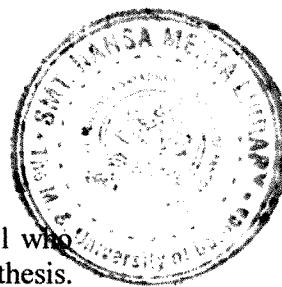


ACKNOWLEDGEMENT



I take this opportunity to express my deep sense of gratitude and thanks to all who have wholeheartedly helped me in reaching this stage of submitting Ph.D. thesis. Without their co-operation, I would not have finished my work.

It was a great privilege to work under the indispensable guidance of my guide Prof. (Dr.) Someshwar Bhattacharya, Vice-Dean, Faculty of Technology and Engineering, Head, Textile Engineering Department for his uninterrupted guidance, constant encouragement, inspiration and persistence, without which my potentials would not have extricated and without which this study would not have attained its present format. I extend my sincere thanks to Prof. (Dr.) Someshwar Bhattacharya.

I highly appreciate Prof. S. M. Joshi, Pro-Vice Chancellor of The M. S. University of Baroda, Vadodra, Ex-Dean, Faculty of Technology & Engineering and Prof. Bhuvan Parekh, Dean, Faculty of Technology & Engineering for their kind co-operation and encouragement in executing my work.

Sincere thanks are extended to Prof. (Dr.) Deepak Kumar De, Ex-Pro-Vice Chancellor of The M. S. University of Baroda, Ex-Dean, Faculty of Technology and Engineering and Ex-Head, Textile Engineering Department for his valuable suggestions and guidelines during my study.

I express my special thanks to Prof V. A. Bangalore, Ex-Head of the Department, for his encouraging attitude and support. I could implement and establish my experimental set up due to his kind cooperation, during his tenure as the Head of the Department.

Heartfelt thanks to my senior colleague Mr. Shrikant Vernekar, Reader, Textile Engineering Department for extending his moral support at all stages as well as some fruitful discussions regarding my work.

I thank all teaching staff members of the department for extending their co-operation one way or the other during my course.

I thank Mr. Satyajit Chaudhari – Lecturer, Textile Engineering Department, for his help related to computer.

I am deeply grateful to Prof. Romy Mistry, Director of TAIRO, Ex-Vice Dean of Faculty of Technology and Engineering, Ex-Head of the Textile Engineering Department, for facilitating me in fabricating some modifications in TAIRO workshop and also for availing internet facility which has been of great help in various ways. I also thank Mr. P. S. Gajjar of TAIRO for his help in fabrication.

With warm gratitude, I acknowledge the co-operation extended by all non-teaching staff of my department. Mr. Shrikant Jaiswal, Mr. Pravinbhai Solanki, Mr. Prakash Javale, Mr. Bhagwat Firke, Mr. K. M. Pardasani (Retd.), Mr. Maheshbhai Parmar and Mr. G. N. Rathwa who took great physical pain in establishing experimental set up and running the machine. Mr. D. M. Shah, Mr. Jyotindra Vasava, Mr. K.J. Kharadi, Mr. N. K. Bhangale and Bharatbhai Rathwa also extended their cooperation

frequently. I also thank Mr. Bhadreshbhai Shah, Mr. Dilipbhai Mochi and Mr. Kirti Panchal for their help whenever required. I would like to thank late Mr. V. C. Rajput, Mr. Narendra Shelar, Mr. Subhash Solanki, Mr. K. L. Pawar and Mr. Jayesh Pawar for their assistance.

I thank Mr. Amit Patel and all other alumni of the Faculty of Technology and Engineering whose generous help has given free internet access across University which is very useful to researchers.

My special thanks to my friend Mr. Girish Karhadkar, Reader, Mechanical Engineering Department (Work shop) for his valuable help during erection and commissioning of the machines of the experimental set up and also source various materials.

I thank Dr. D. C. Vakaskar, Dr. R. K. George and Dr. Dhaneshbhai Patel, all Readers, Applied Mathematics Department, for valuable interaction that resulted in a useful mathematical tool for designing reed.

My thanks are due to Prof. P. B. Desai, Retired Professor of Mechanical Engineering Department, Prof. S. C. Patodi, Head, Applied Mechanics Department and Prof. P. B. Joshi of Department of Metallurgy for sharing the expertise of their own field whenever I approached them.

I specially want to express my appreciation towards my past students Mr. Mitulbhai Patel, Mr. Lalitbhai Patel, Mr. Jignesh Kachiwala and Mr. Mrudang Parikh who helped me in finding suitable suppliers for various machines, accessories, attachments and materials.

I express my sense of gratitude and appreciation to my parents, brothers, sister and in-laws for their blessings and well wishes.

I am deeply indebted to my wife Ms. Seema Koranne for her inspiration, concern, moral support and unending help by sharing extra burden at home to let me concentrate on my work. I greatly appreciate my daughter Ms. Trusha Koranne whose help, love and sacrifice was the source of encouragement for the completion of my Ph.D. work.

Last but not least, my very sincere thanks to Baroda Rayon Corporation, Surat, for generous donation to the University to generate research fund for teachers. Funds granted from this enabled me to carry out my initial work. Very special thanks are also due to All India Council for Technical Education, New Delhi, for granting me funding from which subsequent exhaustive work could be carried out.

Vadodara

Milind V. Koranne