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Seminarium Zakładu Energetyki Jądrowej i Analiz Środowiska (UZ3) Departament Badań Układów Złożonych (DUZ)

Wtorek: **12.01.2021**
11:30

dr inż. Piotr Darnowski
ITC PW

Severe Accident Analyses for a PWR NPP dedicated to the SAMG Decision Making Tool Development

Abstract:

The presentation will focus on the severe accident analyses for PWR nuclear reactors. In the first part, severe accident phenomenology and MELCOR computer code will be discussed. In the second part, the example analysis performed in the framework of the WP5 NARSIS Horizon 2020 Project will be presented and discussed.

Severe accident simulations were performed to generate a database of NPP states dedicated to being used with Severe Accident Management Guidelines Decision Making Tool (SAMG DM) SEVERA. The novel software is intended to be a supporting tool for the SAMGs implementation, Emergency Preparedness and selection of Severe Accident Management (SAM) strategies.

The presentation covers MELCOR simulations for both in-vessel and ex-vessel phases for different accident scenarios. Two general types of scenarios are considered in the database: low-pressure and high-pressure sequences. The first class covers different realization of LB-LOCA and the second, different variants of Station Blackout. Totally more than 25 accident sequences were studied. In the presentation, the accident progression will be presented and the most important observations will be discussed.

Serdecznie zapraszamy,
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