Earlier studies of measurement error mainly considered hundred percent inspection and assumed normality of the distributions of manufactured units and measurement error. In this dissertation, the effect of measurement error on both hundred percent inspection and sampling inspection plans has been considered for normal as well as non-normal product distributions.

The study has also been extended to a selective assembly problem involving hundred percent testing and classification of items into more than two ordered groups. An allied problem of the effect of non-normality on a sequential test for mean with two alternative hypotheses has also been studied.

The work is original; some of the results have already been published. The results embodied in this dissertation have not been submitted to any other University or Institute for a degree.

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