CHAPTER VI

DESIGN WAREHOUSE OPERATION

Warehouse management must ensure that the company always has been available at the correct stock level the goods it needs; that the warehousing capacity is both economic and efficient; and that the goods are properly kept. Then, the main functions performed by a warehouse are:

1. Receiving the goods from a source
2. Storing the good until they are required
3. Shipping the goods to the appropriate user

The operations that are needed to perform these functions efficiently are necessary to identify and establish standards for the tasks to be performed and the operation procedure. After there are many systems have been designed to bring the warehouse management meets its objective, the warehouse operation must support the other systems, equipment and space in a warehouse also. A warehousing operation that is established to perform function of this warehouse must satisfy the operating objectives which three are generally accepted:

1. Minimize the time required from sales order to its final execution: expediting to customer.

2. Utilize men effectively, as well as equipment, storage capacity and time resources.

3. Provide warehousing management with the information needed to guarantee a timely, orderly and continuous flow of incoming and outgoing goods.

Therefore, the warehouse operation of this warehouse involves in 7 sequential steps to attain effective warehouse operation system. Warehouse operations include the following:

1.Receiving

2.Identifying item to determine its storage location.

3.Dispatching to Storage : Put away and Storage

4.Order picking

5.Packing

6. Loading and Shipping

7.Physical inventory

These operations must be established standards procedure to guide the operators of this warehouse to perform it efficiently.

6.1. Designing Receiving Operation

This operation starts when supplier deliver product to a warehouse. Supplier must unload products from their trucks to a receiving area which is changed its location from the administration's office to the first floor of building no.2.

Warehouse staffs must check amount of items and list of items compares with the number in the invoice paper. If amount and list of items are not correct, warehouse staff will inform administrators and supplier deliver person to work on it. They are supposed to not accept items into a warehouse if it is not correct to an invoice paper from suppliers.

After checking amount of items on the list, quality checking needs to be performed by warehouse staff to ensure the quality of incoming product. The number of product that is checked is determined by their previous record on the quality checking record in database system. If previous record on incoming product indicates that in the last 5 delivery, there are problems with quality of the incoming product, warehouse staffs must check the quality of product strictly so the number of product that will be checked is 20% of total incoming product. But if previous record on incoming product indicates that in the last 5 delivery, there are problems free with quality of the incoming product, warehouse staffs must check the quality of product normally so the number of product that will be checked is 10% of total incoming product. Then if they find at least 1 unit that has a poor quality, they must ask suppliers to deliver the new lot to the warehouse.

After they have checked the quality of incoming products, they must record the result into the quality checking paper (see in fig. 5.21) and key the data into the quality checking record in database system. If quality of items is good, administrators are assigned to take an invoice paper from suppliers. Then administrators update the product movement in the product movement record in database system with data in an invoice paper.

As a result, the standard procedure of receiving operation is shown in the below table. Beside that the flow chart of this operation is following this:

Detail	Operator	Document	Equipment
1. Suppliers deliver items to a warehouse	Supplier' staff	no	no
2. Suppliers unload items from a truck to the receiving area (1st floor of building no.2)	Supplier' staff	no	no
3. Warehouse staffs check amount of items and list of items compares with the list in an invoice paper. If amount and list of items are not correct, warehouse staff will inform administrators and supplier deliver person to work on it	Warehouse operator	invoice paper	no
4. Warehouse staffs read the previous record of quality checking of incoming products with "The quality checking of incoming product record in Database system".	Warehouse operator	Database System	no
5. Warehouse staffs must check the quality of product but the number of product that will be checked is 20% or 10% of total incoming product depens on its quality checking record.	Warehouse operator	no	no
6. Warehouse staff writes down the result of quality checking into the quality checking form	Warehouse operator	The quality checking form	no
7. Warehouse staff hands the quality checking form to administrators at administrator's office.	Warehouse operator	no	no
8. Administrator read te result of quality checking. If quality of items is good, administrators take an invoice paper from suppliers. But if it is not good, administrators inform suppliers to bring a new lot.	Administrator	no	no
9. Administrator keys the result of quality checking into "the quality checking of incoming product record in the database system".	Administrator	Database System	no
10. Administrators take an invoice from suppliers.	Administrators	invoice	no

