classified by the theory used and the further subsidiary approximations employed. The tables are carefully captioned and explained, thus making them easy to use; they will indeed be of great service to those requiring information on dissociation in heavy particle collisions.

Of equal or greater value, the remainder of the book provides the "guide to the understanding and evaluation" of the large number of papers referred to. Chapter 2 develops a concise conceptual framework upon which thought and discussion of dissociation experiments can be built. The value of this chapter should extend past those interested only in dissociative collisions and should be of help to anyone planning or evaluating scattering experiments. Chapter 3 is directly concerned with dissociation and describes in rather brief terms the various experimental methods used.

Measurements without a means to evaluate measurement accuracy are in many ways meaningless. Communication of measurements without the attendant clear communication of the evaluation of accuracy is likewise meaningless. The authors' frustration in this matter shows clearly in Chap. 5 where major sources of systematic error in dissociation measurements are itemized and discussed. There the case is well made that principles leading to more careful assessment of uncertainty and (more importantly) better communication of the means and extent of uncertainty evaluation "need to be reemphasized in the interest of higher quality scientific work." The chapter constitutes a carefully considered and perceptive exposition of errors which arise in dissociation measurements and thus provides a comprehensive footing for those needing to evaluate specific data or to plan new measurements.

One might wish that the authors had applied their evaluation criteria of Chap. 5 to the data so thoroughly indexed in Chap. 4. Such is not the case. Ambiguities attendant in communicating such an evaluation, coupled with the large amount of extra space and labor needed for this task, apparently dissuaded them from this.

In a similar way, the authors did not include the data on dissociation in their work. The qualifying discussion needed to present the data clearly was apparently so great in most cases that captions for the figures became prohibitively long and complex.

Although it has taken some time to change point of view, this reviewer now believes the authors made the best choice in the above omissions. The book serves its stated function quite effectively as is.

Theoretical balance is added to the book in the lucid and brief discussion of theoretical methods employed in dissociative collisions and in the previously mentioned tables relating to theoretical papers. Thus, Chap. 7 is presented in a way that is readable and informative to the experimentalist; yet its structured and organized presentation, along with the index to the literature, should make it of real use to the theoretician as well. This chapter is written with good physical feeling, and it is communicated well.

One other feature deserves comment. The authors have communicated with the bulk of original authors of dissociation papers; updating and qualifying remarks obtained in this fashion are contained in Appendix I. Many such comments are found to be quite substantive, and this appendix should be useful.

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Nuclear Power Plant Systems and Equipment. By Kenneth C. Lish. Industrial Press, Inc., New York (1972). $17.50.

My overall assessment of this book is that it is an informative presentation and collection of system and equipment design definition for nuclear power plants. The information content is similar to General Description documents usually provided by nuclear system suppliers, but it is unique in combining the BWR, PWR, and HTGR descriptions on a level of basic understanding. For the most part, the material presented is technical facts and appears to be generally accurate.

The author has pointed out that the material is qualitative not quantitative, but there is a considerable amount of specific information and data, such as plant ratings, fuel bundle design parameters, and equipment and system numbers, that obviously will eventually become out of date. This may only be of concern for the user who needs these specifics. An example of this point is that the information presented on the BWR systems represents the product line offered prior to 1972. It is unfortunate that the author or contributors of information did not keep the content somewhat more general so that the presentation would not so readily become obsolete.

My impression is that the author has been careful not to emphasize any one reactor concept over another, although the manner in which the HTGR is presented might lead readers to the erroneous conclusion that this reactor concept has evolved to a similar state of development as have the BWR and the PWR. It was noted that presentation of more reactor design details in the subsequent chapters is obviously limiting with respect to the HTGR.

In general, I considered the balance of content good, considering the wide scope of presentation. I would have liked to see more attention given to the instrumentation presentation as covered in Chap. 15.

The text does contain certain notable errors. Within Chap. 5 on containment, the TVA Browns Ferry station is erroneously referred to as having an ice condenser-type containment, when obviously this should be TVA's Sequoia station. In Chap. 3 on boiling water reactors, the text states that the primary function of the recirculation loop is reactor control rather than cooling. This statement is incorrect in that the primary function is reactor cooling although the reactor load following function is controlled within the recirculation loop system. In covering the radioactive waste handling systems, the author has in different text locations referred to the effluent system as "near zero release," "as low as practicable," and "zero release concept." This area has been very carefully treated and reviewed as part of the AEC "As Low As Practicable" public hearing, with indications that "zero release" references are neither a practical nor necessary objective and should not be confused with a reasonable "as low as practicable" design objective.

Yet, on the whole, *Nuclear Power Plant Systems and Equipment* provides an excellent collection of equipment and system descriptions that enables the student and practicing engineer to get up to speed on the BWR, PWR, and HTGR nuclear plant features and equipment utilization.

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