The book is, in the main, a list of plant diseases, but I think it is more than that. It covers an extensive field, and is a condensation of experience gained by the author over 30 years while travelling about the American continent to give advice on plant disease problems. There is certainly no comparable book in this field in Great Britain. Its scope is vast and its contents are intended for American nurserymen, growers and advisers, but even allowing for plants peculiar to the American continent I consider there is much in its pages which can be of value to horticulturists and plant pathologists in Britain. The diseases of ornamental plants are well catered for, and this branch of pathology is one in which British pathologists are not well versed.

The book claims that without special training, seedsmen and growers will be able to use it as a working guide and reference book in diagnosing and treating plant diseases. I doubt whether such people will appreciate the rather formidable lists of scientific names, and whether laymen in general can achieve accurate diagnoses despite the apparent simplicity of the system here propounded. Nevertheless, I consider that the book can provide valuable assistance to professional horticulturists, advisors and plant pathologists generally. Much of the information has had to be condensed, but it is still an impressive collection of facts skillfully cross-referenced so that most people will find little difficulty in finding quickly the knowledge they seek. It is my opinion that Prof. Whetzel, to whom the book is dedicated and whom I remember with affection, would have been pleased with this contribution by his former pupil.

D. E. GREEN

CONSTANTS FOR BINARY SYSTEMS

The Physico-chemical Constants of Binary Systems in Concentrated Solutions

By Prof. Jean Timmermans. Vol. 4: Systems with Inorganic + Organic or Inorganic Compounds (Excepting Metallic Derivatives). Pp. xi+1332. (New York: Interscience Publishers, Inc.; London: Interscience Publishers, Ltd., 1960.) 293s.

THIS volume is the last of a series of four prepared by offset printing and contains 900 pages of data on binary mixtures in which at least one of the components is an inorganic compound. The general arrangement follows that adopted in the earlier books and the same properties are recorded. Volume 4 presents the long-awaited indexes of which there are three, one for organic compounds, one for inorganic compounds and one for authors' names. Binary mixtures are not indexed, but under a molecular formula appears the name of one of the components followed by an unclassified list of all pages where the properties of mixtures containing that compound appear. This is a very unsatisfactory arrangement. Suppose, for example, that it was required to find the densities of acetic acid-benzene mixtures, then 166 pages under the title acetic acid would have to be searched. The author index is simply an alphabetical bibliography, so while it is possible to take a page of the main text and find the source of the work cited, it is not possible to look up an author's name and find where his work is included in these volumes.

A pair of names of compounds printed boldly at the head of each page affords assistance in searching the book, but it is a pity that somebody conversant with the peculiarities of the English language was not consulted regarding these titles so that names such as sulphur anhydride and carbon oxide could have been avoided. Some errors were noted in this volume, which contains four pages of errata applicable to Volumes 1-3. However, most of the errors previously pointed out by myself and other reviewers have not been listed. The book ends rather quaintly with a short list of papers which the author has not been able to find.

In spite of the imperfections of the indexing of these volumes this work will be invaluable to many workers as a first reference.

E. F. G. HERINGTON

PHYSICAL TECHNIQUES IN METALLURGY

The Physical Examination of Metals

Edited by Prof. Bruce Chalmers and Prof. A. G. Quarrell. Second edition. Pp. vii+917. (London: Edward Arnold (Publishers), Ltd., 1960.) 168s. net.

IN the present edition of this book one large volume replaces the two volumes of the first edition. Further, the original authors have become editors for a team of contributors who provide coverage of what is relatively broad subject-matter. This change, of course, represents a current trend, and although the method has disadvantages, it is well suited to the subject in question. The book is thus a completely new one.

It deals with numerous methods of examination, ranging from those providing information on the atomic scale to those concerned with the detection of flaws. Somewhere in between come techniques for the measurement of basic electrical, thermal, and magnetic properties. Apart from the more obvious topics, the book includes details of many not necessarily expected, such as the damping capacity of metals, measurements of elasticity using mechanical waves, the use of radioactive isotopes, and vacuum techniques. A relevant method not included is that of radiography, but presumably the editors think that this is more than adequately covered in other books. However, in this connexion it should be pointed out that other X-ray techniques, such as X-ray diffraction and microradiography, as well as autoradiography are described.

For each subject the underlying physical principles are well described in clear and satisfactory physical language. The actual experimental methods are discussed, and the treatment is illustrated by typical results. No doubt there are omissions, particularly in detail, and the approach in some sections may place most emphasis on the physics of the subject. However, even if this is true, the book unquestionably achieves its aim, that is to bring together for metallurgists the principles of a wide range of physical techniques.

The volume is attractively produced, well printed and illustrated, and the text is clearly presented. All concerned with its production should derive satisfaction from the final result.

A. R. BAILEY