

**Reduced CO₂ emissions and increased sustainability in plastics production:
Commercial debut for PLAneo[®] technology from thyssenkrupp**

To reduce dependency on petroleum-based plastics thyssenkrupp has developed its own manufacturing process for the bioplastic polylactide (PLA). Now the company is building the first commercial plant based on its patented PLAneo[®] technology in Changchun, China. The customer is COFCO Corporation, a leading supplier of agri-products offering a wide range of foodstuffs and services. Once completed, the new plant will produce around 10,000 tons of PLA per year. Commissioning is scheduled for the first quarter of 2018.

Poly lactide (PLA) is a 100% bio-based and compostable plastic which is suitable among other things for processing into packaging materials, films and engineering plastics and can therefore replace conventional oil-based polymers in many areas. The raw material for PLA production is lactic acid, which is produced from renewable resources such as sugar, starch or cellulose. Polylactide is thus both bio-based and bio-degradable.

In developing the PLAneo[®] technology, Uhde Inventa-Fischer, a subsidiary of thyssenkrupp Industrial Solutions, profited from expertise gained from the construction of more than 400 polymerization plants and extensive experience in the scale-up of new technologies. PLAneo[®] technology converts lactic acid into PLA in a particularly efficient and resource-friendly way. Another advantage is its transferability to large-scale plants with capacities of up to 300 tons per day (100,000 t/year). Thanks to its great flexibility the process allows the production of tailored PLA types with different degrees of crystallinity and viscosity for a multitude of applications.

Sami Pelkonen, CEO of the Electrolysis & Polymers Technologies business unit of thyssenkrupp Industrial Solutions: "With our technology we want to help establish bioplastics on the market. It reduces the use of fossil raw materials and significantly lowers CO₂ emissions. With it we enable our customers to produce high-quality bioplastics with custom properties – and at a price that is increasingly competitive with conventional petrochemical plastics."

thyssenkrupp is providing basic and detailed engineering, key plant components and supervision of erection and commissioning for the new PLA plant.

About thyssenkrupp Industrial Solutions:

The Industrial Solutions business area of thyssenkrupp is a leading partner for the engineering, construction and service of industrial plants and systems. Based on more than 200 years of experience we supply tailored, turnkey plants and components for customers in the chemical, fertilizer, cement, mining and steel industries. As a system partner to the automotive, aerospace and naval sectors we develop highly specialized solutions to meet the individual requirements of our customers. Around 19,000 employees at over 70 locations form a global network with a technology portfolio that guarantees maximum productivity and cost-efficiency.

More information at: <http://www.thyssenkrupp-industrial-solutions.com>

About Uhde Inventa-Fischer:

Uhde Inventa-Fischer is a leading engineering company located in Berlin, Germany, and Domat/Ems, Switzerland. Its scope of services includes the development, engineering and construction of industrial plants for the production of polyester, polyamide and polylactic acid. The company has built more than 400 production plants throughout the world. Uhde Inventa-Fischer is part of the Industrial Solutions business area of thyssenkrupp.

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