

## Accepted Manuscript

Title: Simulations of reactive settling of activated sludge with a reduced biokinetic model

Author: Raimund Bürger Julio Careaga Stefan Diehl Camilo Mejías Ingmar Nopens Elena Torfs Peter A. Vanrolleghem



PII: S0098-1354(16)30133-8  
DOI: <http://dx.doi.org/doi:10.1016/j.compchemeng.2016.04.037>  
Reference: CACE 5456

To appear in: *Computers and Chemical Engineering*

Received date: 25-1-2016  
Revised date: 11-4-2016  
Accepted date: 25-4-2016

Please cite this article as: Raimund Bürger, Julio Careaga, Stefan Diehl, Camilo Mejías, Ingmar Nopens, Elena Torfs, Peter A. Vanrolleghem, Simulations of reactive settling of activated sludge with a reduced biokinetic model, *Computers and Chemical Engineering* (2016), <http://dx.doi.org/10.1016/j.compchemeng.2016.04.037>

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.

Denitrification in secondary settlers in wastewater treatment plants is a significant problem.

Modelling such a process leads to a nonlinear convection-diffusion-reaction partial differential equation, which needs non-standard numerical methods to obtain reliable simulations.

The Bürger-Diehl settler model is extended to include biological reactions.

The final model describes the last settling stage of a sequencing batch reactor for denitrification.

A numerical scheme is tested for simulations with several initial conditions.

Download English Version:

<https://daneshyari.com/en/article/6595205>

Download Persian Version:

<https://daneshyari.com/article/6595205>

[Daneshyari.com](https://daneshyari.com)