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Title: Evaluation of kinetic models for Fischer-Tropsch cobalt catalysts in a plug flow reactor

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PII: S0263-8762(16)30277-5

DOI: <http://dx.doi.org/doi:10.1016/j.cherd.2016.08.026>

Reference: CHERD 2378

To appear in:

Received date: 5-7-2016

Revised date: 25-8-2016

Accepted date: 26-8-2016

Please cite this article as: Mohammad Ostadi, Erling Rytter, Magne Hillestad, Evaluation of kinetic models for Fischer-Tropsch cobalt catalysts in a plug flow reactor, *Chemical Engineering Research and Design* (2016), <http://dx.doi.org/10.1016/j.cherd.2016.08.026>

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Highlights: (3 to 5 bullet points)

- A review of published kinetic rate models for cobalt catalyst is done
- Twelve kinetic rate models are analyzed based on different criteria in a plug flow model
- A new chain growth model is proposed and fitted to microchannel experimental data
- The proposed chain growth model includes the effect of water and predicts C_{5+} and CH_4 selectivities quite well

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