







Q

Home ► All Journals ► Engineering & Technology ► International Journal of Production Research ► List of Issues ► Volume 51, Issue 5 ► Novel bi-level hierarchical production p

International Journal of Production Research >

Volume 51, 2013 - Issue 5

957 23 0

Views CrossRef citations to date Altmetric

Original Articles

Novel bi-level hierarchical production planning in hybrid MTS/MTO production contexts

Hamed Rafiei, Masoud Rabbani 🔀 & Maryam Alimardani

Pages 1331-1346 | Received 13 Sep 2011, Accepted 23 Jan 2012, Published online: 20 Apr 2012















Read this article



Abstract

A hybrid make-to-stock (MTS)/make-to-order (MTO) production strategy is one of the most appealing production strategies that has recently been investigated by academics and practitioners. In this paper, a hierarchical production planning (HPP) structure is developed in hybrid MTS/MTO production contexts for the first time. The proposed structure includes mid-term and short-term production planning levels by proposing a systematic and integrated approach towards tactical and operational issues. To cope with the problem, diverse novel modules are developed at each level and then they are interrelated from a hierarchical point of view. Moreover, a hybrid meta-heuristic algorithm is developed to tackle the computational complexity of a scheduling task. Finally, numerical experiments validate the proposed solution methodology.

Keywords:

hybrid MTS/MTO hierarchical production planning operational planning tactical planning genetic algorithm simulated annealing particle swarm optimisation

Acknowledgements

The authors would like to acknowledge the financial support of the University of Tehran for this research under grant number 8109002/1/03. Also, they are grateful to the reviewers for their valuable, constructive comments.

Related Research Data

An effective hybrid optimization approach for multi-objective flexible job-shop scheduling problems

Source: Computers & Industrial Engineering

Efficient Scheduling Rules in a Combined Make-to-Stock and Make-to-Order

Manufacturing System

Source: Annals of Operations Research

Capacity coordination in hybrid make-to-stock/make-to-order production environments

Source: International Journal of Production Research

Integrated job release and shop-floor scheduling to minimize WIP and meet due-dates

Source: International Journal of Production Research

Job scheduling with dual criteria and sequence-dependent setups: mathematical

versus genetic programming

Source: Omega

Master production scheduling: a concurrent planning approach

Source: Production Planning & Control

Related research 1



Information for

Authors

R&D professionals

Editors

Librarians

Societies

Opportunities

Reprints and e-prints

Advertising solutions

Accelerated publication

Corporate access solutions

Open access

Overview

Open journals

Open Select

Dove Medical Press

F1000Research

Help and information

Help and contact

Newsroom

All journals

Books

Keep up to date

Register to receive personalised research and resources by email



Sign me up











Accessibility



Copyright © 2025 Informa UK Limited Privacy policy Cookies Terms & conditions



Registered in England & Wales No. 01072954 5 Howick Place | London | SW1P 1WG