Abstract

In the recent years, the effect of deterioration of physical goods has drawn much attention of various researchers. The more the deterioration is, the more order quantity would be. According to such consideration, taking the deterioration rate into account is necessary. Thus in this paper, we develop the two ware-house inventory model with partial backlogging and two parameter Weibull distribution deterioration. In the present market scenario the demand of certain items does not remain constant with time and may increase/decrease for a fixed time interval. The objective of this paper is to derive the optimal replenishment policy considering varying demand rate and deterioration that minimize the present worth of total relevant inventory cost per unit of time. In addition to this single ware-house system is also developed and the results have been compared with the help of numerical example.

References
20. Agrawal, Swati, Banarjee, Snigdha, 2013. Inventory model with deteriorating items, ramp
type demand and partially backlogged shortages for a two warehouse system, Applied Mathematical Modelling 37, 8912-8929.

Index Terms

Computer Science  Information Sciences

Keywords

Weibull deterioration distribution, partial backlogging, ramp type demand