

The author appears to be almost completely misdirected in his selection of topics. It is hardly necessary to devote one quarter of the chapter on separations to graphs of ion-exchange data for all the elements in the periodic table. These fine works are of great general utility but do not particularly pertain to the actinide elements, and a simple reference to them would have been sufficient. The photographs of such items as survey meters, counting room, and sample insertion into a pneumatic tube do not make a worthwhile contribution. An appendix consisting of 12 pages on nuclear data could well have been eliminated from a book as short as this.

A book of this specialized nature should be directed to practicing scientists; unfortunately, it is written more at the level of a college sophomore. The author in writing this book has contributed almost nothing to the field of actinide chemistry. The publishers must also share in this blame for it is feared that, in their desire to have a book with this title on the market, they were not careful enough in specifying what the objectives of such a book should be.

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HOW TO MEASURE NOTHING

Title Pressure Measurement in Vacuum Systems

Author J. H. Leck

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Price 45 shillings

First edition 1957, reprinted 1960

Reviewer C. H. Bachman

This book stays close to the subject matter of its title, and it does its job well. As in the first edition the various gauges have been divided into four basic types, and a

chapter has been devoted to each. Bringing these up-to-date in this second edition has required expanding the chapter on mechanical manometers to incorporate new developments in McLeod gauges. Similar expansion is required in connection with ionization gauges, there having been a considerable activity in this area since the first edition.

In view of the remarkable activity presently being experienced in the field of vacuum technology, there is a hesitancy to use the term "up-to-date" in a review such as this. However, remembering that the mechanics of book publishing does introduce an unavoidable delay, it must be concluded that in coverage the author has kept close to a fast-moving field.

The chapter on gauge calibration has been cautiously but solidly enlarged. The problems encountered in gauge calibration are presently being studied by those engaged in preparing calibration standards, and, when this area is in more satisfactory shape, a much larger chapter will be in order. From his remarks closing this chapter it is evident that the author is aware of this state of affairs.

A newly added chapter to this second edition gives recognition to the increasing importance of an understanding of the residual gases in vacuum systems. It would seem to me that a little background material would have been a very useful addition at the beginning of this chapter. On the other hand the title does restrict coverage to measurements. In any case this chapter will be of value to the many vacuum workers who eventually will find themselves concerned with residual gas problems.

All in all I feel that in coverage this second edition is well-done, and in style and organization it appeals to me personally.

I have one adverse criticism, directed not to the author but to the publisher. The quality of reproduction of the line drawings is just plain bad. In the curves of one illustration, lines that had been solid in the first edition had, in the later printing process, become broken lines. In one circuit diagram a solid line has bled laterally so much that it could nearly be mistaken as a resistance symbol. In some cases figure numbers are not clearly discernable. The usefulness of the book is not impaired but there isn't much leeway for further degradation in quality, and one wonders if the traditional pride in craftsmanship of the bookmaker is in decline.

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