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## IMAGING OF PARTICLE SHAPE USING OPTICAL TOMOGRAPHY

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### 3.1 INTRODUCTION

Tomography means imaging by sections or sectioning. The device used in tomography is called a tomograph and the imaged produced is known as a tomogram. A computed tomography image is typically called a slice, which corresponds to a certain thickness of the object that being scanned. The basic components of any process tomographic instrument are hardware (sensors signal/data control) and software (signal reconstruction, display and interpretation facilities and generation of output control signals to process hardware). The heart of the tomographic technique is the sensor system [1].

Tomography was first developed in the medical field as it was used for the imaging of soft tissue and bone. Before this method has been invented, the only way to look into the patients' body was through invasive procedures. Within the year of the discovery of X – ray, the need for three dimensional imaging had been voiced. As a result, between 1910 and 1940, classical tomography has been invented for the first time [2].

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