THE MANAGEMENT INFORMATION SYSTEM OF PT. ANDISA PALA PUTRA'S MATERIAL WAREHOUSE

Zaki Ichbar Sudarsyah[1], Riani Lubis, ST, MT[2]
[1.2]Informatics Engineering Program
Faculty of Engineering and Computer Science Indonesia Computer University
Jl. Dipatiukur No. 112-114 Bandung
E-mail: zaki_ichbar@yahoo.com[1], riani_lubis@email.unikom.ac.id[2]

ABSTRACT

The construction company, PT. Andisa Pala Putra, is a company which engaged in building construction, interior and renovation. As an interior contractor, the work of PT. Andisa Pala Putra, focused on the interior of company building. The company has a material warehouse as a place to produce building interior which is very important in production activities but the problem now is big load of material is needed at the same time.
Based on this problem, PT. Andisa Pala Putra needs a management information system of raw material warehouse. The goal is to facilitate the office position in determining the number of materials that purchased at each procurement activities, so the expected number of materials inventory to be not too excessive. The method used to determine the number of raw materials is economic order quantity.
The conclusion based on research result is the system successfully helping the office postition in deciding the number of material needed for each production activity.

Keywords: Management Information Systems, Economic Order Quantity, PDCA, Reorder Point

1. INTRODUCTION

PT. Andisa Pala Putra is a company engaged in the field of construction services, which includes services building construction, interior and renovation. PT. Andisa Pala Putra have specificity or specialization of work is as an interior contractor that focuses on the office postion buildings. PT. Andisa Pala Putra are known have a workshop building that used to produce furniture and interior room. In the manufacture of these products, supply of raw materials warehouse has a very important role in the smooth process of the activity. The office postion is the person responsible for overseeing all operations at the warehouse of raw materials starting from raw material procurement activities, storage of raw materials, packing materials, to the raw material expenditure. Besides the office postion is also responsible for planning activities that where the raw material procurement, the office postion is required to determine the amount of raw materials that must be purchased for each procurement to be conducted. The term of the office postion of PT. Andisa Pala Putra is the same level as the warehouse manager.

Raw material warehouse at PT. Andisa Pala Putra used to store three kinds of raw materials such as a raw material for furniture, interior space, and raw materials for building materials which are not bulk. According to the office postion or warehouse manager at PT. Andisa Pala Putra, recently shed often can not store all raw materials that have been held for production purposes in a work period. This happens because the procurement of raw materials is done once at the beginning of the work period (usually 1 to 2 weeks after the work activities), causing the amount of raw material inventory in warehouse becomes very high.

Based on data from the raw material inventory in the period ranging from August 2016 to the month of February 2017, the average supply of all kinds of raw materials in the warehouse reached 742 units per week. Based on the use of all raw materials during the period, the raw material most widely used type of cement dm-939 is as many as 455 sacks (see Annex A table A.5). In that period, there were 19 times the demand for cement conducted by the site manager to logistics. Based on these records, it is known that the cement out of the barn has a number average of 23 sacks per request. While the average inventory in the warehouse carrying cement amounted to a total of 47 sacks per week. Total inventories is considered too large by the office postion and felt no need for the average amount of each request just as much as 23 sacks of cement, and the rest is just regarded as one of the factors that led to the warehouse to be full. So with such problems, we need a method that can memanaj raw material inventory in the warehouse, so that the amount of raw material inventory becomes redundant. One method that can be used is PDCA.

PDCA is an acronym of the Plan, Do, Check, Act, which is a four-step problem-solving process is iterative, which is commonly used in quality control. But in this study will be used as a step PDCA or

reference in memanaj and control the supply of raw materials warehouse.

Based on the description of the issues contained in the PT. Andisa Pala Putra then needed a warehouse management information system construction raw materials in PT. Andisa Pala Putra.

2. CONTENTS RESEARCH CONTEN

2.1 Base Theory

2.1.1 Information Systems

The system is an arrangement (alignment), which consists of a number of functional components (with units of function / special assignments) that are interconnected and together aim to satisfy a process / specific job.

In general, information is data that has been processed into a form that is more meaningful and useful for the recipient that will be used to decide the present and the future. The function of the information is to reduce uncertainty in the decision making process about a situation

So the notion of an information system is a set of components that are interconnected and work together to collect, process, store and distribute relevant information to support the decision-making process, coordination and control contained.

