ABSTRACT:

In opticaltomography, light attenuation/scattering methods have been used to determine average solidsconcentrations in gas-solids flows. Derived from the Lambert–Beer law, the Mie theory forms the theoretical basis for optical sensor. It states that the intensity of light transmitted through a dilute gas–solids mixture should be exponentially related to the solidsconcentration in the light beam. In this context, the light transmits continuously and any particle passing though the volume interrogated by a sensor is detected as variation in the level of illumination of the sensor. This paper focused the modeling for a novel mixed-modality of orthogonal and rectilinearprojections. A novel image reconstruction algorithm has been applied and also tested on the modeling.