

TECHNICAL PAPERS

FISSION REACTORS

- 247 Using Point Reactor Models and Genetic Algorithms for On-Line Global Xenon Estimation in Nuclear Reactors / *Tunc Aldemir, Giancarlo Torri, Marzio Marseguerra, Enrico Zio, Jeffrey A. Borkowski*

FUEL CYCLE AND MANAGEMENT

- 256 Analysis of Burnup and Economic Potential of Alternative Fuel Materials in Thermal Reactors / *Stella Maris Oggianu, Hee Cheon No, Mujid S. Kazimi*
- 270 Maintenance Cycle Extension in the IRIS Advanced Light Water Reactor Plant Design / *Mark R. Galvin, Neil E. Todreas, Larry E. Conway*

THERMAL HYDRAULICS

- 281 Safety Analysis of Fast Reactor Core with Uranium-Free Fuel for Actinide Transmutation / *Igor Krivitski, Mikhail Vorotyntsev, Valentin Pyshin, Ludmila Korobeinikova*

NUCLEAR PLANT OPERATIONS AND CONTROL

- 290 Step Complexity Measure for Emergency Operating Procedures—Determining Weighting Factors / *Jinkyun Park, Wondea Jung, Jaewhan Kim, Jaejoo Ha*

RADIOACTIVE WASTE MANAGEMENT AND DISPOSAL

- 309 Mobility and Criticality of Plutonium in a Repository / *Bernhard Kienzler, Andreas Loida, Werner Maschek, Andrei Rineiski*
- 322 Radionuclide Transport in a Multiple and Parallel Fractured System / *Chih-Tien Liu, Hund-Der Yeh*
- 335 The Effective Diffusion Coefficient of Dissolved Oxygen and Oxidation Rate of Pyrite by Dissolved Oxygen in Compacted Purified and Crude Sodium Bentonites in Carbonate Buffered Solution / *Mitsuo Manaka*

MATERIALS FOR NUCLEAR SYSTEMS

- 347 Development of Creep Constitutive Equation for Low-Alloy Steel / *Kwang J. Jeong, Joon Lim, Il S. Hwang, Hee D. Kim, Martin M. Pilch, Tze Y. Chu*

(Continued)

CONTENTS / SEP. 2003—VOL. 143, NO. 3

(Continued)

TECHNICAL NOTES

FISSION REACTORS

- 358** Monte Carlo Modeling of the Portuguese Research Reactor Core and Comparison with Experimental Measurements / *Ana C. Fernandes, Isabel C. Gonçalves, Nuno P. Barradas, António J. Ramalho*

REACTOR SAFETY

- 364** Power Profile Evaluation of the JCO Precipitation Vessel Based on the Record of the Gamma-Ray Monitor / *Kotaro Tonoike, Takemi Nakamura, Yuichi Yamane, Yoshinori Miyoshi*

DEPARTMENTS

- 373** Volume 143 Indexes
v Volume 143 Contents