

SPECIAL ISSUE ON THE 2008 INTERNATIONAL CONGRESS ON ADVANCES IN NUCLEAR POWER PLANTS

- 1 Foreword: Special Issue on the 2008 International Congress on Advances in Nuclear Power Plants / *Samim Anghaie*

TECHNICAL PAPERS

- 2 An Assessment of Large-Eddy Simulation Toward Thermal Fatigue Prediction / *A. K. Kuczaj, E. M. J. Komen*
- 16 Thermal-Fluid Characterizations of ZnO and SiC Nanofluids for Advanced Nuclear Power Plants / *In Cheol Bang, Ji Hyun Kim*
- 28 Condensation Correlation for a Vertical Passive Condenser System / *Shripad T. Revankar, Seungmin Oh, Wenzhong Zhou, Gavin Henderson*
- 40 Summary for Three Different Validation Cases of Coolant Flow in Supercritical Water Test Sections with the CFD Code ANSYS CFX 11.0 / *Attila Kiss, Attila Aszódi*
- 54 Parametric Sensitivity Study on the Reflooding Models of the MARS Code Based on 6×6 Rod Bundle Test Results / *Ki-Yong Choi, Seok Cho, Hyoung-Kyu Cho, Chul-Hwa Song*
- 68 The Enhancements and Testing for the MCNPX 2.6.0 Depletion Capability / *Michael L. Fensin, John S. Hendricks, Samim Anghaie*
- 80 Development of an Automated Testing System for Verification and Validation of Nuclear Data and Simulation Code / *Brian S. Triplett, Samim Anghaie, Morgan C. White*
- 90 Heat Transfer in Intermediate Heat Exchanger Under Low Flow Rate Conditions / *Hiroyasu Mochizuki*
- 100 An Integral Effect Test on the Reflood Period of a Large-Break LOCA for the APR1400 Using ATLAS / *Hyun Sik Park, Ki Yong Choi, Seok Cho, Kyoung Ho Kang, Nam Hyun Choi, Dong Jin Euh, Yeon Sik Kim, Won Pil Baek*
- 114 Optimal Geometric Configuration for a Natural Circulation Loop / *Jin Ho Song*
- 123 Large Break Loss-of-Coolant Accident Analysis of VVER-1000 Reactor Using CATHARE Code / *Luben Sabotinov, Abhishek Srivastava*
- 133 Development of Advanced Loop-Type Fast Reactor in Japan / *Shoji Kotake, Yoshihiko Sakamoto, Takatsugu Mihara, Shigenobu Kubo, Nariaki Uto, Yoshio Kamishima, Kazumi Aoto, Mikio Toda*
- 148 System Design and Analysis of a 900-MW(thermal) Lead-Cooled Fast Reactor / *Sang Ji Kim, Yonghee Kim, Sergi Hong, Chung Ho Cho, Jae-Hyuk Eoh, Jong Bum Kim, Myung Hwan Wi, Kwi Seok Ha, Eui Kwang Kim*

(Continued)

CONTENTS / APRIL 2010—VOL. 170, NO. 1

(Continued)

- 159** Technological Feasibility of Two-Loop Cooling System in JSFR /
Hidemasa Yamano, Shigenobu Kubo, Ken-Ichi Kurisaka, Yoshio Shimakawa, Hiromi Sago
- 170** Minor Actinide-Bearing Oxide Fuel Core Design Study for the JSFR /
Masayuki Naganuma, Takashi Ogawa, Shigeo Ohki, Tomoyasu Mizuno, Shoji Kotake
- 181** Development of Passive Shutdown System for SFR / *Shigeyuki Nakanishi, Takusaburo Hosoya, Shigenobu Kubo, Shoji Kotake, Misao Takamatsu, Takafumi Aoyama, Iwao Ikarimoto, Jungo Kato, Yoshio Shimakawa, Kiyoshi Harada*
- 189** European Experiments on 2-D Molten Core Concrete Interaction: HECLA and VULCANO / *Christophe Journeau, Jean Michel Bonnet, Eric Boccaccio, Pascal Piluso, Jose Moneris, Michel Breton, Gerald Fritz, Tuomo Sevón, Pekka H. Pankakoski, Stefan Holmström, Jouko Virta*
- 201** Transient Conduction Heat Transfer Modeling in Concrete for the Simulation of Long-Term Phase of Molten Core-Concrete Interaction / *B. Tourniaire, B. Spindler, M. Guillaumé*
- 210** Interaction Between Molten Corium UO_{2+x} - ZrO_2 - FeO_y and VVER Vessel Steel / *S. V. Bechta, V. S. Granovsky, V. B. Khabensky, E. V. Krushinov, S. A. Vitol, A. A. Sulatsky, V. V. Gusarov, V. I. Almiashhev, D. B. Lopukh, D. Bottomley, M. Fischer, P. Piluso, A. Miasoedov, W. Tromm, E. Altstadt, F. Fichot, O. Kymalainen*
- 219** The DEFOR-S Experimental Study of Debris Formation with Corium Simulant Materials / *Pavel Kudinov, Aram Karbojian, Weimin Ma, Truc-Nam Dinh*
- 231** Development of the Fission Product Release Analysis Code COPA-FPREL / *Young Min Kim, Moon Sung Cho*
- 244** Analysis and Justification of MAAP4.0.7 for PRA Level 1 Mission Success Criteria / *Jennifer S. Butler, Darvin Kapitz, Robert P. Martin, Farrokh Seifaei, Ramu K. Sundaram*
- 261** Corrosion Studies of Candidate Materials for European HPLWR / *Sami Penttilä, Aki Toivonen, Liisa Heikinheimo, Radek Novotny*
- 272** Comparison of the High-Temperature Steam Oxidation Kinetics of Advanced Cladding Materials / *M. Grosse*