



CONTENTS

VOLUME 5 NO. 5 NOVEMBER 1968/PAGES 289-372

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*
DENNIS BRUMMELL *Production Editor*
JEAN BARR *Production Assistant*
JUNE JOHNSON *Art Editor*
DIANNE DORAN *Copy Editor*

Advertising

RICHARD HARRIS *Advertising 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

KARL P. COHEN *President*
LOUIS H. RODDIS, JR. *Vice President*
JAMES R. LILIENTHAL *Treasurer*
OCTAVE J. DU TEMPLE *Executive Secretary*

COMPOSITION









BELJAN, ANN ARBOR, MICHIGAN

Address all manuscript 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, two volumes published per year. It is printed in Danville, Illinois, and second-class postage is paid at Hinsdale, Illinois, and at additional mailing offices. Copyright © 1968 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 at any time.

TECHNICAL PAPERS AND NOTES

- | | | |
|---|--|-----|
|  | Effect of Power Changes on Fission-Product Gas Release from UO ₂ Fuel / R. Souhler, M. J. F. Notley - - | 296 |
| | Removal of the Sodium Bond from Sintered (U,Pu)C Fuel Pellets / Felix B. Litton, John H. Bender - - - | 299 |
|  | Power Cost Reduction by Crossed-Progeny Fueling of Thermal and Fast Reactors / L. W. Lang - - - - - | 302 |
| | Milling Technology of Uranium Ores / Alvin H. Ross, Leonard G. Guglielmin - - - - - | 311 |
|  | Optimization of Reactor Irradiation Schedules for Radioisotopes Production According to Demand / A. Morales-Amado, A. M. Martinez-Leal - - - - - | 319 |
|  | Nuclear Radiation Dose Rate Influence on Thermocouple Calibration / Gary J. Dau, R. R. Bourassa, S. C. Keeton - - - - - | 322 |
|  | Corrosion-Resistant Heated Transfer Tubes for Molten Metals and Salts / D. E. Grosvenor, I. O. Winsch, W. E. Miller, G. J. Bernstein, R. D. Pierce - - - - | 329 |
| | A Glovebox System for a Spectrophotometer / D. A. Costanzo, L. T. Corbin - - - - - | 333 |
|  | The Effects of Ground Roughness on Fallout Protection Factors / R. L. French, J. H. Price - - - - - | 334 |
|  | Sodium Analysis by Spark Source Mass Spectrography / Edgar Berkey, George G. Sweeney, William M. Hickam - - - - - | 344 |
|  | Leakage Rate Measurements by Means of Oxygen Determination / J. Kuypers and J. P. Ruiter - - - - - | 354 |

DEPARTMENTS

- | | |
|---------------------------------|-----|
| COMMENTARY - - - - - | 290 |
| AUTHORS AND PAPERS - - - - - | 291 |
| LETTERS TO THE EDITOR - - - - - | 294 |
| BOOK REVIEWS - - - - - | 362 |