Table 6.1-New standard procedure of the receiving operation

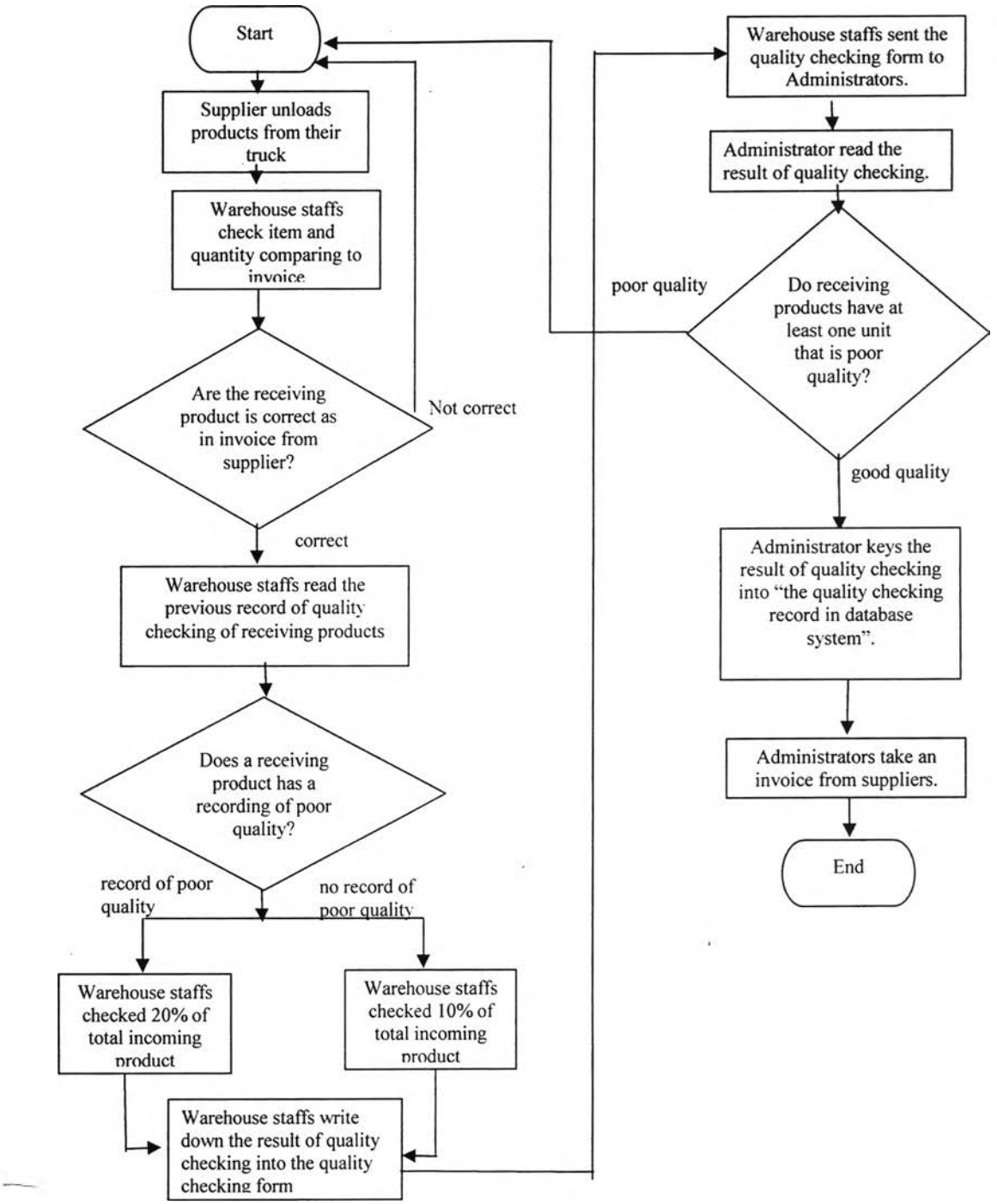

Figure 6.1-Flow chart of receiving operation

6.2 Designing identifying item operation

The purpose of identifying item is to quickly and easily identify and group a product, in order to identify the assigned warehouse keeping location. This ease of recognition reduces errors and time required for either stock selection of put-away. From 4.3.1, item identifying method of this warehouse uses the mark name at the exterior of the package as an item identifier.

After warehouse operators receive a product at the receiving area, warehouse operators must identify the product item identifier. There are 2 ways to identify item identifier. A product that suppliers marked its name at the exterior of the package is identified by using its name that was marked at the exterior. Although most of product has mark at the exterior, there are some products that their names have not been marked at the exterior so identifying these products item identifier must use product's name in the invoice paper and warehouse operators must manual handwritten their names on the exterior of their package.

When all products that are received have been identified their item identifiers, warehouse operator should check specification of unit type of each receiving item compare to what it's recorded in the database specification of storage unit type. As it's mentioned earlier, all products in warehouse must be stored in a unit type as they are shipped to customer. Although most of product's receiving unit type is the same as it is stored, there are some item that there is different on this both unit type. If unit type of product while it is receiving is different from its specification unit type while it is stored, a warehouse operator must change the unit type while it is receiving to the unit type that is stored.

After all products have been managed to have the unit type as it is stored or recorded in the database specification of storage unit type, a warehouse operator must write item identifier of each item down to the "storage recording paper" at the column "item identifier". This document is assigned to help warehouse operator locates the product into its suit storage locations.

Once item identifier of item has been identified, warehouse operators must use it to identify the assigned keeping location of item. Because the same product should be stored at the same place or near it, warehouse operator needs to key item identifier into the database of item's storage location in warehouse database excel file to find whether item is already stored in this warehouse or not and if warehouse

already stores this item, what its storage location. If an item is already stored in this warehouse, a warehouse operator must write down the "storage location address(s)" of its storage location to the "storage recording paper" at the column "storage location addresses".

After that warehouse operator keys item identifier into Database of Allocation system code to find the allocation system code of item and write it down to the "storage recording paper" at the column "Allocation system code". Allocation system code is a guide line code that indicates where item should be stored. This code will help operators to know where they should put item in.

As a result, the standard procedure of identifying item operation is shown in the below table. Beside the flow chart of this operation is following this:

Detail	Operator	Document	Equipment
1.1 Warehouse operators identify the product item identifier by using product name at the exterior of the package.	Warehouse operator		
1.2 If product's names have not been marked at the exterior so identifying these products item identifier must use product's name in the invoice paper and warehouse operators must manual handwritten their names on the exterior of their package.	Warehouse operator	Invoice	Pen
2. Warehouse operator writes item identifier of each item down to the "storage recording paper " at the column "item identifier"	Warehouse operator	Storage recording paper	
3.1 Warehouse operator check specification of unit type of each receiving item compare to what it's recorded in the database of specification of storage unit type.	Warehouse operator	Database system	
3.2 If unit type of product while it is receiving is different from its specification unit type while it is stored, a warehouse operator must change the unit type that was received to the unit type that is recorded in the database.	Warehouse operator		
4.1 Warehouse operator key item identifier into the database of item's storage location to find whether item is already stored in this warehouse or not and if warehouse already stores this item, what its storage location.	Warehouse operator	Database system	
4.2 If an item is already stored in this warehouse, a warehouse operator must write down the "storage location address(s)" of its storage location to the "storage recording paper" at the column "present storage location addresses"	Warehouse operator	Storage recording paper	
5. Warehouse operator keys item identifier into the database of the allocation system code to find the allocation system code	Warehouse operator	Database system	
6. Warehouse operator writes it down to the "storage recording paper" at the column "allocation system code"	Warehouse operator	Storage recording paper	

