

Flex-Tec®

Fluid Catalytic Cracking (FCC) catalyst cracks the bottom of the barrel for enhanced performance in resid FCC

Flex-Tec is a premium resid FCC catalyst based on the Distributed Matrix Structures (DMS) technology providing high conversion and liquid yields even with heavy, highly contaminated resid FCC feeds

Introduction

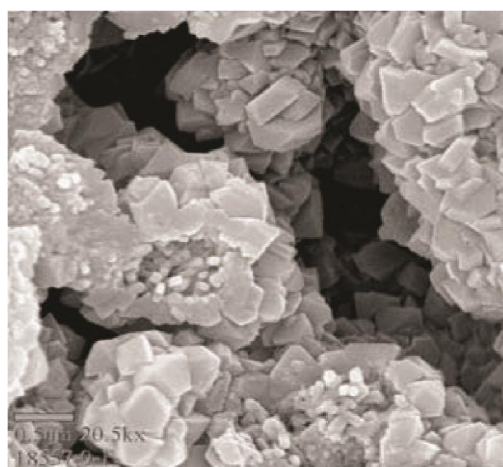
An FCC unit processing heavy resid feedstock wants to increase conversion and gasoline yield while maintaining or increasing feed rate. Flex-Tec is designed to provide excellent coke selectivity and metals tolerance for the unit's desired conversion and gasoline increase. It can also reduce coke yield and regenerator temperature while maintaining catalyst makeup rate. For these reasons, Flex-Tec is chosen to meet this unit's needs.

Results

Flex-Tec performance exceeded expectations and the refiner has already begun a second trial in another of its FCC units. Due to addition of Flex-Tec:

- Feed rate increased 9%
- Conversion increased 6 lv%; C+ liquid increased 4 lv%
- Gasoline increased by 3000 bpd
- HCO + slurry reduced by 2000 bpd
- Regenerator temperature and coke yields reduced

Figure 1. Optimized porosity for heavy molecule diffusion



Flex-Tec Refinery Trial Results

Changes from baseline operations

Feed rate, bpd	+9%
Catalyst makeup, tpd	No change
Conversion, lv%	+6
C+ liquid yield, lv%	+4
Gasoline, bpd	+3000
HCO + slurry, bpd	-2000
Regenerator temperature, °F	-30
Coke yield, wt%	-0.4

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