

Two layers supply chain in an imperfect production inventory model with two storage facilities under reliability consideration

Manna, Amalesh Kumar, author

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20465205&lokasi=lokal>

Abstrak

This article focuses on an imperfect production inventory model with production system reliability under two layer supply chain management. Here, we consider the production system may be shift from in-control state to an out-of-control after a time which is a random variable. A development cost is incurred to improve the reliability of the production system where the reliability parameter depends on the production rate. The rate of defectiveness of the imperfect quality items is also assumed as random and depends upon the production rate and time length of the out-of-control state. A disposal cost per unit of disposed items is incurred to minimize the environmental pollution. Finally, average profit of the integrated model has been maximized by optimizing the production rate as well as defective rate of the production system and some numerical examples have been given to illustrate the feasibility of the model.