Technischer Strahlenschutz

by Thomas Jaeger

Published by Verlag Karl Thiemig, Munich, 1959. pp. 192. Price 8.60 DM.

This book contains the revised texts of two series of articles, one dealing with the use of concrete as a shielding material against radiation and the other with the disposal of radioactive wastes, which were originally published in the journal *Atomkernenergie*.

The first and, for those concerned with concrete construction, the more interesting of the two sections of the book deals with the physical principles of radiation shielding (against gamma and neutron radiation), the attenuation of radiation, and the use of concrete for the construction of protective shields. The author indicates the theory and the formulae for calculating the attenuation in concrete. These computations are not particularly complex and do not require a specialized knowledge of nuclear physics on the reader's part. The information is presented in a concise and logical form which enhances its practical value. The use of high-density concrete as a construction material for biological shields for reactors and other apparatus is discussed with reference to mix design, suitable aggregates, and concreting procedure. The economic aspect of the problem is also considered. Finally, the shields of a number of existing nuclear reactors and of research installations of various kinds are briefly examined.

The second section surveys present-day methods of disposing of the gaseous, liquid and solid wastes produced by reactors, research plant and other installations. The emphasis is on the practical side and the author refers to a number of different solutions that have been adopted to render these products harmless.

This simply, but carefully, produced book will be of value to civil and structural engineers engaged in the design of radiation shields. The waste disposal aspect of the subject is likely to be of interest to engineers concerned with the over-all planning of nuclear installations. As the information given is derived largely from British and American sources—which are acknowledged in two comprehensive lists of bibliographical references—the book constitutes a useful introductory survey of methods and techniques employed in the Western countries.

Reinforced concrete simply explained

by Oscar Faber. Revised by John Faber

Published by Oxford University Press, London. 5th edition, 1959. pp. 88. Price 12s. 6d.

A new edition of this book, which first appeared in 1922, will be welcomed by those seeking a simple introduction to the theory and practice of reinforced concrete design. The book has been revised by the author's son, who worked with his father for many years, and it is now in accordance with the latest Code of Practice CP 114 (1957) though the new symbols recommended in this Code have not been adopted. (This, says Mr Faber, is in order " to retain the non-technical flavour of the book ".)

The book now contains: an introduction; long chapters on slabs and beams, shearing resistance of concrete beams, design of columns, and materials; short chapters on prestressed concrete, water-retaining structures, and shell concrete; two short appendixes. It is still, as it was when first published, " a *simple* book on reinforced concrete. It does not pretend to rank as highly technical ".

RILEM Bulletin No. 1. March 1959

Published by Secrétariat Général de la RILEM, 12 rue Brancion, Paris 15. Price : for non-members 50 Swiss francs a year; for members 40 Swiss francs a year; single copies 12 Swiss francs each.

Although *RILEM Bulletins* and publications have been appearing for many years now, this is the first *Bulletin* to be set in type. This step forward is to be welcomed not only for itself but because it is a direct result of the growing international importance of the " Réunion Internationale des Laboratoires d'Essais et de recherches sur les Matériaux et les constructions ". To quote from the editorial: " . . . this first number marks the end of a period of growing pains from which the *RILEM Bulletin* suffered when it was being issued in a small number of copies . . . it remained an intimate review for the use of members of an association whose numbers were limited. But the RILEM was growing, and so was the *Bulletin* . . . Printing the *Bulletin* . . . means providing it with the means of fully assuming its role as a real international review of methods of testing building materials."

This first printed issue of the *Bulletin* should be of special interest to those interested in concrete since it includes the first of three series of reports given at the RILEM Colloquium on " Influence of time upon strength and deformation of concrete " held at Munich during November 1958. The reports printed in this issue are: " Internal stresses in concrete " by K. E. C. Nielsen (Denmark, reporting work done in Sweden) ; " What do we know about the plastic deformation and creep of concrete?" by R. L'Hermite (France) ; " Le fluage et les caractéristiques physiques et mécaniques du béton " by R. Dutron (Belgium) ; " A note on the maturity and creep of concrete " by A. D. Ross (Great Britain) ; " Ultrasonic pulse velocity, dynamic modulus of elasticity, Poisson's ratio, and the strength of concrete made with thirteen different coarse aggregates " by M. F. Kaplan (South Africa).