Table 6.2--New standard procedure of the item identifying operation

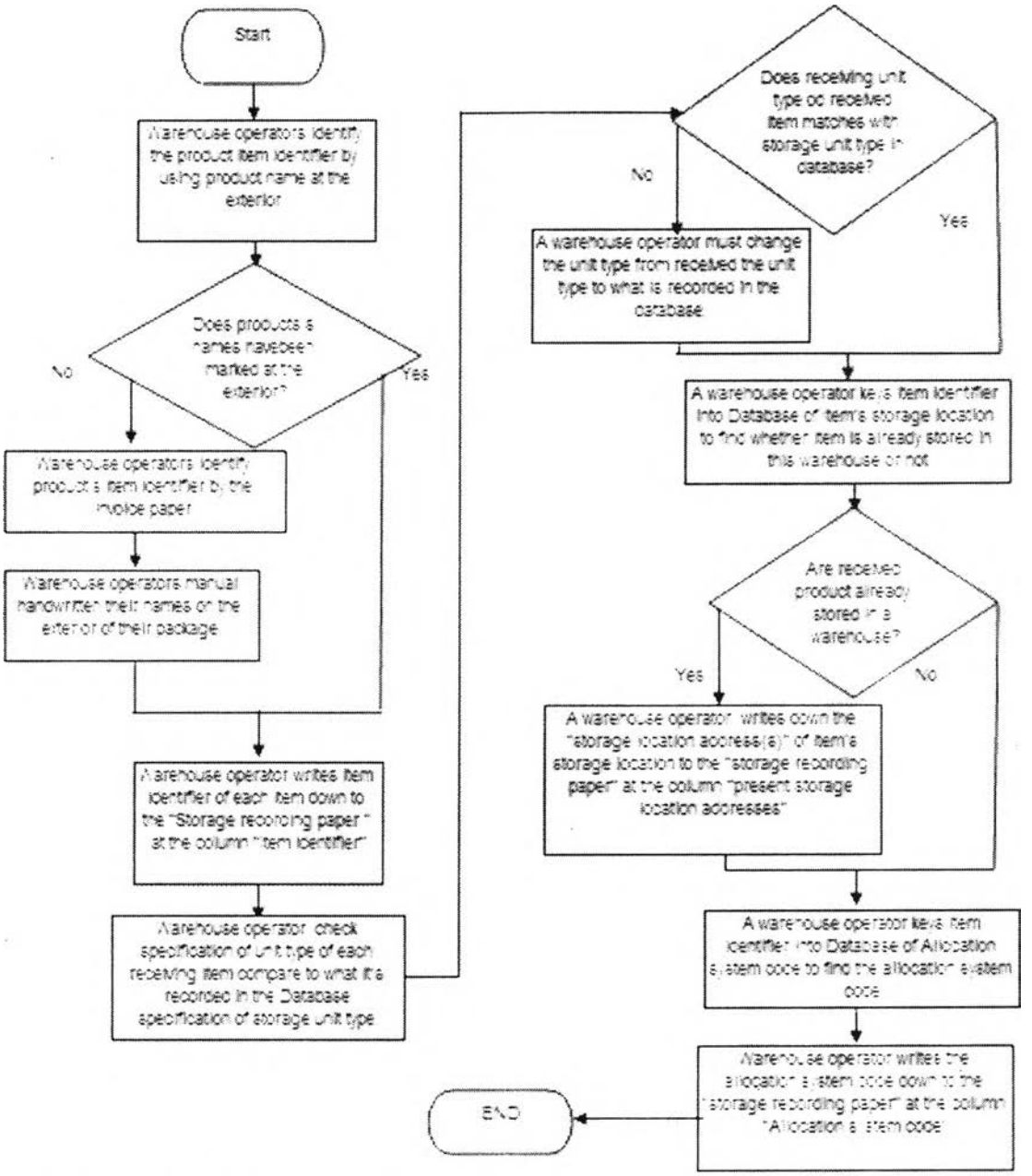

Fig 6.2-Flow chart of item identifying operation

6.3 Designing dispatching and storage operation

Dispatching to storage is the physical act of moving items from inspection and placing them in storage. The purpose of this operation is to move a product from receiving area to its storage area. Storage is the physical act of hand-transferred the product to the storage shelf.

When all received products have been identified theirs allocation system codes and present storage location addresses, if an item is already stored in this warehouse, a warehouse operator use the present storage location address(s) in the storage recording paper to indicate the item's present storage location(s).

Next, a warehouse operator moves products from receiving area to their present storage location(s). After that warehouse operator should put item into its present storage location or near it, if it is possible.

But if it is not possible to put item into its present storage location or near it, a warehouse operator must use the allocation system code of item in the storage recording paper to indicate the storage location(s) where they should put item in. Then a warehouse operator moves items to the storage location(s) that is indicated by the allocation system code of item and puts item to that storage location(s).

A warehouse operator must move products horizontally by the hand truck because previously, a warehouse operator moves products horizontally by manpower without material handling equipment so the amount of item that is moved in each trip is quite low. Beside that the heavy item causes the pain at the back of operators. Using the hand truck decreases these problems a lot and increases efficiency in dispatching operation. A warehouse operator must move the hand truck that is loaded with products into the lift transportation for vertically moving to the storage floor because a hand truck can not move in a stair.

Once a warehouse operator moves products to their suit storage locations, a warehouse operator puts product into the storage location. A warehouse operator must turn the side that has names or item identifiers of the products to the outside because it is convenient to identify items while they are in storage location(s). Storage product must not be putted in the position that blocks other products in the storage location because it is difficult to find products in storage location if it was blocked by other product.

Then, a warehouse operator must record location address of the storage location, and name and quantity of product that just been putted into the "storage recording paper". Then the storage recording paper is brought to the administrator to key data into the database system. The data that receives from this paper are the item's storage location and quantity of item in that storage location which is important to track the product location(s).

As a result, the standard procedure of the dispatching and storage operation is shown in the below table. Beside the flow chart of this operation is following this

Detail	Operator	Document	Equipment
1. A warehouse operator indicates the suit storage location of an item by using the storage recording paper.	Warehouse Operator	Storage recording paper	
1.1 If item is already stored in this warehouse, a warehouse operator use the present storage location address(s) in the storage recording paper to indicate the item's present storage location(s).	Warehouse Operator	Storage recording paper	
1.1.1 A warehouse operator moves products from receiving area to their present storage location(s)	Warehouse Operator		Hand truck/ Lift transportation
1.1.2 A warehouse operator checks the possibility to put item into its present storage location or near it.	Warehouse Operator		
1.1.3 If it is not possible to put item into its present storage location or near it. A warehouse operator uses the allocation system code of item in the storage recording paper to indicate the storage location(s) where they should put item in.	Warehouse Operator	Storage recording paper	
1.1.4 If it is not possible to put item into its present storage location or near it, a warehouse operator moves items to the storage location(s) that is indicated by the allocation system code of item.	Warehouse Operator		Hand truck/ Lift transportation
1.2 If the item has not been stored already, a warehouse operator use the allocation system code(s) in the storage recording paper to indicate the item's appropriate storage location(s).	Warehouse Operator	Storage recording paper	
1.2.1 A warehouse operator moves items to the storage location(s) that is indicated by the allocation system code of item.	Warehouse Operator		Hand truck/ Lift transportation
2. A warehouse operator puts product into the storage location.	Warehouse Operator		
3. A warehouse operator turns the side that has names or item identifiers of the products to the outside and storage product must not be putted in the position that blocks other products in the storage location.	Warehouse Operator		
4. A warehouse operator records location address of the storage location, and name and quantity of product that just been putted into the "storage recording paper"	Warehouse Operator	Storage recording paper	
5. The storage recording paper is brought to the administrator by a warehouse operator.	Warehouse Operator		
6. An administrator keys data from the storage recording paper into the database of item's storage location and the product movement record.	Administrator	Storage recording paper / Database system	

Table 6.3-New standard procedure of the dispatching to storage and storage operation

