The European Research Reactor Conference (RRFM) 2023

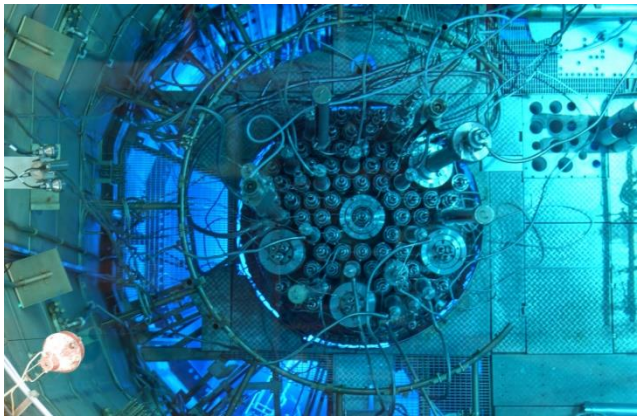
Technical Tour I

On Thursday 20 April 2022 delegates will have the possibility to participate in two technical tours.

Technical Tour I: SCK-CEN

Delegates will have the opportunity to visit different parts of the research center:

BR2



Belgian Reactor 2 or BR2 is a materials test reactor, designed to produce high neutron fluxes. It offers a unique combination of performance (top 10 in terms of power and neutron flux in the world) and flexibility in utilisation. The mission of this installation is to provide irradiation services to a multitude of clients from the nuclear, medical and industrial community. Irradiations in the BR2 not only provide scientific results on material behaviour under irradiation, enhancing the safety of nuclear installations of the present and the future, but also enable low emission transport and energy technology by providing high quality semiconductors by silicon irradiation. The BR2 also has great societal value, as it is one of the world's major suppliers of medical radioisotopes for diagnostics and therapy. It supplies over 35% of the global need of Molybdenum-99, the most used isotope for diagnostic medical procedures, and has a unique role in the provision of therapeutic radioisotopes for the treatment of cancer.

Heavy Liquid Metal Technology complex

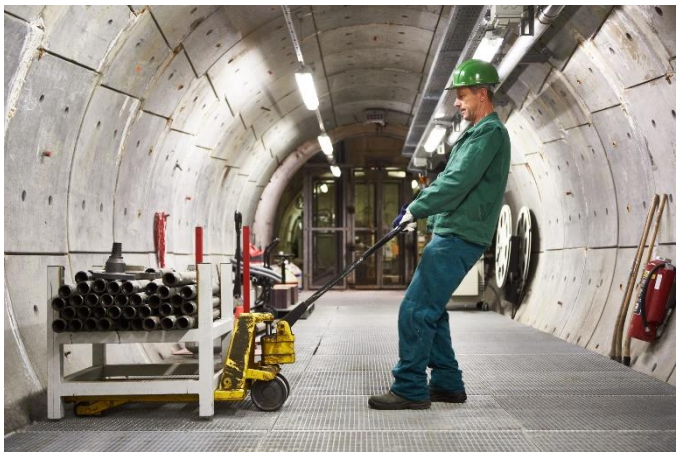
Since the start of the MYRRHA project, SCK CEN has implemented an extensive R&D program to support the development of the reactor. A strong R&D program has

especially been developed on the use of lead-bismuth (LBE), a liquid metal alloy, as a coolant for the reactor.

Within this R&D program, SCK CEN has developed several facilities such as COMPLOT in which prototypes of control rods are tested. HEXACOM, combined with COMPLOT, tests the thermal dissipation of heat exchangers. MEXICO tests the oxygen regulation of LBE. With CRAFT, liquid metal corrosion on structural materials is tested. E-SCAPE studies the liquid and heat flows of LBE in the reactor vessel. RHAPTER verifies the utility of movable mechanical components in an LBE environment.

Beside the research program supporting the development of the MYRRHA reactor, work is also being performed on ISOL@MYRRHA, a facility for the production of new radioisotopes. The focus of this research program is on achieving a high level of efficiency and purity. For this research program, specific test facilities are being built and used in “Labo2”.

HADES



The HADES laboratory is located at a depth of 225 metres below the SCK-CEN domain and allows the feasibility study for the disposal of high-level and long-lived radioactive waste in deep clay layers. GIE EURIDICE, the Economic Interest Grouping between ONDRAF and SCK-CEN, operates this laboratory and carries out scientific research there. At the beginning of the century, the infrastructure was extended by means of an additional gallery in order to carry out large-scale experiments concerning the feasibility and safety of the storage of heat-emitting radioactive waste.

Delegates will have the possibility to chose between **Option 1**: BR2 reactor and Heavy Liquid Metal Technology complex, or **Option 2**: Visit to HADES and Heavy Liquid Metal Technology complex.

Schedule

8 AM Bus departure from the hotel

3 PM Bus return at the hotel

Registration

The Technical Tours are included in the registration fee.

The maximum size of each group is limited and participation is on a first-come, first-served basis.

Please fill in the appropriate section of the registration form and the required information for the security check