

Evaluation Method for Appropriate Fleet Size of Forklifts at a Freight Station

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The decisions on how many forklifts should be assigned to a freight station have been based on the consideration of the number of cargoes, the shape of the yard, the working hours of the forklifts, and so on. But, it is difficult to evaluate the appropriateness of the number of the forklifts. So, we developed a simulator of cargo handling operations in freight stations, and studied influences of the fleet size on the works of loading and unloading. In this paper, we propose a method to evaluate the appropriateness of the fleet size of the forklifts based on the waiting time of the forwarders' trucks for loading or unloading. The shortening of the waiting time of the forwarders' trucks is desirable from the point of view of customer satisfaction. It was found out that the waiting time of the trucks was correlated with operation rate of the forklift.