

**EVALUATION OF IMPLEMENTATION OF INVENTORY CHECK
PROCEDURE IN PT. TECTRON MANUFACTURING**

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ARTICLE INFO	ABSTRACT
<p>Received: filled by JBM team Revised: filled by JBM team Approved: filled by JBM team</p> <p>Keywords: Evaluation, Procedure, Incoming Quality Control</p>	<p>This study report discusses the Evaluation of the Implementation of Inventory Checking Procedures In PT. Tectron Manufacturing. This study report focuses on discussing the inventory checking procedures carried out by IQC (incoming quality control). The background of this writing is that rejected items are often found in the production line, this happens because of the lack of awareness of employees to check according to the established procedures and the lack of accuracy in the checking process due to inadequate IQC checking areas so that when performing visual checks it becomes looks unclear due to dim lighting. The purpose of this study is to improve employee performance in preventing irregularities when checking incoming goods inventory. The research method used by the author is descriptive method and the data collection method is carried out by means of observation, interviews and document inspection. The results of this study indicate that the level of employee compliance at PT. Tectron Manufacturing on the procedure for checking incoming goods inventory has not been effective or it can be said that employees at PT. Tectron Manufacturing has not fully carried out its duties based on the procedures that have been established in the company.</p>

INTRODUCTION

Batam is an industrial area where there are many types of companies. Companies are divided into three types, namely: service companies, industrial companies, and trading companies. The main goal of each company's activities is to produce quality products that meet consumer desires. With quality products, companies can get high profits

Inventory is one of the biggest elements in buying company profits and greatly affects the company's operational activities. The company's operational activities can run effectively and efficiently if all company employees can work together, especially in the material inventory management function. PT Tectron Manufacturing is one of the manufacturing companies in Batam, this company is engaged in the manufacture of wireless telephones that produce various types of

wireless telephone products with different variants. To support the supply of materials PT. Tectron has several suppliers such as TECKWAH and MICROCAST.

According to experts, inventory in a manufacturing or industrial company consists of three types, namely raw material inventory, semi-finished goods inventory and finished goods inventory. Most of the types of inventory at PT Tectron which are in the most order are semi-finished goods inventory. Examples of semi-finished goods ordered by PT.Tectron are gift boxes and cartoon boxes which will later be used for packing ready-to-use wireless telephones.

In the process of working on this product, of course, it takes a lot of raw material inventory and semi-finished goods to be ordered from the supplier. After the inventory arrives at the store, the store will give a delivery order to the IQC (incoming quality control) section, to check the quality of the goods, sampling randomly at every number of arrivals of goods, after the goods are checked and no rejected goods are found, the goods will be stamped by IQC then the goods can be distributed to the production department. This is done to ensure that the incoming goods are zero defects in order to minimize problems that occur in the production line.

PT. Tectron Manufacturing has a procedure for checking incoming goods inventory that is already running, but in practice it is still often found rejected items on the production line, this happens due to a lack of awareness of employees to check according to established procedures and not being careful in the process of checking an adequate IQC checking area. so that when you do visual inspection becomes unclear due to dim lighting.

To prevent irregularities on an ongoing basis, each employee must carry out his work in accordance with established procedures. With that it will help in increasing work productivity more effectively and efficiently.

Every company requires an evaluation of the evaluation procedure so that all its activities can achieve the goals that have been set. This evaluation is the first evaluation at PT. Tektron Manufacturing. With the implementation evaluation, it is hoped that the process of checking incoming goods can improve employee performance to prevent irregularities in checking incoming goods.

Based on the description above, the evaluation of the implementation of procedures for checking incoming goods inventory at PT Tectron Manufacturing. This evaluation is useful for providing recommendations for improvement or assessment of the findings obtained, so that the management can make improvements to related functions. With that, I am interested in raising the Evaluation of the Implementation of the Inventory Check Procedure in PT. Tectron Manufacturing.

