

1. INTRODUCTION

Finished goods inventory management is one of the important elements in the world of manufacturing industry. The timely availability of goods can affect the smooth distribution process and the level of customer satisfaction [1]. If the amount of inventory is not managed optimally, two adverse possibilities will arise, namely overstock which causes an increase in storage costs, or stock shortages (stockouts) which can hinder the fulfillment of market demand [2]. Therefore, companies need appropriate and systematic methods in managing inventory to be efficient and effective.

Inventory or inventory is an asset in the form of goods stored by the Company to support the production, distribution and sales processes. Inventory includes raw materials to finished products, and serves an important function in maintaining operational continuity and meeting consumer needs [3]. PT Hesed Indonesia, as one of the manufacturing companies engaged in production, faces challenges in optimizing the management of finished goods inventory. To answer these challenges, the EOQ method can be the right solution. EOQ is an economical ordering quantity calculation method to minimize total inventory costs, including ordering costs and storage costs [4].

As technology develops, the need for a system that can help make decisions quickly and accurately becomes increasingly important. *Decision Support System (DSS)* is a reliable tool in the planning and strategic decision-making process related to inventory. By integrating the EOQ method into SPK, companies can automatically obtain optimal order quantity recommendations, so that inventory management becomes more efficient, operational costs can be reduced, and service to customers increases [5].

The purpose of this research is to develop a decision support system that can calculate the need for the amount and frequency of ordering raw materials using the EOQ and POQ methods, and determine the most optimal method based on minimizing inventory costs [6]. The results of this study are expected to contribute as a basis for consideration for the Company in determining the right policies related to controlling raw material inventory [7].