

## **ABSTRACT**

*PT . Indocement Tbk Plant 9 is one of the biggest companies of cement manufacturing industry in Indonesia . One of the departments that have an important role in the company is the Production Department . In the production department used 8 different types of key raw material in the manufacture of cement, namely limestone, gypsum, slag, trass, laterite, clay, silica sand, iron sand, and 3 supporting materials that liparite , WWT sludge , and purchase sand.*

*One of the problems being faced by the company is the inventory control of eleven raw material for making cement. The main problem that occurs is the absence of an inventory policy that applies to supplies of raw materials, which makes the condition of inventories of raw materials that are multi-items not properly secured. Therefore, this research intends to solve the problems of the inventory policy .*

*Broadly, this research conducted is divided into three major phases , namely classification and calculation of the total cost of the actual inventory, inventory policies, and calculation efficiency. Stages classification and calculation of the total cost of the actual inventory aims to determine which raw materials which will be calculated in this study based on the demand and the large expenses, which are classified based on the total usage after the biggest money along with the demand of raw materials are acquired four iron sand, trass, slag, and gypsum. After that is done the actual calculation of the total cost of inventory. The second stage is the optimal inventory policies to be implemented in the company based on the criterion of minimum total cost inventory.*

*In this study, use EOQ calculations with Joint Replenishment. The actual condition of the inventory in the PT. Indocement Tbk Plant 9 resulted in a total inventory cost of Rp. 26,790,400,975.00. After calculating with EOQ Joint Replenishment model obtained using the total inventory cost of Rp . 23,480,367,567.00 . which means there is the efficiency of Rp . 3,310,021,746.00.*

*Keywords : EOQ Joint Replenishment, Efficiency, Inventory*