

SELECT PAPERS FROM THE SECOND SEMINAR ON ACCELERATED TESTING OF MATERIALS IN SPENT NUCLEAR FUEL AND HIGH-LEVEL WASTE STORAGE SYSTEMS

- 1 Foreword / *Ed Kuhn, Dick Blauvelt, Gary Smith*

TECHNICAL PAPERS

- 2 Aging Tests of Neutron-Shielding Materials for Transport of Storage Casks /
Herve Issard, Pascale Abadie
- 9 Accelerated Testing of Neutron-Absorbing Alloys for Nuclear Criticality Control /
R. E. Mizia, T. E. Lister
- 22 Combined Experimental and Computational Approach to Predict the Glass-Water
Reaction / *E. M. Pierce, D. H. Bacon*

REGULAR TECHNICAL PAPERS

FISSION REACTORS

- 40 Feasibility of Reduced Boron Concentration Operation in Pressurized Water
Reactor Plants / *Aung Tharn Daing, Myung-Hyun Kim*
- 57 Flashing-Induced Instability Analysis and the Start-Up of Natural Circulation
Boiling Water Reactors / *Rui Hu, Mujid S. Kazimi*
- 72 Automatic Boiling Water Reactor Control Rod Pattern Design Using Ant Colony
Optimization Algorithm / *Cheng-Der Wang, Chaung Lin*

REACTOR SAFETY

- 83 Experimental Study on the Behavior of Suspended Aerosols of Sodium and
Nonradioactive Fission Products (SrO_2 and CeO_2) in a Closed Vessel /
V. Subramanian, R. Baskaran, J. Misra, R. Indira

THERMAL HYDRAULICS

- 93 Analysis of the BR2 Loss-of-Flow Test A / *Constantine P. Tzanos, B. Dionne*

RADIATION TRANSPORT AND PROTECTION

- 106 Using the Levenberg-Marquardt Method for Solutions of Inverse Transport
Problems in One- and Two-Dimensional Geometries / *Keith C. Bledsoe,
Jeffrey A. Favorite, Tunc Aldemir*

CONTENTS / OCTOBER 2011—VOL. 176, NO. 1

(Continued)

NUCLEAR PLANT OPERATIONS AND CONTROL

- 127** High-Performance Differential Pressure Monitoring Devices Using Pulsating Sensors for a Sodium-Cooled Fast Breeder Reactor / *K. Praveen, M. P. Rajiniganth, A. D. Arun, R. Ananthanarayanan, N. Malathi, P. Sahoo, N. Murali*

RADIOACTIVE WASTE MANAGEMENT AND DISPOSAL

- 138** Yucca Mountain Waste Package Closure System Robotic Welding and Inspection System / *C. I. Nichol, D. P. Pace, E. D. Larsen, T. R. McJunkin, D. E. Clark, M. L. Clark, K. L. Skinner, A. D. Watkins, H. B. Smartt*

RADIATION MEASUREMENTS AND GENERAL INSTRUMENTATION

- 147** Hot-Test Results of the Advanced Spent Fuel Conditioning Process Safeguards Neutron Counter for PWR Spent Fuel Rods / *Tae-Hoon Lee, Young Soo Kim, Hee-Sung Shin, Ho-Dong Kim*