would really be closed, but we're not quite there yet," says Marcel Alberts. Depending on the input stream, the recycled pellets are currently also used in open-loop applications such as fibre to film or injection moulding.

During the installation and commissioning of the recycling machine and the training of the Healix employees, EREMA was supported by colleagues from EREMA's Belgian sales agency Plastics Machinery Agency (PMA). This team will also assist with further process optimisation.

Following the start of full-scale recycled pellet production a few weeks earlier, Marcel Alberts and his team were finally able to celebrate the official opening (postponed several times due to corona) of the new company in March 2022, together with Frans Timmermans, Vice President of the European Commission and who, as Commissioner, was responsible for the European Green Deal.



Luc Vandervorst, Technical Manager CPR Consulting BV Div. PMA, Marcel Alberts, Managing Director Healix, Stefan Beckers, Operations Manager Healix, Robert Wahlmüller, Application Sales Manager at EREMA, and Ohad Peled, Raw Materials Technical Manager at TAMA Plastic Industry (photo: EREMA)



Frans Timmermans, Vice President of the European Commission, und Marcel Alberts, Managing Director Healix, at the opening ceremony. (photo: Healix)



Fibre waste from fishing, shipping and agriculture is recycled at Healix in Maastricht (NL). (photo: Healix)

**Rückfragehinweis**

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