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Nota di contenuto	Part I: Overview -- Introduction -- State of the Art -- Methods and Tools -- Part II: Continuous Processes -- Production Planning and Scheduling of Parallel Continuous Processes -- Part III: Semicontinuous Processes -- Production Scheduling in Multistage Semicontinuous Process Industries -- Resource-Constrained Production Planning and Scheduling in Semicontinuous Process Industries -- Simultaneous Optimization of Production & Logistics Operations in Semicontinuous Process Industries -- Part IV: Batch Processes -- Production Scheduling in Large-Scale Multistage Batch Process Industries. Part V: Integrated-

Sommario/riassunto

This book presents a number of efficient techniques for solving large-scale production scheduling and planning problems in process industries. The main content is supplemented by a wealth of illustrations, while case studies on large-scale industrial applications, ranging from continuous to semicontinuous and batch processes, round out the coverage. The book examines a variety of complex, real-world problems, and demonstrates solutions that are applicable to scenarios and countries around the world. Specifically, these case studies include: • the production planning of the bottling stage of a major brewery at the Cervecería Cuauhtémoc Moctezuma (Heineken Int) in Mexico; • the production scheduling for multi-stage semicontinuous processes at an ice-cream production facility of Unilever in the Netherlands; • the resource-constrained production planning for the yogurt production line at the KRI KRI dairy production facility in Greece; and • the production scheduling for large-scale, multi-stage batch processes at a pharmaceutical batch plant in Germany. In addition, the book includes industrial-inspired case studies of: • the simultaneous planning of production and logistics operations considering multi-site facilities for semicontinuous processes; and • the integrated planning of production and utility systems in process industries under uncertainty. Solving Large-scale Production Scheduling and Planning in the Process Industries offers a valuable reference guide for researchers and decision-makers alike, as it shows readers how to evaluate and improve existing installations, and how to design new ones. It is also well suited as a textbook for advanced courses on production scheduling and planning in industry, as it addresses the optimization of production and logistics operations in real-world process industries.