but since then other uses for the element have been found, as in magnesium and nickel alloys to impart temperature-resistant qualities, in optical lenses, and in tungsten alloys for welding electrodes and electrical filaments.

Thorium is now expected to become an important nuclear fuel. The reserves of uranium-235, although ample for current needs, are insufficient to support a major nuclear power industry, but nuclear fuel reserves can be greatly enlarged by the artificial production of the reactor fuels \(^{239}\text{Pu}\) and \(^{233}\text{U}\), into the last of which \(^{232}\text{Th}\) can be converted by neutron bombardment.

This book includes chapters on the physical, chemical, and radioactive properties of thorium and its industrial processing, its chemical and radiological toxicity, the metabolism of the principal isotopes in the \(^{232}\text{Th}\) decay chain, and the nature of thorium hazards in industry with their measurement and control. References to published work number nearly 300 in all and are conveniently grouped at the end of each chapter.

T. G. FAULKNER HUDSON


Fifteen years ago in 1951, the Finnish Institute of Occupational Health was set up in Helsinki. It had the widest terms of reference and from the outset worked on the broadest of interpretations of the term ‘occupational health’. Such an approach was fitting for the particular circumstances existing in Finland. During these 15 years the Institute has grown and its influence has been widely felt throughout that country. It has trained staff, published basic textbooks, and carried out investigations on some of the local occupational health problems.

Throughout the period the staff has grown, income and expenditure have risen sharply, and fundamental research has been undertaken. A detailed list is given in this issue of some 800 papers which have been published in the last 15 years. These papers indicate well the wide interests of the Institute and include general occupational medicine with 54 papers on dermatological subjects, general physiology as well as that with an occupational slant, psychology including ‘traffic psychology’, industrial hygiene, and rehabilitation.

Professor Noro, who has provided much of the driving force necessary to effect this progress, now plans to improve the application of the new knowledge into working practice. This he realizes requires an extended and somewhat different organization which he plans to set up.

R. E. LANE


This small booklet is an extremely good and succinct summary of one of our largest occupational health services.

Pre-employment examinations of entrants to the industry still yield 11.2% of juveniles and 17.7% of adults who are unfit for employment under all mining conditions, thus demonstrating its arduous nature. Periodic medical examinations of young persons made statutory in 1964 produces a very small number who need alternative work and one must doubt if these examinations are really justified.

The 38,614 consultations made voluntarily by mine workers and non-industrial workers endorse the advisory nature of the service. A pneumoconiosis prevalence of 12.9% at collieries surveyed in 1959/60 fell to 11.2% in the same collieries in 1964/65. The reduction was present in all age groups and, although the populations are not exactly the same, it is concluded that the pneumoconiosis hazard is slowly being brought under control. New cases diagnosed by the Pneumoconiosis Medical Panels, thought now to be a more accurate index of incidence, fell to the lowest levels since the war (1,007). Of the other prescribed diseases, there has been little change in the spells of benefit rate over the past 15 years for dermatitis, although the diseases, which are twice as common, show a reduction of almost a quarter over the same period.

There is a very useful summary of the research work carried out by the Medical Service on occupational deafness, back-stress, pneumoconiosis, and work in hot and humid atmospheres. All the research work appears to have some direct bearing on the problems within the industry.

There is a short supplement on the first-aid service within the industry, indicating that there is one box carrier with first-aid material to every 17 men employed underground—a remarkable achievement.

O. P. EDMUNDS


This 20-page pamphlet is the text of the Tavistock Lecture which was to have been delivered by the late Lord Brain in October 1966, but illness prevented him from doing so. This Lecture is the fourth of a series inaugurated by the Council of the Tavistock Institute of Human Relations. To those who loved Russell Brain it will be a lifelong reminder of two of the many facets of his life—the literary man and the elder statesman of medicine.

The lecture begins with a historical development: ‘the relationship between medicine and government is of great antiquity’. With the skill of the literary artist, much thought is given in a few words. In 1965 Brain was appointed Royal Commissioner to survey the medical services of Newfoundland, which gave him the opportunity to look at the British National Health Service from the outside. Having been deeply involved in the National Health Service in many leading capacities since its formation, he recognized this opportunity and distilled his meditations into the Tavistock Lecture.
Like the good statesman he was, he begins by acknowledging the solid achievements of the National Health Service, as we all should do but generally do not. He quotes an American critic as saying that ‘the National Health Service is something magnificent in scope and almost breathtaking in its implications’ and that it ‘cannot very well be excluded from any list of notable achievements of the 20th Century’. This established, Brain discusses the cause of our present dissatisfaction, and here the master’s skill in selecting essential philosophy and omitting the massive details is demonstrated. First, the tripartite division of the National Health Service, leading to the isolation of general practice from hospital practice, is logically condemned, point by point, until the question of the continuance of general practice in its present form is reached. These are not new problems; but there follows the main theme of this essay: the lack of objective data about many aspects of the National Health Service and the need to establish a research unit to collect and analyse such data. Financial frustrations, the implications of differentials, and the injustice to university teachers are considered. Finally, Lord Brain makes some suggestions for fundamental changes in the National Health Service which should be carefully studied in the original.

This contemplative essay by the greatest medico-politician of our time is strongly recommended.

L. G. NORMAN


It is unfortunate that this book, though published in 1967, obviously reached the printers before the publication of the recommendations of the International Commission on Radiological Protection 1966 (I.C.R.P. 9) which modified the concept of the maximum permissible dose of radiation. It has also reduced the maximum permissible dose and in addition makes recommendations about the recording of doses depending upon whether they are received from ‘controlled’ or ‘uncontrolled’ sources of radiation. Otherwise the book is a useful summary of material published in this country or by the International Atomic Energy Agency over the past 10 years. The appendices gather together a considerable amount of useful data not otherwise readily available in one source.

Some points of criticism. The book barely mentions the means of controlling contamination of surfaces by radioactive materials, or air contamination. This is one of the major problems facing health physicists in research establishments and in any industrial organization using unsealed sources. Symposia on this subject have been held recently both in this country and in the United States. There is no mention of the use of thermoluminescent devices for the measurement of extremity doses.

The field of health physics has developed enormously over the past few years and it is not possible to cover all facets of the subject in a book of this size. For this reason some aspects of importance are barely mentioned.

**J. A. BONNELL**

---

**NOTICE**

**XVI International Congress on Occupational Health**

The XVI International Congress on Occupational Health will be held in Tokyo from 22 to 27 September, 1969.

For information apply to: Professor Susumu Harashima, Department of Preventive Medicine and Public Health, School of Medicine, Keio University, Shinanomachi, Shinjuku-ku, Tokyo, Japan.