

CHALLENGES

Projects as large and innovative as the thermonuclear experimental reactor ITER encompass many challenges. They require design, pre-studies, and/or feasibility phases. These preliminary steps help to **control risks related to expensive design mistakes**. They also enable the selection of the **most suitable solution** among different options. KEP Technologies' experts have designed a multi-measurement laboratory in a hot cell for an application of the characterization of radioactive material samples.

SOLUTION

Our **ENGINEERING & CONSULTANCY** team has designed for ITER a modular and multi-platform laboratory having all the necessary tools for the characterization and analysis of radioactive samples in various forms (dust, swipe samples, metallic objects, etc).

It performs different operations, like sample transfer between stations, mass and dose rate measurements, elemental composition characterization and radionuclide inventory, gamma mapping and outgassing characterization. All while ensuring a safe environment for the operator.

BENEFITS

Our **ENGINEERING & CONSULTANCY** team has the necessary skills and tools for your project's preliminary and feasibility studies

Suitable solution selection

- Through nuclear calculation and modelling using tools like MCNPX, Tripoli 4.4.2, Geant 4, MERCURE-6
- By Computer Assisted Design and Scale-up using Solidworks

Control risks

- Integration of safety constraints
- Technical risks analysis
- Specifications drafting

ENGINEERING & CONSULTANCY



Detail of the glovebox containing the Secondary-Ion Mass Spectrometry (SIMS) system

STUDIES AND EXPERTISE

Pre-studies based on your needs

CUSTOM DEVELOPMENTS

Let's Innovate together

AUTOMATION CAPABILITIES

Mechanical and Handling Systems

NUCLEAR SAFETY

Coverage of your Operational Constraints

MULTI-DISCIPLINARY TEAM

A specialist for all your needs