METHOD

In this study the authors used three data collection techniques, namely:

1. Documentation Method

That is the technique of collecting data obtained from files or documents in the company. The documents needed by the author when conducting research are invoices, issue orders (internal), incoming inspection reports. This data will be used

as a basis for analyzing the management of the inventory of goods entering the company.

2. Observation Method

Is the collection of data obtained by observing directly when carrying out practice at PT Tectron Manufacturing where invoices are received, then checking the type and quantity based on the invoice by the store, then checking random sampling conducted by IQC based on the Incoming Inspection Instruction.

3. Interview Method

Data collection techniques are asking questions which are done by discussing and talking directly with employees who are directly related, namely the Store team, Quality team, Production team in the process of checking incoming goods inventory until it is distributed to the production line so that valid and reliable data can be obtained.

RESULTS AND DISCUSSION

The results of the research presented by the author are data related to the procedure for receiving incoming goods by the store and then focusing on the procedure for checking the quality of incoming goods inventory by IQC (incoming quality control) to the procedure for requesting and releasing goods into production. The data were analyzed to provide an overview and explanation based on the observations made by the author. To further clarify the existing problems and the data from the results of this study will be discussed one by one as follows.

Functions related to incoming goods inventory:

1. Jobs of Storeman Receipt of Goods
 - Loading and unloading of incoming goods from suppliers.
 - Checking that the type of goods and the number of incoming goods are in accordance with the invoice.
 - Signing and stamping invoices that have been declared complete.
 - Provide a label on every incoming item.
 - Record and update every item entered in the Stock Card.
 - Move goods to the goods storage area in the warehouse.
2. Jobs of Incoming Quality Control
 - Ensure the part description on the label is in accordance with the PO.
 - Checking with random sampling method.
 - Ensure that every item that arrives has no defects (zero defects).
 - Signing and stamping invoices and labels that have been declared accepted.
 - Record every incoming item in the Incoming Inspection Report.
3. Jobs of Production Planner
 - Scheduling the production process.
 - Control on the amount of raw material inventory to be produced.
 - Calculate and ensure production needs

Documents related to incoming goods inventory:

1. Purchase Order (PO)

is an order letter sent by a customer to a supplier via email containing details of the types of goods and the quantity of goods to be ordered by the company. This Purchase Order is then submitted to the material planner to check the incoming goods inventory based on the order list so that an order can be issued (internally).

2. Invoice

a shipping document to show the goods sent by the supplier to the customer. Contains the type of goods, the quantity of the goods, as well as the DO (Delivery Order) serial number according to the time of order.

3. Issue Order (internal)

a production order issued by the material planner to the shop. The document contains the type of goods and the quantity of goods that must be issued. This document must be signed by the production planner when the requested material is provided by the store to the production department.

Procedures related to incoming goods inventory:

a. Procedure for Receipt of Goods by the Store.

The narrative for the procedure for receiving goods at PT Tectron Manufacturing is:

1. The purchasing department issues a purchase order which is sent to the supplier after an agreement (quotation) occurs.
2. Goods come from suppliers accompanied by original invoices.
3. The store section receives an invoice from the supplier.
4. Goods are checked according to the invoice received.
5. If the quantity of goods is as stated on the invoice, then the process of unloading the goods from the container will be carried out and then put the goods into the goods storage warehouse.
6. After checking between the invoice and the goods received, the shop must stamp, write the date of receipt of the goods and signature on the invoice.
7. The store puts a label on every item that arrives
8. If the goods do not match the invoice, the store is obliged to contact the purchasing department for follow-up to the supplier.
9. Then the store provides information to IQC to check the new goods accompanied by an invoice.

b. Goods Checking Procedure by IQC.

Narrative for the procedure for checking goods from Teckwah suppliers at PT Tectron Manufacturing is:

1. IQC receives an invoice from the store and ensures that the invoice has been affixed with a stamp, date of receipt of goods and a signature by the store.
2. Then IQC checks the product description and the amount on the invoice whether it matches the label from the store.
3. Goods gift boxes and cartoon boxes are usually packed into one pallet with a quantity ranging from 1000-6000 pcs. In one bundle contains 20 pcs cartoon boxes or gift boxes so that in one pallet there are 50-30 bundles of cartoon boxes or gift boxes.

