

## Acknowledgment

I express my thanks to Almighty for providing me inspirations, strength, energy and patience to start and accomplish my work with the support of all concerned a few of them I am trying to acknowledge.

I would like to express my sincerest gratitude towards **My Guide Prof. J.I.Nanavati**, Faculty of Technology and Engineering, The M.S.University of Baroda, who gave me an opportunity to work on this problem, and did not fail in trusting in my commitment. Of course, this work would not have been possible without his full and whole hearted support as an advisor, well wisher.

I really do not have words to express my gratitude toward **Head (I/C) of Mechanical Engineering Department Mr. G. D. Karhadkar**, Faculty of Technology and Engineering, The M.S.University of Baroda, the way he has supported in my work, and I owe him for his support.

I heartily thank to my friend **Mr. Arvind S. Mohite** Ph.D scholar in M.S.University and **Mr. N. K. Patel** Faculty of Technology and Engineering, The M.S.University of Baroda for their moral and technical support.

I wish to convey warmest thanks to **Principal Prof. R.G. Dhamsania**, Darshan Institute of Engineering and Technology, Rajkot who have given me endless support, and give me guidance whenever I need it.

I would like to thanks my colleague **Mr. Ujjaval J. Solanki, Mr Subhesh P. Pansuriya and Mr. Darshit S. Dadhania** for their help and throughout support and teaching and non teaching staff of Mechanical Engineering Department, Darshan Institute of Engineering and Technology, Rajkot for providing me co-operative environment.

I also acknowledge my personal dedication towards **my family** who have always supported in bad and good times and have been dedicated to my success.

*Ashvin J.Makadia*