

Effect Of Maintenance On The Economic Design Of (X)Over- Bar-Control Chart

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Summary

An integrated model for the joint optimization of the maintenance level and the economic design of x-control chart is presented. This is done for a deteriorating process where the in-control period follows a general probability distribution with an increasing hazard rate. In the proposed model, preventive maintenance reduces the shift rate to an out-of-control state by an amount proportional to the preventive maintenance level. An example of a Weibull shock model with increasing hazard rate is used to illustrate the effect of the maintenance level on quality control costs. A comparison between uniform and non-uniform schemes is made both with and without preventive maintenance. Effect of distribution parameters has also been investigated. (C) 2000 Elsevier Science B.V. All rights reserved.

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