ABSTRACT

Production is a process of combining various inputs in order to create an output. This process uses some logistics that require maintenance in order to remain with the operational plan. At any given time, these logistics, for example machine, may stop or breakdown due to damaged spare parts or maintenance activities. When it happens, the replacement spare parts will be taken out from the warehouse and if they are not available so the production process needs to wait for another supply.

Machine downtime can cause significant losses, therefore spare parts availability is one of the essential points in order to avoid company losses. PT. Kertas Trimitra Mandiri (PT. KTM), a paper manufacturing company, has a storeroom for keeping spare parts supply called the spare parts warehouse. This warehouse is in charge of keeping logistics like spare parts, consumer goods and stationeries. A coordinator is responsible for each logistics procurement and stored it in the warehouse. To make an application for logistics procuremenet, PT. KTM used notes called MPP. Logistics management method used in PT. KTM spare parts warehouse has a high risk, where there are several cases of waiting time due to spare parts unavailability. The longer the downtime of a machine, the greater the losses will faced by the company. Therefore it is necessary to use a control methods to avoid the cases of waiting time.

The methods use to design the warehousing information systems in PT. KTM spare parts warehouse are Economical Order Quantity (EOQ), Reorder Point (ROP) and Age Replacement. EOQ and ROP methods will be used to control the consumer goods' supply based on amount of use. It will result an optimal order quantity and ordering time according to usage data. The Age Replacement method will be used to control the spare parts supply based on duration of use. This method looks for an average deadline of using spare parts under proper conditions, so that when it reaches the deadline it will make a purchase request.

This designs obtain an information system that can accommodate the needs of PT. KTM spare parts warehouse. The information system has 17 databases used for operation and warehousing activities. It consists of 20 display screens with function for warehousing activity that can be accessed by certain access rights. Each registered user will have access based on job position and part of company.

Keywords: Information System, Warehousing, EOQ, ROP, Age Replacement