CONTENTS / MID-DECEMBER 1980—VOL. 51, NO. 3

MECHANICS APPLICATIONS TO FAST BREEDER REACTOR SAFETY

269 Preface: Mechanics Applications to Fast Breeder Reactor Safety / Stanley H. Fistedis

TECHNICAL PAPERS


290 A Quasi-Eulerian Fluid-Structure Code for Simulation of High-Pressure Transients in Core Components / James M. Kennedy, Ted B. Belytschko, Daniel F. Schoeberle


317 The Dynamic Response of Cracked Fast Reactor Subassembly Ducts / John L. Glazik, Jr., Henry J. Petroski

332 A Eulerian Method for Analyzing Above-Core Hydrodynamics and Sodium Spillage During a Hypothetical Core Disruptive Accident / Chung-Yi Wang

349 Three-Dimensional Nonlinear Structural Model for Above-Core Structures / James M. Kennedy

363 Arbitrary Lagrangian-Eulerian Method for Transient Fluid-Structure Interactions / Han Y. Chu

378 Theory and Application of Three-Dimensional Treatment of Pool-Type Liquid-Metal Fast Breeder Reactor Components / Ronald F. Kulak

388 Validation of Primary Containment Computer Codes / Yao W. Chang, Joseph Gvildys

400 Analysis of High-Energy Excursions Using the Implicit Continuous-Fluid Eulerian Containment Code (ICECO) / Chung-Yi Wang

414 Three-Dimensional Analysis of Reactor Decks and Their Supports / Ronald F. Kulak

(Continued)
CONTENTS / MID-DECEMBER 1980—VOL. 51, NO. 3

(Continued)

421 Analysis of Sodium Spillage from Primary Containment Following Slug Impact / Wayne R. Zeuch, Chung-Yi Wang

433 Transient Analysis of a Prestressed Concrete Reactor Vessel for Liquid-Metal Fast Breeder Reactor Primary Containment / Algirdas H. Marchertas, Ted B. Belytschko

443 Increasing Primary Containment Capabilities of Liquid-Metal Fast Breeder Reactor Plants by the Use of Prestressed Concrete / Ralph W. Seidensticker, Algirdas H. Marchertas, Zdenék P. Bažant

452 Recent Applications and Improvements of the Hydrodynamic-Structural Piping Code ICEPEL / M. T. A-Moneim


476 Events Contributing to Internal Loading of Secondary Containment: An Integrated Approach / Wayne R. Zeuch

489 Potential Advantages of Prestressed Concrete for Liquid-Metal Fast Breeder Reactor Secondary Containment / Ralph W. Seidensticker, Howard L. Schreyer

499 Perspective: Mechanics Applications to Fast Breeder Reactor Safety / Stanley H. Fistedis

DEPARTMENTS

263 Authors

501 Volume 51 Indexes