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Brand new polyethylene bench scale reactors up and running in Linz

A year ago Borealis, a leading provider of chemical and innovative plastics solutions, announced the successful completion of the laboratory reactors for Polypropylene (PP) polymerisation at the international Innovation Headquarters in Linz. A team of international experts worked on the second stage of a step-changing innovation project for polyethylene (PE)-reactors, which has now been completed.

Three additional laboratory reactors are now up and running. These new, one of a kind reactors are being used for PE polymerisation. During summer, the first test samples were produced.

“We managed to put four competence fields together, namely the mechanical, electrical, software and chemical engineering, and to get all reactors up and running as scheduled,” says Alexander Krajete, Borealis Polymerisation Expert and Project Manager for the new reactors. “With this additional investment, we are able to use smaller samples in a more efficient and flexible way, speeding up our product development process.”

The new laboratory reactors allow a hybrid operation mode for both PE and PP and they herald a new approach in the use of bench scale reactors to accurately mimic a continuous pilot or plant process. They enable Borealis to shorten turn-around time for sample evaluation and to create new product innovations together with the customers. Additionally, innovations will come to the advanced packaging, mobility and pipe markets faster and also in a more cost-efficient way.

“Even in the short time that the small reactors have been running, we have created some new inventions which are on their way to becoming patented and we are further strengthening the accelerated product development with

corresponding processing equipment”, says Michael Benisch, R&D Service Manager Borealis. “The new laboratory reactors have a high degree of automation, safety and functionality, which allow maximum flexibility with respect to hydrogen and comonomer use.”

“After an initial period of general testing, the reactors will form an important part of the company's strategy to accelerate product innovation development”, says Alfred Stern, Borealis Senior Vice President of Innovation and Technology.” In only 15 months the team, consisting of over 20 highly motivated and experienced employees, was able to complete the entire bench-scale laboratory including state of the art gas purification, an external gas supply and 4 PP and 3 PE reactors.”

End



The new reactors are being used for PE polymerisation. The first test samples were produced. (Alexander Krajete, Michael Benisch)

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For further information please contact:

Borealis: Kerstin Meckler, Borealis Head of Communications,
Tel. +43 1 22 400 389, kerstin.meckler@borealisgroup.com

Borealis is a leading provider of chemical and innovative plastics solutions that create value for society. With sales of EUR 6.6 billion in 2008, customers in over 120 countries, and 5,400 employees worldwide, Borealis is owned 64% by the International Petroleum Investment Company (IPIC) of Abu Dhabi and 36% by OMV, the leading energy group in the European growth belt. Borealis is headquartered in Vienna, Austria, and has production locations, innovation centers and customer service centers across Europe and the Americas. Through Borouge, a joint venture between Borealis and the Abu Dhabi National Oil Company (ADNOC), one of the world's major oil companies, the company's footprint reaches out to the Middle East, Asia Pacific, the Indian sub-continent and Africa. Established in 1998, Borouge employs approximately 1,400 people, has customers in more than 50 countries and its headquarters are in Abu Dhabi in the UAE and Singapore.

Building on the unique Borstar® technology and their experience in polyolefins for more than 50 years, Borealis and Borouge provide innovative, value creating plastics solutions for the infrastructure (pipe systems and power and communication cables), automotive and advanced packaging markets. In addition, Borealis offers a wide range of base chemicals from melamine and plant nutrients to phenol and acetone.

Today Borealis and Borouge manufacture 4.4 million tonnes of polyolefins (polyethylene and polypropylene) per year. Borouge is currently tripling its polyolefins manufacturing capacity to 2 million tonnes per year (t/y) by mid-2010 and an additional 2.5 million t/y is scheduled for 2013. The companies continue to invest to ensure that their customers throughout the value chain, across the globe, can always rely on product quality, consistency and security of supply.

Borouge and Borealis are committed to the principles of Responsible Care® and proactively contribute to addressing the world's water and sanitation challenges through their Water for the World™ initiative.

For more information visit:

Borealis: www.borealisgroup.com

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