ABSTRACT

In manufacturing companies, inventories of raw materials have an important role in supporting the production process. Without inventory, the company will be faced the risk that the companies sometimes can not fulfill the demand in the production floor. At this time inventory of raw materials inside PT. XYZ warehouse have not managed properly, so that the available raw materials is bigger than the total demand each month. In conducting the inventory control of raw materials, PT. XYZ has not been classified the raw materials based on the pattern of consumption and the usage value, and the orders without considering the maximum inventory and remain inventory existing. It led to overstock that impact on increasing the total inventory cost.

Based on the previous explanation, so the raw material classification is done by using the ADI and ABC analysis and the application of probabilistic methods models Continuous Review (s,S) system that can produce inventory that near-optimal with intervals and the number of optimum order for each type of raw material, so can minimize the total cost of inventory.

By using probabilistic model of Continuous Review (s,S) system, it can be concluded that PT. XYZ can know the lot size of inventory, backup safety (safety stock), and the optimal reorder point and minimize the total cost of inventory. Selection of models Continuous Review (s,S) System give a decrease of 42%.

Keyword: Inventory, Overstock, ADI *Analysis,* ABC *Analysis, Hadley-Within, Continuous Review System*