

# CONTENTS / APRIL 1993-VOL. 102, NO. 1

## **MIXED-OXIDE FUEL**

1 Editors' Notes

## **TECHNICAL PAPERS**

- **3** Development of Mixed-Oxide Fuel Manufacture in the United Kingdom and the Influence of Fuel Characteristics on Irradiation Performance / *Hugh M. MacLeod, Geoffrey Yates*
- **18** Plutonium Processing at the Siemens Hanau Fuel Fabrication Plant / *Jürgen Krellmann*
- 29 Irradiation Behavior of UO<sub>2</sub>/PuO<sub>2</sub> Fuel in Light Water Reactors / Wolfgang Goll, Hans-Peter Fuchs, Reiner Manzel, Fritz U. Schlemmer
- **47** In-Pile Performance of Mixed-Oxide Fuel with Particular Emphasis on MIMAS Fuel / *P. Deramaix, D. Haas, J. Van de Velde*
- 54 Experience in PWR and BWR Mixed-Oxide Fuel Management / Gerhard J. Schlosser, Wolf-Dieter Krebs, Peter Urban
- **68** Investigation of the Nuclear Inventories of High-Exposure PWR Mixed-Oxide Fuels with Multiple Recycling of Self-Generated Plutonium / *Hans-Werner Wiese*

### **FISSION REACTORS**

- 81 Validation of Fuel Bundle Mechanical Performance Code ÉTOILE with Bundle/Duct Interaction Experimental Data / *Masatoshi Nakagawa*
- **90** Development of a Connectivity Verification System for Sequence Diagrams of Power Plants / *Mitsuko Fukuda, Naoyuki Yamada, Ken'ichi Kan, Mitsugu Utsunomiya*

#### NUCLEAR REACTOR SAFETY

**ON THIS COVER** 

- 100 Global Analysis of Bundle Behavior in Pressurized Water Reactor Specific CORA Experiments / Wolfgang Hering, Kazuo Minato, Fumihisa Nagase
- 116 RELAP5/MOD2 Split Reactor Vessel Model and Steamline Break Analysis / Stojan Petelin, Borut Mavko, Oton Gortnar

#### (Continued)

This month's cover is based on Fig. 1 of the paper by Schlosser et al., which shows a MOX fuel assembly surrounded by uranium fuel assemblies.

# CONTENTS / APRIL 1993-VOL. 102, NO. 1

(Continued)

### **REACTOR OPERATIONS**

125 Ex-Core Detector Response Caused by Control Rod Misalignment Observed During Operation of the Reactor on the Nuclear Ship *Mutsu / Masafumi Itagaki, Yoshinori Miyoshi, Kazuhiko Gakuhari, Noboru Okada, Tomohiro Sakai* 

## **TECHNICAL NOTE**

### NUCLEAR REACTOR SAFETY

**137** Formalisms for Handling Phenomenological Uncertainties: The Concepts of Probability, Frequency, Variability, and Probability of Frequency / *Stan Kaplan* 

## DEPARTMENT

143 Letters to the Editor