ABSTRACT

Purezento is a manufacturing company that produces wooden toys. The growth in demand of Purezento is increasing every year, but in making purchasing or ordering decisions of raw materials is still based on estimates or predictions of the owner. Ordering the raw materials is supposed to be based on economical value, in order to get cost efficiency. Excessive amount of raw materials could lead to accumulation and damage to the wood and increase of inventory cost. Meanwhile, if there is a shortage of raw materials, it could lead to slow down of production and lost sales. These are the background of researcher makes forecasting the use of wood as raw material and the application of Economic Order Quantity (EOQ) method in Purezento Company.

To avoid excessive or shortage in inventories of raw materials, then it is necessary to have a forecasting method and safety stock amount to the procurement of raw materials needs. The best forecasting method for Purezento determined by checking the accuracy of forecasting by using MAD (Mean Absolute Deviation), MSE (Mean Square Error), and MAPE (Mean Absolute Percent Error) with the help of software Minitab 17. In addition, the safety stock is intended to anticipate the increase of demand which resulted in a shortage of supplies. Supposedly with the raw materials inventory policy implemented in the company, the cost of inventory and ordering can be suppressed as small as possible. To minimize these costs, EOQ method can be used as an analytical tool. Type of research used in this research is quantitative descriptive where the method of data collection was obtained from interviews, observation, books, and journals.

Based on the results of data processing in Minitab software, Trend Projection is the best forecasting method for Purezento. Forecast of wood raw material requirements for the company in 2015 with Trend Projection method, is as much as 6971 wooden board. The implementation of EOQ method produce significant differences with company policy, where the total cost of inventories of raw materials have a savings of IDR 6.887.451,73, order frequency is reduced to 2 times a year which resulted in much greater quantity of raw material ordering, where every time the order quantity is 4258 wooden boards, the implementation of safety stock by 44 wooden board, and reorder point of 70 wooden boards that previously did not exist on the company policy. The conclusion is the application of Forecasting and EOQ method can assist company in decision-making of inventories, cost savings, and control of raw materials that can support the production activities.

Keywords : Econoic Order Quantity, Forecast, Inventories, Trend Projection