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All activities associated with the development and quality improvement of any product for full satisfaction of the customers requires extensive planning and conducting various research studies so that the optimum values of all decision variables can be achieved. Research and development is an essential and perpetual activity for all industries intended towards the eternal improvement of the product and growth of the society. The interactions and involvement of academic and industry people is always beneficial. Academic faculties require participating in the technical research era, with the industry people, and they should collectively contribute for the development of the society. The majority research projects are handled and funded by government in the premier technical institutes of the country. Visionary and dynamic industries continuously upgrade their products through research and development. This research work is an example of industry – institute interactions. Study of design aspects & procedure and experimental testing etc. activities are carried out with association of an industry.

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Research is never ending process for the research scholars. Research is not only difficult, but full of uncertainties. During the tenure of research work, I faced lot of difficulties and challenges. Whenever I stucked up in the technical problems, the mind state becomes so difficult. But life is eternal, finding alternates to come out of all these difficulties, not only by avoiding problems, but going through the problems. These are all unforgettable experiences of my life. The realisation of these experiences is only possible during research work. During the period of last five years, many times I may have missed my regular responsibilities towards my colleagues, family members and friends. I apologize to all and thankful to them for their moral support and good wishes.

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"Time can not be created, paused and stored, it can be only utilized or wasted"