ABSTRACT

PT. Dirgantara Indonesia is first company and the only one aircraft industrial in Indonesia. One of its business is to have cooperation in producing part components of aircraft A320/A321 with Spirit AeroSystems Europe, which is named Sprit Program. To conduct this components is required cutting tools.

On a previous research is conducted calculations of inventory control of cutting tools which was probabilistic to perform calculations of lot sizing, min-max level, Q method and P method on inventory of cutting tools in PT. Dirgantara Indonesia. But according to current research, it is conducted calculation of inventory control which is deterministic. This is caused by cutting tools have constant demands every year then the needs (usage) is same. So the planning of the inventory policy of cutting tools in this case, it can be said the demands for cutting tools in PT. Dirgantara Indonesia was deterministic.

The problem of cutting tools in PT. DI is overstock on inventory. Then this research will conduct the optimization of inventory control with the joint replenishment methods.

After applying joint replenishment method, that results optimal order quantity as much as 102 pcs for slot short drill diameter 16 and 304 pcs for slot short drill diameter 25. Ordering is conducted 15 days every period so it is obtained cost saving efficiency of both cutting tools by 6.18 %. From the calculation of sensitivity, variable usage (demand) is the most influential variables to changes in the total inventory cost.

Keywords : Inventory, Joint Replenishment, EOQ, ABC Classification