International Journal of Computer Integrated Manufacturing ›
Volume 22, 2009 - Issue 4: The Challenges of Manufacturing in the Globally Integrated Economy.
Guest Editor: Robin G. Qiu

Articles

The search for the optimal number of kanbans in unstable assembly-tree layout systems under intensive loading conditions

R. Iannone, S. Miranda & S. Riemma

Pages 315-324 | Received 07 Dec 2007, Accepted 04 May 2008, Published online: 06 Apr 2009

Cite this article https://doi.org/10.1080/09511920802206427

Abstra

The JIT s tages when applied i and the reductio rectly exec e demand patterns ut scraps and rew ctive systems growth of inventor IT impleme e been investiga e organisations. In this area, the kanban system, responsible for the exact propagation of

information and for inventory control, is the most widely researched control mechanism. Literature proposes various kanban systems; in all cases the determination of the number of kanbans depends both on the management method chosen at each stage of the process as well as on the fluctuation of operative variables. This study deals with the problem of choosing the optimal number of kanbans in a multi-stage productive environment organised in an assembly-tree layout. In particular, this paper proposes a heuristic procedure to determine the number of kanbans and compares it with the traditional methods applied in manufacturing contexts.

Keywords: just-in-time system kanban simulation

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