A study of temperature sensor location based on fractal analysis for cascade control schemes in tubular reactors - DTU Orbit (10/08/2019)

A study of temperature sensor location based on fractal analysis for cascade control schemes in tubular reactors

Temperature sensor location for cascade control schemes in tubular reactors is still an open research problem. Several studies have pointed out that most temperature sensitive zones along the length of the reactor are suitable to this end. In this work, we have studied the problem of sensor location in a cascade control configuration using fractal analysis of time series obtained by random forcing of the jacket reactor. A benchmark dispersion axial model displaying different temperature profiles is used to illustrate our findings.

General information
Publication status: Published
Organisations: Department of Chemical and Biochemical Engineering, CAPEC-PROCESS, Universidad Veracruzana, Universidad Autonoma Metropolitana
Contributors: Eduardo Ramirez-Castelan, C., Moguel-Castañeda, J., Puebla, H., Hernandez-Martinez, E.
Pages: 195-204
Publication date: 2016
Peer-reviewed: Yes

Publication information
Journal: Chemical Engineering Science
Volume: 141
ISSN (Print): 0009-2509
Ratings:
BFI (2016): BFI-level 2
Scopus rating (2016): CiteScore 3.05 SJR 1.039 SNIP 1.444
Web of Science (2016): Impact factor 2.895
Web of Science (2016): Indexed yes
Original language: English
Keywords: Cascade control, Fractal analysis, Parametric sensitivity, Tubular reactor
DOIs:
10.1016/j.ces.2015.10.036
Source: FindIt
Source-ID: 276631576
Research output: Contribution to journal » Journal article – Annual report year: 2015 » Research » peer-review