



CONTENTS

VOLUME 3 NO. 7 JULY 1967/PAGES 393-456

NUCLEAR APPLICATIONS STAFF

LOUIS G. STANG, JR. *Editor*
JULES B. GODEL *Assistant Editor*
DORIAN STANG *Editorial Assistant*

ANS STAFF

Technical Publications and Production

JOHN GRAHAM *Senior Staff Editor*
RUTH FARMAKES *Assistant Staff Editor*
RICHARD HARRIS *Design and Production Editor*
MARY M. GRIFFITH *Art Editor*
HELEN ANDERSON *Copy Editor*
JEAN BARR *Production Assistant*

Advertising

JOHN GRAHAM *Advertising Sales Manager*
DENNIS J. IMBIOR *Midwest Sales Manager*
ROSEMARY HARVEY *Circulation Manager*

EDITORIAL ADVISORY BOARD

E. ALFRED BURRILL—S. H. BUSH
A. B. CHILTON—ERIC T. CLARKE
VAUGHN CULLER—W. KENNETH DAVIS
M. C. EDLUND—W. H. ESSELMAN
PAUL R. FIELDS—JOHN H. FRYE, JR.
DAVID B. HALL—JOSEPH M. HENDRIE
STEPHEN LAWROSKI—FORREST J. REMICK
S. SANDHAUS—MORTIMER A. SCHULTZ
EDWIN L. ZEBROSKI

ANS OFFICERS

RAEMER E. SCHREIBER *President*
KARL P. COHEN *Vice President*
JOHN W. LANDIS *Treasurer*
OCTAVE J. DU TEMPLE *Executive Secretary*

COMPOSITION

BELJAN, ANN ARBOR, MICHIGAN

Address all manuscripts and editorial communications to the editorial offices, *Nuclear Applications*, 60 Rutherford Drive, Upton, New York 11973.

Nuclear Applications is published monthly by the American Nuclear Society, Incorporated, with executive and business offices at 244 East Ogden Avenue, Hinsdale, Illinois 60521, telephone 312 / 325-1991. Subscription rate is \$25/volume. It is printed in Danville, Illinois, and second-class postage is paid at Hinsdale, Illinois, and at additional mailing offices. Copyright © 1967 by the American Nuclear Society, Incorporated.

Statements made by authors of contributions to the various departments or of technical papers and notes do not necessarily reflect the viewpoint of the American Nuclear Society nor should their appearance herein be construed as tacit approval or endorsement by the Society. Abstracts appearing in *Nuclear Applications* may be freely republished anywhere any time.

TECHNICAL PAPERS AND NOTES



Neutron Beams from Split-Core Light-Water Moderated Reactors / Kenneth W. Downes, Anita Court - - 399

Circumferential Clad Ridging at Fuel-Pellet Interfaces / Henri Fenech, Henri M. Guéron - - - - - 406



Economics of Steady-State Plutonium-238 Production in Epithermal Reactors / L. G. Epel, J. Chernick, B. Manowitz, W. E. Winsche - - - - - 411



General Corrosion of INCONEL Alloy 625® in Simulated Superheat Reactor Environment / W. L. Pearl, E. G. Brush, G. C. Gaul, S. Leistikow - - - - - 418



Fission-Neutron Attenuation and Gamma-Ray Buildup Factors for Lithium Hydride / Francis B. K. Kam, Francis H. S. Clark - - - - - 433



Cesium-137 Determination in Fission Products by Direct Beta-Gamma Coincidence Counting / W. A. Haller, R. W. Perkins, J. M. Nielsen - - - - - 436

Direct Electron Excitation in Isotopic X-Ray Fluorescent Analysis / Troy C. Martin, Kenneth R. Blake, I. L. Morgan - - - - - 444

Estimation of Photofractions of Very Large NaI(Tl) Scintillators / Takashi Nakamura, Tomonori Hyodo - 446

DEPARTMENTS

COMMENTARY - - - - -	394
AUTHORS AND PAPERS - - - - -	395
LETTERS TO THE EDITOR - - - - -	397
BOOK REVIEWS - - - - -	451