

## ABSTRACT

*Inventory planning is very important for the fulfillment of material in amount and timing based on the utilization of funding sources properly. PT Dirgantara Indonesia is the first industry's aircraft in Southeast Asia. PT Dirgantara Indonesia have to maintain the availability of material's company in order to compete with similar companies. In fact, inventory planning of chemical material in Surface Treatment Department PT DI still causing a mismatch on overstock and outstock. One of main factor is purchasing activities which is not concerned with the availability of chemical material and the pattern of material consumption.*

*It's required to perform classification of material (ABC-Analysis) to ensuring optimum inventory planning, in category A stock plan can be evaluated using the Material Requirement Planning approach with lot sizing techniques: Economic Order Quantity, Lot and Lot for Wagner Within. Built on calculation the third of lot sizing method, the best optimization method is obtained by Wagner Within that combines technical combination with dynamic programming period so that the total cost of its inventory become a minimum ones. Different cases with categories B and C materials, evaluation of policies to be considered using min-max technique. This study aims to analyze the inventory planning method according to the class of materials by developing decision support system of chemical material's inventory planning which have a positive impact on company performance for the future.*

*Implementation of inventory policies resulted in an increase of 35% of the average inventory at this time. In addition, this recommendation policy provides total inventory of cost savings valued at Rp 59,779,283.37 as the total cost of current inventory.*

*Key words: PT Dirgantara Indonesia, Material Requirements Planning, lot sizing, min-max, overstock, outstock and inventory planning*