ACKNOWLEDGEMENT

It is a pleasure to place on record my profound sense of gratitude to Dr. Uma Batra, Professor, Materials and Metallurgical Engineering Department, PEC University of Technology, Chandigarh for her inspiring guidance, constant encouragement and support during the course of this research work. I am deeply indebted to Dr. Subrata Ray, (Retd.) Professor, Metallurgical and Materials Engineering Department, IIT Roorkee, Roorkee for his invaluable inspiration and guidance. Without their guidance, it would not have been possible to complete the work. My heartfelt thanks are due to both of them.

I am thankful to Dr. Seema Kapoor, Associate Professor UICET, Panjab University, Chandigarh for her continuous guidance, support and encouragement during course of my work.

I am grateful to Dr. R.S.Walia, Associate Professor, Delhi Technological University, Mechanical and Production Engineering Department, Delhi for his kind support to design and analyze ANOVA work in this research.

I am thankful to Director, PEC University of Technology Chandigarh, Dr. Manoj Datta for his continuous support and backing, which made it possible for me to complete my research work.

My due acknowledgement is to Dean Research Planning and Development, PEC University of Technology, Chandigarh for granting an in house project on “Development of ADI and its Commercialization” worth Rs. 5 lacs so as to generate testing facilities and support the other financial needs of this research work.

I am deeply indebted to the support offered by my colleagues during this period and departmental staff for their assistance in experimental set up and maintenance of research facilities. I am thankful to staff of SAIF, Panjab University Chandigarh, for conducting XRD, SEM and photographic development work.

I acknowledge with deep sense of gratitude for the help extended by M/s Krishna Engg. Works, Jalandhar, for providing the material with specific compositions required for the present research work.
My wife Ritu deserves special note of appreciation for her forbearance and constant encouragement during the period of preparation of this dissertation. My most affectionate thanks is due to my sons Vinayak and Anirudh for giving up a part of their share of my time during my involvement in this work. I take this opportunity to thank my mother, brother and bhabhi for their blessings and encouragement throughout life and especially during this tenure.

(Jagmohan Datt)