

## **thyssenkrupp Uhde and Praj Industries Ltd join forces to revolutionize polylactic acid production and circular economy**

- **Polymer specialists Uhde Inventa Fischer (UIF) to partner with Praj Industries Ltd (PIL)**
- **End-to-end offering for PLA (polylactic acid) production**

thyssenkrupp Uhde's polymer specialists Uhde Inventa-Fischer (UIF), a subsidiary of the global leader in chemical engineering and construction, and Praj Industries Limited (PIL), a global leader in industrial biotechnology solutions, announced a strategic partnership to jointly offer an end-to-end integrated technology for the production of Polylactic Acid (PLA). This strategic partnership offers a unique, seamless solution that sets them apart in the arena of bioplastics.

The indiscriminate use of fossil-based plastics and the often irresponsible disposal, especially of single-use plastics (SUPs), call for urgent, innovative, and sustainable solutions. Polylactic acid (PLA), as a sustainable alternative to conventional plastics holds significant potential in advancing a circular bioeconomy. To meet this global need, PIL and UIF are leveraging their combined expertise in industrial biotechnology and chemical engineering to enhance PLA technology, ensuring efficient, cost-effective and sustainable production processes.

Nadja Håkansson, CEO thyssenkrupp Uhde: "We see a perfect match of two world-leading technologies: Uhde's PLAneo® process can now be offered as an integrated solution with Praj Industries' lactic acid production. Together, we can design and deliver complete PLA plants. Our joint vision is a competitive solution to replace conventional plastics with sustainable alternatives."

Dr. Pramod Chaudhari, Founder Chairman, at Praj Industries: "Praj's Bioprism® portfolio for renewable chemicals and materials, with a focus on bioplastics, underscores our commitment to a sustainable future. Our strategic partnership with Uhde marks a significant step in driving the global shift toward a circular economy by enabling cost-effective biomanufacturing and the establishment of biorefineries. With our award-winning proprietary *PLANERA™* technology and this collaboration, we aim to tackle the challenges posed by fossil-based plastics and contribute to a more sustainable planet with innovative, bio-based solutions."

The partnership will be able to offer an end-to-end integrated technology, covering the entire PLA production process from feedstock conversion to polymer production. Different grades of Lactic acid can be produced from this technology which find applications in food and industrial sectors. A broad range of PLA grades can be produced, addressing the diverse requirements of various industries such as packaging, textiles, and hygiene supplies. Both companies have a strong global presence, enabling them to deliver innovative solutions to customers worldwide and adapt to practically any agricultural feedstock containing either starch or sugar, including second generation feedstocks based on non-food raw materials.

A shared commitment to sustainability drives the partnership, focusing on developing environmentally friendly and socially responsible solutions. Praj recently inaugurated India's first-of-its-kind 'Demonstration Facility for Biopolymers' near Pune, India, where it is producing lactic acid and lactide. This facility will serve as a crucial platform for testing and validating the joint offering, enabling the partners to showcase the potential of PLA and accelerate its commercialization.

**About Praj Industries Limited**

Praj, India's most accomplished industrial biotech company, is driven by innovation, integration, and delivery capabilities. Over the past four decades, Praj has focused on the environment, energy, and agri-process industry, with 1000 + customer references spanning 100+ countries across all five continents. Bio-Mobility® and Bio-Prism® are the mainstays of Praj's contribution to the global Bioeconomy. The Bio-Mobility® platform offers technology solutions globally to produce the renewable transportation fuel, thus ensuring sustainable decarbonization through a circular bioeconomy. The company's Bio-Prism® portfolio comprises technologies to produce renewable chemicals and materials, promises sustainability while reimagining nature. Praj Matrix, the state-of-the-art R&D facility, forms the backbone for the company's endeavours towards a clean energy-based Bioeconomy. Praj's diverse portfolio comprises Bio-energy solutions, Critical process equipment & skids, Breweries, Zero liquid discharge systems and High purity water systems. Led by an accomplished and caring leadership, Praj is a socially responsible corporate citizen. Praj is listed on the Bombay and National Stock Exchanges of India.

**About thyssenkrupp Uhde**

thyssenkrupp Uhde combines unique technological expertise and decades of global experience in the engineering, procurement, construction and service of chemical plants. We develop innovative processes and products for a more sustainable future and thus contribute to the long-term success of our customers in almost all areas of the chemical industry. Our portfolio includes leading technologies for the production of base chemicals, fertilizers and polymers as well as complete value-chains for green hydrogen and sustainable chemicals. [www.thyssenkrupp-uhde.com](http://www.thyssenkrupp-uhde.com)

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