SUMMARY AND CONCLUSION
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This thesis is devoted to the study of Mixed Sampling Plans in which variable as well as the attribute quality characteristics are used in determining the disposal of the lot. A part of this thesis is also focused on Reliability sampling plans and Bootstrap control charts.

Mixed Sampling Plans are two-stage sampling inspection plans in which the first stage is concerned with variable criteria and the second stage sample is concerned with attribute criteria. If the lot is not accepted in the first stage it may be concluded that the lot is not rejected but the second stage sample is sought to discriminate the lot.

The main advantage of Mixed Plans over attribute plan is the reduction in the sample size for the same amount of protection. If the first stage of inspection fails to accept the lot, then the second stage becomes more important to sentence the lot. Hence in the second stage, various attribute inspection such as Single Sampling, Double Sampling, Sequential Sampling, Repetitive Group Sampling, Chain Sampling and Link Sampling plans are recommended and developed to suit the different production processes.

In this thesis Mixed Sampling Plans with variance criterion are also developed because in many occasions measure of dispersion criterion is used instead of central tendencies. Mixed Quick Switching System has been formulated in order to protect the consumer as well as producer.
The Reliability based Mixed Sampling Plans has been developed to reduce the sample size, test duration, etc., These Mixed Plans will be very useful to practitioners because they provide Economic Sample Size, which in turn minimizes inspection cost, data recordings, inspector error etc.,

In manufacturing units normally the Operators and Inspectors may not know the exact Pattern or distribution of the quality characteristics. Moreover one may not be aware of Probability concepts also. Hence a Distribution free technique called as Bootstrap has been formulated through this Research study to control the number defectives / defects in a production process.

Further, one can easily investigate the effect of inspection error based on mixed plans.