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Sommario/riassunto	This book surveys recent applications of inspection models, maintenance models and cumulative damage models, as well as discusses the policies involved with these models. It explains how a stochastic approach can be applied to systems using real-world examples. The book begins by introducing and summarizing standard inspection models. It dedicates chapters to random inspection models and general inspection models, before moving on to discuss inspection policies and checkpoint models. The book discusses inspection of reliability systems, such as missile maintenance systems, as well as Markov models of inspection. The book concludes with a summary of other inspection models, problems they face, and solutions to these problems. Each chapter utilizes examples to illustrate the various models, methods, and policies. This book is of interest to engineering students, researchers, and design and production engineers working in system manufacturing.