There are various definitions of information systems, as listed in Table 2.1. based on various definitions, we can conclude that the information system includes a number of components (human, computer, information technology, and procedures), there is something that is processed (data to information), and is intended to achieve a goal or purpose. [1]

2.1.2 Management Information System

The management information system is an information system that is used to present information that is used to support the operation, management, and decision making in an organization. Usually the management information system produces information to monitor performance, maintain coordination, and provide information for the organization's operations. Generally, management information system to retrieve data from transaction processing systems.

Management Information System is often referred to as a warning system management (management alerting system) because the system provides a warning to the user (general management) to the problems and opportunities (Haag, 2000), a term other than a driver's license is a system of management reporting or management reporting system (Zwass, 1998). [2]

The management information system is an information system that in addition to doing all the processing of transactions necessary for an organization also provided support for the processing of information and management functions and decision-making.

Management information system is described as a pyramid in which a layer consisting essentially of information for processing the transaction. [3]



Picture 1 Information Systems Pyramid

Plot: information data base -> management information system -> information for the user

2.1.2.1 Management Information Systems Characteristics

1. Operation in tasks that are structured, namely on the environment that has defined the following terms expressly and clear: operating procedures, rules of decision-making, and information flow
2. Improve efficiency by reducing costs
3. Provide reports and ease of access that is useful for decision-making but walkin directly (managers use reports and information and make conclusions of its own to make decisions) [3]

2.1.2.2 Various reports generated by the management Information System

1. Periodic reports are reports generated at intervals such as daily, weekly, monthly, quarterly, and so on.
2. Overview report is a report that provides a summary of the number of data / information.
3. Exception report is a report which only appears if there is not normally present. For example, the purchasing manager may require the delivery of goods from suppliers report that has been delayed one week. This report only appears if the requested state is fulfilled.
4. A comparison report is a report that shows two or more sets of similar information for the purpose of comparison.

In addition, sometimes the SIM also provides a report that was classified as demand (Ad Hoc) report, the types of reports that can be requested at any time and users can customize the layout of the required information. [3]

The definition of information systems

1. Alter (1992) information system is a combination of work procedures, information,

people, and information technology organized to achieve the objectives dalah an organization.

2. Bodnar and Hopwood (1993) The information system is a collection of hardware and software designed to transform data into useful information form.

3. Gelinas, Oram, and Wiggins (1990) information system is a man-made system which generally consists of a set of computer-based components and manuals are made to collect, store, and manage data and provide output information to the user.

4. Hall (2001) inforasi system is a series of formal procedures by which data grouped, processed into information and distributed to users

5. Turban, McLean, and Wetherbe (1999) an information system to collect, process, store, analyze and disseminate information for specific purposes.

6. Wilkinson (1992) The information system is a framework that coordinates the resources (human, computer) to change the input (input) into kelaran (information), in order to achieve company goals. [3]

2.1.3 Stock

Inventory is one of the most active element in the company's operations are continuously acquired, converted and then resold.

In dasanya inventory will facilitate the smooth running of the company's operations or the plant should be done consecutively for meproduksi goods, then deliver to customer or consumer.

Inventories held from raw materials to finished goods, among other things useful for: [4]

1. Eliminate the risk of delays in the arrival of goods

2. Eliminates the risk of damaged goods

3. Maintaining the stability of the company

4. Achieving an optimal use of the machine

5. Providing services for consumers as well-bainya

2.2 Analysis Problem

Analysis of the problem is a description of the problems derived from the current system. At present, the procurement of raw materials is done on a large scale at the beginning of the work activity is generally one to two weeks after starting work activities. The office postion planned procurement of raw materials based on the list of needs provided by the site manager. all raw materials in the list of needs should be held simultaneously with the aim to minimize the cost of ordering and delivery. However, the procurement of raw materials in a way that causes the raw material warehouse becomes unable to store all raw materials purchased because it causes the supply of raw materials warehouse to be excessive or tend to be very high. The direct impact caused that any raw material that is not stored in warehouse to be stored outside the warehouse or stored improperly diruangan so can result in a risk of damage and loss of goods to be very high. So therefore, in order to avoid problems Accordingly needed a solution how to determine the amount of raw materials that must be purchased to the supplier for each procurement so that the amount of the raw material inventory becomes redundant.

