DTP Process

(DTP : Dominant Technology for Propylene Production)

Propylene

Propylene, which serves as the feed for the production of numerous important chemicals and polymers, is traditionally manufactured by cracking petroleum feed.
The world demand for propylene is expected to increase steadily in the future, but the present supplies of propylene are seen as inadequate to meet this increased demand. In addition, the diversification of feedstock and the energy conservation are needed as crude oil prices have soared.
With this background, the attention of the propylene industry has become focused on the diversification of feedstock and propylene production processes intended for “on purpose” propylene production with low energy consumption.

Introduction of DTP Process

Mitsubishi Chemical and JGC Corporation have jointly developed a catalyst which ensures high propylene selectivity and stable performance and the process which produces propylene with high yield and low energy consumption.
A demonstration test has been successfully completed through the operation of a demonstration plant in Mitsubishi Chemical's Mizushima Plant.

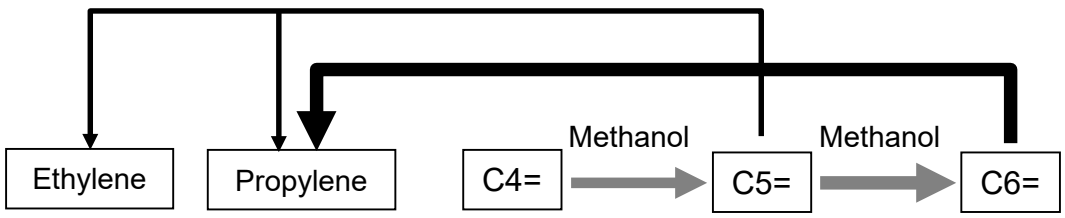
Features of DTP process

DTP process uses olefins and dimethyl ether (DME) or methanol produced from natural gas or other sources as feedstock and produces propylene. In addition, DTP process can produce propylene by only using DME or methanol as feedstock.

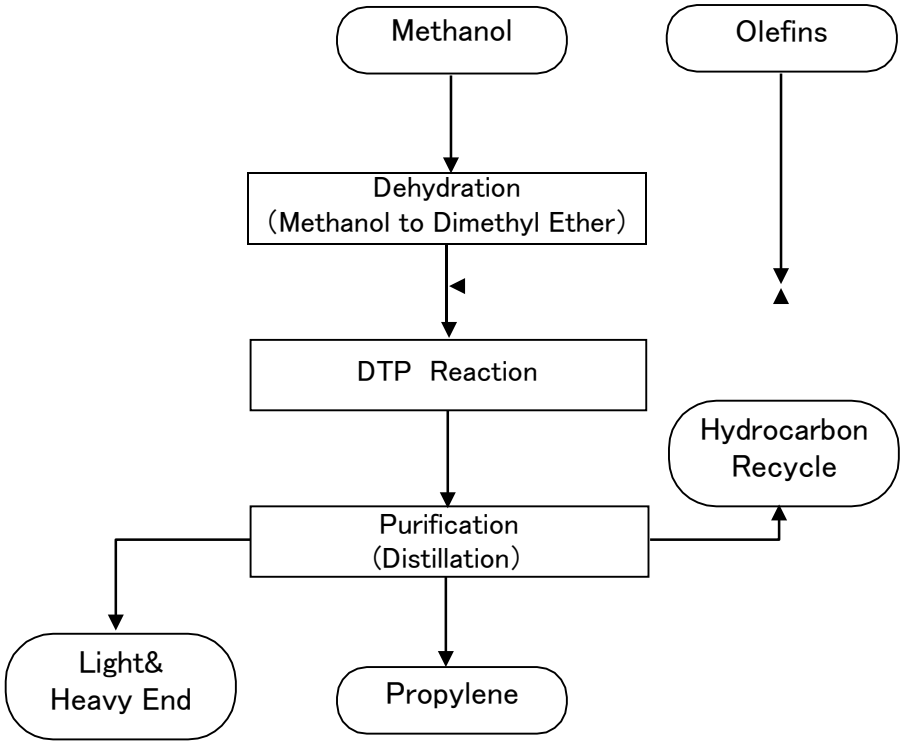
Features of this process are as follows;

(1) DTP catalyst ensures high propylene selectivity and stable performance.
(2) High propylene yield is attained by hydrocarbon recycling.
(3) Fixed-bed adiabatic reactor is adopted as a DTP reactor. The reactor is easy to operate.
(4) Low energy consumption and low CO_2 emission are attained by high performance catalyst.

Chemistry



Simplified block flow



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