

SUMMARY REPORT

TEACHING OF UNDERGRADUATE

MASS AND ENERGY BALANCES

A Mini-Session Presented at the
Annual Meeting

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INTRODUCTION

chemical engineering departments in the United States and Canada. The survey compiled data on texts, laboratories and course contents. In successive

engineering have been surveyed. Responses

COMPUTERS IN MASS AND ENERGY BALANCES

computer are summarized below:

<u>% of Assignments</u>	<u>Number of Colleges</u>
0-10%	77
10-30%	22
30-50%	8

PROJECTS

Projects lasting one month or longer were assigned in 16% of the courses. On the average, there project involves groups of 3 to 4 students. The project grade was 10% to 30% of the total course grade.

The following comments were made about the nature and purpose of the project.

... problem including the solution of many simultaneous material

TEXTBOOK

In previous surveys, there has almost always been a text which was
This survey is no exception

Six texts, plus personal notes, were mentioned. The text by Felder and
Himmelblau's book was used in

29% of the courses. No other text was used in more than two courses.

<u>AUTHOR</u>	<u>NUMBER OF SCHOOLS</u>
Felder & Rousseau	64
Himmelblau	29

TEXTBOOK COMMENTS

The compilation of comments on the textbook involves some subjective judgement. Over 80% of the questionnaires included comments on the texts. The comments listed below were mentioned on over 20% of the replies.

Many problems
Well organized
Good examples
Clearly written

Deficiencies

Shortage of example problems
Problems not difficult enough
Depth of treatment is not enough
Needs more computer problems
More development of unsteady-state processes

Himmelblau

Strengths

Excellent examples
Challenging problems

Deficiencies

Some topics require more explanation
Errors in many examples
More problems requiring computer solutions