2.3 Analysis of Business Rules To Be Built

Analysis of the system to be built is a description of the rules that will be applied to the system to be built at PT. Andisa Pala Putra. The business rules that are still running are still being used, but there are some business rules proposed in the system is as follows:

1.Procurement of Raw Materials

a.Procurement of raw materials should be carried out gradually with the amount of raw materials has been calculated by the system for each stage of the procurement will be done.

b.Each procurement activities to be carried out must go through an approval process director. The approval process can be done in a system built.

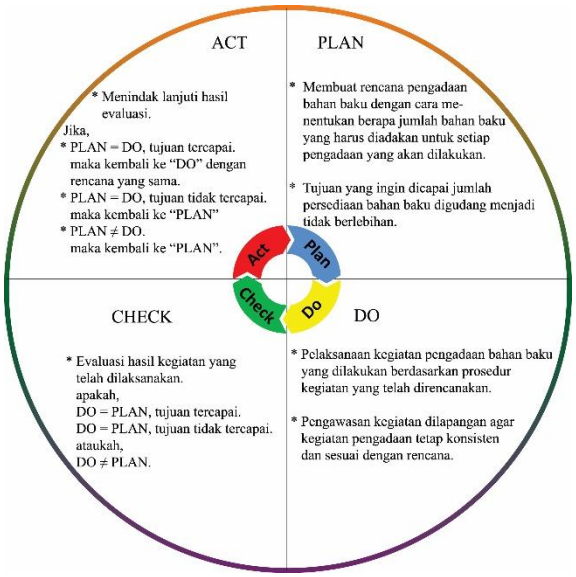
2. Use of Raw Materials

The use of raw materials can reduce the amount of raw material inventory in the warehouse, so therefore the system is built makes a feature of monitoring the amount of raw material inventory in warehouse so that the amount of inventory remains unchecked.

2.4 Raw Material Warehouse Management

a. Raw Material Procurement Process

Raw material procurement process is a sequence of activities in the procurement of raw materials starting from procurement planning, purchasing raw materials, up to acceptable raw materials in the company. Here is a picture of PDCA stages of the procurement process of raw materials:



Picture 2 Implementation PDCA On Raw Material Procurement Process

Figure 2 is a form of implementation of PDCA to research cases that occur, on raw material procurement process in PT. Andisa Pala Putra. The explanation of the stages are as follows:

1. Plan, this stage is the stage of the plan conducted by the office postion. At this stage the office postion conducted a series of activities related to the manufacture of raw material procurement plan. The problem faced is the procurement of raw materials for the production needs a period of labor activity should be done all at once at the beginning of the work activity or a maximum of two weeks after beginning work activities. This causes the amount of raw material inventory in warehouse becomes extremely high even tend to be exaggerated . So therefore, needed a plan to resolve the issue. As for the plans to be made is to determine the amount of raw materials that must be purchased to the supplier, for each procurement activity that must be done.
2. Do, this stage is raw material procurement activities, this activity is a form of realization of the plans that have been made in the previous stage. In this phase the section the office postion oversees the activities of procurement of raw materials that occur in the field and compare it with the plan that was created earlier. Supervision is done so that activities on the ground still in accordance with the plans that have been made.
3. Check, this stage is the stage where the office postion to evaluate the results of the activities that occur in the field.
4. Act, this stage is the stage of assessment by the director to follow up the results of the evaluation. Director must make decisions related to the procurement activity to do next.

2.4.1 PLAN

This stage is the stage of planning is part of the raw material procurement process conducted by the office postion. The core of the activities carried out in this project is how the office postion to plan procurement of raw materials. Planning question is how the office postion determines the amount of raw materials that must be purchased to suppliers for each raw material procurement to be conducted. Determination of the amount of raw material is done so that the amount of raw materials that are held not excessive (not too much and not too little). The determination of the amount of raw materials is determined by the method of calculation of EOQ (economic order quantity). Here is a case study that occurred at PT. Pala Andisa Putra in raw material procurement process:

PT. Andisa Pala Putra have work schedules starting on August 21, 2016 until the date of February 25, 2017 (188 working days). In the time period required the office postion mengadaan suitable raw material feedstock requirements list that has been provided by the site manager. Here is a list of the raw materials need to be purchased to the supplier during the period of 188 working days are:

