在DBR環境及人力不足下的雙資源指派法則探討

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摘要

The Drum-Buffer-Rope (DBR) method is the pro-duction application of Theory of Constraints (TOC), a global managerial methodology that helps the manager to concentrate on the most critical issues. The DBR method-ology is now being implemented by a growing number of manufacturing organizations. By enabling better schedul-ing and decision making on the shop floor, its results are remarkable such as higher throughput, lower WIP, and shorter cycle time. Although, the DBR methods and its applications in some industries have been studied in some literatures recently, little research on the problem of Dual Resource Constraints (DRC) on DBR. In this paper, labor dispatching rules are provided to study the impact of DRC on DBR management system. These rules are discussed first and a case of job shop with various operators and seven machines is then utilized to evaluate the effective of these rules. The final results of experiment show that the performance of DBR system declines when labor utiliza-tion increases and the CCR-WIP dispatching rule facili-tate to improve the CCR utilization, especially in the case of high labor utilization.

關鍵字：Theory of Constraints (TOC), Dual Re-source Constrained (DRC), Bottleneck First, Look Ahead Bottleneck First, Labor Dispatching, Drum-Buffer-Rope (DBR)