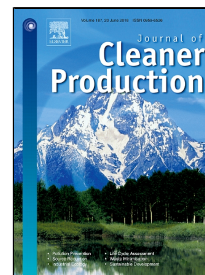


Accepted Manuscript

Design of distributed wastewater treatment networks by combining total mixing influence potential indicator with heuristic rules

Chang-Zhan Liu, Ai-Hong Li, JiříJaromír Klemeš, Zhi-Yong Liu



PII: S0959-6526(18)31343-X

DOI: 10.1016/j.jclepro.2018.05.016

Reference: JCLP 12873

To appear in: *Journal of Cleaner Production*

Received Date: 09 January 2018

Revised Date: 27 March 2018

Accepted Date: 02 May 2018

Please cite this article as: Chang-Zhan Liu, Ai-Hong Li, JiříJaromír Klemeš, Zhi-Yong Liu, Design of distributed wastewater treatment networks by combining total mixing influence potential indicator with heuristic rules, *Journal of Cleaner Production* (2018), doi: 10.1016/j.jclepro.2018.05.016

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.

Design of distributed wastewater treatment networks by combining total mixing influence potential indicator with heuristic rules

Chang-Zhan Liu^a, Ai-Hong Li^{a,*}, Jiří Jaromír Klemeš^b, Zhi-Yong Liu^{c,*}

^aDepartment of Chemical Engineering, Chengde Petroleum College, Chengde 067000, Hebei, China

^bSustainable Process Integration Laboratory – SPIL, NETME Centre, Faculty of Mechanical Engineering, Brno University of Technology - VUT Brno, Technická 2896/2, 616 69 Brno, Czech Republic

^cSchool of Marine Science and Engineering, Hebei University of Technology, Tianjin 300130, China

Abstract: This article presents a design method for the following wastewater treatment networks: a treatment process can remove multiple contaminants and/or a contaminant can be removed by multiple treatment processes. The method is developed by improving the numerical indicator of total mixing influence potential (TMIP), which was proposed by Li et al. (2015, AIChE J, 61: 3223-3231) based on the minimum treatment flowrate calculated with pinch-based method. The design procedure presented in this work includes two steps. First, calculate the values of

*Corresponding author.

E-mail address: liah76@sina.com (A.-H. Li), liuzhiyong@hebut.edu.cn (Z.-Y. Liu).

Download English Version:

<https://daneshyari.com/en/article/8094587>

Download Persian Version:

<https://daneshyari.com/article/8094587>

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