International Journal of Production Research ›
Volume 47, 2009 - Issue 24

Original Articles

Flexible kanbans to enhance volume flexibility in a JIT environment: a simulation based comparison via ANNs

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Pages 6807-6819 | Received 19 Jul 2007, Accepted 07 Aug 2008, Published online: 28 Oct 2009

Cite this article https://doi.org/10.1080/00207540802425351

Abstract

Kanbans play an important role in the information and material flows in a JIT production system. The traditional kanban system with a fixed number of cards does not work satisfactorily in an unstable environment. In the flexible kanban-type pull control mechanism the number of kanbans is allowed to change with respect to the inventory and bac…as proposed by (Huss…ance volume flexibilit…mics, 104 (2), 653…etermine the num…tal inventor…method propose…the results for the c…firmed by a simulation study using artificial neural networks (ANNs). The main aim of this paper is

to show the cost advantage for Husseini et al.'s method over the conventional method in fluctuating demand situations, and especially to prove that simulation via ANNs ensures a simplified representation for this method and is time saving.

Keywords: just-in-time kanban flexibility volume flexibility artificial neural networks