

ABSTRACT

Tanker ship is the main transportation channel for fuel distribution from supply depots to end depots at PT Pertamina UPMS V. Tanker ship distribution problem is included in Vehicle Routing Problem. Fuel distribution problem at PT Pertamina has characteristics of VRP Multiple Depots, Heterogeneous Fleet Vehicles, Multi Products and Compartments, Split Delivery, Multiple Trips and Multiple Time Windows. It must be solved by heuristic approaches, because this problem include in NP-hard problem. One of them is Sequential Insertion. This algorithm is easy to be developed and implemented to solve problems with high complexity. This research objectives solve the tanker ship routing problem to distribute fuels at PT Pertamina, by developing fuels distribution model at PT Pertamina and solving the model by developing sequential insertion algorithm, then that algorithm is applied to the real case. The algorithm results at real case are less number of tanker ships, from five ships to four ships, and shorter completion time than the existing method.

Keywords : *Vehicle Routing Problem, tanker ships, Pertamina, sequential insertion.*