

Refiner realizes large increase in distillate yields and profits with ExxonMobil's MIDW™ technology

Energy lives here™

Optimized ExxonMobil drop-in catalyst solution delivers significant benefits.

Estimated annual benefits:

\$10 MM/yr+

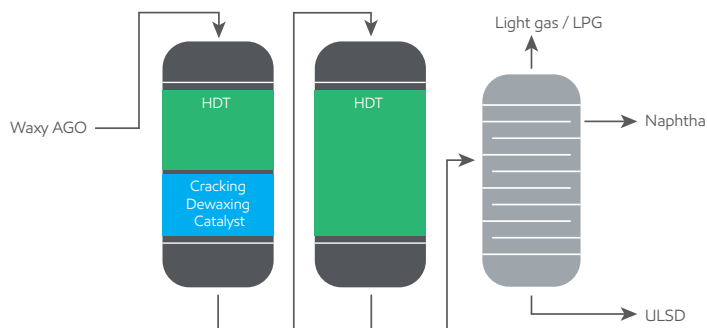
Diesel yield improvement:

+42%

Challenge – Refiner utilizing waxy atmospheric gas oil feed experiencing high LPG and naphtha yields

A North American refiner was producing 3 kbd of ultra-low sulfur diesel (ULSD) in winter mode [Figure 1]. The refiner achieved its target of a very deep cloud point reduction for a waxy feed, but this came at the expense of significant distillate yield loss. Cracking dewaxing results in high LPG and naphtha yields. The refiner's goal was to increase profitability by increasing distillate yields.

Figure 1:



Solution – Replace cracking dewaxing catalyst with ExxonMobil’s drop-in MIDW™ technology

ExxonMobil worked with the refiner to assess options and identify the best value solution, leveraging ExxonMobil’s technical expertise and owner-operator experience.

ExxonMobil’s MIDW technology is highly selective to diesel, minimizing the production of LPG and naphtha through isomerization of n-paraffins to iso-paraffins instead of cracking the paraffins out of the diesel range. In addition, updated distributor designs were recommended to improve contacting efficiencies.

Result – Improved profitability and increased distillate yields

The implementation of ExxonMobil’s catalyst technology and optimization knowledge [Figure 2] resulted in a 42 percent increase in distillate yield at constant pour point and cloud point. LPG and naphtha yields decreased by 16 and 26 percent, respectively. [Figure 3].

As a result of switching to ExxonMobil’s high-performing MIDW catalyst, the refiner was able to achieve an estimated annual benefit of \$10 million per year.

Figure 2:

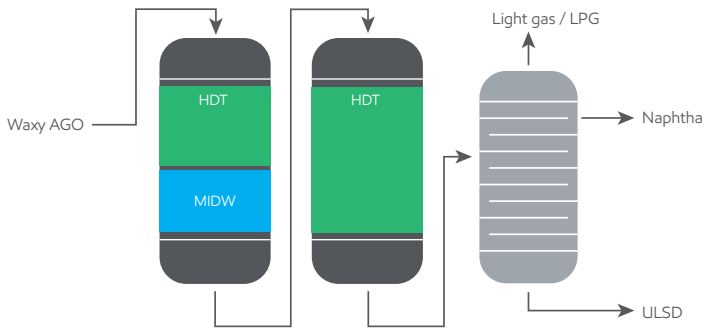
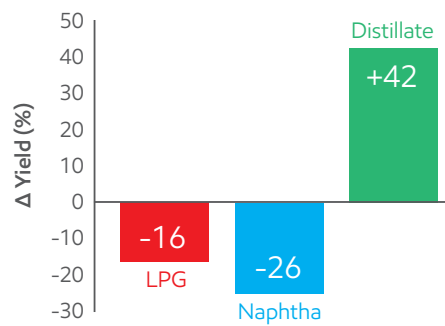


Figure 3:



For more information, visit:

www.exxonmobilchemical.com/midw

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