

AN ABSTRACT OF A THESIS

A NUMERICAL SOLUTION TO MASS TRANSFER IN  
A WETTED-WALL COLUMN

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Master of Science in Chemical Engineering

In this investigation, a solution to the finite difference equations representing the momentum and continuity equations was obtained for mass transfer in a laminar flow wetted-wall column. The system of equations formed using the finite difference representations was solved using numerical methods on a digital computer. The numerical solution includes the effect of liquid flow rates on mass transfer in the wetted-wall column. The calculated results were compared to the Graetz solution, which does not include any considerations for liquid flow, and to experimental results. The numerical results were in good agreement with the Graetz solution at moderate to low gas flow rates. Agreement with experimental results varies with the investigator and with the fluid in the wetted-wall column.

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CERTIFICATE OF APPROVAL OF THESIS

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by

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