ChE letters

REACTION TO GRISKEY RANKING

Sir:

I found the article by R. G. Griskey, "Ranking Chemical Engineering Departments" in the Summer 1976 issue of *CEE* to be very interesting. No doubt he will attract both praise and brickbats for his approach.

With his method a department may fluctuate rapidly in the standing as fortunes go up or down. If a professor lands a million dollar grant, the departmental rating will soar suddenly. If the number of Ph.D.'s produced drops from 15 to 5 in one year (entirely possible) the rating will take a nosedive. I am sure he is quite aware of the short-time fluctuations.

I would like to see ratings compiled every year, by Griskey's scheme. Let me urge him to consider being the author of a yearly ranking for *CEE* or some other journal. To many people it would be as valuable as the annual reviews of special areas of research which were formerly published, for example, by Ind. Eng. Chem.

J. W. Westwater
University of Illinois, Urbana

Editor's Reply:

CEE would be interested in receiving another paper from Prof. Griskey on departmental ratings next year, in order to see what, if any, changes have occurred. However, since the results one obtains depend upon the weighting one gives to the various parameters as well as upon the input data, others may want to try a different approach and, in the interest of fairness and diversity, are invited to do so. *CEE* would not want to be thought of as endorsers of any particular rating system or to be more or less committed to publishing the "Griskey Ratings" annually to the exclusion of others.

Other letters will appear in the next issue.

ChE book reviews

HEAT AND MASS TRANSFER DATA BOOK, 2ND EDITION

by C. P. Kothandaraman and S. Subramanyan
John Wiley & Sons, 1975. $5.95.

Reviewed by F. J. Lockhart, University of Southern California

Reference materials, both data and equations, are presented for heat and mass transfer in MKS and SI units.

This book is a compilation of data intended for use with a text-book. There are essentially no discussions of the various tables, graphs and formulae, and at times insufficient definitions of symbols. References are not given for specific data items, but a list of 16 books is given at the end. So this book is a tertiary reference which does not identify the specific secondary references.

There is no subject index and the table of contents is too brief to be of help in locating specific items of interest. A user will have to prepare his own index. (Perhaps this is a good thing!)

Coverage of heat transfer, physical properties, and fluid flow is thorough. Mass transfer receives scant attention: 2 pages for equation of molecular diffusion, 2 pages for convective mass transfer coefficients, and 3½ pages for humidification equations. □

MULTIVARIABLE COMPUTER CONTROL A CASE STUDY

by D. Grant Fisher and Dale E. Seborg
North Holland Publishing Co. (1976) 205 Pages.

Reviewed by W. Harmon Ray,
University of Wisconsin, Madison

In order to understand the value of this book, one must become familiar with its genesis. Approximately 10 years ago, the Department of Chemical Engineering at the University of Alberta acquired an IBM 1800 process control computer and began interfacing it with equipment in their unit operations laboratory. One of the first units to be put under computer control was a double effect evaporator. In the ensuing years, the authors have used this slightly nonlinear, multivariable evaporator as a model process for testing a wide range of both traditional and modern process control techniques. As their research projects were completed, the results were published in great variety of ways including meeting proceedings, chemical engineering journals, control journals, trade journals, etc. In many instances their work represented the first real time experimental implementation of the techniques applied. After several years of testing and comparing on-line identification, state estimation, and control algorithms applied to this evaporator, quite a number of conclusions could be drawn about the relative merits of the techniques considered. Thus after some urging from their colleagues in the field, the authors were persuaded to compile a case study of process control algorithms applied to the evaporator and to

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