



The Chemical Company

Performance Profile

Converter[®]

Fluid Catalytic Cracking (FCC) additive helps refiners create value by utilizing a novel catalyst solution

Gasoline production increased and slurry yields decreased at constant regenerator temperature during peak season.

Converter is an FCC additive from BASF Catalysts' Distributed Matrix Structure (DMS) technology platform designed to provide today's refiner with a flexible tool to convert less valuable feeds to higher valued products.

Goals

- Improve refinery profitability
- Maintain or reduce existing operating costs

Plan

- Converter is part of a novel DMS based catalyst solution combined with a base resid catalyst and purchased ecat.
- Maintain unit operations at high severity resid conditions, i.e. high regen temperatures and high metals.
- Compare results with competitor's high alumina, high porosity fresh catalyst.

Results

- Performance of the DMS based catalyst solution clearly outperforms alternative catalyst option.
- DMS based catalyst solution creates* \$4.12/bbl versus \$3.93/bbl for the competitors high alumina, high porosity alternative.
- DMS based catalyst solution allows refinery to process 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.

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 °F	1368	1365

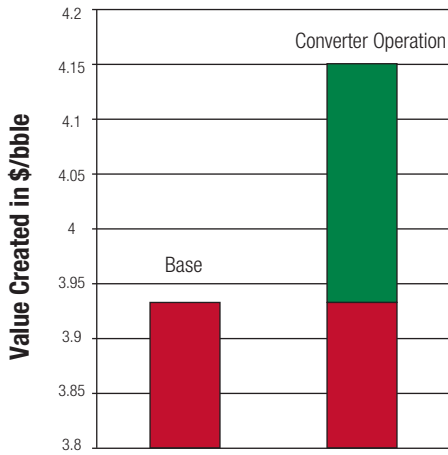


Figure 1: Economic Value Comparison

About BASF

BASF Catalysts is the Global Leader in Catalysis, and is part of BASF - The Chemical Company. By leveraging our industry-leading R&D platforms, BASF's global research infrastructure and our passionate pursuit of innovation, we develop unique, proprietary technologies that drive customer success. Our catalytic solutions cover a wide range from chemical and refinery processes, to adsorbents and mobile emissions. In addition, we offer broad experience in trading base and precious metals.

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For more information, contact the BASF Catalysts office in your region or visit

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