

Fusion technology™

CONTENTS / JULY 1994—VOL. 25, NO. 4

TECHNICAL PAPERS

PLASMA ENGINEERING

- 377** Initial Boronization of PBX-M Using Ablation from Solid Boronized Probes / *H. W. Kugel, Y. Hirooka, J. Timberlake, R. Bell, A. England, R. Isler, S. Jones, R. Kaita, S. Kaye, M. Khandagle, M. Okabayashi, S. Paul, H. Takahashi, W. Tighe, S. von Goeler, A. Post-Zwicker*

BLANKET ENGINEERING

- 388** Neutronic Investigation of Inertial Fusion Energy Blankets for HYLIFE-II and Magnetohydrodynamic Applications / *Sümer Şahin, Ralph W. Moir, Joseph D. Lee, Sabahattin Ünalan*
- 398** Electromagnetic Control of Flow Distribution Between Parallel Ducts of Liquid-Metal-Cooled Blankets / *Nancy Ma, John Walker, Tess Moon, Thanh Hua, Basil Picologlou*
- 411** Similarities and Differences Between Single-Side and Uniform Heating for Fusion Applications—I: Uniform Heat Flux / *Ronald D. Boyd*

PLASMA HEATING SYSTEMS

- 419** 106-GHz Electron Cyclotron Heating System for Heliotron-E / *Kazunobu Nagasaki, Motoyasu Sato, Masashi Iima, Sakaji Kobayashi, Kinzo Sakamoto, Hideki Zushi*

TRITIUM SYSTEMS

- 428** Guidelines for Valves in Tritium Service / *William W. Weaver*
- 434** Improved Permeation Barriers for Tritiated Waste Packaging / *G. Vassallo, R. van den Bergh, K. S. Forcey, A. Perujo*

FUSION REACTORS

- 437** A 14-MeV High-Flux Neutron Source Based on Muon-Catalyzed Fusion—A Design Study / *C. Petitjean, F. Atchison, G. Heidenreich, H. K. Walter, F. Amelotti, R. Andreani, F. De Marco, S. Monti, M. Pillon, M. Vecchi, V. E. Markushin, L. I. Ponomarev, C. Niebuhr*

(Continued)

ON THIS COVER

The artwork on this month's cover is a concept by the artist stimulated by Fig. 3 of the paper by Nagasaki et al.

CONTENTS / JULY 1994–VOL. 25, NO. 4

(Continued)

SAFETY/ENVIRONMENTAL ASPECTS

- 451** Comprehensive Safety Analysis Code System for Nuclear Fusion Reactors I: Model and Analyses of Overpower Events for the International Thermo-nuclear Experimental Reactor / *T. Honda, T. Uda, K. Maki, T. Okazaki, Y. Seki, I. Aoki*

NUCLEAR REACTIONS IN SOLIDS

- 469** On the Nonstationary Quantum-Mechanical Origin of Nuclear Reactions in Solids / *V. A. Chechin, V. A. Tsarev*
- 475** Improved Coulomb Barrier Transmission Coefficient for Nuclear Fusion Cross Sections / *Yeong E. Kim, Alexander L. Zubarev*
- 478** Anomalous Effects Involving Excess Power, Radiation, and Helium Production During D₂O Electrolysis Using Palladium Cathodes / *Melvin H. Miles, Benjamin F. Bush, Joseph J. Lagowski*

ELECTROLYTIC DEVICES

- 487** An Isoperibolic Calorimeter to Study Electrochemical Insertion of Deuterium into Palladium / *Turgut M. Gür, Martha Schreiber, George Lucier, Joseph A. Ferrante, Jason Chao, Robert A. Huggins*

DEPARTMENTS

- 369** Authors

- 502** Meeting Reports

Summary of the International Workshop on Nuclear Data for Fusion Reactor Technology, San Diego, California, May 3–6, 1993 / *Frederick M. Mann*

Summary of the Sixth International Conference on Fusion Reactor Materials, Stresa, Italy, September 27–October 1, 1993 / *M. Merola*

- 507** Volume 25 Indexes

- v** Volume 25 Contents