EVALUATION OF TOTAL COMBINE TRACTOR TERMINAL (CTT) IN THE LOADING-UNLOADING PROCESS PT TERMINAL TELUK LAMONG USING DISCRETE SIMULATION APPROACH

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ABSTRACT

The use of container terminals as a place for loading and unloading activities is increasing from year to year. Container terminals have equipment including Container Crane (STS), Combine Tractor Terminal (CTT) to support loading and unloading activities. The current operational condition has experienced high STS waiting time at the port. The existence of a high waiting time for STS indicates that the number of CTT is not yet optimal for now.The method used in this research is simulation. The research scenario being tested is to change the number of CTTs used to serve STS. In the existing condition, 7 units of CTT are used to serve STS. The number of CTTs in the scenario used were 6, 7, 8, and 9 units of CTT. The results of this study are the number of CTTs using 9 units of CTT for High Season conditions and CTT of 7 to 8 units for Normal and Low Season conditions. The average waiting time for STS during High Season conditions was from 2.2 minutes to 0.5 minutes, while the average waiting time for STS during Low conditions was from 0.34 minutes to 0.24 minutes and Normal Season from 0.47 minutes to 0.40 minutes.

***Keywords**: Container Terminal, Loading Unloading, Discrete Simulation Approach, Combine Tractor Terminal (CTT).*