

ABSTRACT

PT. Indonesia Power is one of the company which provide electricity in Indonesia. In providing needed some chemical to change sea water into pure water. The total cost of the actual inventory is still very high because it is not based on exact calculations. So the company wants to meet the chemical inventory without having to spend a very large cost.

Now, something that happens in the company is planning the procurement of chemicals still based on their estimate. Beside that, the company does not have safety stock so that the company could experience shortages feared chemical inventories. Therefore, the purpose of inventory system is expected to reduce the costs incurred for the supply of chemicals.

Planning inventories were performed by using the method of Economic Order Quantity. Based on the results of calculations performed by this method, the total inventory cost the company incurred that is equal to Rp 2,321,718,321, so the companies can save their costs amounting to Rp 703,967,081. Beside that, they also calculate interval of time, reorder point, and safety stock. Safety stock that I get based on service level that produces the smallest cost. Based on the calculation of the cost, service level that chosen for covering safety stock is 90%.

Keywords: *Order Quantity, Safety Stock, Reorder Point.*