McSAFER Training Course

Universidad Politécnica de Madrid (Spain)

January 25 - 27, 2021 (14:30 – 17:30)

PROJECT OVERVIEW

Interest on the development and deployment of **Small Modular Reactors** (SMR) has increased in the last years in Europe and worldwide. SMRs have a great potential for safe, flexible and CO2-free power generation, salt water desalination, and process heat generation. They are currently considered in various countries as an alternative to large nuclear power plants and as part of the future energy-mix to achieve the low-carbon power generation goals with low risk and cost in a competitive energy market.

The new small core design, the integral concept, the innovative heat exchangers, and passive heat removal systems as well as the novel containment designs represent new challenges for the safety demonstration in the frame of a licensing process in the near term.

The aim of the **McSAFER project** (*High-Performance Advanced Methods and Experimental Investigations for the Safety Evaluation of Generic Small Modular Reactors*) is to advance the safety research for SMRs by combining experimental investigations and numerical simulations. McSAFER has received funding from the Horizon 2020 Euratom Research and Training Programme.

COURSE THEME

The course will focus on SMR LWR technologies (e.g. CAREM, NuScale, SMART …) including design peculiarities, safety systems and accident analysis. The lectures will cover the following topics for different SMR technologies:

a. Introduction to SMR LWR Technologies
b. Reactor and safety systems description
c. Core main features
d. Accident analysis

COURSE STRUCTURE

The course consists of eight lectures (45 min. each) distributed over three days. Lectures will be given by international experts from Jacobs (UK), Tractebel (Belgium), KIT (Germany), VTT (Finland), UJV (Czech Republic), CNEA (Argentine) and UPM (Spain). On-line quizzes will be included in each lecture to help online learning.

LOCATION: ONLINE using ZOOM

FEE: The course is **free of charge**.

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WEB-PAGE: https://mcsafer-h2020.eu/news-and-events/