Centre for Nuclear Safety

New Hot Cell laboratory for irradiated samples

Material investigations and failure analysis
Nuclear Power Plant safety needs mechanical testing and microstructural characterisation of irradiated materials to ensure lifetime performance optimisation.

**Services**

**Our offering:**
- Testing of radioactive materials, excluding nuclear fuel
- Fabrication of test specimens
- Conducting microstructural investigations by light optical microscopy, scanning electron microscopy (SEM) and transmission electron microscopy (TEM)

**Facilities**

Radiation protection at a highest standard, regulatory licensed

**Lightly-shielded protective cells**
- Isolated cell for light-optical microscopy examinations
- Cell for preparing cross-sections and resizing of specimens for SEM, TEM
- Shielded glovebox for preparation of TEM foils and other delicate activities

**Heavily-shielded protective cells**
- Fabrication operations by electric discharge cutting, drilling
- Fabrication operations by electron beam welding
- Metallography, including cutting, hot moulding, cold moulding, coarse grinding
- Mechanical testing by impact tester with tempering chamber and semi-auto feed
- Mechanical testing by hydraulic universal test machine
- Mechanical testing by dedicated semi-automatic pre-fatiguing device
- Mechanical testing by universal test machine with environmental chamber
- Dimension-measuring microscope
- Vicker’s hardness tester
- Fractography macroscope
- Utility cell for transport cask docking system - horizontal and vertical ports for transport casks of different size and orientations, weight up to 10 metric tons

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**Ask us more!**

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