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Design and Optimization of Dimethyl Ether Production from Crude Glycerol in a Reactive

Distillation

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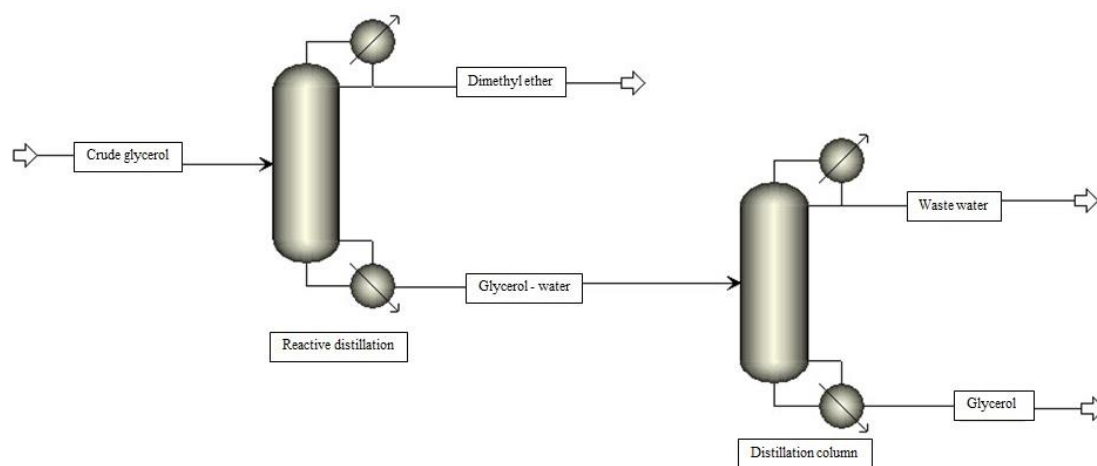
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Graphical Abstract



Process flow sheet of dimethyl ether production

Highlights

- Methanol in crude glycerol is used for dimethyl ether (DME) production.
- Analysis of a reactive distillation system for DME production is performed.
- Optimal process design is given in term of the minimization of total annual cost.

Abstract

Methanol in crude glycerol from biodiesel production is considered to be a raw material for dimethyl ether production. In this work, the production of dimethyl ether from the dehydration

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