

ABSTRACT

Cutting tools inventory management is essential for manufacturing company, especially for Machining Department PT EFG in supporting the production process to run smoothly. If cutting tools are not available when production is going on, resulting in loss of production. On the other hand, having too many tools in the crib so that cutting tools are not being used and also incurs more monetary investment in tool inventory which is not acceptable either. High inventories of cutting tools that are not followed by a comparable number of tool requests caused overstock conditions at the tool crib. Effective cutting tools inventory management will be able to decrease total inventory cost of tools.

Thus, this study constructs an inventory model which involves cutting tools used in the milling process and included in A items as many as 15 SKU with also involve distribution of lifespan in designing an optimal inventory policies for cutting tools using Tool Procurement Policy algorithm. Application of this policy on inventory systems able to generate a lower total cost inventory with an optimal order quantity and optimal lifespan. With inventory calculation parameter of Tool Procurement Policy algorithm, the total cost of inventory is able to be pressed by 78.22% lower than its current state.

Keywords: Cutting Tools Inventory Management, Tool Procurement Policy algorithm, Lifespan Distribution