ABSTRACT

The inventory management is one of the most important activities in supply chain these days. It requires a lot of investment for the company, such as storage space and other carrying cost. The inventory can be damaging to the company’s financial health and competitive edge. To get a well-managed inventory is not easy. There are many models for inventory level and cost improvement.

TJ Company is a machine maintenance service center in Thailand that has a high variety of inventory spare parts. With the lack of knowledge of inventory management and communication across functions, TJ Company has been facing the problem of spare parts inventory being overstock and shortage. It causes the company to carry an unnecessary high inventory cost and low level of customer service. This study will help the company determine its optimal level of spare parts inventory by using ABC Analysis and Moving Average demand forecasting.

ABC Analysis is a model that classifies the products into three groups (A, B and C) based on dollar value. It uses the concept of 20% of total product units, of which contributes 80% in dollar value of the total product value. It shows the company which products have high value and thus should be focused on. For this method, TJ Company could give attention to the right items as Class A and B only which 28 items from 91 items. Moving Average Model uses the historical data of demand to average moving to forecast the demand. This model helps determine the maximum inventory level in yearly period for the company. The result, TJ Company could reduce the total inventory cost at least 238,585.30 Baht in the year 2016.

Also, this study will provide the recommendation for improving inventory management and preventing lack of communication across function, such as store area arranging, monitoring and controlling for inventory, and working process arrangement.