

Development of Operating Rules for Automated Guided Vehicle Systems in Heterarchical Manufacturing System **

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ABSTRACT

This paper proposes a new AGV dispatching algorithm which is suitable for heterarchical control structure. It is developed on the basis of bidding concept utilizing the information of work-in-process in incoming and outgoing buffers of machine center, and travel time of AGV. Since the bidding functions are functions of two parameters, sensitivity test is performed to find their appropriate values. The performance of the algorithm is compared with those of well-known existing rules in terms of system throughput through simulation on a hypothetical job shop type manufacturing system.