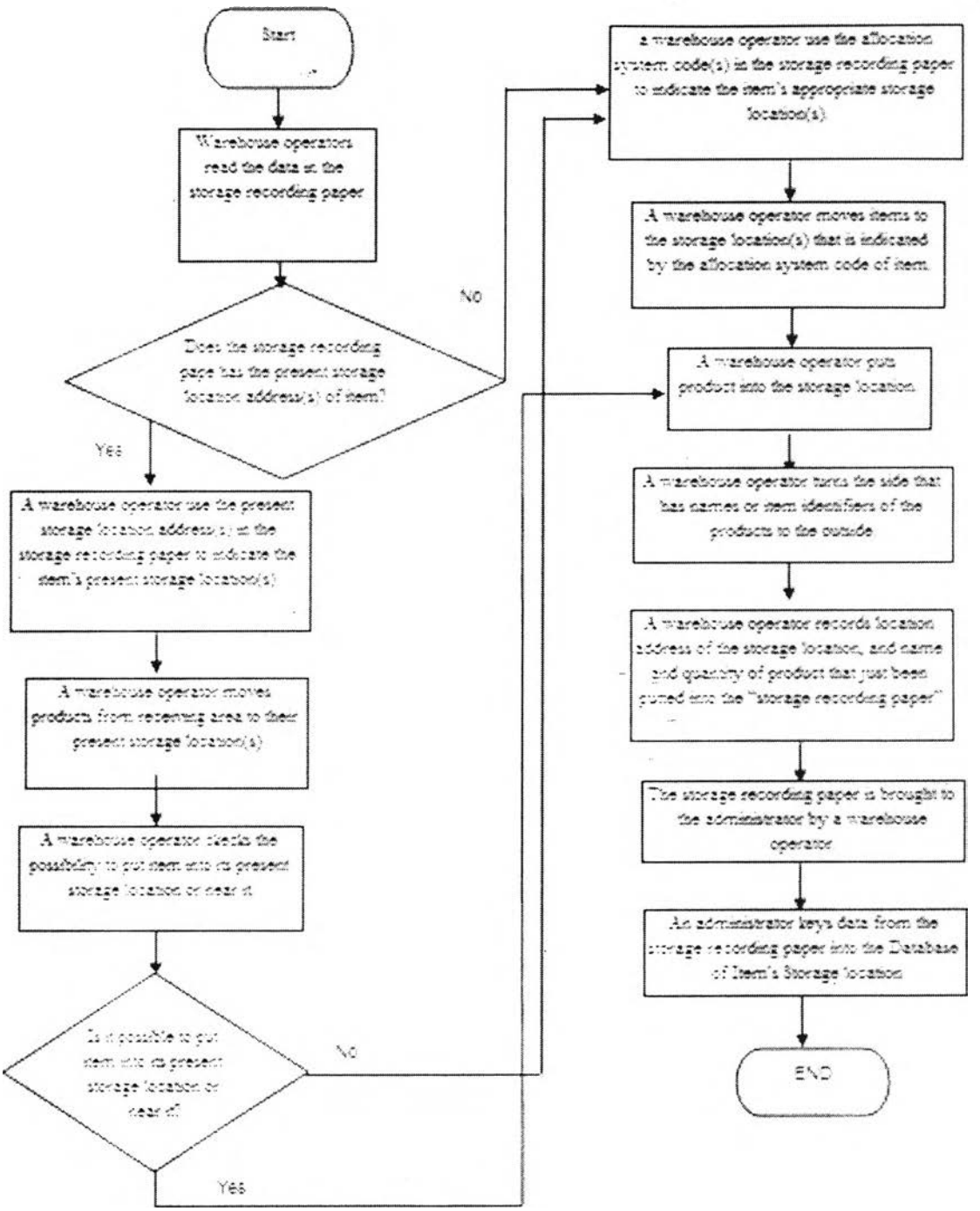

Figure 6.3-Flow chart of the dispatching and storage operation

6.4 Designing order picking operation

Order picking is the physical act of picking items that are ordered from storage area and placing them in a shipping area. The purpose of this operation is to pick an ordered product from storage area to a shipping area.

This activity of this warehouse starts with receiving order from customers. Orders of a warehouse come from 3 groups: The first type of order comes from the company' selling store at Sampeng. In early morning, selling store at Sampeng would call to order items and delivery staff must deliver items in there before 9 o'clock in the morning. The second type of order comes from Bangkok retailers. Usually, Bangkok retailers bring their trucks to receive items at some places near Sampeng and delivery staff must deliver items to their trucks. The third type of order comes from upcountry retailers. Normally, they would call to make an order through administration office in the morning and items have been sent to them through logistic companies.

Administrators must be assigned to take an order from customers or company' selling store by a phone, then they must check the availability of the items that are ordered in the stock by checking with "the product movement record in database system" after that an administrator checks the availability of the items that are ordered in the stock by checking with "the product movement record in database system". An administrator must informs a customer immediately that the items that they order are available or not and confirm the items and quantity that are ordered with a customer.

Then an administrator must write down a customers' name, items' name and quantity to the order picking recording paper. An administrator must tick the box at the order picking recording paper to inform that this order requires packing or non-packing delivery. After that, an administrator sends the order picking recording paper to a warehouse operator. Warehouse operator starts order picking activity immediately after receiving order picking recording paper. Warehouse operator should use a single-order-picking which means one order picker takes a single order and fills it from start to finish. It is convenient to use only one order picker to deal with one order in this warehouse because of limitation from building shape and transportation.

Warehouse operator keys the item identifier of ordered items into database of item's storage location to find the storage location address(s) of the storage location(s) that stored those items and quantity of item in each storage location. Then, a warehouse operator writes down these data into the order picking recording paper at the column "the storage location of product".

A warehouse operator walks to those storage locations and brings the hand truck and the order picking recording paper with him. When ordered items have been picked from storage location(s) and loaded into the hand truck, a warehouse operator must record quantity of product that just been picked and the rest quantity of that item into the "order picking recording paper" at the column "picking quantity"

After all ordered products have been picked, a warehouse operator moves the hand truck that loaded with ordered items to the shipping area. As a result, the standard procedure of order picking operation is shown in the below table. Beside the flow chart of this operation is following this.

