# Application of Radioisotopes: PipeScanner: Non-destructive Detection of Blockage and Material Build-up

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**Date and time:**
30th of May, 2024,
14:00 – 14:20 + discussion

**Location:**
Building 26 Lecture hall,
KFKI Campus and on-line

**Seminar link:**
https://teams.microsoft.com/l/meetup-join/19%3aQtQ_LQhBREzKCg8zOfxRqRQRweT9idkWr9lHVfQoyA81%40thread.tacv2/17%2016732053374?context=%7b%22Tid%22%3a%22f44a99b6-b8f5-4e2e-983e-b01357a9fd32%22%2c%22Oid%22%3a%227f04d546-a75d-4cae-%20afd3-b67bdcc5dc68%22%7d

**Abstract:**

Industrial radioactive tracers involve the use of radioactive isotopes or labeled compounds to track and study the behavior of materials in various industrial processes. These radioactive "tracers" are selected to mimic the physical and chemical properties of the material being traced, allowing researchers to monitor flow patterns, residence times, leaks, and other process characteristics. Common radioactive tracers include tritium, sodium-24, scandium-46, bromine-82, technetium-99m, and iodine-131. Radiotracer technology has widespread applications in process diagnostics, enhanced oil recovery, mixing studies, leak detection in pipes and vessels, and residence time distribution analysis. By providing critical insights into industrial operations, radioactive tracers enable process optimization, troubleshooting, and the development of more efficient systems across sectors like petrochemicals, water treatment, and energy production.