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Comparison of piezo electric particle monitor with laser diffraction technique

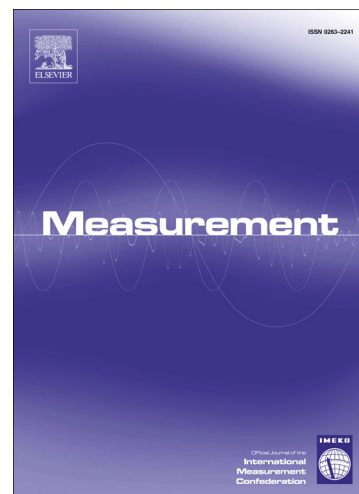
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Abstract

A piezo electric particle monitor was used to record droplet size distributions at 5 bars with nitrogen as gas phase and Exxol D60 as liquid phase. The measurements were compared with a laser diffraction technique. A discussion of the limitations of the methods is given. The results show that the piezo electric particle monitor is a good method for measuring droplet size distributions at given conditions.

Key words: Multiphase flow, Annular flow, Droplet, Particle sizing, Laser diffraction

1 Introduction

In many industries there is a need to monitor particles or droplets suspended in a flow of gas. In the oil and gas industries, process industries and the refining industries amongst others there are benefits in knowing the droplet size distributions of a process stream, and in particular for separation purposes.

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