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Press Release

LANXESS successfully produces polyamide compounds on Coperion turnkey system Polyamide Compound Manufacturing Reaches New Throughput Dimension

Stuttgart, November 2021 – Specialty chemicals company LANXESS is now operating another Coperion line to produce Polyamide 6, Polyamide 66 and Polybutylenterephthalate (PBT) at its Krefeld-Uerdingen, Germany, location, making significant steps toward a new throughput range. With this technology, constructed around the high-performance ZSK 92 Mc¹⁸ twin screw extruder, LANXESS is producing demanding compounds at throughputs never achieved before. To reach such high output and maintain very good product quality, Coperion equipped the entire system with special features that ensure a high degree of automation, a crucial requirement for this developer and provider of high-performance compounds. Among these features is the ASC strand conveying system from Coperion Pelletizing Technology which automatically conveys polymer strands from the twin screw extruder discharge to the pelletizer. The entire system, built around the ZSK 92 Mc¹⁸, is one of several Coperion lines that LANXESS operates in Krefeld-Uerdingen.

Seamless Productions Thanks to Complete Solution from a Single Source

Coperion has designed this compounding line as a complete turnkey solution for LANXESS from engineering to commissioning. From state-of-the-art raw material feeding, to conveying, compounding, pelletizing and classifying technology, Coperion seamlessly synchronized every one of the system's process steps with each other and logistically integrated them into one steel construction, forming the basis for the compounding system's fully automated operation. Following a short startup process, its high performance capacity can be fully exploited. Moreover, Coperion designed this compounding line for LANXESS to make optimal use of



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available space and to assure good accessibility to individual components, as well as short walking distances for operating personnel.

Every key component of this complete solution comes from Coperion's own development and manufacturing, including the ZSK 92 Mc¹⁸ high performance extruder with its very high 18 Nm/cm³ torque, which takes pride of place when aiming for high throughput rates for reinforced polyamides. The ZSK twin screw extruder is equipped with a twin screw ZS-B side feeder and a ZS-EG side devolatilization unit. Coperion further developed the SK92 die head specifically for polyamide compound manufacturing. With its intelligent heating/cooling concept, a very homogeneous temperature distribution is achieved so that strands discharge completely uniformly across the entire width of the die head, even at high throughput rates. Optimized flow geometry allows for very gentle handling of the polyamide melt, achieving high compound quality. In the new SK92 design, the die plate can be changed very easily and quickly with just a few simple maneuvers'. The fully automatic strand conveying system from Coperion Pelletizing Technology is one of the most important contribution to the entire system's operation. It automatically guides the extruded strands over a cooling water chute and a downstream conveyor belt to the SP 700 HD strand pelletizer's intake section. Startup is fully automatic just as the conveying and rethreading of the broken strands is. There is no product loss and running production is not interrupted.

Frank Lechner, General Manager Process Technology and Research & Development of the Polymer Division at Coperion, speaks of his complete satisfaction with the system: "We were able to pour all of our expertise in complete systems into this solution for LANXESS. A lot of our spirit of development has gone into every single process step. We are very proud to see how all these technologies intermesh successfully, and that LANXESS can fully exploit the performance potential of our system to manufacture their polyamide compounds."



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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 two divisions – Polymer and Strategic Markets / Aftermarket Sales and Service – Coperion has 2,500 employees and nearly 30 sales and service companies worldwide. Coperion K-Tron is a brand of Coperion. For more information visit www.coperion.com or email info@coperion.com.

About LANXESS

LANXESS is a leading specialty chemicals company with sales of EUR 6.1 billion in 2020. The company currently has about 14,900 employees in 33 countries. The core business of LANXESS is the development, manufacturing and marketing of chemical intermediates, additives, specialty chemicals and plastics. LANXESS is listed in the leading sustainability indices Dow Jones Sustainability Index (DJSI World and Europe) and FTSE4Good.

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On its Coperion compounding system, LANXESS produces highly reinforced polyamide compounds at very high throughput rates.

Photo: LANXESS, Krefeld-Uerdingen, Germany