

Nuclear Technology Public Seminar

Recent development in fluoride salt-cooled high-temperature reactor (FHR) technology

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Date: 07 June 2016 (Tuesday)

Time: 6:45pm– 8:00 pm

Venue: Lecture Theatre LT-7, Academic Building 1, City University of Hong Kong

Registration: On-line free registration is via,
<http://www.hkarms.org/Registration/EventRegister.php?Event=69>
on a first-come-first-served basis.

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Abstract

The Fluoride salt-cooled High-temperature Reactor (FHR) is a new reactor concept that combines a liquid salt coolant and high temperature graphite-matrix coated coated-particle fuel originally developed for High Temperature Gas-cooled Reactors (HTGRs). The base-line liquid salt coolant was originally developed for use in molten salt reactors (MSRs) where the fuel is dissolved in the salt. The FHR operates at low pressure and has excellent heat transfer characteristics with superior safety features. Design temperature of FHR coolant is about 600-700°C that enables a nuclear air-Brayton combined cycle power system adapted from natural gas combined cycle plants. Research and development of FHR is supported by U.S. Department of Energy (DOE) through a joint university program at MIT, University of California-Berkeley, University of Wisconsin-Madison, and University of New Mexico. In China, Shanghai Institute of Applied Physics (SINAP) of Chinese Academy of Sciences (CAS) is leading the FHR development and is planning to build a 10-MW test reactor (TMSR-SF1). A Memorandum of Understanding was signed between U.S. DOE and CAS to cooperate on FHR technology. This talk will provide an overview of selected FHR research and development activities at MIT that includes the materials irradiation tests at the MIT Research Reactor and a pre-conceptual design 10 MW Transportable FHR for off-grid applications

Attendance/CPD Certificate will be provided

Supporting Organisations:

