

nuclear technology®

CONTENTS / JANUARY 1988—VOL. 80, NO. 1

ADVANCED LIGHT WATER REACTORS

- 9 Preface: On High Conversion Ratio Light Water Reactors / *Milton C. Edlund*

TECHNICAL PAPERS

- 11 Development Trends for Future French Pressurized Water Reactors / *Bertrand Barré, Gérard Gambier, Claude Golinelli*
- 18 Feasibility Studies on High Conversion Pressurized Water Reactors with Semitight Core Configurations / *Etsuro Saji, Yoshiei Akiyama, Norio Kono, Kiyoshi Nambu, Keichi Hori, Toshihiro Umeoka, Tsuyoshi Kono*
- 29 Current Status of High Conversion Pressurized Water Reactor Design Studies / *Toshihiro Umeoka, Tsuyoshi Kono, Yukio Toyoda, Masao Ogino, Shozo Iwai, Hisashi Hishida*
- 42 Light Water Reactor (LWR) Innovation Needs in the United States: The Massachusetts Institute of Technology LWR Innovation Project / *Michael W. Golay*
- 61 Research and Development Efforts for the Light Water High Conversion Reactor / *Rudolf H. Brogli, Claus A. Goetzmann, Bernhard J. Kuczera*
- 65 KWU's High Conversion Reactor Concept—An Economical Evolution of Modern Pressurized Water Reactor Technology Toward Improved Uranium Ore Utilization / *Hans Märkl, Claus A. Goetzmann, Helmut Moldaschl*
- 73 The French Thermal-Hydraulic Program Addressing the Requirements of Future Pressurized Water Reactors / *Michel Courtaud, Roger Deruaz, Luc Gros D'Aillon*
- 83 Numerical Simulation of Reflooding Behavior in Tight-Lattice Rod Bundles / *Yoshio Muraö, Tsuneyuki Hojo*
- 93 NEPTUN-III Reflooding and Boiloff Experiments with an LWHCR Fuel Bundle Simulator: Experimental Results and Initial Code Assessment Efforts / *Jörg Dreier, Gerassimos Analytis, Rakesh Chawla*
- 107 Thermohydraulic Optimization of Homogeneous and Heterogeneous Advanced Pressurized Water Reactors / *Marco Cigarini, Mario Dalle Donne*
- 133 Loss-of-Coolant-Accident and Anticipated Transient Without Scram Calculations for Homogeneous and Heterogeneous Advanced Pressurized Water Reactors / *Mario Dalle Donne, Claudio Ferrero*

(Continued)

ON THIS COVER

This month's cover is taken from Fig. 3 in the paper by H. Märkl et al.

CONTENTS / JANUARY 1988—VOL. 80, NO. 1

(Continued)

- 153** Experimental Investigations on the Reflooding and Deformation Behavior of an Advanced Pressurized Water Reactor Tight-Lattice Fuel Rod Bundle in a Loss-of-Coolant Accident / *Franz J. Erbacher, Klaus Wiehr*
- 161** High-Temperature Behavior of CrNi-Steel DIN Material No. 1.4970 Cladding Material with Respect to Advanced Pressurized Water Reactor Safety Considerations / *Claus Petersen, Gerhard Schanz, Siegfried Leistikow*

DEPARTMENT

- 1 Authors