Table 1 List of Raw Material Supplies

No.	Name of goods	Item Description	Unit	The amount of goods
1	Cement	dm - 939	Sact	455
2	ceramics	30x30 cm Ex. Roman Rock Dark Gray	box	350
3	ceramics	25x45 cm Ex. Platinum White	box	275
4	blockboard	15 mm x 120 cm x 240 cm	Pcs	250
5	Granite	50 cm x 50 cm	box	250
6	Melaminto		Pcs	220
7	blockboard	12 mm x 120 cm x 240 cm	Pcs	205
8	Gypsum	12mm x 140cm x 240 cm	Pcs	190
9	Plywood / Multiplex	9 mm x 120 cm x 240 cm	Pcs	165
10	Accessories (hinges, handles, drawer rails)		Set	150
11	Accessories (hinges, lockcase, handle)		Set	130
12	Plywood / Multiplex	6 mm x 120 cm x 240 cm	Pcs	115
13	The wooden door hinge	SEL 0007 US32D	Set	101

14	Laminate (HPL)	Type PY - 502 Pearl White color	Pcs	95
15	yellow glue	650 gr Ex. Fox	Can	86
16	Block board	18 mm x 120 cm x 240 cm	Pcs	80
17	central locking		pcs	80
18	Laminate (HPL)	PJ 505 light gray	Pcs	77
19	Laminate (HPL)	ACASIA walnut TYPE PT - 712 shade	Pcs	75
20	Laminate (HPL)	Fine Bright ex arborite Type A 8361 M	Pcs	70
21	duco	White	kg	65
22	Laminate (HPL)	Acacia Walnut PY-712	Pcs	60
23	grommet		pcs	50
24	Laminate (HPL)	PY-506 Ghotic	Pcs	50
25	Gypsum	wet area of 12mm x 140cm x 240cm	Pcs	40
26	Cylinder Double wooden doors	08610-07 US14	Set	33
27	Wood door handles	HRE 75.01 / 02:05 US32D	Set	33
28	Wooden doors Lockcase	87735-40 / 60	Set	33
29	Laminate (HPL)	ex arborite type Snow Ice # A 4511 TA	Pcs	30
30	Couplers	1 cm	box	28
31	Couplers	2 cm	box	27
32	Couplers	2.5 cm	box	24
33	Dynabolt	hex bolt	pcs	20
34	Wood	Camphor, 50 mm x 100 mm x 3m	Pcs	20
35	duco	Blue	kg	10
36	Door Closer door	TS 73 V	pcs	10
37	Couplers	5 cm	box	8
38	Double Cylinder	KE 610 + ESCUSTCHEON E.73.05	Set	5
39	pull Plate	TL PP.73.06FB US32D	pcs	5
40	push plate	stainless steel 200 x 300 x 1.2 mm	pcs	5
41	Catch Rooler	RC 75-002 US32D	pcs	5
42	Acrylic	Transparent	Pcs	4

List needs raw materials shown in Table 3.2 is the total raw material requirements needed during the period from the date of August 21, 2016 until the date of February 25, 2017 (188 working days).

Based on data from these needs, the office postion must procure raw materials in accordance with the raw materials required in the list of needs. In order for the procurement of raw materials can be done gradually, the office postion needs to determine the optimal amount of raw materials or raw materials is not exceeded at any procurement activity undertaken.

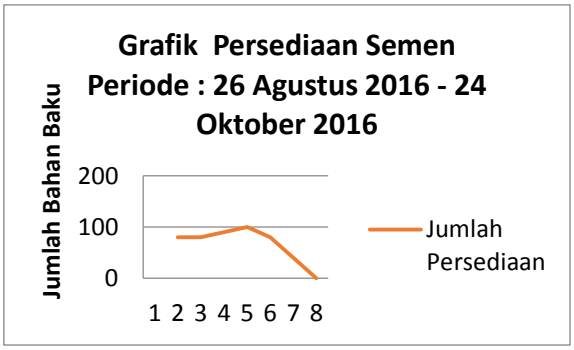
In order to determine the optimal amount of raw materials needed an EOQ calculation method. There are 7 EOQ calculation models that can be used are as follows:

1. EOQ models with their needs remain
2. EOQ models with the Stock Out
3. EOQ models with more capacity.
4. EOQ model with a grace period.
5. EOQ models with the need not remain
6. EOQ models with their rebates
7. EOQ model with the assumption of a continuous product flow.

