

论文与报告

## 离散制造装配系统的活性控制

邢科义,胡保生,万百五

西安电子科技大学应用数学系,西安;西安交通大学系统工程研究所,西安

收稿日期 1996-10-3 修回日期 网络版发布日期 接受日期

摘要

首次研究离散制造装配系统的活性控制问题.建立了系统的工件加工过程Petri网模型.通过对系统Petri网模型的结构分析,提出了导致系统死锁的两类元素结构及活性特征.对一类离散制造装配系统提出了避免死锁的Petri网控制器,这类控制器容易实现,对系统的限制小,而且使得受控系统仍具Petri网模型.对一般离散制造装配系统提出了保证系统活性的控制策略.

关键词 [制造系统](#) [Petri网](#) [控制](#)

分类号

## Liveness Control for Discrete Manufacturing/Assembly Systems

XING Keyi,HU Baosheng,WAN Baiwu

Department of Applied Mathematics,Xidian University,Xi'an; Institute of Systems Engineering,Xi'an Jiaotong University,Xi'an

Abstract

The liveness problem for discrete manufacturing/assembly systems is studied first in this paper. We develop a Petri net model for processings of jobs in a manufacturing/assembly system. By analysis of the Petri net model, two kinds of structural objects which can lead to system deadlock and the liveness characteristics of the system are obtained. We then present our deadlock- avoidance Petri net controller for a class of manufacturing/assembly systems. This controller can be implemented easily and places less restrictive requirement on systems. And the controlled system can be modeled by a Petri net. For a general manufacturing/assembly system, we present a policy which can guarantee that the controlled system is live.

Key words [Manufacturing system](#) [Petri ent](#) [control](#)

DOI:

通讯作者

作者个人主页 邢科义;胡保生;万百五

### 扩展功能

本文信息

- ▶ [Supporting info](#)
- ▶ [PDF\(656KB\)](#)
- ▶ [\[HTML全文\]\(0KB\)](#)
- ▶ [参考文献\[PDF\]](#)
- ▶ [参考文献](#)

服务与反馈

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [加入引用管理器](#)
- ▶ [复制索引](#)
- ▶ [Email Alert](#)

▶ [文章反馈](#)

▶ [浏览反馈信息](#)

相关信息

- ▶ [本刊中 包含“制造系统”的 相关文章](#)
- ▶ 本文作者相关文章
  - [邢科义](#)
  - [胡保生](#)
  - [万百五](#)