

THERMAL STATE OF VENTILATED CONCRETE CASK WITH SPENT NUCLEAR FUEL IN THE CONDITIONS OF EXTERIOR AIRFLOW LEAKING

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The process of heat-and-mass transfer in the ventilated concrete container used for prolonged intermediate storage of sealed cask with spent fuel rods is investigated by computer modelling in conditions of exterior airflow leaking. The problem is considered in the three-dimensional coupled statement with account of natural and forced convection, and radiation heat transfer. The results of analysis for a stand-alone container for various external wind influences are given.

Key words: spent nuclear fuel, dry storage, ventilated cask, coupled problem of heat exchange.