reference book for the nuclear spectroscopist, regardless of his approach to studying nuclear level structure, i.e., radioactive decay, particle reactions, or neutron capture reactions.

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Handling of Nuclear Information

Author IAEA

Publisher Unipub, Inc.

Pages 674

Price $18.00

Reviewer Margaret Butler

In February 1970 the International Atomic Energy Agency convened its first symposium on library science and information technology. The meeting was held in Vienna and timed to introduce to this, its most concerned audience, the International Nuclear Information System (INIS). This book is a collection of the papers presented at the conference, supplemented with the edited discussion and rapporteurs' summaries of the three major topics: information sciences, primary and secondary information, and indexing.

Following an introductory paper on Science and Documentation delivered by Gross of Brazil, the meeting was divided into nine topical half-day sessions. This volume follows the same chronological organization. The opening session contains five papers on National and Institutional Information Centers. The first describes the information services provided by Atomic Energy of Canada Limited to its own Chalk River Laboratories, Whiteshell Research Establishment, Ottawa, and Toronto Divisions, and to Canadian universities and industry. The second paper covers library, documentation, and translation services at the Karlsruhe Nuclear Research Center in Germany, while the third details the nuclear information dissemination activities of the French Commissariat a l'energie atomique (CEA). Octave DuTemple authored the next paper—a survey of nuclear information services in the nongovernment sector, stressing the role of the American Nuclear Society. The final paper of the session, a report on the radioisotope information center at the Czechoslovak Institute for Research, Production and Use of Isotopes serves to introduce the second session, "Specialized Information Centres."

Second session papers include descriptions of a CEA-developed automatic system, SAPRISTI, for handling data and documentation on light element reactions; the international neutron data system as implemented by the four participating centers at Brookhaven, Obninsk, Saclay, and Vienna; the DESY elementary particle physics information system used to prepare the biweekly *High Energy Physics Index;* and the Excerpta Medica Foundation's automated production of their abstract journal, *Nuclear Medicine*. An experimental nuclear physicist at EURATOM comments on the procedures employed for the evaluation of nuclear data and some of the problems involved; mechanized processing of patent literature at the Brevatome Documentation Center in Paris is discussed; Argonne Code Center and Oak Ridge Information Analysis Centers are described; and efforts currently underway in Germany to make Eastern nuclear literature more generally available are reported—a varied offering.

The third and fourth sessions are devoted to the single topic of "Information Services: Manual, Mechanized, and Computerized." Except for a paper describing the conventional information service operation at the United Kingdom Atomic Energy Authority's Risley establishment the information services reported on are computer-based systems, primarily designed to perform bibliographic search and dissemination or current awareness services. Activities covered are the Grenoble CEA SYDOLAB bibliographic search system, the Swedish ABACUS document retrieval and selective dissemination of information (SDI) program utilizing a variety of commercially available tape services, UKAEA mechanization of current awareness services at Culham and Harwell, operational experience with the EURATOM Nuclear Documentation System (ENDS), the Russian SDI program at the Central Research Institute of Information and Technical and Economic Studies on Atomic Science and Technology, the Berkeley Lawrence Radiation Laboratory's SDI experiment based on the NSA tape service, and the mechanized preparation of the Brazilian Bibliography of Physics. Three additional papers discuss current and anticipated cost effectiveness of automated information retrieval, a mathematical model of a large-scale scientific information service, and the status of the EURATOM Russian-English machine translation program.

Session five is concerned with "Primary Publications"; the publications described in this session are the Pakistan Atomic Energy Commission's journal, *The Nucleus;* the Russian journal, *Atomnaja Energija* with its unique deposition policy, and those produced by the American Institute of Physics, the USSR Nuclear Publishing House (Atomizdat), and the Joint Institute for Nuclear Research in Dubna. A survey article on publishing habits and publication procedures is included as well.

"Secondary Publications" treated in session six are the French Le Bulletin Signaletique du CNRS Nuclear Physics Chemistry and Technology Series and the CEA Nuclear Literature Index; the USAEC's Nuclear Science Abstracts and Preprints in Particles and Fields; the Soviet VINITI abstract journals; and Nuclear Science Abstracts of Japan.

The seventh session is divided between the subjects of "Nuclear Libraries and Services" and "Organization and Coordination of Scientific Conferences." Following an invited paper on the documentation needs of developing countries which stresses the bilateral value of their participation in international systems, there are papers describing the Bhabha Atomic Research Centre library, the automated library system under development at the EURATOM Research Center in Ispra, and the one in operation at the Canadian Chalk River library, and a review of USAEC library experience using a joint book acquisitions system. IAEA, USAEC, and ANS activities in

the planning and coordinating of conferences are reported in the second half of the session, together with Belgian experience in developing an SDI announcement service on scientific meetings and the German ZAED effort to collect and make available conference literature.

