

Noble Gas Equipment Development – System Design and Envisaged Usage

A high throughput system for processing and detection of radionuclides for On-Site Inspection (OSI) purposes is currently being developed at FOI. To locate an underground event during an OSI it is important to cover and narrow down a large area of interest in a short time period. This will require a large number of sub-soil gas samples to be analyzed per day. Even if samples are combined, a noble gas system has to have a much higher throughput than currently available. The new system is intended to achieve this and have the capacity of separating high levels of Rn, CO₂ and other gases in combination with the high sensitivity and performances of the current SAUNA II system. The system design covering current status and performance will be presented. Envisaged use in the field, user interface, sample identification and future possibilities will also be presented.

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