

RESEARCH NOTES

气固流化床中非线性特性的多尺度分析

甄玲^a, 王晓萍^a, 陈伯川^b, 黄海^a, 黄春艳^b

^a Instrument Department, Zhejiang University, Hangzhou 310027, China

^b Chemical Engineering Department, Zhejiang University, Hangzhou 310027, China

收稿日期 修回日期 网络版发布日期 接受日期

摘要 Deterministic chaos theory offers useful quantitative tools to characterize the non-linear dynamic behavior of a fluidized bed and the developed complexity theory presents a new approach to evaluate finite sequences. In this paper, the non-linear, hydrodynamic behavior of the pressure fluctuation signals in a reactor was discussed by chaos parameters and complexity measures. Coherent results were achieved by our multi-scale analysis, which further exposed the behavior in a gas-solid two-phase system.

关键词 [gas-solid fluidized bed](#) [pressure fluctuation](#) [chaotic theory](#) [complexity theory](#)

分类号

DOI:

Multi-scale Analysis of Chaotic Characteristics in a Gas-Solid Fluidized Bed

ZHEN Ling^a, WANG Xiaoping^a, CHEN Bochuan^b, HUANG Hai^a, HUANG Chunyan^b

^a Instrument Department, Zhejiang University, Hangzhou 310027, China

^b Chemical Engineering Department, Zhejiang University, Hangzhou 310027, China

Received Revised Online Accepted

Abstract Deterministic chaos theory offers useful quantitative tools to characterize the non-linear dynamic behavior of a fluidized bed and the developed complexity theory presents a new approach to evaluate finite sequences. In this paper, the non-linear, hydrodynamic behavior of the pressure fluctuation signals in a reactor was discussed by chaos parameters and complexity measures. Coherent results were achieved by our multi-scale analysis, which further exposed the behavior in a gas-solid two-phase system.

Key words [gas-solid fluidized bed](#); [pressure fluctuation](#); [chaotic theory](#); [complexity theory](#)

通讯作者:

甄玲 lingzhendk@yahoo.com.cn

作者个人主页: 甄玲^a; 王晓萍^a; 陈伯川^b; 黄海^a; 黄春艳^b

扩展功能

本文信息

▶ [Supporting info](#)

▶ [PDF](#) (1634KB)

▶ [\[HTML全文\]](#) (0KB)

▶ [参考文献](#)

服务与反馈

▶ [把本文推荐给朋友](#)

▶ [加入我的书架](#)

▶ [加入引用管理器](#)

▶ [引用本文](#)

▶ [Email Alert](#)

▶ [文章反馈](#)

▶ [浏览反馈信息](#)

相关信息

▶ 本刊中 包含 “[gas-solid fluidized bed](#)” 的 [相关文章](#)

▶ 本文作者相关文章

· [甄玲^a](#)

· [王晓萍^a](#)

· [陈伯川^b](#)

· [黄海^a](#)

· [黄春艳^b](#)