Detail	Operator	Document	Equipment
1. An administrator takes an order from telephone.	Administrator		
2. An administrator checks the availability of the items that are ordered in the stock by checking with "the product movement record in database system"			
3. An administrator informs a customer immediately that the items that they order are available or not and confirm the items and quantity that are ordered with a customer.			
4. An administrator writes down a customers' name, items' name and quantity to the order picking recording paper	Administrator	Order picking recording paper	
5. An administrator tick the box in the order picking recording paper to inform that this order requires packing or non-packing delivery.	Administrator	Order picking recording paper	
6. An administrator sends the order picking recording paper to a warehouse operator.	Administrator	Order picking recording paper	
7. Warehouse operator keys the item identifier of ordered items into the database of item's storage location to find the storage location address(s) of the storage location(s) that stored those items and quantity of item in each storage location.	Warehouse Operator	Database System	
8. A warehouse operator writes down the storage location address(s) of the storage location(s) that stored those items and quantity of item in each storage location into the order picking recording paper at the column "the storage location of product".	Warehouse Operator	Order picking recording paper	
9. A warehouse operator uses storage location address(s) of the storage location(s) that stored those items t indicate the storage location that should be picked the items from.	Warehouse Operator		
10. A warehouse operator walks to the storage locations and brings the hand truck and the order picking recording paper with him.	Warehouse Operator	Order picking recording paper	Hand truck/ Lift transportation

Table 6.4-New standard procedure of the order picking operation

Detail	Operator	Document	Equipment
11. A warehouse operator picks ordered items from storage location(s) and loaded into the hand truck.	Warehouse Operator		Hand truck
12. A warehouse operator records quantity of product that just been picked and the rest quantity of that item into the "order picking recording paper" at the column "picking quantity".	Warehouse Operator	Storage recording paper	
13. If all ordered item have not been picked, a warehouse operator uses the storage location address(s) in the order picking recording paper to indicate another item's storage locations. Then he moves to it and do the same things until all items have been picked.	Warehouse Operator	Storage recording paper	
14. A warehouse operator moves the hand truck that loaded with ordered products to the shipping area	Warehouse Operator		Hand truck/ Lift transportation

Table 6.5 -New standard procedure of the order picking operation (Continue)

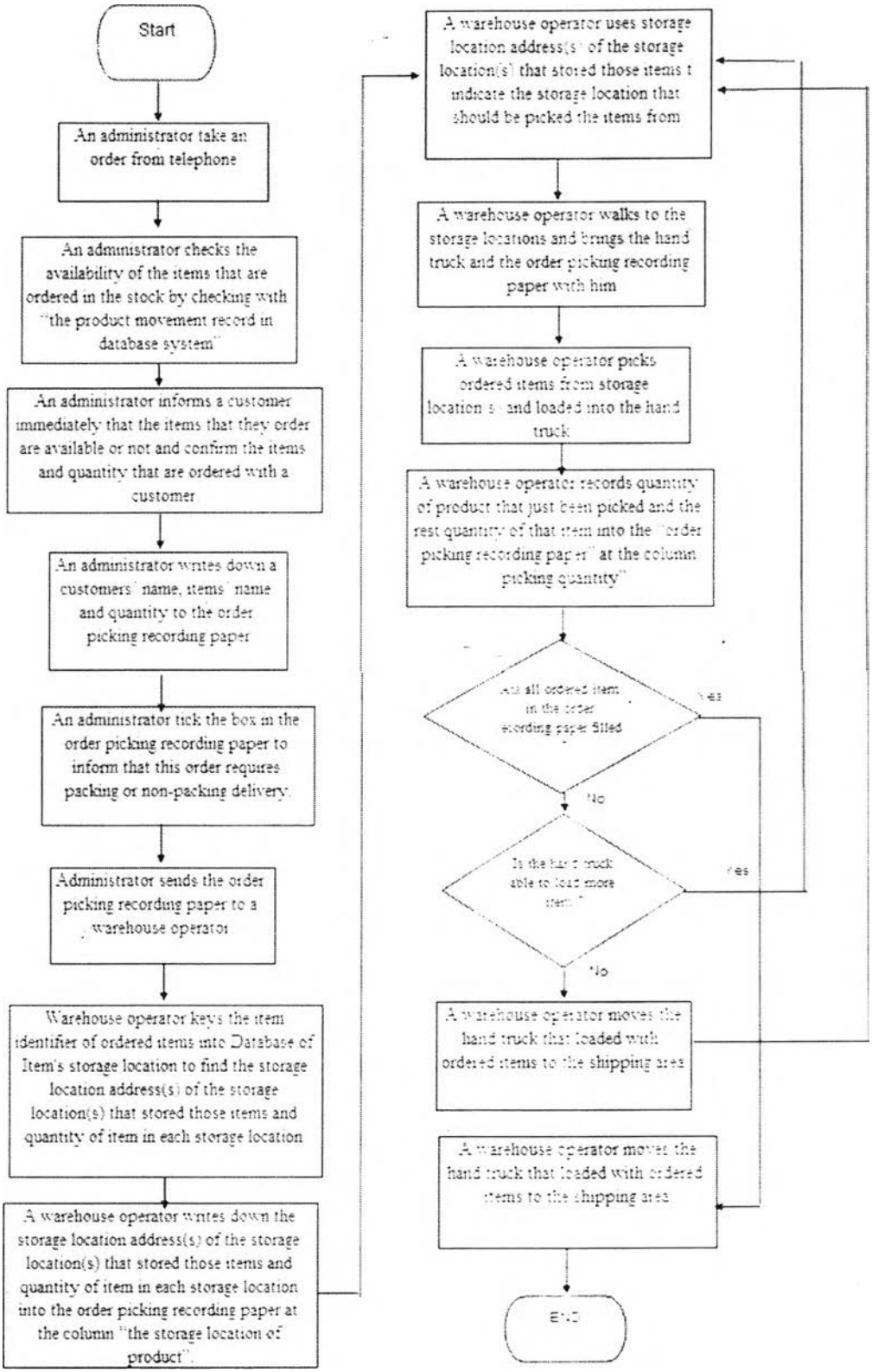

Figure 6.4 -Flow chart of the order-picking operation

6.5 Designing packing operation

Packing is the physical act to put products into a container or package that contains the product while they are shipped. The purpose of packing operation is to protect and contain product by package while it is delivered. The suit package to the product should provide protection against the common hazards of warehousing and distribution.

After all ordered products in each order have been picked from the storage location and moved to a shipping area, a warehouse operator must stack products together and checks for accuracy of items and quantity according to the order picking recording paper firstly. Then a warehouse operator must read the order picking recording paper to know that ordered products require packing operation or not.

In this warehouse, most of product is not fragile then the main reason that packing activity is required is products have the same shipping destination or customer's requirement. If they are packed at the same container or package. it will be easier and cheaper for shipping activity. In this warehouse, the destination of shipping is the main factor to determine packing method. If the destination of shipping is a company' selling store at Sampeng, a warehouse operator just needs to bundle or tie items together with a rope before loading into a 2-wheel hand truck.