Based on the models of the EOQ calculation, obtained the most suitable model used is EOQ models with the need remains. The model was chosen because it has fulfilled the following criteria:

1. Demand or basic needs for the time period known constant or relative has a very small fluctuation change.
2. The grace period or lead time for each raw material are known constant for 3 days.
3. Not happening stock out.
4. There is no discount when purchasing with a certain quantity.

Graph raw material inventory in PT. Andisa Pala Putra showed a similar pattern to the pattern of inventory that characterize the EOQ model. Here is a pattern of cement raw material inventory in PT. Andisa Pala Putra:



Picture 3Graph cement supplies in PT. Andisa Pala Putra

Figure 3 shows the pattern of cement raw material inventory in PT. Andisa Pala Putra starting

on August 26, 2016 up to October 24, 2016. The graph shows a similar pattern to the EOQ model with the need remains that where inventories of raw materials will be discharged along with the completion of the period of work activity, so therefore, the EOQ model is assessed suitable for use on a case in PT. Andisa Pala Putra.

With the EOQ model, followed by determining the optimal amount of raw material through a series of calculations EOQ. Sample of raw materials to be used in the analysis is the calculation of dm-939 cement types. The following is a table of cost and demand for cement in the period:

Table 2 Table costs and the need for cement types dm-939

Name of goods	Cement
Needs / Period	455
Booking fee / Order	Rp 50.000.00-
Unit price	Rp 81.000,00-
Storage Cost / Unit (20% x Price of Units)	Rp 16.200,00-

Here is the EOQ calculation process in determining the optimal amount of cement reservations:

EOQ calculation formula remains the model with their needs are:

$$Q = \sqrt{((2 \times D \times Cs) / Cc)}$$

And the total cost of inventory formula is:

$$TC = Q / 2\ Cc + D / Q\ Cs$$

Wich one,
Q is the optimal amount of cement reservations.
Cs is the cement booking fee per order.
Cc is the cost of cement per unit of storage. and
D is the number of request or demand for cement in the first period.

EOQ calculation results using these formulas are as follows:

$Q = \sqrt{((2 \times 455 \times 50000) / (16200))} = 52.9 \approx 53$ Sact ..

From these calculations, it has acquired Q or the optimal amount that is equal to 53 sacks of cement.

After the Q obtained is then followed by calculating its total cost, total cost is calculated using the value of Q has been obtained at 53, the calculation process is as follows:

TC (Q = 53) = 53/2 (16,200) + 455/53 (50,000)
= 429 300 + 429 300
= USD 858 600, -

Based on these calculations, the total cost of inventory acquired by the number of procurement by 53 sacks of cement is USD 858 600, -

After getting the Q value or the optimal amount of cement raw materials, then the calculation is continued to determine how many times the procurement should be done if the amount of cement for every procurement is a total of 53 sacks. Here is the calculation:

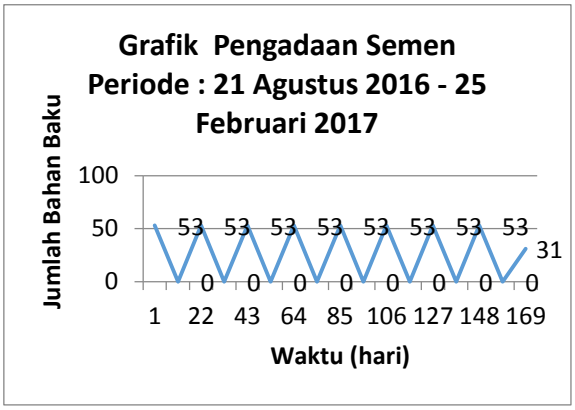
Total procurement = (455 Sact) / (53 Sact) = $8.58 \approx 9$

Then the number of procurement of cement to be done is as much as 9 times or 9 times procurement. And to know the procurement cycle for each of the stages are as follows:

Procurement cycle = (188 Days) / (9 Procurement) = $20.88 \approx 21$

Then supplying cement to be done is for 21 days.

Based on these results, the production of cement which was originally performed at the same time, it will be done gradually transformed into will do as much as 9 times the time period for 21 days and the amount of cement as much as 53 sacks for each stage of the procurement conducted. Here is a chart estimates the amount of raw material inventory in warehouse after a change in procurement pattern:



Picture 4 Cement Inventories graph

Figure 4 shows the approximate graph cement warehouse inventory after it determines the amount of cement that must be purchased for each purchase. Total inventories of cement becomes excessive, and the highest point of a cement warehouse inventory number only reached the number of 53 sacks.

