ACKNOWLEDGEMENT

Apart from my efforts, the success of this project depends largely on the encouragement and guidelines of many others.

I thank the Almighty for this work and its completion. My heart goes out in deep gratitude to my research supervisor, Dr. R. SIVARAMAKRISHNAN, Associate Professor, Department of Production Technology, MIT campus, Anna University, Chennai, to whom thanks giving by words appears just too small and insignificant when compared to the affection, help, encouragement, inspiration and guidance given by him. The author is greatly indebted to him for sparing his valuable time for lengthy discussions and constructive comments during the progress of this work and also during the preparation of the report.

I am very thankful for the help rendered by Mr. A. Jothilingam, Prof and Head i/c, MIT campus, Anna University, Chennai. I am also very grateful to Dr. K. Kalaichelvan, Associate Professor, Department of Production Technology, MIT campus, Anna University, Chennai and Dr. V. Sundereswaran, Professor, Department of Mechanical Engineering, CEG campus, Anna University, Chennai, doctoral committee members for their highly valuable guidelines and suggestions for the work.

I also wish to record my gratefulness for the support received from my college Sri Venkateswara College of Engineering and all the faculty members of Mechanical Engineering department who contributed to this project. I am indebted for their constant support and help. I also thank my mother S. Mariammal, my wife A. Priti and my god father Y. Jeyakumar for their constant encouragement throughout the tenure of this work.

Arockia Selvakumar A