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Evaluation of Material Handling Methods of Lubricant Products in PT Warso Dharma Utama Warehouse

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Abstract. This study aims to evaluate the warehousing system that has been owned by PT. Warso Dharma Utama. PT. Warso Dharma Utama is an official lubricants distributor of Pertamina based in Rawasari, East Jakarta. The research method used is a qualitative descriptive method. The result shows that internal control over warehousing was not effective, where there was a lack of workers who had experience in the functions related to the receipt, expenditure and delivery of goods so that it was sometimes difficult to implement FIFO in every warehouse activity. Monitoring of merchandise inventory has been done regularly every month by the warehouse through stock opname activities.

Keywords: evaluation, warehouse, material handling methods

INTRODUCTION

Inventory is company's current assets whose circulation must be managed properly. In the absence of inventory the company will face the risk of being unable to fulfill the demand of its customers. Storage of inventory in warehouses also requires SOP (Standard Operation Procedure) that have been tested and verified so that warehousing management can run effectively and efficiently. Warehouse is something that cannot be separated from the world of goods trading business, especially in industrial goods. A good warehouse management system is often missed the attention of business people. Warehouse management is very important for business continuity, because warehouse is directly related to sales. A good warehousing system determines the final value that will be received by the consumer because the warehouse is where the goods they receive came from. Therefore, checking the quality and checking the accuracy of the goods when the goods arrive or the goods will be sent are very important.

In business activities, we will often hear the term of warehouse. Warehousing is something that cannot be separated from the world of goods trading, especially in industrial goods and in the production section. Warehousing is not just an activity of entering goods in a storage room, it is also important that warehousing activities planning, organizing, and controlling logistics both technically and administratively so that these activities can guarantee and maintain the continuity and the continuity of each activity in each work unit within a organization. According to the Warehousing Management Institute (2008), warehouses or warehousing is a storage place that serves to store inventory before further processing. Warehouse procurement in a company indicates that the production of the company is large enough so that outflows and stock of goods must be controlled. Similar with a distributor warehouse that stores finished goods or goods that can be sold directly to end users. Therefore, warehouse is a solution in handling effectively and efficiently in sending value to the final customer.

1. Problem Limitations

This journal would discuss the procedure of warehousing activities in the warehouse of PT. WARSO DHARMA UTAMA, there are many problems found in warehousing such as this which cause the activities in warehousing to be hampered so that they do not run effectively and efficiently. Therefore, organized warehousing procedure activities are needed to run smoothly.

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2. Literature Reiew

According to KBBI, evaluation is a process to find the value of information services or products according to the needs of consumers or users. ("KBBI Evaluasi," n.d.). Whereas according to, Worthen and Sanders (1979: 1), evaluation is looking for something valuable (worth). Something valuable can be in the form of information about a program, production and certain alternative procedures. Therefore evaluation is not a new thing in human life because it always accompanies someone's life. Then according to Curtis, Dan B; Floyd, James J .; Winsor, Jerryl L, Evaluation is an assessment process. This assessment can be neutral, positive or negative or a combination of both. When something is evaluated, usually the person evaluating makes a decision about the value or benefits. There is also according to Arikunto (2003), evaluation is a series of activities aimed at measuring the success of educational programs. According to the writer, evaluation is an activity aimed at measuring an activity to improve things that need improvement and optimize the performance of an activity.

Advantages	Methods of achieving greater efficiency
• **Savings in storage and operating space** • **Better stock control** • **Improved working conditions** • **Improved product quality Lower risk of accidents** • **Reduced processing time Lower production costs** • **Less wastage of materials and operator time**	• Only move materials when necessary and minimise all movements by placing related activities close together • Handle materials in bulk Package or group materials for easier handling • Use continuous handling techniques and minimise manual handling • Automate where possible • Combine operations to eliminate handling between them • Use a systems approach to optimise material flows and make paths as direct as possible Use all layers of a building's height • Use handling equipment that can be adapted to different applications • Use gravity wherever possible

Efficient materials handling is the organised movement of materials in the correct quantities, to or from the correct place, accomplished with a minimum of time, labour, wastage and expenditure, and with maximum safety. Some advantages of correct materials handling are summarised in Table 1. (Fellows, 2017).

