scopic equations and then moves into applications of the whimsical, thought-provoking type for which he is famous.

While reviewing the book I got the feeling that Levenspiel is trying to fill a void in modern engineering education. Here is a book devoid of partial differential equations (except for the unavoidable ones in unsteady heat transfer), vector notation, numerical methods and computer-based problems. This is a book that tries to keep thinking from becoming a lost art. Levenspiel has cleverly used his whimsical problems to encourage new thinking and application. By moving the reader away from standard CPI applications, creativity and thinking are encouraged because these are not the "real" problems facing an engineer. In fantasy land one is not constrained by past experiences, so imagination can have free rein. Almost unknowingly one takes his fundamental models of the universe and applies them to the new situation.

I found the heat transfer part of the book less satisfying than the fluid flow part. The second half of the book is much more a recital of equations. There are chapters with no examples or problems at the end of the chapter. The clever application problems drop from about 50% in the fluids portion down to about 25% in the latter portion. One almost gets the impression that the author was running out of steam during the last part of the book.

Chapter 16 is a refreshing assembly of problems with no tie to any previous chapters. In an era where many textbooks almost tell you what equation in a given chapter applies to a particular problem, Levenspiel gives some multi-concept problems and leaves the rest to the reader. Bravo!

The book uses SI units exclusively. I would rather see a mixture of applications using English units, particularly if the audience is to include practicing engineers. Engineers still must be comfortable with more than one system of units.

There are no answers provided for any of the problems. For a clientele of practicing engineers who want to check their understanding of what they are learning, answers to some of the problems would help.

It may prove unfortunate that the book will not really find a home. With the structured and crowded curricula which are now so common, it may not be readily usable. It is definitely not a teaching text in the usual sense—there are too many gaps for a new learner to bridge. Perhaps it may serve as an adjunct text in a design course. If such is the case, then a less expensive paperback edition would make it more attractive. In any case, finding a home within the university for this book may well require some creativity on the part of the professor (the author has already done his part). □

ChE letters

SAFETY MODULES AVAILABLE

Dear Editor:

I read with considerable interest the article in the spring 1988 issue, "Safety and Loss Prevention in the Undergraduate Curriculum: A Dual Perspective," by Dan Crowl and Joe Louvar. As one of the founders of AIChE's Center for Chemical Process Safety and as a promoter, while AIChE Executive Director, of increased emphasis on safety in the undergraduate curriculum, I commend Wayne State and BASF for their video training sessions.

In their article, Crowl and Louvar note the "ambitious safety and loss prevention program" in Great Britain. This program, under the leadership of the Institution of Chemical Engineers, has led not only to formal safety instruction in universities, but also to excellent interactive hazard workshop modules. These excellent products are now available in the western hemisphere.

These modules are available in different formats. First, there are seven slide module programs, on subjects ranging from the hazards of plant modifications to human error. In addition, IChemE offers four current videotape and slide programs, on Preventing Emergencies, Inherent Safety (by Trevor Kletz), Safe Handling of LPG, and Safer Piping. Finally, a computer emergency simulation module on Handling Emergencies for IBM and compatible PCs involves the students in a very real simulation of fire or toxic gas release at an operating chemical plant, with actions and results occurring according to the pre-plan assembled by the group. New modules are being prepared on other important process safety subjects.

These modules are ideal for use in the undergraduate curriculum, and are available at special university discount prices. Each package comes with a full text and trainer's guide. I will be pleased to describe and discuss these products with interested chemical engineering academicians.

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