

Chemical Reactor Design for Process Plants, Howard F. Rose, John Wiley and Sons, New York, 1977. Vol 1—**Principles and Techniques**, 772 pp., \$35.00; Vol 2—**Case Studies and Design Data**, 242 op., \$20.00.

The author has written this reference work for the professional engineer who is involved with the design, scale-up or operation of chemical reactors. He has done an excellent job in distilling an extensive literature into a well organized and useable format with a good balance between theory and the practical applications. A few misprints were found; therefore, the reader will want to verify equations before using.

The content is subdivided into five parts. The first four parts, in Volume I, include a reasonably complete summary of the significant theory, knowledge and empirical facts pertaining to the selection, design and operation

of chemical reactors. Some aspects of the material are covered in less detail, and the important topic of homogeneous catalysis was purposely omitted. However, extensive treatment is given to the design of continuous stirred tank reactors, tubular reactors for homogeneous reactions, fixed bed catalytic reactors and batch reactors, all of which are of great industrial significance. Of particular interest to the reviewer were the author's discussions about the thermal behavior of reactors.

An overview of factors involved in the design of fluidized-bed reactors is presented although the very challenging problems involved in developing a suitable catalyst, when required, are hardly mentioned. Reactors for gas-liquid and liquid-liquid systems are reviewed. The discussion of drop breakup, coalescence and suspension phenomena in liquid-liquid systems in agitated reactors is somewhat misleading.

Part 5, presented in Volume II, is a collection of 14 case studies of real problems of industrial significance. These studies generally succeed in illustrating the real-world application of principles discussed in Volume I. Useful design data are included in the Appendix in Volume II, although the data presented in Appendix D for heat transfer in fixed-bed reactors appears to be at variance with much of the data in the literature (see, for example, the data summarized by Beek in *Advances in Chemical Engineering*, 3, 230-234, Academic Press, New York, (1962)).

On balance, this book will be a valuable addition to the library of the practicing engineer, and it should be a worthwhile textbook for an advanced course in reactor design.

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IAHR/IUTAM—Symposium 1979 in Karlsruhe

PRACTICAL EXPERIENCES WITH FLOW-INDUCED VIBRATIONS

From September 3 to 8, 1979, an International Symposium on Flow-Induced Vibrations will be held in Karlsruhe, Germany. Special attention will be given to information from *engineering practice*. Again, a major objective is to stimulate interaction between field engineers, design engineers, and researchers from a variety of disciplines. The goals are to provide engineers with an overview of possible vibration problems and effective cures, to supply scientists with research priorities, and to contribute to improved design criteria. Technical sessions are planned on: Hydraulic Structures; Hydraulic Machinery and Equipment; Reactor and Heat-Exchanger Components; Ocean Structures; Ship Structures; Bridge Decks, Beams and Cables; High-Rise Buildings and Structures.

For each of these areas a general lecturer will give a state-of-the-art report, supplemented by two workshops, one on prediction methods and one on cures of vibration problems. Preprints will be made available ahead of time displaying, in a unified chart format, the essence of individual contributions. The conference language will be English. Deadline for summaries illustrating the basic content (2 to 4 pages): January 1, 1979.

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