

How automated guided vehicles affect the operation of a container yard?

3. Mathematical model

Can flexible container space allocation planning be applied to other terminals?

The flexible container space allocation planning adopted in this paper is not only applicable to terminals equipped with URMGCs, but also to other terminals, such as traditional terminals with increased automation capabilities.

How to minimize the horizontal transportation cost of containers?

In addition, considering the shortage of storage space in the yard, a flexible space allocation strategy for these yards is studied, and a mixed integer quadratic programming model is established to minimize the horizontal transportation cost of containers.

How automated guided vehicles affect the operation of a container yard?

In the scenario, the automated guided vehicles can go deep among the container blocks arranged perpendicularly to the shoreline, which completely changes the yard's operation mode and affects its operational efficiency.

Can urmgc improve the yard management of busy transshipment container terminals?

Conclusions In this paper, a new type of ACT equipped with URMGC is used as the research object with the aim of improving the yard management of busy transshipment container terminals and providing new methods to terminal managers.

Can a container load be completed within a planning horizon?

Assumption 3: All loading of containers can be completed within the planning horizon, regardless of whether delayed transshipment has occurred. Assumption 4: Each segment can only be allocated to only one vessel during a shift, and can be allocated to any vessel across different shifts.

Why do unhandled containers increase with the number of containers?

It can be seen that with the increase of the number of containers, the volume of unhandled containers and solution time gradually increase, which means that there are containers that cannot be accommodated while meeting the storage requirements. Table 7. Unhandled containers under different J with different strategies.

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This model will explain the importance and relationship of container covariates, semantically enrich AI outputs, combine them with linked existing data to create new value chains, ...

Plan view of the maritime access, the berth, the apron, the container yard, the gate and the land access to the terminal - road, rail and inland waterways. A selection of cargo handling equipment, container ...

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Energy efficiency on the reefer container storage yard; an analysis of thermal performance of installation roof shade Muhammad Arif ...

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