Table 1 Advantages of correct materials handling techniques and methods of achieving greater efficiency in materials handling.

- The space, facilities and layout of equipment in a factory enable efficient handling and movement of materials without a risk of cross-contamination (see Fig. 1.30).
- Storage facilities are sufficient for stocks of materials and can maintain the quality of materials for the required time.
- Handling equipment and staff levels are sufficient to move materials in the required amounts and in the time available
- Distribution vehicles are sufficient in number and capacity, and journeys are scheduled to optimise fuel consumption and drivers' time, particularly minimising journeys with empty vehicles. Kill (2013) describes in detail movement of materials.

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According to the researcher Material Handling is a process that includes the basic operation of materials and products throughout manufacturing (manufacturing), warehousing, distribution, consumption and disposal (disposal) from a location to a particular location.

According to Gwynne Richards (2011: 07) Warehouse is: Special facilities that are fixed, which are designed to reach the target level of service with the lowest total cost. The definition of warehouse according to Iwan Nova (2012: 10) is: It is part of a logistics company that stores products (raw materials, intermediate goods, finished goods and spare parts) and between the place of origin and use, and provides information about the status, conditions and usage stored items. The definition of warehouse according to John Warman (2004) is a building that is used to store merchandise. Warehousing (verb) is the activity of storing goods in a warehouse. Whereas according to KBBI the warehouse is a house or ward for storing goods. Thus the researcher can conclude that the warehouse is a temporary space to store trade products efficiently with the use of optimal layout. According to the researcher: warehouse serves to store products or finished goods and provide information on the latest condition.

There also the problems in the warehouse. The higher the activity in a warehouse, the higher the problems that may arise in the field. According to our research, the problems that often occured in warehouse activities are: Wrong items, Wrong quantity, Item damage.

- Wrong items (wrong of goods) that are items that come is not in accordance with the order data.
- Wrong quantity (error in number), which is an error in the number of items that come which is not according to the order data.
- Item damage (damage of goods), namely goods received or sent in conditions that are damaged or not worth selling.

The above problems are also occur at PT. Warso Dharma Utama. The other problems that PT. Warso Dharma Utama has are:

- There's only one checker officer who checks the arrival and delivery of goods.
- The FIFO system which should be a SOP is not always implemented because the arrival of goods is too much while human labor is inadequate.
- There is a deadstock that results the waste of warehouse space. The deadstock is generated due to lack of control on inventory in the warehouse so that the stock passes through the expired or damaged period.

The warehousing system at PT. WARSO MAIN DHARMA is as follows:

1. Every inbound items (purchase) and outbound item (sale) is recorded on the date of the transaction. Recording is done by the warehouse administration on the inventory system and is obtained from the checker section, it aims to control the warehouse so that in carrying out the storage and expenditure of goods there is coordination between the related parts.
2. There also the sequence of numbered forms such as Product Delivery Order (SP3), Road Letter (SJ), and Invoice.
3. When issuing an item to fulfill an order from a customer, the checker officer must first fill in the SP3. This is intended so that in every issue of goods is always accompanied by supporting documents, so the amount requested to be issued from the warehouse can be controlled through these supporting documents.
4. Recording of inventory is done perpetually (perpetual inventory system) the purpose is to

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find out if there are differences in physical calculations with the amount that is on the record. The method of recording on stock cards uses the FIFO (First In First Out) method and for the expenditure of goods carried out using the FIFO method.

5. Stock taking / inventory calculation is done once a month. This is done to check / match the physical inventory in the warehouse with the records in the warehouse administration stock card and accounting section.

DATA ANALYSIS METHOD

The method used is a qualitative approach method, namely descriptive analysis. This method will evaluate the application of an internal control system to the inventory of consumer goods.