2.4.2 DO

This stage is the stage of execution of the plans that have been made. This stage shows the raw material procurement activities that actually occurred in the field.

Here are the recaps cement procurement data obtained from raw material procurement activities undertaken during the period from the date of August 26, 2016 until October 24, 2016:

Table 3 Procurement History of Cement

No.	Date of entry	Name of goods	Item Description	Unit	amount	Purchase price
1	22-Aug-16	Cement	Dm - 939	Sact	80	81,000.00
2	5-Sep-16	Cement	Dm - 939	Sact	50	81,000.00
3	12-Sep-16	Cement	Dm - 939	Sact	50	81,000.00
4	15-Nov-16	Cement	Dm - 939	Sact	150	81,000.00
5	9-Jan-17	Cement	Dm - 939	Sact	130	81,000.00
The average amount of procurement of cement = 92 Sact.						

Based on historical data recap procurement of cement is known that the procurement of cement performed 5 times. the average procurement conducted cement amounted to 92 sacks. When compared to what has been planned increase in the amount of cement than the optimum amount is 92.4% of which was originally only for 53 Sact.

With the increase in the number, it can be concluded that the amount is not in accordance with what has been planned. So to determine the total cost of inventory change should be calculated by the following equation:

$$TC = Q / 2\ Cc + D / Q\ Cs$$

The following is the calculation process:

$$TC\ (Q = 92) = 92/2\ (16{,}200) + 455/92\ (50{,}000)$$
$$= 745\ 200 + 247\ 300$$
$$= \text{USD } 992\ 500, -$$

From the results of these calculations is known that the total cost of inventory produced changes in the amount of USD 992 500, -. The value was experiencing cost increases of 15.6% of the total costs originally planned in the amount of USD 858 600, -.

2.4.3 CHECK

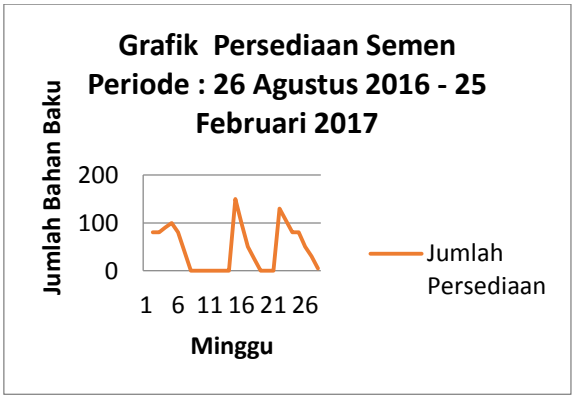
This stage is the stage of evaluation, in which the office postion will do a comparison of the raw material procurement activities that occur in the field with the original plan has been set.

This phase is done by comparing the raw material procurement activities that have been carried out, with a predetermined plan at the planning stage. Comparisons were made by analyzing stock charts cement on an actual incident with cement stock chart estimates made at the planning stage.

Raw material procurement planning activities have a purpose, namely to optimize raw material inventory in warehouse so that inventories are not too much and not too little. Here are the results obtained from the evaluation of the comparison between the phases do and plan:

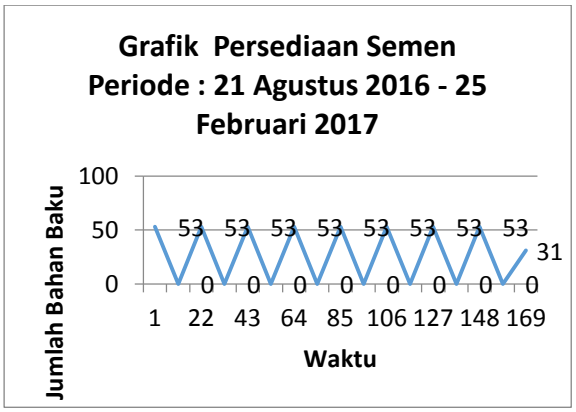
1. Based on the report of procurement activities that have been done in the period of time starting from August 26, 2016 until the date of October 24, 2016, it is known that the average procurement conducted cement is 60 sacks, the value is 87.5% greater than the planning. From the calculation, it is known that the average number of such procurement cause an increase in the total cost of inventory in the amount of 15.6% which was originally only Rp Rp 858 600, - to Rp 992 500, - The increase was caused by the amount of cement that held not in accordance with the plan , it is therefore an increase in the total cost of inventory that is not cool.