"Indexing Methods and Systems" covered next contains papers telling of Russian work in setting up a bilingual Russian-English thesaurus for INIS, the EURATOM Cetis automatic indexing project, the development of the CERN subject index and its use in retrieving reports and preprints, and the computer's role in maintaining the EURATOM thesaurus.

The remainder of the symposium volume is devoted to an invited status report on UNISIST, a study of the feasibility of a world scientific information system supported jointly by UNESCO and the International Council of Scientific Unions and INIS papers—a definitive one on the design and implementation of the system by the IAEA personnel responsible for its development and others on its cooperative aspects, and decentralized input processing projects in Sweden and Russia.

This collection of papers like most symposium proceedings covers a wide variety of material, most of it state-of-the-art reports by nuclear librarians, documentalists, and information specialists concerned with putting computer technology to work to assist them in providing information services and devising new techniques to effect scientific communication.

Of the 57 papers included in the publication, 43 are in English, while 8 are in French and 6 in Russian with an English translation of the abstract provided.

Margaret Butler, (AB, Indiana University, 1944) a staff member of Argonne National Laboratory's Applied Mathematics Division, has been in charge of the Argonne Code Center since its founding in 1960 and served as a consultant to the European Nuclear Energy Agency in the planning for their ENEA Computer Programme Library. She headed the Technical Information Subcommittee during her membership on the ANS Publications Committee and is a past Chairman of the Society's Mathematics and Computation Division.

Decontamination of Nuclear Reactors and Equipment

Editor J. J. Ayres

Publisher The Ronald Press Company

Pages 825

Price $22.50

Reviewer J. A. Buckham

In the preface, Dr. Ayres states the purpose of the book is "to present general information about decontamination operations, especially decontamination of nuclear reactors." This goal is more than achieved by the forty some contributors to this comprehensive technical manual on the decontamination of nuclear facilities. The scope of the work is indicated by selected chapter titles —Cleaning and Defilming Arts, Contamination Mechanisms, Decontamination and Film Removal, Corrosion, Influence of Design on Decontamination, Planning the Operation, Treatment and Disposal of Wastes, Protective Coatings, Specialized Equipment, Ultrasonic Cleaning, Low Temperature Water Cooled Reactors, Pressurized Water Reactors, Boiling Water Reactors, Gas Cooled and Other Reactor Systems, Decontamination of Equipment, Decontamination of Buildings and Laboratories. The list of contributors includes a strong representation of those who have faced routine and severe decontamination problems in the field and have successfully solved these problems. The text is well written with many excellent illustrations, readable data plots, and well-organized summary tables. There are comprehensive subject and author indexes, a glossary of unique technical terms, and valuable lists of proprietary decontamination reagents and equipment. This book is recommended for the engineer who both needs to act in the area of radiochemical decontamination and wishes to understand, to the limits of available basic information, what procedure is best and how to follow it. As the reader understands that decontamination is both an art and a science, he will appreciate the numerous examples of actual large scale decontamination experiences, but will realize that the results obtained in these examples may not be literally translated to his particular problem; the principles involved can be. The book is written particularly for those directly involved with the decontamination of nuclear reactors, and buildings housing reactors and radiochemical processes. For these people, this book will be a standard reference for many years. Those seeking information on the routine decontamination of radiochemical processing equipment in place will not find the same complete guidance, but will find the book very useful for its exposition of principles and general information. In effect, this book is a required reference for any nuclear installation since the scope and depth of the coverage of the subject could not be obtained by a literature search conducted at any one installation in any nation of the world.

J. A. Buckham (PhD, chemical engineering, University of Washington, 1953), is manager of the Chemical Programs Division of Idaho Nuclear Corporation. Dr. Buckham is the author of numerous technical papers in the fields of nuclear fuel reprocessing, radioactive waste management, waste calcining, and other fluidized-bed processes, and the use of nuclear poisons for process safety.

A. Radioisotope X-Ray Fluorescence Spectrometry

B. Neutron Moisture Gauges

C. Monitoring of Radioactive Contamination on Surfaces

Author International Atomic Energy Agency

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B. 95
C. 33

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C. $2.00

Reviewers John M. Palms
H. H. Nichols

These three books have recently been published by the International Atomic Energy Agency (IAEA), Vien-