

**Der Chemie-Ingenieur:**

ein Handbuch der physikalischen Arbeitsmethoden in chemischen und verwandten Industriebetrieben. Herausgegeben von A. Eucken und M. Jakob. Band 3: Chemische Operationen. Teil 1: Physikalisch-chemische und wirtschaftliche Gesichtspunkte für die Durchführung chemischer Operationen. Herausgegeben von A. Eucken. Pp. xvi + 564. (Leipzig: Akademische Verlagsgesellschaft m.b.H., 1937.) 52 gold marks.

**T**HIS book is the first part of volume 3 of a well-known work on chemical engineering under the editorship of Eucken and Jakob, the former of whom in the opening chapter of this book considers the determination of the maximum output from the point of view of chemical equilibrium, both of homogeneous and heterogeneous systems under constant conditions of temperature, as well as the thermodynamics involved and practical applications thereof.

The first part of the second chapter is from the pen of H. von Dohse, and is concerned with the subject of the velocity of reaction particularly in homogeneous systems and where catalysts are present. K. von Fischbeck, who is responsible for the second part of this chapter, has treated the subject of the reaction velocity in heterogeneous systems such as may arise in the burning of coal, decomposition of salts and between compact bodies.

Responsibility for the last section of this chapter is taken by G. von Danikohler, who has considered such subjects as the influence of diffusion, flow and heat on the yield in reactions carried out on an industrial scale.

Involving as they do the application of the principles of physical chemistry to industrial problems, the treatment of the aspects discussed in these chapters is quantitative as well as qualitative, and numerous references are made to much recent work.

Not of least interest and importance to the chemical engineer and industrialist is the cost of the various operations involved in the manufacture, packing and selling of his product, an important subject which is discussed in Chapter iii by L. von Meyer, who, realizing the variations which may be introduced, has wisely stressed the general principles involved.

The book is uniform with the parts of volumes 1 and 2, and contains much useful and valuable information relating to the transfer of a process from the laboratory to the industrial scale, which should be of assistance to the chemical engineer and industrial chemist.

**The Bantu-speaking Tribes of South Africa:**

an Ethnographical Survey. Edited for the (South African) Inter-University Committee for African Studies by I. Schapera. Pp. xv + 453 + 24 plates. (London: George Routledge and Sons, Ltd., 1937.) 21s. net.

**I**N view of the increasing importance of native policy as a factor in determining the future of British and Mandated Africa, it is essentially desirable that accurate information about the native should be available in a readily accessible and easily

assimilable form. For this purpose this volume is in every way admirable. The life of the Bantu-speaking peoples of South Africa is described from every side as lived before modification by European contacts. Each chapter is written by an acknowledged expert among South African anthropologists. Among those dealing with the more general questions, Prof. Raymond Dart writes on racial origins and Dr. A. J. H. Godwin describes the geographical environment, while Dr. N. J. van Warmilo deals with grouping and racial history. Dr. C. M. Doke is responsible for the account of language and Mrs. Hoernlé analyses their social organization and records their magical and medical practices. The other aspects of native life and culture are covered by writers of equal authority; the editor himself has been responsible for economics, politics, and law and justice.

It is unnecessary to enter further into detail. The name of the editor is a sufficient guarantee that nothing which is essential to give the layman a comprehensive view of South Africa Bantu culture—using the term in a broad sense—has been omitted. The special merit of the book, however, is that not only does it deal with the native of South Africa as he was, but it also gives objectively, and impartially, be it said, an adequate account of present-day conditions—the native as he is, after contact with European civilization and now that he has become a 'problem'—information that is essential, if we in Great Britain are to understand what is involved in the difficulties which the people of the Union of South Africa have to solve. Here Prof. Schapera, Dr. Monica Hunter, and the colleagues who have collaborated with them are guides whose scientific detachment is above suspicion of political bias.

**Light:**

Principles and Experiments. By Prof. George S. Monk. Pp. xi + 477. (New York and London: McGraw-Hill Book Co., Inc., 1937.) 30s.

**T**HERE is a rapid increase in the number of elementary treatises on light intended to serve the needs of the student of a good pass or first year honours grade. Prof. Monk's book is of this standard. It provides a very well balanced course of geometrical and physical optics in which the emphasis is, naturally, on the physical side. The fundamentals of the subject are carefully developed and expounded, and, though the treatment is relatively elementary, intensity-distribution problems receive due consideration, and there are concise but comprehensive chapters on spectra, light and material media, the effects of magnetic and electric fields, and the eye and colour vision. The geometrical part contains a useful discussion of the cardinal points of an optical system developed on classical lines, apertures, aberrations, photometry and instruments. About seventy pages are devoted to a series of twenty-three laboratory experiments, ranging from the focal lengths of simple lenses to the optical constants of metals.

The book forms an excellent introduction to a more specialized treatment for students in an honours grade.

A. F.