# PRESS RELEASE

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# Air Liquide Global E&C Solutions licenses its leading Acrylic Acid technology to Bharat Petroleum Corporation Limited in India

Air Liquide Global E&C Solutions, the Engineering and Construction activity of the Air Liquide group, has been selected by Bharat Petroleum Corporation Limited (BPCL) to supply its leading Lurgi/Nippon Kayaku Ester Grade Acrylic Acid technology for their Propylene Derivatives Petrochemical Project (PDPP) located in Kochi, Kerala, India.

Acrylic acid and acrylates are mainly used for paints, coatings, adhesives and platicisers. The market demand for acrylic acid is driven by growing populations with increasing prosperity.

For BPCL's Propylene Derivatives Petrochemical Project, Air Liquide Global E&C Solutions is providing the **technology license**, **basic engineering**, **technical services as well as proprietary catalyst and equipment** for the world-scale unit.

This contract with BPCL follows two successful implementations of this Air Liquide Global E&C Solutions technology, notably at one of the **world's largest single-train plants** located in Huizhou, Guangdong Province, China. There, the facility utilizes chemical-grade propylene as feedstock to produce some **140,000 tons per year** of ester-grade acrylic acid. The plant started operation in 2012 and stands out for its world-scale capacity, its high product quality and its operational reliability.

Air Liquide Global E&C Solutions is committed to moving forward and takes a relentless approach to innovation, in line with Air Liquide group's mission to create value over the long term by delivering high-quality solutions to customers.

Domenico D'Elia, Vice President and Chairman, Air Liquide Global E&C Solutions, commented: "This petrochemical project in India is the very first such endeavor to integrate acrylic acid technology to supply local demand. We are pleased to contribute to the development of Bharat Petroleum Corporation Limited (BPCL) by supplying our leading Lurgi/Nippon Kayaku Ester-grade Acrylic Acid technology."

# Air Liquide Global E&C Solutions

Air Liquide Global E&C Solutions, the Engineering and Construction activity of Air Liquide, builds the Group's production units – mainly air separation units (ASUs) and hydrogen / carbon monoxide production units – and provides plants for external customers.

## About Lurgi/Nippon Kayaku Ester-grade Acrylic Acid technology

The Lurgi/Nippon Kayaku Ester-grade Acrylic Acid technology process consists of a two-stage catalytic oxidation of propylene to acrolein and acrylic acid and subsequent purification by extraction and distillation.



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World leader in gases, technologies and services for Industry and Health, Air Liquide is present in 80 countries with more than 50,000 employees and serves more than 2 million customers and patients. Oxygen, nitrogen and hydrogen have been at the core of the company's activities since its creation in 1902. Air Liquide's ambition is to be the leader in its industry, delivering long-term performance and acting responsibly.

Air Liquide ideas create value over the long term. At the core of the company's development are the commitment and constant inventiveness of its people.

Air Liquide anticipates the challenges of its markets, invests locally and globally, and delivers high-quality solutions to its customers and patients, and the scientific community.

The company relies on competitiveness in its operations, targeted investments in growing markets and innovation to deliver profitable growth over the long-term.

Air Liquide's revenues amounted to € 15.4 billion in 2014, and its solutions that protect life and the environment represented more than 40% of sales. Air Liquide is listed on the Paris Euronext stock exchange (compartment A) and is a member of the CAC 40 and Dow Jones Euro Stoxx 50 indexes.