4. After that, IQC checks the random sampling plan (checks some of the goods from the arrival of a large number of goods to represent the decision) on each arrival lot of goods, if the number of arrivals of goods is small then check all the goods that come.
5. IQC PT Tectron Manufacturing uses a sampling method with AQL. AQL (acceptable quality level) is the quality level specified for each lot so that the sampling plan will receive a comparable comparison with the manufacturer. The AQL number defines how many rejects are allowed in a lot of goods. Inspection Level used by IQC PT Tectron Manufacturing is level 2.

Lot Size	AQL 0.65			AQL 2.5		
	Sample Size	Judgement		Sample Size	Judgement	
		AC	Re		AC	Re
1 ~ 50	↓	↓		5	0	1
51 ~ 150				20	1	2
151 ~ 280	20	0	1	32	2	3
281 ~ 500	↓	↓		50	3	4
501 ~ 1200	80	1	2	80	5	6
1201 ~ 3200	125	2	3	125	7	8
3201 ~ 10000	200	3	4	200	10	11
10001 ~ 35000	315	5	6	315	14	15
35001 ~ 150000	500	7	8	500	21	22
150001 ~ 500000	800	10	11	↑	↑	↑
500001 ~ Over	1250	14	15			

Figure 1. Single Sampling Plan for Normal Inspection, Level II
Source : PT. Tectron Manufacturing

- ↑ = Use first sampling plan below the arrow, if sample size equals, or exceeds, lot size carry out 100% inspection.
 ↓ = Use first sampling plan below the arrow.
 Ac = Acceptance Number, Re= Rejection Number

6. The basis for checking goods is using drawings or sample parts that have been approved or approved by the engineering department or called approval samples. IQC performs checks using an approval sample that matches the model being checked. An example of agreement used to compare the shape, color, writing on the cartoon box or gift box. IQC also ensures that no rejects are found, such as broken, scratched on cartoon boxes or gift boxes. Checking is done visually (direct vision). For that we must know:
 - 1) Types of cartoon box or gift box models
 - CS5229-2
 - CS6919
 - CS6919-2
 - CS6114
 - CS6124

2) Types of cartoon box dan gift box rejected

- *Broken*
- *Dent*
- *Bent*
- *Cut*
- *Crack*
- *Dirty*
- *Foreign*
- *Scratches*
- *Black Dot*

7. Then do the fitting on the cartoon box or gift box, the cartoon box or gift box is shaped according to the shape, this is done to see that each side of the box folds no more or less.
8. Then scan the barcodes in the gift boxes and cartoon boxes using a barcode scan tool, to make sure the barcodes in the gift boxes and cartoon boxes work well.
9. Make the results of the check for the arrival of the goods, whether the checked condition is "ok" or "rejected". If the results of the sampling check are ok, then the QC must stamp PASSED and if the results of the sampling check are found to be rejected goods exceeding the specified AQL standard, then IQC must stamp REJECTED on the ticket label and make a report to the superior regarding the rejected goods, then the report will be sent to suppliers with offer options, if few are found rejected, the goods will be replaced, if they are rejected in large quantities, the supplier will sort it out first and then send a replacement.

