ABSTRACT

PT Dirgantara Indonesia (PT DI) is the first and only aircraft company that operates in Indonesia. One of the department who have a significant role in the company was Machining Department. In the Machining Department used three kinds of standard cutting tool that serves as a tool to support the production process. One of the tools supporting the production process is the cutting tool in the form of equipment supporting the production process in the form of carving cut (cutter). Tools cutter has a utility to do the coarsening process and cutting the aluminum material that will be made Part in aircraft manufacturing. In addition cutter tools are also used to process borring, for example the type of tool cutter center drill is used to make the center hole and do borring.

One of the problem faced by this company is the control of tools cutter supplies in Machining Department. As a supporting component for production, the availability of tools cutter is important, in order for production to run smoothly. The main problem is the absence of an inventory policy regarding tools cutter, whic causes the inventory of multi-item cutter to be unreliable. This research aims to solve this inventory policy problem.

This research is done in three phases, which are classification and actual calculation, determination of inventory policy, and sensitivity calculation. The classification and actual phase aims to determine which tools cutter that will be calculated in this research based on the interests and demand, after that do the actual calculation. The second phase is inventory policy, aims to design an inventory policy that is optimal to be applied in the company based on the minimum total inventory cost criterion.

In this study, the Hadley-Within formula is used on Q Model and P Model. The actual condition of inventory system at PT DI resulted in a total inventory cost of Rp 210.167.921,- for Slot Drill Short and Rp 15.903.906 for Center Drill. While the calculation Q Model Rp 108.920.056,- for Slot Drill Short and Rp 8.205.669,- for Center Drill. Total inventory P model cost of Rp 187.042.681,- for Slot Drill Short and Rp 15.509.412,- for Center Drill. The third phase is sensitivity calculation, aims to find out how big the impact of changes in the variables that affect the total cost of inventory. The variables that affect are demand tools cutter, cutter tools ordering cost, and cost savings tools cutter. Sensitivity analysis performed for the increase and decrease of 5-10%. The selection of the range of 5-10% are chosen randomly and the average of the increases and decreases in the data in 2012.

Keywords: Q Model, P Model, Hadley-Within, Sensitivity Analysis, Inventory