

Universiti Malaysia Perlis

INVENTORS

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SMART COLUMN IMAGER

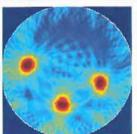
Industrial Design: 08-01559-0101, MY 13-E0029-0101

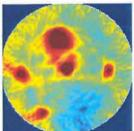


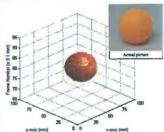


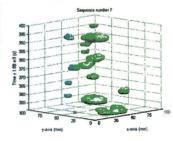












ABSTRACT

This invention presents a smart column imager system that performs 3D imaging of liquid/gas mixtures in a process column and estimates of the mixtures profiles.

NEEDS

Multi-phase flow instrumentation for column imaging and monitoring

APPROACH

Ultrasonic sensor in the form of tomography sensor array

BENEFITS

Non-contact column imaging and full-spectrum monitoring system

COMPETITION

Ordinary instrument use only single point measurement

ADVANTAGES / APPLICATIONS

- · Concentration Measurement in Industrial Processes
- · Volume Flow Rate Estimation in Chemical Reactors
- Continuous Monitoring of Mixing and Gas Transfer in Reactors/ Centrifuges
- Internal Processes Observation for Bacteria Cultivation
- · Oil and Gas Pipeline Imaging
- Chemical Column & Reactors Imaging
- · Flow Behavior Monitoring in Industrial Column
- Turbulence Control Monitoring in Industrial Pipelines
- · Volume Flow Rate Measurement

3D RECONSTRUCTIONS