RESULT

From the results of the evaluation of internal control over inventory of goods at PT. Warso Dharma Utama

1. Errors obtained include no uniformity in writing the name of the item, errors writing the name / brand / size of the goods that come out. The company still uses a manual system so the risk of writing errors of name / brand / size of the item is very large. Usually mistakes in the name / brand / size of the item will be known at the time of matching between the warehouse administration records with notes on the checker section.
2. Another mistake that occurs as a result is the error in removing goods from the warehouse. This error is caused by the name of goods and packaging that are almost the same as well as warehouse human resources that have an inadequate educational background.
3. Goods at PT. WARSO UTAMA DHARMA is finished goods and ready to use so that the packaging must always be in a condition that should or should not be damaged. There is no expert / staff in assessing the quality of goods, in the depreciation of goods there is no appraisal witness who can judge that the item is truly damaged.
4. Buy a break from Pertamina directly causing damage to the new goods coming to the warehouse of PT. Warso Dharma Utama becomes its own responsibility or cannot be returned.

Inventory of goods must not be too little or under standard, because this can affect if there is a sudden order in a large enough amount by the customer, the company cannot fulfill the request.

Procedure for Receiving Goods

Redemption from Pertamina is carried out by the redemption coordinator and Pertamina will issue SP3 (Surat Pengantar Pengiriman Produk / Product Delivery Covering Letter). After the SP3 was published, PT. WARSO DHARMA UTAMA prepares a transportation to pick up goods at PERTAMINA PLUMPANG. Because of the large quantity of goods, PT. WARSO DHARMA UTAMA uses 3PL.

After the goods arrive at the warehouse, the loading and unloading process is immediately carried out. The task of the checker here is to record and equalize the items written in the SP3 with the physical items arriving. After that, the note is submitted to the inventory staff to be input into the system.

Based on the results of the evaluation of the procedure for receiving goods at PT. WARSO DHARMA UTAMA, the procedure for receiving & recording goods carried out by checkers is done by the inventory section. It can be concluded that PT. WARSO DHARMA UTAMA has been effective.

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Procedure for Storing Inventory

The purpose of storing goods is to protect the item from loss or theft. At PT. WARSO DHARMA UTAMA, inventory of goods or goods purchased by the company, by warehouse staff is stored in the warehouse. To simplify the arrangement, income and expenditure of goods when needed, the items are stored based on the type of goods that are adjusted to the standards suitable for the goods, goods are arranged based on the brand, size, and movement (slow moving / fast moving) goods. The goods storage system is stored in a pallet, in the arrangement of pallets using forklift tools. Placement of goods in a warehouse is arranged based on the movement of goods.

From the results of evaluating the procedure for storing goods at PT. WARSO DHARMA UTAMA, items stored based on the standards of each type of goods, items stored are based on the type / brand / size of the goods, items arranged in each pallet do not exceed the box stack. It can be concluded that PT. WARSO DHARMA UTAMA is still lacking in storing merchandise, where there is no single function that is expert in assessing the quality of goods and lack of labor, which makes it difficult to implement FIFO on too many items.

Procedure for Issuing Goods

Purchase Order received by the warehouse of PT. WARSO DHARMA UTAMA comes from the head office located in Rawasari. After that, a Picking List was made for the warehouse staff. After the warehouse staff prepares the goods, the goods are transported by a forklift to be loaded into the transport car. Before the item is loaded, the checker records the item which then becomes the Dispatch Checklist document and the Road Letter. After that, a travel pass is given to the driver who transports the goods. Drivers are facilitated by the NForce Delivery application which function is for the tracking driver's position. But the disadvantage is that the drivers still do not use this application properly because of a lack of understanding of the technology.

CONCLUSION

Based on the results of field research, interviews with interviewee and analysis that have been carried out could be concluded that, increasing human resources is still most needed for better warehousing performance and a standardization is needed to achieve optimal warehousing system, as well as with the method of recording on the stock card. Using methods such as FIFO could minimize the deadstock. Zero accident is also a concern or target of the company in protecting the workforce so as to achieve optimal results by providing health and safety training.

SUGGESTION

1. The system used by the company needs improvements, and also adjusted to the existing developments, so that the company can become a company that dominates Pertamina's lubricant distribution market segment.
2. Hold employee training once a month for the better skills of every employee.
3. Hire more checkers so that there are no more mistakes in receiving and loading goods to the transport cars.
4. Implement a warehouse management system to improve operations and man power to support productivity

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