2. Based on the reports of cement raw material procurement activities that have been done in the period of time starting from August 21, 2016 until February 25, 2017, the average number of procurement of cement known to turn out to be as much as 92 sacks per each procurement. Changes or discrepancies are known to cause changes also to the amount of cement supplies warehouse. Total inventories of cement warehouse to be very high, carrying supplies of cement reached its highest point of 150 sacks. Here is a graph of cement supplies from history that occurred in the field of procurement.



Picture 5 Cement Inventories graph

From the graph it can be seen that the supply of non-compliance with the plan of activities on the ground can cause a number of cement warehouse inventories increased significantly to reach the highest number of 150 sacks. When compared with the forecast graph cement supplies that have been planned, that number has increased very much. Here is a graph of cement supplies are estimated in the planning stage:



Picture 6 Cement graphic Inventories

From Figure 6 graph cement supplies are estimated in the planning stages, it can be seen that the amount of inventory in warehouse cement only reach the highest point is equal to 53 sacks.

The conclusion that can be drawn from the results of procurement activities that have been implemented is the provision made in the field was not in accordance with the operational procedures that have been planned, causing the total cost of inventory and the amount of cement warehouse inventories shot up very high.

As a precaution once the corrective actions proposed to the director. Necessary efforts better supervision so as to prevent the occurrence of a mismatch between planned activities and events that occur in the field.

2.4.4 ACT

This stage is the stage to follow up the results of the evaluation, which is where the director should make decisions on the results that have been obtained. The results include:

Field procurement activities incompatible with raw material procurement plans that have been made previously. The mismatches negative impact on the total cost of inventory, and the amount of raw material inventory in warehouse. With these results it gets to be emphasized to the office postion in order to get back to supervise the process of "DO" in order to remain consistent and in accordance with the operational procedures at the stage of procurement of raw materials "PLAN".

2.5 Spending Process Raw Materials

Raw material procurement process is a sequence of events in spending starting from the raw material does demand for raw materials to the office postion, then packing the raw material, to the raw materials delivered. Here is a picture of PDCA stages in processing raw materials:

2.5.1 PLAN

This stage is the stage of raw material demand planning carried out by the site manager to the office postion. The core of this activity is to request the expenditure of raw materials to the office postion according to production requirements that have been established on a weekday. Here is a recap of the data demand of raw materials for cement types dm-939 in the period from the date of work activities August 26, 2016 until October 24, 2016:

Table 4 Cement Demand Data DM-939

date	name of goods	description of goods	unit	amount
5-Sep-16	cement	dm - 939	Sact	20
8-Sep-16	cement	dm - 939	Sact	20
12-Sep-16	cement	dm - 939	Sact	10
15-Sep-16	cement	dm - 939	Sact	10
17-Sep-16	cement	dm - 939	Sact	20
19-Sep-16	cement	dm - 939	sact	20
26-Sep-16	cement	dm - 939	Sact	20
1-Oct-16	cement	dm - 939	Sact	20
3-Oct-16	cement	dm - 939	Sact	20
4-Oct-16	cement	dm - 939	Sact	20

Table 4 shows the history of demand for raw materials of cement types dm-939 done by the site manager to the office postion.

2.5.2 DO

This stage is the stage of execution of the request made by the site manager at the previous stages, where the office postion has received a request from a site manager expenditures and then instructed logistic the office postion to do the packing of goods in accordance with the number of requests a site manager.

Table 5 Cement spending data history dm-939

DATE	NAME OF GOODS	DESCRIPTION OF GOODS	AIM	UNIT	AMOUNT
5-Sep-16	Cement	dm - 939	Civil	Sact	20
8-Sep-16	Cement	dm - 939	Civil	Sact	20
12-Sep-16	Cement	dm - 939	Civil	Sact	10
15-Sep-16	Cement	dm - 939	Civil	Sact	10
17-Sep-16	Cement	dm - 939	Civil	Sact	20
19-Sep-16	Cement	dm - 939	Civil	sact	20
26-Sep-	Ceme	dm - 939	Civi	Sact	20

16	nt		l		
1-Oct-16	Cement	dm - 939	Civil	Sact	20
3-Oct-16	Cement	dm - 939	Civil	Sact	20
4-Oct-16	Cement	dm - 939	Civil	Sact	20

Table 5 shows the history of the type of cement raw material expenditure dm-939 in the same period of work activity that is starting on August 26, 2016 until October 24, 2016.

