

fusion technology

CONTENTS / JANUARY 1996—VOL. 29, NO. 1

- iii Comments / *George Miley*

TECHNICAL PAPERS

BLANKET ENGINEERING

- 1 Results of an International Study on a High-Volume Plasma-Based Neutron Source for Fusion Blanket Development / *Mohamed A. Abdou, Sam E. Berk, Alice Ying, Y. K. Martin Peng, Shahram Sharafat, John D. Galambos, Glenn W. Hollenberg, Siegfried Malang, Eric Proust, Steven J. Booth, Luciano Giancarli, Patrick Lorenzetto, Yasushi Seki, V. V. Filatov, Guelli Shatalov, Alexander Sidorenkov*

MATERIALS ENGINEERING

- 58 Material Requirements and Perspectives for Future Thermonuclear Fusion Reactors / *A. Donato, R. Andreani*
- 73 Electrical Insulation and Conduction Coating for Fusion Experimental Devices / *Masanori Onozuka, Seiji Tsujimura, Masahiko Toyoda, Masahiko Inoue, Tetsuya Abe, Yoshio Murakami*

NUCLEAR REACTIONS IN SOLIDS

- 83 Ultrasonic Irradiation of Deuterium-Loaded Palladium Particles Suspended in Heavy Water / *Jacob Jorné*

TRITIUM SYSTEMS

- 91 Isotopic Water Handling and Hydrogen Isotope Recovery for Fusion Application Using the Zr(V_{0.5}Fe_{0.5})₂ Alloy—II: Conversion Behavior Under Water Vapor Flow Conditions / *N. Venkataramani, F. Ghezzi, G. Bonizzoni, W. T. Shmayda*

EXPERIMENTAL DEVICES

- 105 Engineering Aspects of the Tokamak ISTTOK / *C. A. F. Varandas, J. A. C. Cabral, J. T. Mendonça, M. P. Alonso, P. Amorim, B. B. Carvalho, C. Correia, L. Cupido, M. L. Carvalho, J. M. Dias, H. Fernandes, C. J. Freitas, S. Magalhães, A. Malaquias, M. E. Manso, A. Praxedes, J. Santana, F. Serra, A. Silva, A. Soares, J. Sousa, W. van Toledo, P. Vaessen, P. Varela, S. Vergamota, B. de Groot*

SAFETY/ENVIRONMENTAL ASPECTS

- 116 Comprehensive Safety Analysis Code System for Nuclear Fusion Reactors III: Ex-Vessel LOCA Analyses Considering Passive Safety / *T. Honda, T. Okazaki, K. Maki, T. Uda, Y. Seki, I. Aoki, T. Kunugi*

DIVERTOR SYSTEMS

- 126 Calculation of the Impact of $n = 1$ Error Fields on the Divertor Heat Loading of the Tokamak Physics Experiment / *R. J. La Haye*

(Continued)

CONTENTS / JANUARY 1996–VOL. 29, NO. 1

(Continued)

ICF TARGETS

- 134** An Externally Guided Target for Inertial Fusion / *J. M. Martínez-Val, M. Piera*
171 A Study of Energy Output from Implosion of a Reactor-Size Indirect Drive Reduced Tritium Inertial Fusion Target / *N. A. Tahir, D. H. H. Hoffmann*

NUCLEAR DATA

- 178** An Investigation of Reports of Fusion Reactions Occurring at the Cathode in Glow Discharges / *C. H. Ellison, James A. Mahaffey*