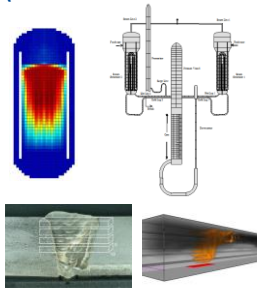


Research areas (SAFIR2014)

1. Man, Organization and Society
2. Automation and Control Room
3. Fuel Research and Reactor Analysis
4. Thermo Hydraulics
5. Severe Accidents
6. Structural Safety of Reactor Circuit
7. Construction Safety
8. Probabilistic Risk Assessment (PRA)
9. Infrastructure



The volume of the SAFIR2014 is in
~10 millionEuro/year

<http://safir2014.vtt.fi/>

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Impact of Fukushima accident on SAFIR2014 research

A supplement to the SAFIR2014 Framework Plan for 2012:

Fukushima Dai-ichi accident supplement:

- extension of existing topics and new safety issues
- Initiating events: external hazards, multiple events
- Design of NPPs: seismic events, cliff edge effects (loads, integrity of safety functions after extreme loads)
- Accident mitigation: deterministic and probabilistic assessment of long lasting accidents, heat removal, hydrogen issues, release of fission products
- Safety of the entire fuel life cycle, esp. storage of spent fuel

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SAFIR2014 in 2012 related to Fukushima supplement

Man, organization and society:

- Review of lessons learned from reported events (e.g. Fukushima) which have design as a contributing factor

Fuel research and reactor analysis:

- Development of tools and methods to enable an informed assessment of the distribution of radionuclides in various fuel microstructures

Thermal hydraulics:

- OECD/PKL3 project: "Fukushima" test scenario

Severe accidents:

- Estimation of the radiation doses caused by the Fukushima accident in the environment of the Fukushima Dai-ichi power plant
- Investigation of liquid metal, liquid oxide slag and salt liquid/solid phases interactions
- Development of MELCOR models of the Fukushima accident
- Development of an analysis tool for studies of loss of coolant accidents in spent fuel pools in the reactor building

Probabilistic risk assessment:

- More detailed studies of the occurrence of natural hazards: very rapid changes of Baltic Sea level, ice storms, excess snowfall cases and hurricane scale wind speeds, seismic hazard

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Thank you!

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