But if the destination of shipping is a truck or receiving place of Bangkok retailers or a retail store in upcountry, a warehouse operator needs to pack items in a big carton and uses a string-tight packing machine to tight a carton before shipping them.

As a result, the standard procedure of packing operation is shown in the above table. Beside that the process chart of this operation is following this

Detail	Operator	Document	Equipment
1. A warehouse operator stacks products that are ordered together at the same place.	Warehouse Operator		
2. A warehouse operator checks for accuracy of items and quantity according to the order picking recording paper	Warehouse Operator	Order picking recording paper	
3. A warehouse operator reads the order picking recording paper to know that ordered products require packing operation or not	Warehouse Operator	Order picking recording paper	
4. If the products need to be packed, a warehouse operator moves the products from the shipping area to the packing area.	Warehouse Operator		Hand truck
5. A warehouse operator uses the packing machine to pack products which are ordered together in the same container(s).	Warehouse Operator		Packing Machine
6. A warehouse operator moves the container(s) that contain the ordered product to the shipping area	Warehouse Operator		Hand truck

Table 6.6-New standard procedure of the packing operation

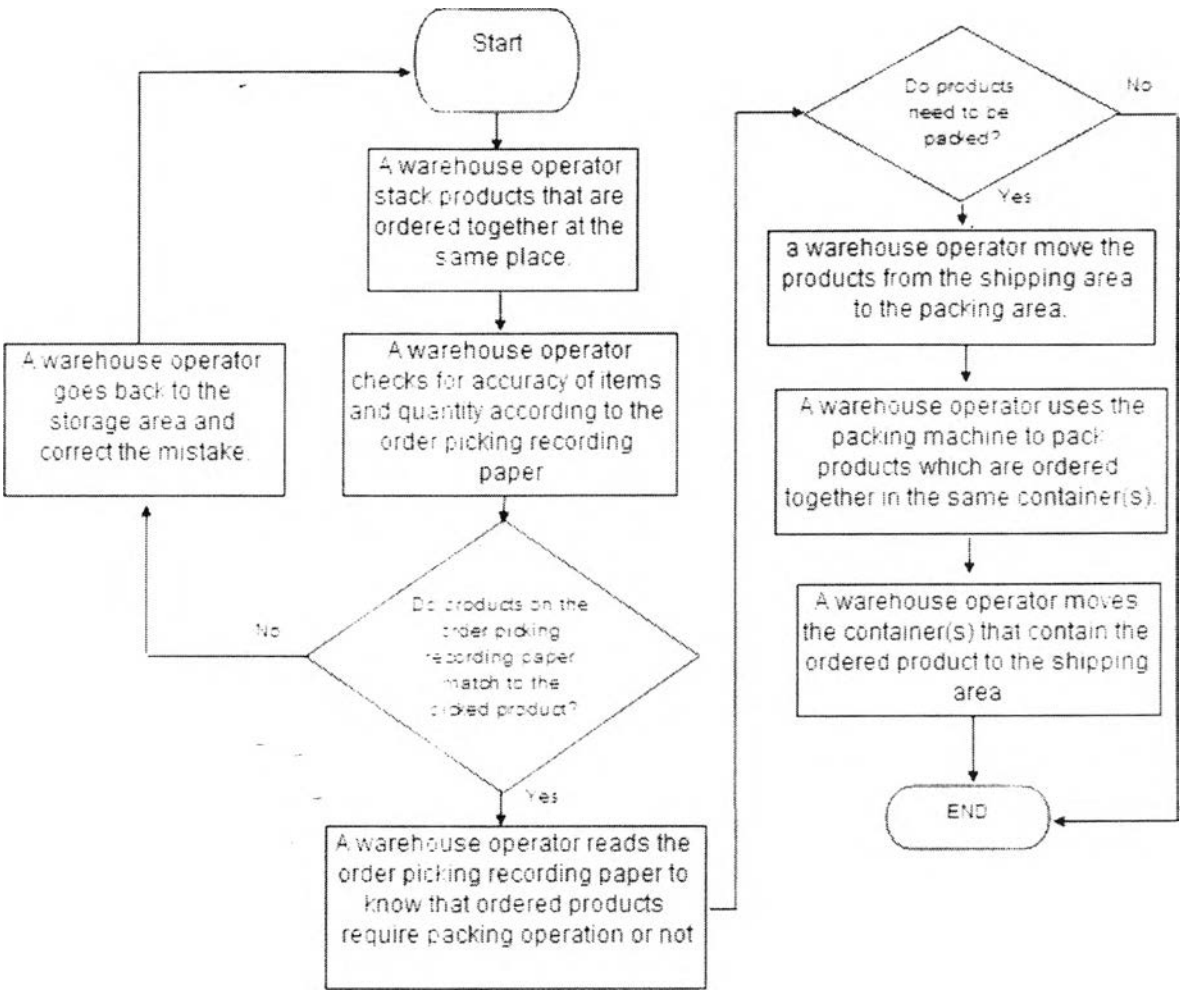

Fig 6.5- Flow chart of the packing operation

6.6 Designing the loading and shipping operation

Loading is the physical act of putting container(s) or products to the transportation. The purpose of loading operation is to load products from a shipping area to the vehicle to prepare for shipping. Shipping is the physical act of move products from a warehouse to a customer place. The purpose of shipping operation is to deliver products to a customer.

After the destination of shipping has been identified, delivery staffs will select shipping method. Shipping method of items can be divided into 2 method depend on destination of shipping.

If the destination of shipping is a company' selling store at Sampeng, items are shipped to a store with a 2-wheel hand truck. But if the destination of shipping is a truck or receiving place of Bangkok retailers or a store of upcountry retailers, items are shipped out of the warehouse with a motorcycle or a pickup.

After the shipping method has been selected, the next area to look at is how these products will be loaded. Items which been shipped by 2-wheel hand trucks, are loaded by hand stacking and items which been shipped by a motorcycle or pickup, are loaded by hand stacking also. With both shipping methods, a warehouse operator loads items or container(s) to a vehicle by hand stacking.

Therefore, when all ordered item are loaded into the vehicle, a warehouse operator must hand the order picking recording paper to an administrator. An administrator launches an invoice for the order and sends it with the delivered products to a customer.