2.5.3 CHECK

This stage is the stage of checking, where before the goods are shipped to the production, the office postion to check first on the amount of goods that have been prepared by the logistics. If the quantity of goods in accordance with the number of requests, the goods are ready for delivery. But if the amount of goods not in accordance with the request, the logistics must perform additional quantity of goods as it should be.

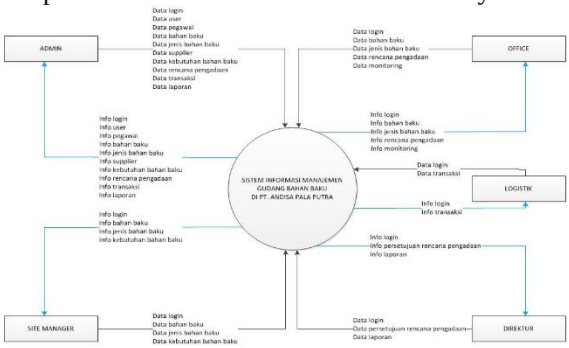
Based on the reports received, the amount of cement raw materials required and the amount of raw materials of cement out of the warehouse have matched based on the amount. So therefore it can be concluded that the stages do have in accordance with the existing plan at this stage of plan so that it can be interpreted that the raw materials warehouse able to meet any demand for expenditures made by the site manager.

2.5.4 *ACT*

This stage is the stage to follow
up the results of the evaluation, which is where the director should make decisions based on the results obtained. In a report on expenditures, the number of requests for production expenditures are always met. So with these results the director shall provide further guidance on the procedures expenditures that may have to do next.

2.6 Context Diagram

Diagram context is a global model to explain how the data are used and transformed to describe the process or data flow into and out of the system.



Picture 7 Context diagram

2.7 Testing process

The test system is an important thing that must be done after construction of the completed system. test aims to find errors or deficiencies in the information system is built. The test intends to determine whether the information system has been built to meet the performance objectives in accordance with its design.

The test system is done with black box testing methods. Black box testing is a test that focuses on testing the functional requirements of the system built.

Warehouse management information system testing raw materials in PT. Andisa Pala Putra will be performed using test data based on the data that has been given.

a. Conclusion Alpha Testing

Based on the test results of each process contained in a system built with a test sample that has been done. The conclusion is that any process on the system has been built completely in accordance with the functionality, the filtering error for the provision of an error message to every process that occurs is quite good, and the output (output) generated from the system has been as expected.

b. Beta testing

Beta test is a test that is directly or tests performed in the actual environment. Researchers conducted an assessment of the systems built using interviews. From the results of these interviews it can be concluded whether the software has been built in accordance with the purpose or not.

The interview was conducted on all employees involved actual or prospective user. The manual consists of admin, the office postion, site manager, logistics, and director. Beta testing is done by direct testing in the study, namely PT. Andisa Pala Putra. Tests carried out in order to determine the extent to which the system is built to be a solution or resolution of problems of the problems that have been described previously.

c. Conclusion Beta Testing

Based on previously conducted beta testing, the authors conclude that:

1. The management information system built raw material warehouse is now able to facilitate the office postion in determining the amount of raw materials to be purchased in any process of procurement of raw materials. The shortage obtained in the system is not something fatal and can hinder the work of the office postion.

2. The management information system built raw material warehouse was able to facilitate the performance of every employee in all activities in the warehouse of raw materials. The shortage obtained become good feedback for the writer as suggestions for improvement.

3. CLOSING

Based on the results of the implementation and testing that has been done in penulisaan this thesis, it can be concluded as follows:

1. Information management system built raw material warehouse is now able to facilitate the office postion in determining the amount of raw materials to be purchased in the procurement process. The shortage obtained in the system is not something fatal and can menghampat the office postion work.
2. Information management system built raw material warehouse was able to facilitate the performance of every employee in all activities in the warehouse of raw materials.

The suggestions for the development of management information systems in the raw material warehouse PT. Andisa Pala Putra is the information system needs to be developed further in terms of appearance to make it more interesting, the use of language that can be more easily understood, and also the functions of the system could be simplified further.

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