ABSTRACT

This research was conducted at PT Pindad (Persero) which is a State-Owned Company (BUMN) that is engaged in the field of defense and state security equipment. As a manufacturing company that manufactures heavy equipment, PT Pindad uses various types of machinery to support its production process. However, the company has not precisely determined the number of parts that must be prepared to replace damaged parts. The object of the machine in this study is a laser cutting CNC machine because based on the results of data collection in the field this machine drains 76.13% of the total cost of purchasing machine parts, there are spare parts that experience stock out and there is a gap between the number of uses and the number of purchases during the 2019 period.

This research was conducted to provide an inventory policy proposal by calculating the expected demand for spare parts based on the failure rate for the coming period using the Poisson Process method. Inventory policy is carried out using the Continuous Review method to minimize the total inventory cost.

The results of the inventory policy proposed in this study can reduce the total cost of inventory by 28.90% or Rp415,003,518.05 from the actual condition.

Keywords: spare part, poisson process, continuous review, failure rate, stockout