

TECHNICAL PAPERS

FISSION REACTORS

- 315 Neutronic Design and Analysis of a Small Nuclear Reactor to Supply District Heating and Electrical Energy to Canadian Forces Bases Located in the Arctic or the Northern Remote Communities / *Stéphane Paquette, Hugues W. Bonin*
- 337 Thermo-economic Analysis of High-Temperature Gas-Cooled Reactors with Steam Methane Reforming for Hydrogen Production / *Duk Jin Kim, Jong Hyun Kim, K. F. Barry, Ho-Young Kwak*

REACTOR SAFETY

- 352 Analyses of the Phébus FPT3 Experiment Using the Severe Accident Codes ATHLET-CD, ICARE/CATHARE, and MELCOR / *Georges Repetto, Olivier de Luze, Tilman Drath, Marco K. Koch, Thorsten Hollands, Klaus Trambauer, Christine Bals, Henrique Austregesilo, Jon Birchley*

THERMAL HYDRAULICS

- 372 Triggered Steam Explosions with the Corium Melts of Various Compositions in a Two-Dimensional Interaction Vessel in the TROI Facility / *J. H. Kim, B. T. Min, I. K. Park, S. W. Hong*

RADIATION TRANSPORT AND PROTECTION

- 387 Neutron Channeling Through Neutron Absorber Sheets / *Alan H. Wells, Albert J. Machiels*
- 395 Use of Multiple Layers of Repeating Material to Effectively Collimate an Isotropic Neutron Source / *Z. D. Whetstone, K. J. Kearfott*

NUCLEAR PLANT OPERATIONS AND CONTROL

- 414 Advanced Cable-Testing Techniques for Nuclear Power Plants / *Hashem M. Hashemian, Wendell C. Bean*

MATERIALS FOR NUCLEAR SYSTEMS

- 430 Managing Beryllium in Nuclear Facility Applications / *G. R. Longhurst, K. Tsuchiya, C. H. Dorn, S. L. Folkman, T. H. Fronk, M. Ishihara, H. Kawamura, T. N. Tranter, R. Rohe, M. Uchida, E. Vidal*

TECHNICAL NOTES

THERMAL HYDRAULICS

- 442 Evolution of the Leak-Before-Break Concept in Nuclear Plants: Issues and Resolutions in the Process of Regulatory Actions / *Mir Sajjad Ali*

RADIATION MEASUREMENTS AND GENERAL INSTRUMENTATION

- 452 Laboratory Tests of an Ultrasonic Inspection Technique to Identify Defective CANDU Fuel Elements / *W. H. Huang, T. W. Krause, B. J. Lewis*

CONTENTS / DECEMBER 2011—VOL. 176, NO. 3

(Continued)

DEPARTMENTS

- 462 Technical Reviewers
- 466 Volume 176 Indexes
 - v Volume 176 Contents