

News Release



BASF introduces Fortress™ NXT FCC catalyst to help refiners increase liquid product yields with heavy resid feeds

- **Allows refiners to optimize operations and maximize profits**
- **Delivers superior metals passivation and activity maintenance**
- **Minimizes hydrogen and coke production**

BASF announced today the launch of Fortress™ NXT, the next generation of the industry-leading Fortress Fluid Catalytic Cracking (FCC) catalyst for heavy residuum (resid) oil feedstock applications for the refining market. Fortress NXT has been optimized to deliver superior metals passivation and activity maintenance, while keeping hydrogen and coke production low. For refineries, this creates the opportunity for profit maximization.

Fortress NXT has shown excellent results in refinery trials. Refineries that used Fortress NXT in their FCC units achieved optimal results with lower coke and gas. Refineries also sustained Liquefied Petroleum Gas (LPG) and gasoline outputs and bottoms upgrading while exploring new feedstocks with higher resid content. It builds on the BASF Fortress FCC catalyst technology that has been established in the Refinery markets for many years, and has been successfully used in FCC units all over the world.

“The introduction of Fortress NXT adds an innovative new product to BASF’s advanced refinery catalysts portfolio,” said Detlef Ruff, Senior Vice President, Process Catalysts at BASF. “Customers that already used Fortress NXT during plant trials have seen clear gas and coke

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reduction and the ability to increase the residue content of their feeds by up to 7%. This shows Fortress NXT's capability to help refiners optimize their operations and maximize profits."

Fortress NXT resumes the path of continuous innovation of BASF's refinery catalysts portfolio and builds on successful product introductions. The unique BoroCat™ technology, introduced in 2016, was recently awarded with the 2017 Hydrocarbon Processing Award for best catalyst technology and the 2017 Thomas Alva Edison Patent Award for outstanding environmental contributions. In 2017, Borotec™ was introduced in the market, the second innovation using BASF's unique Boron-Based Technology (BBT) platform.

"Our goal is to make our refining customers worldwide more successful by offering catalysts that minimize unwanted side reactions and increase their output. That is why we will continue to work on innovative FCC catalyst solutions with unique properties," added Jim Chirumbole, Vice President, Refining Catalysts at BASF.

About BASF's Catalysts Division

BASF's Catalysts division is the world's leading supplier of environmental and process catalysts. The group offers exceptional expertise in the development of technologies that protect the air we breathe, produce the fuels that power our world and ensure efficient production of a wide variety of chemicals, plastics and other products, including advanced battery materials. By leveraging our industry-leading R&D platforms, passion for innovation and deep knowledge of precious and base metals, BASF's Catalysts division develops unique, proprietary solutions that drive customer success. Further information on BASF's Catalysts division is available on the Internet at <http://www.catalysts.basf.com>.

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. The approximately 114,000 employees in the BASF Group work on contributing to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio is organized into five segments: Chemicals, Performance Products, Functional Materials & Solutions, Agricultural Solutions and Oil & Gas. BASF generated sales of about €58 billion in 2016. BASF shares are traded on the stock exchanges in Frankfurt (BAS), London (BFA) and Zurich (BAS). Further information at www.basf.com.