

Optical tomography: Velocity profile measurement using orthogonal and rectilinear arrangements

Abstract

In tomography applications, flow velocity is an important flow characteristic for analysis. Excessively high particle velocity will cause high energy consumption, severe pipeline wear and particle degradation. This paper demonstrates a method of measuring velocity profile using the orthogonal and rectilinear sensors. Several experiments have been conducted to measure the velocity using those sensors and the results will be described at the end of the paper.