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Abstract

Process industries need a system that can image flow so that they can monitor the effectiveness of their process plant as well as detect any possible leakage or damages that might occur. This paper presents an optical tomography system which made use of infrared sensors to monitor the concentration profiles of solid flow in air conveyed by a vertical gravity flow rig. Several tests were conducted involving single pixel flow, multiple pixels flow, half flow

and full flow. The results showed that the system is capable of providing vital information on the flow inside the rig in the form of concentration profiles.

Refer

ences

- R. Abdul Rahim, C. KokThiam, M. H. FazalulRahiman, 2008. An Optical Tomography System Using a Digital SignalProcessor, Sensors, Volume 8, pp. 2082-2103.
- Uday S. Karmarkar and Kumar Rajaram, 2012. Aggregate production planning for process industries under oligopolistic competition, European Journal of Operational Research, Volume223, Issue 3, pp. 680–689.
- S. MeghaAnand, S. Sarkar, S. Rajendra, 2012. Application of Distributed Control System in Automation of Process Industries, International Journal of Emerging Technology and Advanced Engineering, Volume 2, Issue 6, pp. 377-383.
- S. Ibrahim, R. G. Green, K. Dutton, K. Evans, R. A. Rahim, and A. Goude, 1999. Optical sensor Configurations for Process Tomography, Measurement Science and Technology, Volume10, Issue 11, pp. 1079-1086.
- S. Ibrahim, 2000. Measurement of Gas Bubbles in a Vertical Water Column Using Optical Tomography, PhD Thesis, Sheffield Hallam University.

Index Terms

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Keywords

Tomography Fiber Optics Sensors