

论文与报告

一种提高制造系统运行可靠性的控制策略

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摘要

从控制理论的角度出发,通过折衷考虑系统的在线运行成本和可用度,对于一般可修的、具有中间缓冲库的级联生产线,基于制造系统的冲突点调度策略,提出一种改善系统运行可靠性和利用率等性能指标的控制策略.仿真结果证明了本文方法的有效性.这种方法可推广至一般结构的制造系统.

关键词 [制造系统](#) [最优控制](#) [可靠性](#) [库存控制](#) [调度](#)

分类号

A Control Policy to Improve Operation Reliability of Manufacturing Systems

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Abstract

This paper, from control theoretic point of view, proposes a control policy to improve performances of a general repairable serial production line with buffers. The proposed policy is based on the concept of hedging point scheduling strategy that considers both running costs and availability of the system. The simulation results illustrate the effectiveness of the policy. The method can be used to manufacturing systems with general structure.

Key words [Manufacturing systems](#) [optimal control](#) [reliability](#) [inventory control](#) [scheduling](#)

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