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**MODELING OF THE CORIUM COOLING
AND LOADING FACTOR ANALYSIS
FOR CONTAINMENT DURING SEVERE ACCIDENTS**

The paper is devoted to the development and study of the mathematical model for corium melt interaction with low-temperature melting blocks in the passive protection systems (PPS) against severe accidents at the NPP, and learning the peculiarities of construction and operation of the PPS. The configurations of cooling blocks' distributions considered and the results of their work in the corium cooling pool are compared to the data of other PPS's conceptions. The conclusion is made that the models developed and the results obtained may be useful for constructing the PPS against severe accidents.

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