

<<Dynamic control of q>>

图书基本信息

书名：<<Dynamic control of quality in production-inventory systems生产一库存系统的质量动态控制>>

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内容概要

This book aims to address the coordination of quality control with other aspects of a firm's production system and supply chain, specifically, the coordination between the inspection-repair of finished products and their follow-up services, between inspection and process revision, between production and inspection under capacity constraints, between replenishment and rework quantities, and between supply and substitution decisions. To address these issues, the authors have in recent years developed a set of dynamic approaches based on Markov decision programming and using stochastic comparison techniques, including those based on notions of stochastic convexity and submodularity. The focal question driving their studies is this: under what conditions and for what systems does a certain class of policies become optimal in the sense of striking the best coordination among several competing or even conflicting aspects in the production-inventory system? Particular emphasis has been put on the class of policies that have simple, threshold structures -- simple enough to facilitate implementation, but sophisticated enough to be optimal. Written in a self-contained and well-motivated manner, the book offers a timely and useful text or reference to researchers and practitioners in operations research and management, industrial and quality engineering, systems and control, applied mathematics and statistics, and related fields.

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