

## Non-Invasive Process Tomography In Chemical Mixtures – A Review

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### ABSTRACT

Decades of research, visualizing and monitoring chemical mixtures in the process plant non-invasively plays an important role in making sure that the system produces a high quality product without disturbing the nature of the plant. In this case, process tomography can be applied for the chemical mixtures. Thus, the objective of this paper is to review the current research on non-invasive process tomography for detecting chemical mixtures based on hard-field and soft-field tomography. The discussion on liquid–liquid, liquid–solid and liquid–gas two-phase flow for every type of non-invasive process tomography is explained in detail. Consequently, non-invasive process tomography has expanded strongly in chemical applications. Finally, potential future research on the chemical mixture based on ERT is addressed.

**KEYWORDS:** Non-invasive; Process tomography; Chemical mixtures; Hard-field tomography; Soft-field tomography

DOI: 10.1016/j.snb.2014.12.103