Sulzer launches PyroCon™ to enhance plastic and biomass waste reduction

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Sulzer's new PyroCon technology rapidly cools the gases emitted during pyrolysis, a process that heats and liquefies plastic without oxygen, limiting harmful pollutants. The resulting pyrolysis oil can be used as a fuel or refined to produce valuable chemicals. PyroCon's rapid cooling (quenching) of the pyrolysis gases prevents further chemical reactions and potential product degradation, improving quality and yield for the circular economy and helping to reduce plastic waste.

Drawing on its success at Indaver's Plastics2Chemicals plant in Belgium, and the legacy of its plastic waste projects at Quantafuel (Denmark) and Carboliq (Germany), Sulzer is proud to add PyroCon, its new rapid condensing technology for biomass and plastic pyrolysis, to its portfolio of chemical technology solutions.

Improving quality and yields

PyroCon addresses key critical operational challenges including anti-fouling technology, low maintenance design, flexible capacity and feedstocks, ranging from polyolefins (PP/PE) and polystyrene (PS) to bio-mass waste residues. The solution is further designed to allow optimal reaction control for pyrolysis processes by rapidly quenching pyrolysis products, leading to increased yields.

Promoting a circular economy

PyroCon optimizes superheated vapor condensation through unique liquid recirculation in a compact design capable of handling up to 600°C vapor inlet temperatures, joining other Sulzer Chemtech solutions that are essential to promoting circularity for solvents, chemicals, and plastics.

“We are continually striving to improve efficiencies and create value for our clients,” said Tim Schulten, President of Sulzer Chemtech. “Our new PyroCon technology effectively ensures the integrity of the plastics and bio-waste pyrolysis process, making it a valuable technology for sustainable waste management and energy recovery.”

Image captions:

Image 1: Sulzer's PyroCon technology rapidly cools the gases emitted during pyrolysis, limiting the creation of harmful pollutants. [Image source - shutterstock_2325451079]

About Sulzer

Sulzer is a global leader in fluid engineering and chemical processing applications. We specialize in energy-efficient pumping, agitation, mixing, separation, purification, crystallization and polymerization technologies for fluids of all types. Our solutions enable carbon emission reductions, development of polymers from biological sources, recycling of plastic waste and textiles, and efficient power storage. Our customers benefit from our commitment to innovation, performance and quality through our responsive network of 160 world-class manufacturing facilities and service centers across the globe. Sulzer has been headquartered in Winterthur, Switzerland, since 1834. In 2023, our 13'130 employees delivered revenues of CHF 3.3 billion. Our shares are traded on the SIX Swiss Exchange (SIX: SUN). www.sulzer.com

The Chemtech division is the global market leader in innovative mass transfer, static mixing and polymer solutions for chemicals, petrochemicals, refining and LNG. We are steering the way in ecological solutions such as bio-based chemicals, polymers and fuels, recycling technologies for textiles and plastic as well as carbon capture and utilization/storage, contributing to a circular and sustainable economy. Our product offering ranges from process components to complete process plants and technology licensing.

Visit our LinkedIn channel at www.linkedin.com/showcase/sulzer-chemtech for exciting updates and more!

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