used to construct tables of z as a function of p_r and T_r for values of z_c of 0.23, 0.25, 0.27, and 0.29. In addition, other tables of considerable utility were compiled on the basis of these values of z_c over suitable ranges of p_r and T_r. Among these are the thermodynamic properties of saturated liquids and gases, reduced densities of gases and liquids, deviations of enthalpy, entropy, and internal energy of gases and liquids from ideal-gas behavior, fugacity coefficients, and vaporization-equilibrium constants.

The entire development, from the choice of the third parameter to the methods of obtaining the tabulated values, is carried out with admirable clarity and verbal economy. The use of the tables for constructing thermodynamic charts and for solving problems involving the Joule-Thomson effect is effectively explained. The text contains many helpful figures and illustrative problems which should make it particularly attractive to those not continually in touch with thermodynamics.

The authors present an extensive bibliography and a large quantity of data comparing experimentally determined with calculated generalized values of various properties. The use of the added parameter, z_c, is shown to improve the correlation significantly, particularly around the critical point and in the regions of saturated liquid and vapor. At higher values of p_r and T_r the beneficial effect of this added parameter diminishes.

An errata sheet is included which accounts for almost (but not quite) all the errors in the text. The editing leaves something to be desired, but this deficiency becomes insignificant when the value of the work is considered.

This report should definitely be on the bookshelves of our teachers and students, and anyone in the field whose work is concerned with the application of the law of corresponding states.

R. H. M. SIMON

Distillation Literature, Index and Abstracts, 1953–54. Arthur and Elizabeth Rose. Applied Science Laboratories, Inc., State College, Pennsylvania (1955). 412 pages, $12.50.

The 1953–54 volume has been preceded by similar volumes, the first covering 1941–45 and the second 1946–52. Arthur and Elizabeth Rose also contributed Chapters I and IV to "Distillation" (published by Interscience Publishers, Inc., in 1951), which includes bibliographies and a wealth of references on distillation from the earliest reports to 1950. Taken together, this is a unique accomplishment by the Rose team as well as a tremendous job, similar to Hercules' labors, in so completely and exhaustively abstracting all the reports in the technical literature of many languages on the important subject of distillation. In fact, there is nothing else available even remotely approaching the completeness and precision of the distillation abstracts by Arthur and Elizabeth Rose. It is noted that the 1946–52 volume of this series was judged by the American Library Association to be the best bibliography on sciences related to agriculture published in 1953–54 and was the basis for the presentation of the Oberly Award to the authors.

The present 1953–54 volume is nearly two-thirds the size of the 1946–52 volume,

(*Continued from page 13S*)

evidencing the increasing rate of growth of literature on distillation. Like the previous volumes, the present volume contains three sections: (1) a list of all subject and substance index headings and cross references used in the book, (2) a main subject index section comprising the majority of the book and containing abstracts grouped according to subject, and (3) a final author index section giving the authors and their locations, titles of articles, journal references, and subject index headings under which each entry is found in the subject index.

The book contains more than 400 pages of abstracts in compact type. The general plan of indexing, classification, selection of appropriate words or phrases of index headings, etc., has been worked out logically. It would be a formidable job to proofread the present 1953–54 volume, but spot reading throughout the book has not yet disclosed typographical or factual errors. The language used in writing the abstracts appears uniformly clear and adequately informative. It is obvious to anyone reading and using the abstracts that both Arthur and Elizabeth Rose are not just abstractors, but authorities in the field of distillation, and that they have conscientiously digested, correlated and edited suitably every one of the great number of pieces of information reduced to abstract form in their book.

WALTER J. PODBIELNIAK

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