Taleizadeh

Stochastic Imperfect Inventory Systems

Inventory and Production Management

In today’s manufacturing environment, managing inventories is one of the basic concerns of enterprises dealing with materials according to their activities. This book introduces and examines important production strategies such as scrap strategy and rework strategy under stochastic conditions that contribute to the reduction of unexpected costs. In a step-by-step manner, it presents stochastic imperfect inventory models, inventory models involving rework processes or breakdowns, as well as their maintenance. Also, different aspects of uncertainty are provided in multiple chapters of this book.

One of the primary questions answered in this book is: What is the optimal production quantity when there is a failure in the production line? To answer the question, the problem is first modelled mathematically, then the concavity or convexity of the objective function is proved and finally the optimal production quantity of the production system is determined using suitable solution methods.

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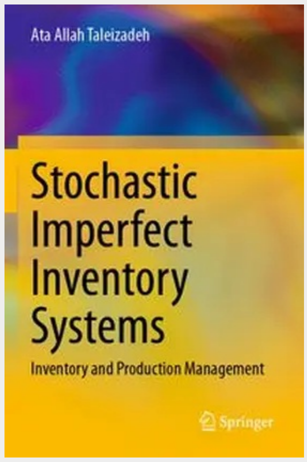

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