

Ink removal process enables recycling of printed film

KEYCYCLE, a subsidiary of the EREMA Group, is intensifying cooperation with technology developer Cadel Deinking, and has exclusive sales rights

The Spanish company Cadel Deinking has been working on the removal of printing inks from plastic surfaces since 2014 and has developed an innovative process for this purpose. In combination with EREMA recycling technology, this ink removal process has already proven its suitability for real-life applications involving the recycling of printed inhouse and post-industrial film waste. This represents a milestone in safely feeding recycled pellets made from originally printed film back into the production process. The EREMA Group with its subsidiary KEYCYCLE is now intensifying its cooperation with Cadel Deinking to drive this development forward technologically and form a product that meets industrial standards.

Ansfelden, 17 December 2020 - Starting in January 2021, KEYCYCLE will exclusively take over worldwide sales and project implementation of this unique technology, which is patented in over 20 countries. The company will operate the pilot system in Sant Vicente del Raspeig (Alicante, Spain) together with Cadel Deinking. "Together we are making ink removal technology a process step that can be integrated into the plastics recycling chain," says Michal Prochazka, Managing Director of KEYCYCLE and Pablo Cartagena, Business Development Manager at Cadel Deinking.

Another milestone for the circular economy

Printing inks are a major challenge in the recycling of plastics and there are different strategies for solving this challenge. Reducing printing directly on the packaging film is a requirement for the Design for Recycling strategy, but it is often not possible to eliminate it completely in the many different fields of application for film products. That is why ink removal technologies are still being investigated. From the beginning, EREMA has also been committed to developing solutions for processing heavily printed plastics in the extrusion process. The company has been working together with Cadel Deinking since June 2020 with the aim of removing printing inks during the recycling process. The technology they have developed removes the ink from the shredded film before the material is fed into the recycling extruder. Combined with an EREMA INTAREMA[®] extruder, the ink removal process has been so successful during test runs using the pilot system that orders have already been placed for five Deinking systems.

"We see great potential in developing this new technology for recycling solutions to process in-house and post-industrial waste film ecologically and cost-effectively. It will increase our market presence and expand our range of products for particularly challenging turnkey recycling solutions. It is also an important step towards closing plastic cycles," says Manfred Hackl, CEO of the EREMA Group, explaining the decision to intensify the cooperation with Cadel Deinking. He is also thinking about developing the technology so it can be integrated into washing systems made by various manufacturers.

The young Spanish company is also pleased to have an EREMA Group company at its side as a competent and experienced partner to successfully develop the technology. "We are delighted that with KEYCYCLE we can continue along the route we started when our company was founded six years ago," says Rafael Garcia Vidal, Managing Director of Cadel Deinking. Both companies want to establish their ink removal technology as a key component in the recycling process for printed film production waste and to integrate it into new and existing recycling solutions for customers around the world.



Photo credit: EREMA

- 1) heavily printed film before the deinking process
- 2) Film after the deinking process
- 3) Regranulate after the extrusion process

KEYCYCLE GmbH

KEYCYCLE GmbH is a global provider of turnkey solutions for new plastics recycling projects and for system optimisations. Our range of services includes engineering and consulting, project management, manufacturing and logistics planning and complete implementation up to a turnkey system ready for operation. The company is based in Ansfelden/Linz and is part of the Austrian EREMA Group, whose experience and technological know-how also benefit KEYCYCLE customers.



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