ACKNOWLEDGEMENT

The author expresses his deep sense of gratitude to his guide Dr. J. SHANMUGAM, Professor & Head, Dept. of Electronics Engg, MIT, Anna University, Chennai for his valuable guidance, support and constant encouragement for this research work.

The author conveys his wholehearted thanks to his research co-coordinator Dr. K.P. Mohammed, Principal, Crescent Engineering College, Vandalur, Chennai for his guidance and encouragement. The author is indebted to the doctoral committee members Dr. M. Chidambaram, Professor, Dept of Chemical Engineering, IIT, Chennai and Dr. R. C. Panda, Scientist ‘C’, CLRI, Chennai for their support and valuable guidance. The author also owes his gratitude to Dr. T. Thyagarajan, Dean, CEC, Chennai, Er.V.Elango, North Madras Thermal Power station, Dr.L.Sivakumar, BHEL, Hyderabad and Dr.P.Kanagasabapathy, Dean, MIT, Chennai for their support in carrying out this research work.

The author is extremely thankful to the Management and Correspondent Prof. S.Peer Mohamed of CEC for giving him an opportunity to pursue his research programme. The funding received for the present work from the AICTE, Delhi is gratefully acknowledged. The author thanks all the staff members of ICE Dept, CEC and finally wishes to express his gratitude to his wife Mrs.R.Radha, to his daughter R.Ramya and to his son R.Badrinath for their continued co-operation throughout his research period.

(T.R.RANGASWAMY)