

PECULIARITIES OF THE MELTING-SOLIDIFICATION PROCESSES BY SINKING OF THE MELTING BLOCKS INTO HIGH-TEMPERATURE CORIUM MELT

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Mathematical modeling of the corium melt coolability with the low-temperature melting blocks is a subject of the paper, focusing on the methodology of modeling. The results of a computer simulation and conclusions concerning the features of the process studied are presented. Obtained results allowed making some conclusions concerning the main features and dynamics of the process of corium melt pool cooling with sinking of low-melting temperature blocks into high-temperature pool, which present the key part of the passive protection system against severe accidents at NPP.

Keywords: model, corium, melting blocks, solidification, coolability.