BASF
We create chemistry

Performance Profile

Converter®

Fluid Catalytic Cracking (FCC) co-catalyst creates value for refiners by utilizing a novel catalyst solution

Using Converter, gasoline production increased and slurry yields decreased at constant regenerator temperature during peak season

Introduction

Converter is an FCC co-catalyst from BASF's Distributed Matrix Structures (DMS) technology designed to provide today's refiners with a flexible tool for converting lower-valued feeds to higher-value products.

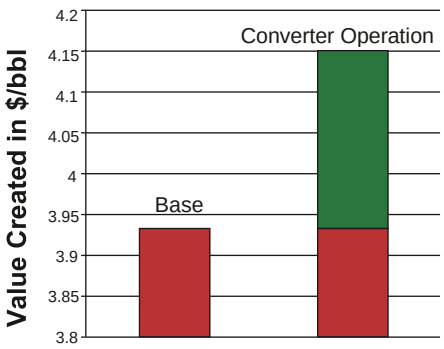
Converter was used at a refinery in combination with a base resid catalyst and purchased ecat with the goal of maintaining unit operations even at severe resid conditions such as high regen temperatures and high metals, thus improving refinery profitability. The unit also wants to compare Converter's results with those of a competitor's high alumina, high porosity fresh catalyst.

Results

- Performance of the DMS-based catalyst solution including Converter outperforms alternative catalyst option
- DMS-based catalyst solution creates* $4.12/bbl versus $3.93/bbl for the competitor's high alumina, high porosity alternative
- Using Converter, the refinery processed an additional 1,200 bpd
- Converter provides critical zeolite stability and increased total activity in a high severity operation allowing for successful inclusion of purchased ecat

*This result is from one refinery. Individual results may vary and are dependent on, for example, feed type and operating conditions.

Figure 1. Economic value comparison



Yield Improvements with DMS Catalyst Solution

	Competitor Fresh Cat	Converter + Ecat + Fresh Cat
Relative fresh feed rate	Base	Base + 1,200 bpd
Gasoline yield, wt%	47.9	49.1
LCO, wt%	18.6	19.1
Bottoms, wt%	12.6	12.2
Regenerator temperature, ºF	1368	1365

About Us

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.

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