Then an administrator updates the database of item's storage location and database of product movement with the data from the order picking recording paper. As a result, the standard procedure of loading and shipping operation is shown in the below table. Beside that the flow chart of this operation is following this:

Detail	Operator	Document	Equipment
1. A warehouse operator reads the customer's name at the order picking form to know the destination of shipping.	Warehouse Operator	Order picking recording paper	
2.1 If the destination of shipping is a company' selling store at Sampeng, a warehouse operator select a 2-wheel hand truck as the shipping method.	Warehouse Operator		2-wheel hand truck
2.2 If the destination of shipping is a truck or receiving place of Bangkok retailers or a store of upcountry retailers, a warehouse operator selects a motorcycle or a pickup as the shipping method.	Warehouse Operator		Motorcycle or Pickup
3. A warehouse operator loads items into the shipping vehicle by hand stacking.	Warehouse Operator		2-wheel hand truck or Motorcycle or Pickup
4. A warehouse operator hands the order picking recording paper to an administrator.	Warehouse Operator	Order picking recording paper	
5. An administrator launches an invoice for the shipping.	Administrator	Invoice to customer	
6. An administrator updates the Database of Item's storage location with the data from the order picking recording paper.	Administrator	Order picking recording paper	
7. An administrator hands an invoice to the delivery staff.	Administrator	Invoice to customer	
8. Delivery staff ships the products to the destination and attaches invoice along with them.	Delivery staff		2-wheel hand truck or Motorcycle or Pickup

Table 6.7- New standard procedure of the loading and shipping operation

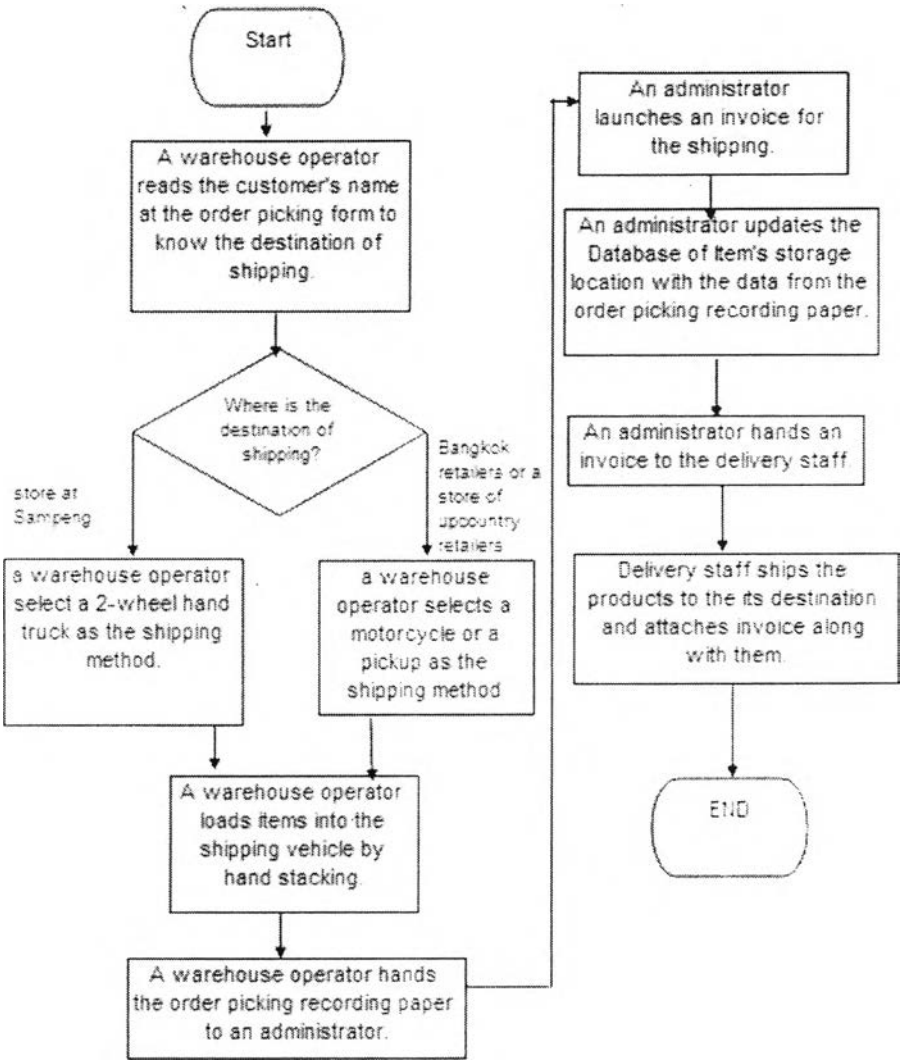

Fig 6.6- Flow chart of the loading and shipping operation

6.7 Designing the physical inventory operation

The purpose of this operation is to count the real quantity of stock-keeping-units and compare it to the number in the database system. The other benefit of this operation is to check the quality of stock-keeping-units then, both quantity and quality of stock-keeping-units in storage area are supposed to be checked at this operation.

The physical inventory of this warehouse should use "*Cycle counting*" method. This method needs operators who have to do this operation regularly as their routine job. It can find errors immediately so it is easy to track back to the root cause of the errors.

From the system of the new warehouse management, a warehouse operator can do cycle counting easily. In each day, a warehouse operator must select one

storage location randomly to check the quantity and quality of item in that storage location. A warehouse operator uses the physical inventory paper to perform this operation. Firstly, he uses the database of item's storage location to find the products and their quantity in the selected storage location. Then he writes down the data into the physical inventory paper and moves to that storage location. After that a warehouse operator checks the products and their quantity comparing to the data that is written in the physical inventory paper.

After all products in the storage location have been checked in the term of quality and quantity, the result must be recorded into the physical inventory paper and handed to an administrator.

After an administrator receives the physical inventory paper, he keeps the paper into the file. If the result from checking equivalent to what is written in the physical inventory paper, it means there is no problem in the tracking system. If the result from checking is not equivalent to what is written in the physical inventory paper, it means there is problem in the tracking system. The warehouse database system and the recording papers that are kept must be used to track back to the cause immediately

If the quality of products is not good, the products must be removed from its storage location and moved to the administrator's office. An administrator must key the result of poor quality product into the database of quality checking record then it will remind operators to strictly check this product while it is received.

After, an administrator keys the result of poor quality product into the database of quality checking record, he need to update the quantity of product in the storage location in the warehouse database system. As a result, the standard procedure of loading and shipping operation is shown in the below table. Beside that the flow chart of this operation is following this.

