At the crossroads of artificial intelligence, manufacturing engineering, operational research and industrial engineering and management, multi-agent based production planning and control is an intelligent and industrially crucial technology with increasing importance. This book provides a complete overview of multi-agent based methods for today’s competitive manufacturing environment, including the Job Shop Manufacturing and Re-entrant Manufacturing processes. In addition to the basic control and scheduling systems, the author also highlights advance research in numerical optimization methods and wireless sensor networks and their impact on intelligent production planning and control system operation.

• Enables students, researchers and engineers to understand the fundamentals and theories of multi-agent based production planning and control

• Written by an author with more than 20 years’ experience in studying and formulating a complete theoretical system in production planning technologies

• Fully illustrated throughout, the methods for production planning, scheduling and controlling are presented using experiments, numerical simulations and theoretical analysis

Comprehensive and concise, Multi-Agent Based Production Planning and Control is aimed at the practicing engineer and graduate student in industrial engineering, operational research, and mechanical engineering. It is also a handy guide for advanced students in artificial intelligence and computer engineering.
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