

Air Products and Johnson Matthey Establish Alliance to Market Monolith Catalyst Technology to Fine and Specialty Chemical

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Companies to Collaborate on Commercialization of New Catalysis Technology

Air Products and Chemicals, Inc. (NYSE: APD) today announced that a Marketing Agreement has been signed with Johnson Matthey (<http://www.jmcsd.com/>) to commercialize its proprietary monolith catalyst-based process technology: the Monolith Loop Reactor (MLR). The technology has been developed specifically for the Specialty Chemicals market.

Air Products has developed a unique and economical process solution that brings many of the advantages of fixed bed catalytic processes to the smaller-scale chemical producer. The combination of the attributes and robustness of the MLR technology along with the catalyst capabilities of Johnson Matthey provides a unique new technology package for the chemical manufacturer. Initial market focus will be to companies who operate hydrogenation reactors utilizing precious metal catalysts.

The MLR is a novel integrated monolith catalyst reactor system and can be easily retrofitted onto existing commercial slurry-catalyst stirred tank reactors. The slurry catalyst is replaced with a reusable high-activity monolithic catalyst bed. A two-phase gas and liquid feed mixture is fed to the reactor using a specialized gas-liquid ejector. This technology provides reaction rates that are 10 to 100 times greater than typical reaction rates in the slurry tank reactor for many process chemistries. The monolith catalyst effectively concentrates or intensifies the catalytic reaction in the small parallel channels of the monolith, while the ejector correspondingly increases the gas-liquid mass transfer to match these high reaction rates. The MLR technology provides a host of improvements in the areas of process economics, hygiene, post-processing options, controlling catalyst contact at selected times in the batch cycle and incremental productivity expansion by the elimination of slurry catalysts and filtration unit operations.

Under the terms of this agreement, Johnson Matthey will be the exclusive supplier of a new line of catalysts developed for use with Air Products' MLR process technology. To sustain the rapid adoption of the technology, state-of-the-art support facilities have been developed and include high throughput laboratories and a pilot-scale MLR installation to quickly screen and optimize MLR-based process modules. Similar capabilities have been implemented to rapidly develop and manufacture custom catalyst modules required for the diverse range of syntheses operated by chemical manufacturers.

Air Products (NYSE:APD) serves customers in technology, energy, healthcare and industrial markets worldwide with a unique portfolio of products, services and solutions, providing atmospheric gases, process and specialty gases, performance materials and chemical intermediates. The company is the largest global supplier of electronic materials, hydrogen, helium and select performance chemicals. Founded in 1940, Air Products is recognized for its innovative culture, operational excellence and commitment to safety and the environment. With annual revenues of \$5.4 billion and operations in over 30 countries, the company's 17,200 employees build lasting relationships with their customers and communities based on understanding, integrity and passion. For more information, visit www.airproducts.com.

Johnson Matthey is a highly diversified global technology firm, traded on the London Stock Exchange (symbol: JMAT). The \$7.0 billion company is 185 years old and has been providing catalytic solutions for air quality problems for more than a quarter of a century. Johnson Matthey's North American catalyst division has sold more than 300 million catalysts for mobile and stationary applications, as well as providing comprehensive installation, service, support and maintenance. The company is backed by a reputation for superior reliability, design, engineering and manufacturing, technological expertise and customer service.

NOTE: Actual results could vary materially, due to changes in current expectations.

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