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Press Release

Coperion Delivers Innovative Closed-Loop Solution

Visionary Multi-Layer Film Recycling Avoids Production Waste

Stuttgart, April 2020 – Coperion GmbH is implementing a closed-loop concept for the production of flexible multi-layer film. Recycling multi-layer film has long posed a challenge since such films can only be reclaimed in very complicated ways and not without residues. Now, however, Coperion has developed a closed-loop approach solution in which up to 100 percent of multi-layer film production waste can be re-processed and fed back into the production process in a closed-loop. For a concrete project Coperion will deliver a recycling system, including bulk material handling, high-accuracy feeding from Coperion K-Tron, and the heart of the system, a ZSK Mc¹⁸ twin screw extruder.

Closed Loop Using the Most Advanced Technologies

Multi-layer film waste resulting during the production process is shredded as a first step before it is fed into the ZSK extruder via pneumatic conveying and highly accurate feeding from Coperion K-Tron. There, the material is homogenized and devolatilized with very high intensity in the co-rotating ZSK Mc¹⁸ twin screw extruder. Within the extruder, dispersion and devolatilization performance are crucial to end product quality — with gentle product handling and very good mixing behavior even at very high throughput rates, thus achieving consistently high product quality.

Following homogenization in the ZSK extruder, in the closed-loop concept, the recycled material is added back into the multi-layer film production process; with no quality loss and the proportion of added recyclate is very high. Multi-layer film manufacturing thus takes place sustainably, highly efficiently, and resource-friendly with the aid of advanced technologies.

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Peter von Hoffmann, General Manager of Business Unit Engineering Plastics & Special Applications at Coperion, is convinced: “Sustainability is becoming more and more important, and the topic of the circular economy is moving further into the foreground for companies – and that is much more so for multi-layer film producers. We’re proud that, with our years of process know-how and our visionary technological solutions, we can contribute to a promising, forward-looking and sustainable closed-loop approach.”

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. Coperion K-Tron is part of the Equipment & Systems division of Coperion. For more information visit www.coperion.com or email info@coperion.com.

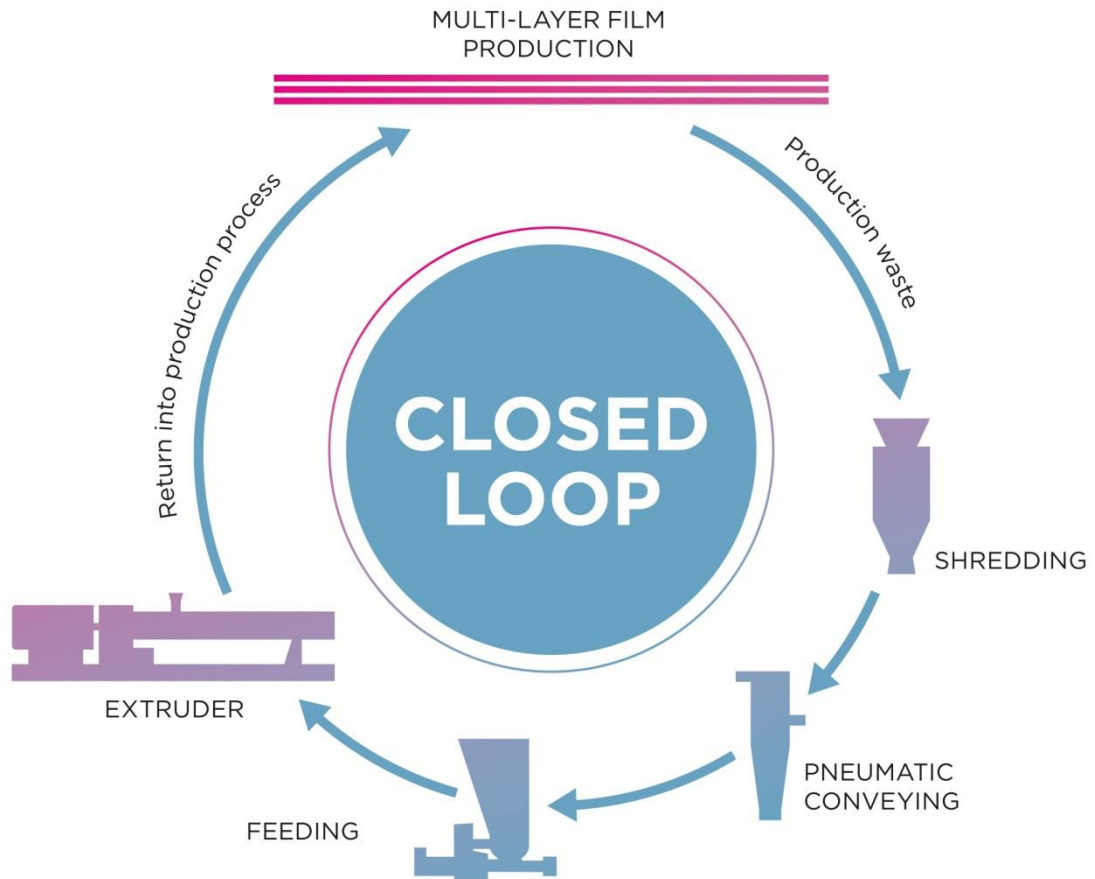


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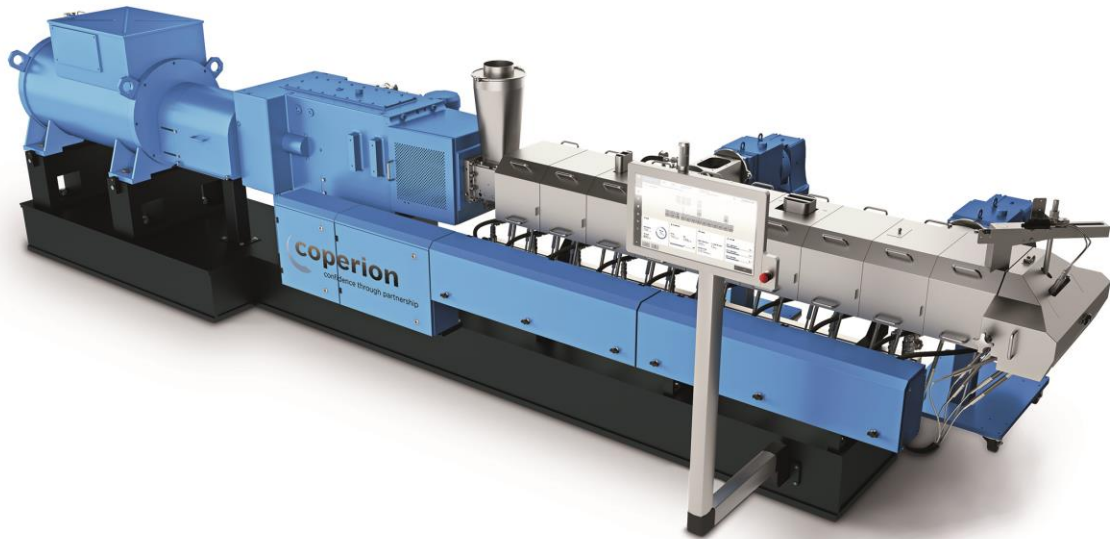
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With Coperion's innovative closed-loop approach, production waste resulting from multi-layer film production can be re-added and re-processed within the manufacturing process at a rate of up to 100%.

Photo: Coperion, Stuttgart

April 2020



Within the ZSK Mc¹⁸ twin screw extruder, shredded production waste is processed such that it can be added back into the multi-layer film production process — at consistently high end product quality.

Photo: Coperion, Stuttgart