

Process Design for Reliable Operations, N. P. Lieberman, 253 pp., Gulf Publishing, 1988, \$35.00.

This short book is directed at students in chemical engineering, young process designers or operating engineers, and those in allied sciences seeking some background in the fast-moving field of chemical engineering process design. The book is clearly and simply written with extensive subheadings which make it easy to find specific items. A considerable amount of illustrative material is included, as well as a glossary of terms commonly used by chemical engineers that have developed a meaning peculiar to the process industry.

After a humorous introduction, which outlines the basic idea of chemical engineering process design, the book is divided into eighteen enlightening and entertaining additional chapters. Topics such as sizing process vessels, choosing between packing and trays for a distillation column, designing heat exchangers and centrifugal pumps, practical difficulties of operating a vacuum system, surface condenser, steam jets and other equipment used in the operation of chemical plants

are covered in this book. As a former design engineer for a very large chemical company, I found the book valuable for anyone who wishes to learn something about the importance of process design, its uses in the petro-chemical industry, and its great potential for technological applications. The author guides the reader through the field of process design by using enlightening anecdotes and illustrations that produce solutions to actual design and plant problems. The author has made an effort to show the reader how to avoid/overcome specific problems in process design and equipment. I do not recommend the book as a classroom textbook; however, I would make it required reading for any future engineer. Anybody reading this book develops a feeling for what it is like to work as a process designer.

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