

Accepted Manuscript

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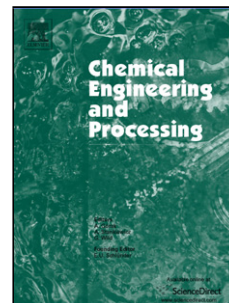
PII: S0255-2701(16)30332-4
DOI: <http://dx.doi.org/doi:10.1016/j.cep.2016.08.017>
Reference: CEP 6852

To appear in: *Chemical Engineering and Processing*

Received date: 13-5-2016
Revised date: 16-8-2016
Accepted date: 25-8-2016

Please cite this article as: Fengxia Huang, Songlin Xu, Ting Li, Dong Zhu, Innovative Ethylene Glycol Diacetate synthesis process in a single reactive distillation column, *Chemical Engineering and Processing* <http://dx.doi.org/10.1016/j.cep.2016.08.017>

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Innovative Ethylene Glycol Diacetate synthesis process in a single reactive distillation column

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Graphical abstract



Highlights

- High purity ethylene glycol diacetate was gotten in a single reactive distillation.
- As an auxiliary reaction, the hydration of ethylene oxide (EO) was proposed.
- Energy consumption was saved more than 48% achieved by the dynamic state simulation.

Abstract

In this paper, an innovative ethylene glycol diacetate (EGDA) synthesis process in a single reactive distillation column has been investigated. The consecutive, reversible second-order esterification of ethylene glycol (EG) with acetic acid (HAC) to ethylene glycol monoacetate (EGMA) and ethylene glycol diacetate (EGDA) were

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