## Accepted Manuscript

Pore-scale modelling of the coupled thermal and reactive flow at the combustion front during crude oil in-situ combustion

Qianghui Xu, Wei Long, Hang Jiang, Cheng Zan, Jia Huang, Xi Chen, Lin Shi

PII: \$1385-8947(18)30687-9

DOI: https://doi.org/10.1016/j.cej.2018.04.114

Reference: CEJ 18914

To appear in: Chemical Engineering Journal

Received Date: 26 January 2018 Revised Date: 16 April 2018 Accepted Date: 18 April 2018



Please cite this article as: Q. Xu, W. Long, H. Jiang, C. Zan, J. Huang, X. Chen, L. Shi, Pore-scale modelling of the coupled thermal and reactive flow at the combustion front during crude oil in-situ combustion, *Chemical Engineering Journal* (2018), doi: https://doi.org/10.1016/j.cej.2018.04.114

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

### **ACCEPTED MANUSCRIPT**

# Pore-scale modelling of the coupled thermal and reactive flow at the combustion front during crude oil in-situ combustion

Qianghui Xu<sup>1</sup>, Wei Long <sup>2</sup>, Hang Jiang<sup>3</sup>, Cheng Zan<sup>2,4</sup>, Jia Huang<sup>3</sup>, Xi Chen<sup>3</sup>, Lin Shi<sup>1\*</sup>

1 Key Laboratory for Thermal Science and Power Engineering of Ministry of Education, Department of Energy and Power Engineering, Tsinghua University, Beijing 100084, China

2 iCore Digital Reservoir Group, Katy, Texas, 77450, United States

3 State Key Laboratory of Enhanced Oil Recovery, Research Institute of Petroleum Exploration & Development, China National Petroleum Corporation,

Beijing 100007, China

4 Research Institute of Tsinghua University in Shenzhen, 518055, China

Abbreviations: ISC: in-situ combustion; LB: Lattice Boltzmann; LBGK: Lattice Bhatnagar-Gross-Krook (model); IEDDF: internal energy double-distribution-function; DnQm: n-dimension, m-speed velocity space; Pe: Péclet number; Da: Damköhler number; Pr: Prandtl number: Le: Lewis number; VOP: Volume of Pixels; MRT-LB: Multiple-Relaxation-Time Lattice Boltzmann

\*Corresponding Author: Tel: +86 10 6278 7613; E-mail address: rnxsl@mail.tsinghua.edu.cn (Lin Shi)

#### Download English Version:

# https://daneshyari.com/en/article/6578451

Download Persian Version:

https://daneshyari.com/article/6578451

<u>Daneshyari.com</u>