

عنوان مقاله:

Optimization Models for a Deteriorating Single Server Queuing Production System

محل انتشار:

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خلاصه مقاله:

In this paper a single server queuing production system is considered which is subject to gradual deterioration. The system is discussed under two different deteriorating conditions. A planning horizon is considered and server which is a D/M/1 queuing system is gradually deteriorates through time periods. A maintenance policy is taken into account whereby the server is restored to its initial condition before some distinct periods. This system is modeled to obtain optimal values of arrival rates and also optimal maintenance policy which minimizes production, holding and maintenance costs and tries to satisfy demands through time periods. The model is also considered to control customers sojourn times. For each deteriorating condition a model is developed. Models are solved by GA based algorithms and results for a sample are represented.

کلمات کلیدی:

Single server queue, Maintenance, stochastic model, Gradual deterioration, Production planning

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