there is far too much to discuss, including most of kinetic theory and large segments of fluid dynamics and statistical mechanics. Professor Rowlinson picks a reasonable middle course (unfortunately not explicitly stated), and the real meat of the book is concerned with the internal mechanics of molecules as related to the calculation of the thermodynamic properties of gases by statistical mechanics.

There is a short first chapter on the thermodynamics of the perfect gas; this is clear and concise. A slightly longer second chapter reviews the experimental measurement of heat capacities. The third chapter is the longest and best, and essentially covers the statistical thermodynamics of perfect gases. It could fairly be described as a revised and up-to-date summary of parts of the well-known books by Fowler and Guggenheim and by Mayer and Mayer. Anyone who wishes to learn about the statistical mechanical calculation of thermodynamic properties of perfect gases can do no better than to start here. The subject is topped off with a short chapter on gas mixtures.

The last two chapters have a different flavor from the rest of the book. Chapter 5 is entitled "Molecular Collisions". Clearly this is too vast a subject to be covered in 19 brief pages; the aim is apparently to say something about the absorption and dispersion of sound in polyatomic gases due to relaxation effects in inelastic collisions. This is of importance in connection with the measurement of heat capacities by sound measurements. Chapter 6 is entitled "Flowing Gases", and is a short introduction to one-dimensional, steady-state, adiabatic flow, with some emphasis on shock studies. Both Chapters 5 and 6 could have been expanded into whole books by themselves. It is hard to say whether the book as a whole would have been improved if the space devoted to these last two chapters had been used for something else; such questions probably fall into the category of matters of personal taste for individual readers. What is certain is that Professor Rowlinson has done a highly competent job on those topics he has chosen to discuss.

E. A. MASON

Handbook of Heat Transfer Media: PAUL H. GEIRINGER. Reinhold Publishing Corporation, New York. Chapman and Hall Ltd., London, 256 pp. $12.50.

THIS book presents and discusses property data for fluids which are employed as energy carriers in heat-transfer equipment. The book is arranged in four sections. Section one deals with the appropriate theoretical background and definitions and gives a classification of the fluids according to their thermodynamic and transport properties, their stability and cost, and their handling characteristics (surface tension, corrosiveness, etc.). Section two contains a brief discussion of the natural materials available and reviews some of the methods used for predicting the properties of synthetic materials. Section three presents graphs of thermodynamic and transport properties versus temperature together with explanatory text and brief notes on stability, cost and handling characteristics. In section four the fluids are classified according to recommended ranges of working temperatures; in addition brief descriptions are given of some typical heat-transfer equipment for process, space-heating and nuclear applications.

The major part of the book is taken up with the graphical data of section three. The graphs are clearly drawn on closely ruled grids, permitting them to be read to an accuracy normally acceptable for engineering calculations; as a supplement to the curves, selected points on each curve have their co-ordinates marked adjacent to them. Sixty two commercially available materials are considered, ranging from permanent gases to liquid metals; refrigerants are not included. The temperature range covered by the graphs is 0°F to 2400°F.

The book is well-indexed and contains a large number of references. Although the book incorporates terminology and presents some of the concepts in a manner with which many would not concur, the property graphs given in section three are a useful addition to the data on material properties.

E. H. COLE