ACKNOWLEDGEMENTS

The author sincerely acknowledges, with a deep sense of indebtedness and gratitude, the valuable guidance, unremitting support, encouragement and patient supervision offered by Dr.V.Mohan, Research Supervisor as well as Professor and Head, Department of Chemical Engineering, A.C.Tech., Anna University, Madras - 600 025 in carrying out the investigation reported in this thesis.

The author expresses his special thanks to Dr.K.Padmanabhan, University of Madras and Dr.A.Baradarajan, Indian Institute of Technology - Madras, for their suggestions and advice as members of the Doctoral Committee.

The author also gratefully acknowledges all the valuable help, assistance and moral support rendered to him by his colleagues and friends whose names are left unmentioned, chiefly because of the sheer enormity of the names.

Thanks are also due to the authorities of Anna University for their permission granted to the author to carry out this study.

-RAJA MANICCAM SAI