

## Development of a distillation column scanning apparatus using gamma-ray tomography

### Introduction

Process column and reactor scanning apparatus are process diagnostics instrumentation and is required to be brought to the plant and used by specialized personnel. Radioisotope gauges have been used for this type of measurements for more than 50 years, and is still widely used. Data is normally recorded for subsequent off-line analysis. Often multiple measurements are carried out in a scan for instance by manually lowering a source down one side of a vessel and a detector down the other to build up a vertical density profile. A trained operator can then easily interpret this signature and provide information on the state of the process as well as the process vessel.