

## عنوان مقاله:

Travel Times Models of a Single Machine Flow Rack AS/RS

## محل انتشار:

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## خلاصه مقاله:

In the present work, a variation of the classical flow-rack automated storage and retrieval system (AS/RS) is investigated. This configuration is using a single storage and retrieval machine instead of two machines dedicated to storage and retrieval. The aim being to reduce the capital investment of the warehouse. The present paper aims to investigate travel times models of this system. Exact discrete travel times models are developed and used to validate the approximate continuous models developed by authors in previous works. These exact models are developed for storage, retrieval single cycles as well as for dual cycles. In addition, two dwell point positions of the storage and retrieval machine are investigated. An overall travel time model considering single and dual cycle operations is proposed. Computer simulation is used to compare exact and approximate travel times models for different scenarios of the AS/RS dimensions.

## کلمات کلیدی:

AS/RS; Travel time, warehousing

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