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## LINEAR PROGRAMMIG APPROACH FOR COST AND RISK MINIMIZATION OF CSP - 1

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## Abstract

The problem of optimal design of inspection plans for continuously manufactured items taking L consecutively produced items as a sample and tried to find out the optimal screening policy by skipping over certain number of successive samples when their was good indication that the process was running satisfactorily. The costs associated with screening policy consists of `cost of testing', `cost of passing defective items' and `cost of taking wrong decisions'. In the first part of the present paper, the cost-function proposed by Anscombe (1958) under Uniform prior is considered and applied Two-Stage Linear programming approach to minimize the aggregate of excess average costs of inspection yielding optimal choice of `n' and `i'. The case when p is fixed can be obtained as a special case. Secondly, game theoretic approach using linear programming has been applied to find out the optimal plan for continuous inspection taking the risk for different p as pay-o\_ entry. Numerical examples have been given to explain the application of the proposed procedure.

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KeyWords : CSP-1, Optimal design of inspection plan, Two-stage linear programming approach, Inspection cost, Game-theoretic approach.