COMPUTER AIDED DESIGN MODULE FOR DYNAMIC SIMULATION OF BINARY DISTILLATION COLUMN USING MICROSOFT EXCEL

BY

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2000/9653EH

DEPARTMENT OF CHEMICAL ENGINEERING FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA

OCTOBER, 2006
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DYNAMIC SIMULATION OF BINARY
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A RESEARCH PROJECT SUBMITTED TO THE
DEPARTMENT OF CHEMICAL ENGINEERING,
SCHOOL OF ENGINEERING AND ENGINEERING
TECHNOLOGY, FEDERAL UNIVERSITY OF
TECHNOLOGY, MINNA, NIGER STATE, NIGERIA

IN PARTIAL FULFILMENT OF THE REQUIREMENT
FOR THE AWARD OF BACHELOR OF ENGINEERING
(B. ENG.) DEGREE IN CHEMICAL ENGINEERING

OCTOBER, 2006
DECLARATION

This project work was carried out by YAHAYA AMINU ABBA under the supervision of PROFESSOR K.R ONIFADE in the Department of Chemical Engineering Federal University of Technology.

YAHAYA AMINU ABBA
REG. NUMBER: 2000/9653EH
CERTIFICATION

I hereby certify that this project title “Computer Aided Design Module for a Dynamic Simulation of Binary Distillation Column Using Microsoft Excel” was carried out by YAHAYA, AMINU ABBA with matriculation number 2000/9653EH. It was supervised, read and approved for the fulfillment of the requirement for the award of Bachelor’s Degree in chemical engineering.

PROFESSOR K.R. ONIFADE
(SUPERVISOR)

DR. M. O. EDOGA
(HEAD OF DEPARTMENT)

EXTERNAL SUPERVISOR

DATE

DATE

DATE
DEDICATION

This work is dedicated to Almighty Allah for His guidance, love, caring and protection throughout my academic pursuit. To my parents, for their moral and financial supports throughout the course of my study. This work is also dedicated to my Uncles, Aunties, Brothers and Sisters and my entire friends for their wonderful contribution and support.
ACKNOWLEDGEMENT

I wish to express my gratitude to Almighty Allah for His guidance, protection and sustenance given to me throughout my academic pursuit.

My great appreciation goes to my project supervisor in the person of Professor K. R. Onifade, putting this project work together would have been the greatest job I ever carried out, but for my project supervisor who provides me with all the hints, materials, academic and moral advice from the critical stage to the final stage, has made the whole work easier for this I say thank you, for you are a supervisor.

I am equally grateful to my Head of Department in the persons of Dr. M.O Edoga for his support both morally and academically. My profound gratitude goes to my father, Alhaji Abba Yahaya, my mother Hajiya Aisha for their parental support both morally and financially.

I also show my gratitude and appreciations to Justice Unmaru Abdullahi for his guidance and financial support given to me.

My sincere gratitude also goes to all the lectures in the Chemical Engineering Department for their words of encouragement and support, more especially Professor Odugure, Dr. F.A Aberuagba, Eng. Giwa Abdulwahab, Engr. Kovo Abdul-salam, Engr. Habib to mentioned but, few.

My profound gratitude also, goes to Engr. Musa D. Abdullahi H.O.D Electrical Engineering Department, Engr. Abdulkareem Nasir in Mechanical Engineering Department, Mallam Kasim A. in Physic Department.

Also, my sincere gratitude goes to my uncle Engr. Sule Naikko, my brothers Nasiru Abba Yahaya, Hayatuddeen Abba Yahaya, and my sisters Maryama, Jumai, Hadiza, Asiya Abba Yahaya for their contribution, morally and financially throughout my academic pursuit.
I am highly grateful to my friends, Mudansir Mamman, Umman Iliyasu, Kabir Harande Mahe and Ahmad Sada Sodangi, also among them were Nura Abubakar Masanawa, Abubakar Mai-wada, Mi’iraj Abdul-mumeen Fatima Ibrahim Hassan, Hassan Kabir Yar’adua, Sani Mohammed M., Aliyu and Ibrahim Adamu, Hajara A. Usman and others.

I cannot forget to show my gratitude and appreciation to Sharif Abubakar Wushishi (Mallam Bala), Usman Mamman Ifo, Aminu Yawale, our sister Halima and her husband Malam Ibrahim and others May ALLAH reward you abundantly, ameen.
ABSTRACT

A Computer Aided Design Module was developed for determining some design parameters for a binary distillation column using McCabe-Thiele method for composition across the stages and the total number of plates, feed plates, and number of plates in the rectifying and stripping section of the column. The module was coded using Microsoft Excel. The module was tested with a sample design problem. The results using manual calculation and CAD module were very close.