

ABSTRACT

Policy in managing inventory becomes an important part of a company. PT EFG is a private company engaged in pharmacy industry and food industry. To support production activities, company needs machines to carry out production activities. In order to keep production activities running well, PT EFG always strives to maintain the reliability of these machines. Spare parts are an important component to support these activities. The type and number of spare parts is not only one, but can reach thousands. Therefore, it is necessary to manage a good spare part inventory by the company to ensure the availability of spare parts in warehouse and of course avoid the accumulation of spare parts stock in warehouses that make inventory costs high. This study uses the base-stock policy (S-1, S) method, which is applied to high priority spare parts. Determination of high inventory (HI) category spare parts is obtained based on FRMIC classification (Fuzzy-Rule-based approach Multi-criteria Inventory Classification) which considers several criteria, including: unit price, consumption value, replenishment lead time, critically and commonality. The use of the base-stock policy method has been proven to reduce inventory costs by 24.72% and be able to increase service levels by 10.04%.

Keywords: *Spare part, FRMIC, high inventory, base-stock policy, total inventory cost, service level*