

VALIDATION OF THE CODE PACKAGE MCPV

V. N. Bukanov, O. V. Grytsenko, V. L. Diemokhin, O. M. Pugach, S. M. Pugach

The results of the validation of the code package MCPV that is used in the radiation exposure determination methodology for the pressure vessels of the VVER type reactors of Ukrainian NPPs are presented. The validation is carried out on the basis of the data obtained with the reactor LR-0 benchmark and of the results of dosimetry measurements behind reactor pressure vessels. It is shown the code package MCPV can be used to simulate the neutron transport through a complicated heterogeneous environment of nuclear reactor and to obtain the calculational values of functionals of the neutron flux influencing onto its pressure vessel.

Keywords: reactor pressure vessel, radiation exposure, neutron transport code, validation.