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Title: A Physics-based Model for Industrial Steam-Methane Reformer Optimization with Non-uniform Temperature Field

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PII: S0098-1354(17)30002-9
DOI: http://dx.doi.org/doi:10.1016/j.compchemeng.2017.01.002
Reference: CACE 5658

To appear in: *Computers and Chemical Engineering*

Received date: 31-8-2016
Revised date: 1-1-2017
Accepted date: 2-1-2017

Please cite this article as: Ankur Kumar, Michael Baldea, Thomas F. Edgar, A Physics-based Model for Industrial Steam-Methane Reformer Optimization with Non-uniform Temperature Field, *<![CDATA[Computers and Chemical Engineering]]>* (2017), http://dx.doi.org/10.1016/j.compchemeng.2017.01.002

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Highlights:

- Physics-based model enables study of non-uniform furnace temperature distribution
- Novel empirical modeling scheme used to fit the real-plant temperature distribution
- Reasonably low computational time makes the model suitable for online optimization
- Optimization scheme uses physics-based model for furnace operation intensification

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