Harmony search to solve the container storage problem with different container types

Abstract

This paper presents an adaptation of the harmony search algorithm to solve the storage allocation problem for inbound and outbound containers. This problem is studied considering multiple container type (regular, open side, open top, tank, empty and refrigerated) which lets the situation more complicated, as various storage constraints appeared. The objective is to find an optimal container arrangement which respects their departure dates, and minimize the re-handle operations of containers. The performance of the proposed approach is verified comparing to the results generated by genetic algorithm and LIFO algorithm.
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