

Dual modality tomography system using optical and electrodynamic sensors

Introduction

The concept of combining two sensing mechanisms in tomography provides the opportunity to obtain and compare each other that can be used to improve the accuracy of concentration profiles. In the medical field, dual modality imaging is emerging as a method of improving the visual quality and quantitative accuracy of radionuclide imaging for diagnosis of patients with cancer and heart disease (Hasegawa et al., 2001).

Since, there is no single sensing method which is capable of detecting all suspended solids flow, it is vital to combine the technologies of optical sensors and electrodynamic sensors to produce a single measurement system. Both sensors are suitably positioned around the object of interest to allow comparison of concentration measurement and concentration profiles.