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THE STUDY OF THERMAL-HYDRAULIC PROCESSES IN THE STEAM GENERATOR OF THE BREST-OD-300 REACTOR FACILITY

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One of the most important elements of the BREST-OD-300 reactor facility is a steam generator (SG), which is a vertical heat exchanger with twisted pipes, immersed in liquid lead. To justify heat-hydraulic performance of SG and reliability of circulation was conducted complex of computational and experimental works. Computational research were conducted with the help of numerical model of SG developed on the basis Re-lap5 heat-hydraulic code. Adequacy of modeling heat-hydraulic processes of numerical model SG has been confirmed by experiments conducted in JSC «IPPE» and JSC «NIKIET». After verification of the numerical model was made computational analysis of heat-hydraulic stability SG, simulated work SG in stationary modes with different levels of power, in start-up conditions and emergency stop, including mods after breaking heat exchange tubes.

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