Accepted Manuscript

Title: Computational fluid dynamics study of full-scale aerobic bioreactors: Evaluation of gas-liquid mass transfer, oxygen uptake, and dynamic oxygen distribution



Author: Mohammad J. Rahimi Hariswaran Sitaraman David Humbird Jonathan J. Stickel

 PII:
 S0263-8762(18)30433-7

 DOI:
 https://doi.org/doi:10.1016/j.cherd.2018.08.033

 Reference:
 CHERD 3327

To appear in:

Received date:	28-1-2018
Revised date:	24-7-2018
Accepted date:	24-8-2018

Please cite this article as: Mohammad J. Rahimi, Hariswaran Sitaraman, David Humbird, Jonathan J. Stickel, Computational fluid dynamics study of full-scale aerobic bioreactors: Evaluation of gas-liquid mass transfer, oxygen uptake, and dynamic oxygen distribution, <<u>[CDATA[Chemical Engineering Research and Design]</u>> (2018), https://doi.org/10.1016/j.cherd.2018.08.033

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

- CFD simulations of bubble-column and airlift aerobic bioreactors were performed
- Models for interphase oxygen transfer and uptake were coupled with hydrodynamics
- Regions of oxygen depletion were observed for low aeration conditions

Download English Version:

https://daneshyari.com/en/article/11023763

Download Persian Version:

https://daneshyari.com/article/11023763

Daneshyari.com