DETERMINATION OF TOTAL FORKLIFT FOR LOADING PROCESS AT PT. CM WAREHOUSE USING DISCRETE SIMULATION

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ABSTRACT

The loading area of container truck in PT. CM has 8 docks and 2 forklifts. Loading process into container truck (CT) covers discharging CT in the loading area, dismantling container’s gate by the CT driver, cleaning the container by the CT driver, checking up of container condition, taking picture of the container, taking up the product for entered on the container by forklift, structuring product into container by one group of porter, final inspection before container closed, closing CT and sealing of the container. A lot of product demands by the consumers then followed by few forklift range that they have, caused raising up the loading time. Raising up the loading time can cause overtime and penalty fee up also. Deciding forklift range is the way for handling of loading time raising by using discrete simulation method as follows: (1) collecting data from loading process which is described above; (2) making simulation line diagram of loading process in the existing condition; (3) doing simulation process in the existing condition; (4) doing verification and validation examination; (5) expanding scenario of simulation process; and (6) doing analysis from simulation result that already done. The result of expanding simulation process scenario showed that by using 4 forklifts in the shortest loading process, the company can push the cost of outcome.

Keyword: Range of forklift, discrete simulation, overtime fee, penalty fee