ACKNOWLEDGEMENTS

I am extremely grateful to Dr. N. Subrahmanyam, Professor of Chemical Engineering, for the continuous guidance and encouragement given during the present study. I wish to record my sincere thanks for the help extended by him in obtaining facilities in the Department for the study.

The financial help provided by Gujarat Energy Development Agency for carrying out the investigations is gratefully acknowledged. I am thankful to Dr.K.S.Rao, Director, for suggesting to take up the present work for my doctoral thesis and the encouragement given from time to time.

I wish to acknowledge the management of Hindustan Brown Boveri for allowing me to take up the study. Mr.L.N. Shil helped in providing the Lotus programs for illustrations of the experimental and simulations results.

Mr.Sunil Patel, an M.Tech student, deserves a special mention for his contributions in ensuring timely completion of the experimental set-up and also during the experimental runs. Without his assisstance the present work would have suffered.

I wish to acknowledge the patience shown by my wife and children for my latecoming to home. It is to them the present work is dedicated.