Nuclear Technology

VOLUME 204 · NUMBER 1 · OCTOBER 2018

Contents

TECHNICAL PAPERS

1 Potential Recovery Actions from a Severe Accident in a PWR: MELCOR Analysis of a Station Blackout Scenario

J. Wang, H. J. Jo, M. L. Corradini

15 Transient Thermal-Hydraulic Analysis of Single Flow Channel Blockage in the JRR-3M 20-MW Research Reactor

Yuchuan Guo, Guanbo Wang, Dazhi Qian, Heng Yu, Bo Hu, Xiangmiao Mi, Simao Guo

- **25** Comparison of Wall Treatments and Meshes in Large-Eddy Simulations of Mixing Tees *Antti Timperi*
- **41** Applications for Thorium in Multistage Fuel Cycles with Heavy Water Reactors *Timothy Ault, Steven Krahn, Andrew Worrall, Allen Croff*
- **59** Ab-Initio Calculation of Spectral Absorption Coefficients in Molten Fluoride Salts with Metal Impurities

Ethan S. Chaleff, Nikolas Antolin, Wolfgang Windl, Thomas Blue

- 66 Influence of Coolant ⁶Li Concentration on the Neutronic Parameters of Lithium-Cooled Reactor Bing Hong, Yunging Bai, Gang Xu, Xiaoliang Zou
- 74 Demonstration of Under Sodium Viewer in Monju

 *Kosuke Aizawa, Koei Sasaki, Yoshitaka Chikazawa, Masaru Fukuie, Noboru Jinbo
- 83 Evaluation of Nuclear Warhead Symmetry Detection by Compton Camera

 Zhang Yingzeng, Xiang Qingpei, Hao Fanhua, Guo Xiaofeng, Xiang Yongchun,
 Chu Chengsheng, Zeng Jun, Luo Fei, Ze Rende
- **94** Criticality Detection Method Based on Fission Product Gamma Radioactivity Measurement *Yoshitaka Naito, Kazuo Azekura*
- 101 Estimation on Feeding Portions of Slitting Decladded Fuel Fragments to Electrolytic Reduction Process

Jae-Won Lee, Do-Youn Lee, Young-Soon Lee, Jae-Hwan Yang, Geun-II Park, Jung-Won Lee, Hyoung-Mun Kwon, Yung-Zun Cho

TECHNICAL NOTE

110 Postclosure Performance Assessment of a Hypothetical Canadian Deep Geological Repository for Thorium-Containing Advanced Heavy Water Reactor Fuels

Nicholas Chornoboy, Alexandra Levinsky, Charles Kitson, Blair P. Bromley