



PRODUCTION

SUPERCONDUCTORS



Varian's* high-homogeneity superconducting solenoid, delivered in June, achieves a field of 65 kilogauss using Supercon A-33 wire. The field is homogeneous to within 0.1% over 1.2" of axial length. Working bore at liquid helium temperature is $\frac{7}{8}$ " diameter with $\frac{5}{8}$ " diameter room temperature access. Maximum current is in excess of 21 amperes. Varian's scientific personnel have been extremely pleased with Supercon's wire quality and service.

*Varian Associates Instrument Division. Attn: Matt McKay, 611 Hansen Way, Palo Alto 1, California.

For specification sheets on developments released for production, or more information about SUPERCON, write or call Dr. James Wong or Mr. Thomas Reed.

Career openings now exist at SUPERCON for experienced personnel in the fields of superconductivity, solid-state physics and refractory metallurgy. For information, please write or call Dr. Wong or Mr. Reed.

SUPERCON

P. O. BOX 4209, HOUSTON 14, TEXAS
AREA CODE: 713, HO 2-2010 or HO 2-3460

SC

Information Service of the National Science Foundation, covering over 500 documentation-research projects, studies, and experiments carried out by 264 organizations in the US and in 23 foreign countries. The reports are grouped under five headings, covering (1) the scientists' information needs, the uses made of scientific and technical information, and communication problems in science and technology; (2) information storage and retrieval systems and procedures; (3) mechanical translation; (4) equipment for the processing of scientific information; and (5) potentially related research which may affect the future of documentation, including such fields as character and pattern recognition, speech analysis and synthesis, linguistics, and artificial intelligence.

The current report is available for \$4.00 from the Office of Technical Services, US Dept. of Commerce, Washington 25, D. C. Previous reports in the series can be obtained from the Supt. of Documents, Gov't. Printing Office, Washington 25, D. C.

Pyrodynamics

Research and development in thermal power and related technologies comprise the theme of *Pyrodynamics*, a new international journal edited by Gilbert S. Bahn of the Marquardt Corporation. The journal will be published four times a year and will present original research papers dealing with applied kinetic theory, fluid mechanics, thermodynamics, aerothermochemistry, energy and mass transport, chemical kinetics and equilibria, combustion and combustion-like processes, condensation processes, plasma science, and energy conversion that is at least partly thermal in nature. Survey articles, abstracts, book reviews, and bibliographies will also be included. The subscription price of Volume 1 (four issues) is \$25, and orders may be placed with the Circulation Department, Gordon and Breach, 150 Fifth Ave., New York 11, N. Y.

Reactor-Characteristics Data

A new compilation of data used in calculating reactor characteristics has been prepared by the Reactor Physics Constants Center of the Argonne National Laboratory. Entitled *Reactor Physics Constants* (ANL-5800, 2nd edition), the 850-page volume was issued by the Atomic Energy Commission and supersedes a first edition published in 1958. Material in the book is based on data available through March 15, 1961, though more recent information has been included in some sections. Changes in the new edition include the addition of data on digital computer codes and the omission of properties of elements and reactor materials. The contents are divided into ten sections: fission properties, selected cross-section data, constants for thermal homogeneous reactors, lattice constants for thermal heterogeneous systems, control and dynamics of thermal reactors, intermediate reactors, fast reactors, shielding constants, constants related to inter-

PHYSICS TODAY