

Seminarium Zakładu Energetyki Jądrowej i Analiz Środowiska (UZ3)

Departament Badań Układów Złożonych (DUZ)

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**Application of Burnup Credit Methodology on
WWER-440 Reactors Spent Fuel Pool Re-Racking
Analysis**

Abstract:

Transition of ANPP to the fuel assemblies with higher enrichment (3.82%) and consequently, higher burnup, could cause shortage of free cells in the spent fuel pool due to doubling of the pre-cooling time of the spent fuel assemblies in the spent fuel pools to meet ANPP NUHOMS type dry spent fuel storage acceptance criteria. One of the possible options to overcome shortage of free cells could be compacting (re-racking) of spent fuel pools, applying burnup credit approach. Bounding isotopic composition of WWER-440 spent fuel was calculated by using ORIGEN-S program of SCALE 6.1 package. Developed model of WWER-440 fuel assembly was verified and validated against WWER-440 reactor fuel chemical assay data. Criticality safety analysis of spent fuel pool was carried out by applying Actinides-only option of burnup credit approach. Model of WWER-440 reactor spent fuel pool was developed by MCNP6.1 code.

Serdecznie zapraszamy,

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