

ABSTRACT

UD.KS Pro, a manufacturing company, faced significant challenges in managing raw material inventory with a limited manual recording system. The lack of detailed information regarding the need for goods and the availability of goods is the main obstacle to the efficiency of company cost control. To overcome this challenge, this research applies two effective inventory management methods. ABC analysis is used to classify raw material prices based on their contribution value to total inventory. Shows inventory value in Class A (79.64% of total value), even though the number of items is only 20%. Class B has a value of 13.99% with 30% items, while Class C has a value of 6.38% with 50% items. Tighter control of class A materials, which has a significant impact on inventory costs. A multi-item EOQ is used to optimize the number of orders. The EOQ calculation for each type of raw material shows the optimal order quantity that must be placed for each order. For example, the EOQ for Plat is 278 units, and for Plat Astra 1.4, it is 161 units. The implementation results show a significant reduction in total raw material inventory costs from previously IDR 2,224,861,100 to IDR 400,440,627. This reduction shows striking efficiency, with savings of IDR 1,824,420,473, indicating that EOQ is effective in reducing inventory costs. The decline in inventory reached 63% to 86% across various types of goods. The application of these two methods to raw material inventory management has succeeded in increasing operational efficiency and reducing costs significantly. ABC analysis helps identify critical materials. EOQ organizes order quantities optimally to reduce inventory costs.

Keywords: *ABC Analysis, EOQ, Inventory Control, Raw Material.*