

nuclear technology®

CONTENTS / DECEMBER 1977—VOL. 36, NO. 2

INTERNATIONAL SAFEGUARDS

157 Preface / *The Editor*

TECHNICAL PAPERS

158 Preparing the Implementation of Non-Proliferation Treaty Safeguards in the U.S. / *Wolfgang Frenzel, Vladimir Shmelev, Adolf von Baeckmann*

163 Report on an International Atomic Energy Agency Inventory Verification / *George H. Winslow, A. Lee Harkness*

167 The Use of Fuel Reprocessing Plant Instrumentation for International Safeguards / *Arnold L. Ayers*

REACTORS

171 Impurity Radiation from Medium Density Plasmas / *G. R. Hopkins, John M. Rawls*

187 Radiographic Control of Materials Testing Reactor Fuel on X-Ray Paper / *J. C. Domanus*

193 A Neutron-Gamma Chemonuclear Fusion Reactor / *Vi-Duong Dang, Meyer Steinberg*

200 Intrusion of Molten Steel into Cracks in Solid Fuel in a Transient-Undercooling Accident in a Liquid-Metal Fast Breeder Reactor / *R. W. Ostensen, W. F. Murphy, B. J. Wrona, L. W. Deitrich, J. C. Florek*

CHEMICAL PROCESSING

215 The Isolation of Radioiodine with Portland Cement. Part I: Scoping Leach Studies / *Walter E. Clark*

FUELS

222 Differences in the ^{103}Ru and ^{106}Ru Axial Distributions in $(\text{U,Pu})\text{O}_2$ Fuel Pins / *J. R. Phillips, T. K. Marshall*

(Continued)

ON THIS COVER

This month's cover was derived by our artist from Fig. 9 of the paper by Ostensen et al.

CONTENTS / DECEMBER 1977—VOL. 36, NO. 2

(Continued)

TECHNICAL NOTE

REACTORS

- 229** Reactor Hydrodynamics During the Reflood Phase of a Loss-of-Coolant Accident / *Rodney R. Gay*

DEPARTMENTS

- 153** Authors
- 238** Letters to the Editor
- 241** Book Reviews