

# BOOK REVIEWS

Selection of books for review is based on the editors' opinions regarding possible reader interest and on the availability of the book to the editors. Occasional selections may include books on topics somewhat peripheral to the subject matter ordinarily considered acceptable.



## Basic Thermodynamics

*Authors* A. S. Morton and P. J. Beckett

*Publisher* Philosophical Library, Inc.

*Pages* 300

*Price* \$15.00

*Reviewer* Robert O. Parker

This little book ( $7\frac{1}{2} \times 5$  in.) has six chapters, seven appendixes, and one index. The basic thermodynamics is presented in three chapters: Pressure and Temperature, Energy, and Entropy (107 pages); the remainder is concerned with applications.

The authors' presentation is excellent with many clear figures, illustrative examples, and experiments. Their objective of simple experiments to suit a low budget has been attained—and the experiments are good. In their examples, the parallel treatment in SI, fps, and cgs units is excellent.

In the discussion of temperature, Fig. 1.3 indicates that a person would feel pain as a result of a two-minute skin contact with an object at 40°C; this is not so. Only on p. 220 is it mentioned that the perfect gas law is inadequate under some circumstances. The definition of "fugacity" was sought in vain. Although this writer objects to reference to the activity coefficient as a correction factor, the authors are right. There is no treatment of vapor-liquid equilibria.

In spite of the minor shortcomings mentioned above, this is a good little

book and should prove useful in a freshman course of an engineering science program. Finally, the price seems a bit high.

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## Topics in Light Water Reactor Physics: Final Report of the NORA Project

*Author* International Atomic Energy Agency

*Publisher* UNIPUB, Inc., New York

*Pages* 110

*Price* \$3.00

*Reviewer* W. H. McCorkle

This final report on the NORA Project is a companion document to one in the International Atomic Energy Agency (IAEA) Technical Report Series No. 67 that summarized research performed during the first three years of the NORA Project.

The present review report presents a very comprehensive summary of knowledge and techniques,

including development or refinements to the state-of-the-art as used in the NORA Project and having wide general application.

The techniques discussed for utilizing solid-state Nuclear Track detectors such as phosphate glass disks and polycarbonate plastic foil (Makrofol) are particularly interesting. The refining and development of these techniques for fission density, as well as fast neutron flux distributions in zero power or critical assembly reactor studies, is one of the more exciting accomplishments summarized in this report.

The references listed and the reports cited in the bibliography also provide a useful catalog of documented literature in reactor physics with application to many nuclear power reactor systems.

This report should be of interest and useful to nuclear engineering departments for suggestions of techniques applicable to exponential pile, critical assembly, and zero power reactor measurements. For reactor design guidance it is doubtful that its value would be very important. It could, however, serve to remind code users of some pitfalls of which to be aware.

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