

# Critical Analysis of the Primary Circuit Components Important to LTO's Safe Operation of NPP VVER 440 and VVER 1000

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**Abstract.** The paper is focused on the identification of critical issues with the primary circuit components based on the operational experience with the importance of safe long-term operation (LTO) of VVER 440 and VVER1000 nuclear reactors. Results from the actual running H2020-Europe project DELISA-LTO are presented in cumulative form in detail. Our approach is to combine the development of the simulation tools, experimental work (material analyses), specific irradiations and in-service and/or non-destructive inspection techniques to develop the effective “early warning” tool for the assessment of the system integrity for the LTO of the current VVER reactors.

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