

nuclear technology®

CONTENTS / MARCH 1977—VOL. 32, NO. 3

221 Editorial: *NT Letters*—Early Reports of Important Results / *The Editor*

TECHNICAL PAPERS

REACTORS

- 222 Optimal Synthesis of a Power Plant Cooling System / *L. T. Fan, David F. Aldis*
- 239 Properties of Light Water Reactor Core Melts / *S. Nazaré, G. Ondracek, B. Schulz*
- 247 Reliability Analysis of the Decay Heat Removal System of a 1000-MW(e) Gas-Cooled Fast Breeder Reactor / *D. Bittermann, J. Wehling*
- 257 Comparison of the Power Distribution in Uranium and Plutonium Fuel Elements in the KWO Core / *Dieter Sommer*

FUELS

- 276 Mechanical Response of UO_2 Subjected to Transient Heating / *B. J. Wrona, J. T. A. Roberts, T. M. Galvin, G. T. Higgins*

MATERIALS

- 290 The Overall Probability of Detection in Connection with the Optimization of Safeguards Effort / *Günter Hartmann*
- 297 Equilibrium Pressure and Solubility of Hydrogen in Liquid Lithium / *Hiroji Katsuta, Takahiro Ishigai, Kazuo Furukawa*
- 304 Sodium Purification by Cold Trapping at the Experimental Breeder Reactor II / *J. T. Holmes, C. R. F. Smith, M. M. Osterhout, W. H. Olson*

RADIOISOTOPES

- 315 A Californium-252 Fission Spectrum Irradiation Facility for Neutron Reaction Rate Measurements / *J. A. Grundl, V. Spiegel, C. M. Eisenhauer, H. T. Heaton II, D. M. Gilliam, J. Bigelow*

(Continued)

ON THIS COVER

This month's cover is a scanning-electron micrograph showing fusion zone and pellet surface exhibiting vaporization of UO_2 . Taken from the paper by B. J. Wrona et al. (Photo courtesy of Argonne National Laboratory.)

CONTENTS / MARCH 1977—VOL. 32, NO. 3

(Continued)

TECHNICAL NOTE

REACTORS

- 320** The Application of SPOOL-FIRE in Theoretical Analysis and Experimental Comparison / *Lucy Wu Person*

DEPARTMENTS

- 217** Authors
- 326** Volume 32 Indexes