ABSTRACT

This study is about battery transportation of Vehicle Manufacturer that was found to have inefficient space utilization in the truck container. This problem has negatively affected the profit and opportunity of the company. Therefore, the consideration to apply GRASP is proposed to develop and improve the problem substantially.

In this research, Vehicle Manufacturer focused on its battery export by transporting it with commercial vehicles. As purchase is contracted to only one supplier, it is important to investigate the cost and eliminate the risk. To solve the problem, data were collected by interviewing personnel, observing actual operation, and historical data were analyzed. The result showed that the container truck utilized only 68% of its space. Thus, it impacted in two areas: high number of transportation trips and high spending on transportation cost. The conceptual framework of the research is to find the causes of battery transportation problem as well as implement GRASP methodology to the solution.

GRASP methodology is a heuristics approach of allocating the right space. This methodology is widely applied in vessel container business. It can be useful in related field such as truck container following the research consequence. The objective of this research is to build a significant tool to enhance on space utilization for loading battery.

The result indicates that the proposed solution can be accomplished and solve space utilization. According to this research the company should implement a tower rack to stack batteries on pallets and change the truck size from six wheels to ten wheels. These will provide cost saving, customer satisfaction, and collaboration which raises competitiveness in the industry.