

# nuclear technology®

## CONTENTS / JANUARY 1984—VOL. 64, NO. 1

### TECHNICAL PAPERS

#### NUCLEAR SAFETY

- 5 Analysis of the Xenon Feedback on the Core Dynamics of High-Temperature Reactors During Heat Removal Transients Without Reactor Shutdown / *Rahim Nabbi*

#### CHEMICAL PROCESSING

- 14 Accumulation Process of Plutonium Third Phase in Mixer-Settlers / *Kozo Gonda, Koichiro Oka*

#### NUCLEAR FUELS

- 19 A Conceptual Design of a Fuel Bundle for Extended Burnup in Boiling Water Reactors / *Motoo Aoyama, Sadao Uchikawa, Kazuyoshi Miki, Kazuo Hiramoto, Renzo Takeda*

#### RADIOACTIVE WASTE MANAGEMENT

- 26 A Three-Dimensional Potential Flow Model for the Prediction of the Behavior of Radioactive Plumes / *Yoichi Ichikawa, Hiroshi Shikata*

#### MATERIALS

- 35 Radiation Buildup on Stainless Steel in a Boiling Water Reactor Environment / *Takashi Honda, Masakiyo Izumiya, Akira Minato, Katsumi Ohsumi, Hideo Matsubayashi*

#### HEAT TRANSFER AND FLUID FLOW

- 43 Accelerated One-Phase Flow Through Perforated Plates / *Folco Casadei, Mario Dalle Donne*

#### TECHNIQUES

- 70 Sensor Fault Analysis Using Decision Theory and Data-Driven Modeling of Pressurized Water Reactor Subsystems / *Belle R. Upadhyaya, Malgorzata Skorska*

(Continued)

### ON THIS COVER

This month's cover is an artist's impression of a graph in the paper by Casadei and Dalle Donne.

# CONTENTS / JANUARY 1984—VOL. 64, NO. 1

(Continued)

- 78 The Accuracy of  $T(d, n)^4\text{He}$  Neutron Energy Measurements Using an NE-213 Liquid Scintillator / *Alex Tsechanski, Gad Shani*

## TECHNICAL NOTE

### FISSION REACTORS

- 88 Selection and Benchmarking of Computer Codes for Research Reactor Core Conversions / *Emin Yilmaz, Barclay G. Jones*

## DEPARTMENTS

- 1 Authors
- 101 Book Reviews