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

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Dual fluid reactor – static and transients calculations

Abstract:

In recent years a growing interest in nuclear reactors based on molten salt technology has been noticeable. Based on experience with modelling Molten Salt Reactor Experiment (MSRE), results for Dual Fluid Reactor (DFR) 250 MWth will be presented during the seminar. The main objective of the work was transients scenarios for DFR. However, some additional work has been done: the proposition of control reactivity system and its impact for such key parameters as power distribution, reactivity temperature coefficients and temperature distribution.

Results include the introduction of the control rods in the reflector zone, burnable poison in the reactor core and minor changes in reactor dimension and fuel composition. Results shows also the impact of 2 different reactivity control systems for parameters such as power peaking factors, temperature distributions or temperature reactivity coefficients.

Serdecznie zapraszamy M. Dąbrowski, T. Kwiatkowski http://www.phd4gen.pl