Physical Inventory

Operator _____

Date_____ Time_____

From the warehouse database			From checking		
				Quality Checking	
Storage location Addres	Item identifier	Quantity in the database	Quantity in storage location	Quantity of Good Quality	Quantity of Bad Quality

Receiving at administrator office

Administrator_____ Date_____

Fig 6.7- The physical inventory paper

Detail	Operator	Document	Equipment
1. A warehouse operator must select one storage location randomly to check the quantity and quality of item in that storage location	Warehouse Operator		
2. A warehouse operator uses the database of item's storage location to find the products and their quantity in the selected storage location.	Warehouse Operator	Database system	
3. A warehouse operator writes down the product' name and quantity of the storage location in the warehouse database into the physical inventory paper.	Warehouse Operator	The physical inventory paper	
4. A warehouse operator moves to that storage location.	Warehouse Operator		
5. A warehouse operator checks the products and their quantity comparing to the data that is written in the physical inventory paper.	Warehouse Operator	The physical inventory paper	
6. A warehouse operator checks quality of product in the storage location.	Warehouse Operator		
7. A warehouse operator writes down the result of checking into the physical inventory paper.	Warehouse Operator	The physical inventory paper	
8. If there are poor quality products in the storage location, a warehouse operator removes them from the storage location.	Warehouse Operator		
9. A warehouse operators walks to the administration office and brings the poor quality products along if he has.	Warehouse Operator		Hand truck
10. A warehouse operator hands the physical inventory paper to an administrator.	Warehouse Operator	The physical inventory paper	
11. If there are poor quality products, a warehouse operator gives the poor quality product to an administrator.	Warehouse Operator		
12. After an administrator receives the physical inventory paper, he reads the data in the paper.	Administrator	The physical inventory paper	

Table 6.8- New standard procedure of the physical inventory operation

Detail	Operator	Document	Equipment
13. If the result from checking is not equivalent to what is written in the physical inventory paper, it means there is problem in the tracking system. The warehouse database system and the recording papers that are kept must be used to track back to the cause immediately by an administrator.	Administrator	Database system	
14. If the quality of products is not good, an administrator must key the result of poor quality product into the database of quality checking record.	Administrator	Database system	
15. After an administrator keys the result of poor quality product into the database of quality checking record, he updates the quantity of product in the storage location in the warehouse database system.	Administrator	The physical inventory paper	
16. An administrator returns the poor quality product to the suppliers the next time when they arrive and ask them to replace the poor quality product with the new one.	Administrator		

Table 6.9- New standard procedure of the physical inventory operation (Continue)

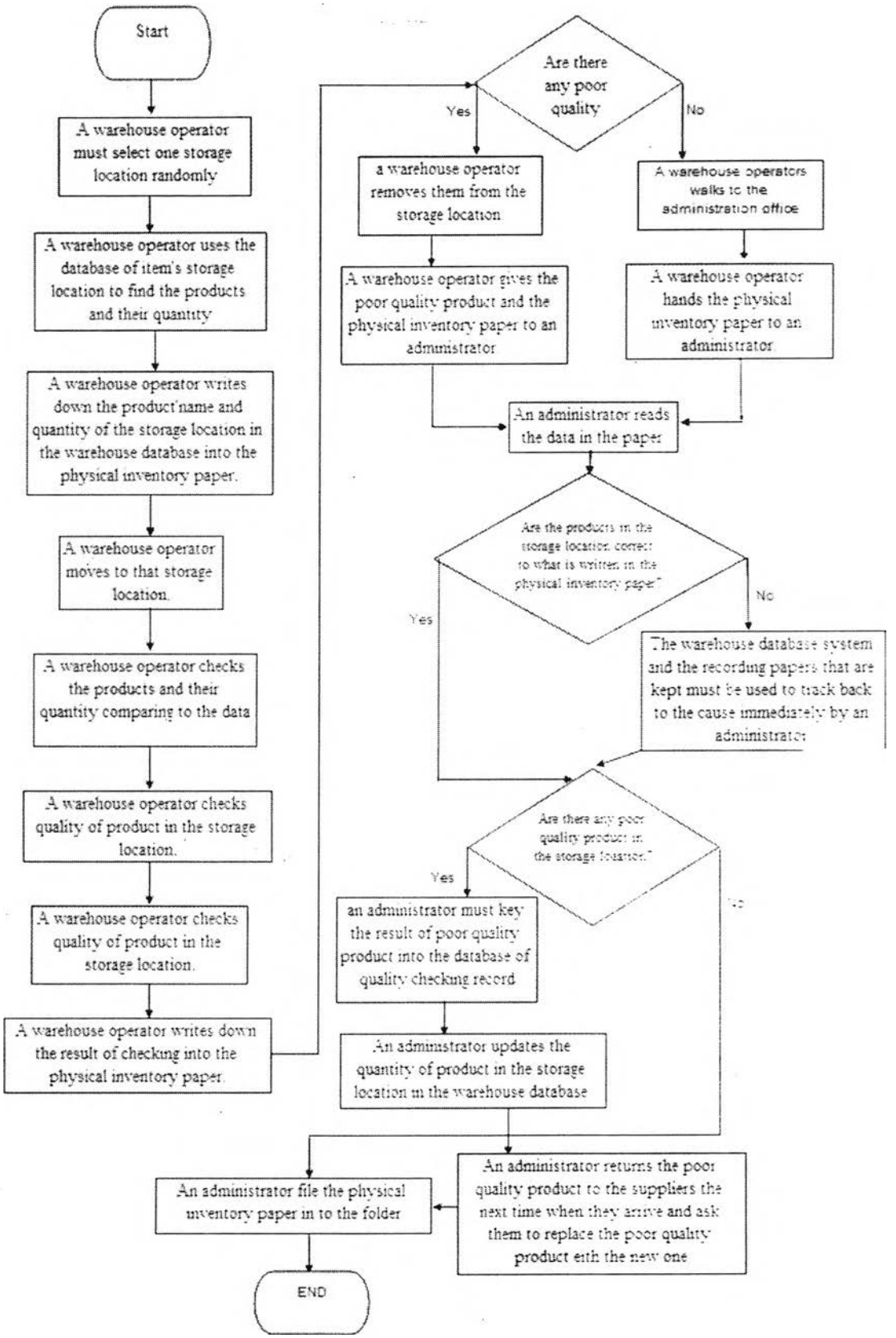

Fig 6.8- Flow chart of the physical inventory operation

The standard procedures of all daily activities have been established to be a manual for all operators who involve in warehouse activities. These manual makes operators know their role in the new warehouse management system. Due to there are many new systems in the new warehouse management system, operators must been trained to use these systems fluently so these standard procedures inform them to know what they are expected to do in each operation.

The new warehouse operation is the key to use all the systems that have been improved to achieve the warehouse objectives. However, these procedures require operators to use them so the most important thing to get the optimum benefit is to train the operators to understand the new procedures and follow it strictly.

The new warehouse operation makes an inexperienced operator works as the same way an experienced operator works because this operation do not depend on the memory of operators any more. But if the operators follow the procedure strictly, they can perform the operation well and the objective warehouse can be achieved as a final point.