

ABSTRACT

CV. Trimas Cahaya Chemical is a company engaged in the garment industry that produces unique batik Pekalongan. The company has grown and increased production from time to time. In planning its raw materials, CV. Trimas Cahaya Chemical has difficulty in determining the exact quantity of raw material. Raw materials required are cotton. Difficulty in planning due to the raw material demand from customers is very volatile depending on market trends and fashion role in the fashion industry, so the purpose of this study is to conduct planning and inventory control to determine the size of the lot and the most optimum time of reservation using three techniques lot sizing, the Least Unit Cost, Period Order Quantity, and Wagner Within Algorithm.

Those three choices of lot sizing technique is because it is a technique that may be close to the current stock plan after consideration of the lot sizing techniques other.

The results of the calculation of the total cost of inventory lot sizing three techniques will be compared to get the lot size, and the time of ordering that produces optimal total inventory cost of the minimum.

Based on the results of data processing and analysis, the method chosen to be recommended to the company is the method of Least Unit Cost. The total cost incurred on the condition of existing companies is Rp 1,666,191,702.56, while the total cost of the calculation method of the proposal obtained by using the method of lot sizing Least Unit Cost is Rp 1,170,933,782.56.

Comparisons were obtained from actual inventory planning using the Least Unit Cost is Rp 495,257,920.00 or means companies can minimize the total inventory cost of raw materials 29.72%. Of these savings, companies can allocate resources to meet the needs of companies stored in other sectors, so that the progress of the company itself will be able to be realized.

Keywords: lot sizing, inventory, demand, materials