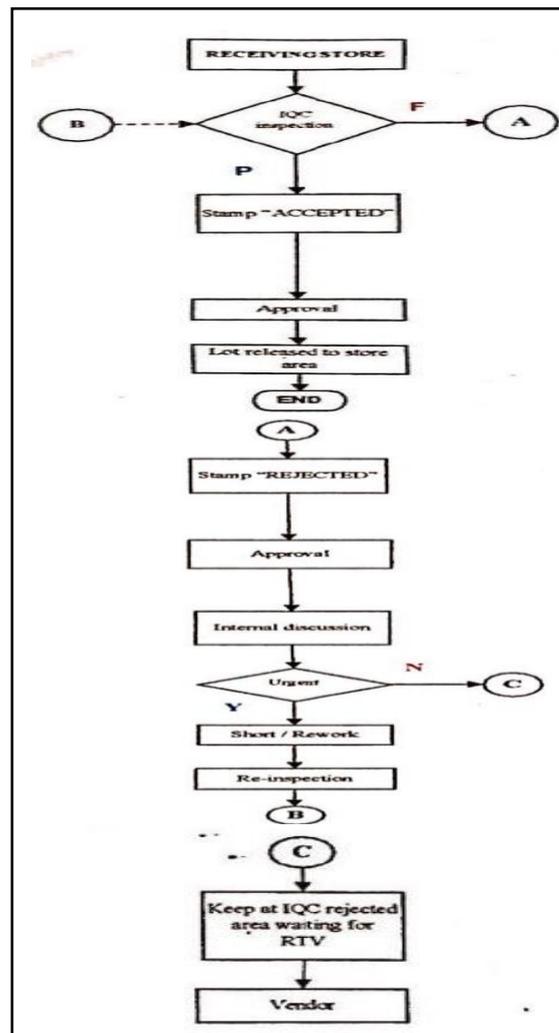


Figure 2. Flowchart Prosedur Pengecekan Barang oleh IQC

Source : PT. Tectron Manufacturing

c. Goods request procedure by production

The narrative for the procedure for requisitioning goods from store to production at PT Tectron Manufacturing is:

1. Production planner makes issue orders (internal) according to the goods needed by production.
2. The shop received a problem order (internal).
3. Request for goods required in accordance with the order (internal).
4. Record every item that comes out on the Stock Card..
5. Sign and stamp the order problem (internal) and then hand over the goods to the material handler.

The results of the evaluation of procedures related to incoming goods inventory

To make improvements to the findings obtained during the research, so that the management can make improvements in the activities of related functions, make a table of evaluation results as follows.

Table 1. EVALUATION RESULTS OF IMPLEMENTATION OF INVENTORY CHECK PROCEDURE IN PT. TECTRON MANUFACTURING

No	Problem Finding	Obstacles encountered	Suggestions
1	When the storeman does things between the delivery order and the physical goods that have just arrived.	Avoid returning errors in the type of goods and the quantity of goods ordered by the purchasing party with the actual goods received by the store from the supplier.	The purchase order given to the supplier is copied and then submitted to the receiving department to be checked for completeness and correctness of the data between the purchase order from the purchasing party and the invoice made by the supplier.
2	The warehouse for goods storage has lights that are slightly dim.	Dim lighting does not support IQC performing a visual check to confirm any rejections such as damage, scratches on cartoon boxes or missed gift boxes.	The number of lights in the goods storage warehouse is added to make the room even brighter so that IQC can do a good visual check.
3	The goods warehouse does not have an inspection desk for IQC to scan barcode s.	Due to the absence of an inspection desk in the storage warehouse and the location of the IQC room which is quite far away, IQC often does not scan barcodes on cartoon boxes or gift boxes.	It is recommended that the storage warehouse has an inspection table created for IQC to scan the barcode on the cartoon box or gift box and for the record that IQC has scanned the barcode, a file must be created on the computer from the date the goods were received.
4	There is a skip process carried out by IQC such as using approval samples and scanning barcodes when checking goods.	Checking goods is not optimal because of the skip process, thus allowing the rejection of goods to be missed to the production line.	This happens because of the lack of direct supervision from IQC's superiors, supervision should often be carried out when IQC checks goods to increase awareness of IQC checking according to established procedures.

CONCLUSION

Based on the results of the research that the authors have done, it can be concluded that the procedure for receiving incoming goods is sufficient, but evaluation activities are still needed to provide recommendations for improvements to the findings that have been obtained during the research, so that the management can make improvements in activities for related functions, as well as increasing employee awareness to carry out their work in accordance with established procedures.

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