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Participant Handbook

Sector
Logistics

Sub-Sector
Warehousing

Occupation
Warehousing Operations, Receiving

Reference ID: **LSC/Q2112, Version 3.0**
NSQF Level 3

Receiving Assistant

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This book is sponsored by

Logistics Sector Skill Council

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Shri Narendra Modi
Prime Minister of India

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SKILLING CONTENT: PARTICIPANT HANDBOOK

Complying to National Occupational Standards of
Job Role/ Qualification Pack: **'Receiving Assistant'** QP No. **'LSC/Q2112,V3.0 NSQF Level 3'**

Date of Issuance: 27/01/2022
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'Valid up to' date mentioned above (whichever is earlier)

Authorized Signatory
(Logistics Sector Skill Council of India)

Acknowledgements

We wholeheartedly thank all the organizations who have immensely helped us in endorsing the contents of this Participant Handbook thus contributing towards Government of India's initiative in skilling based on the Qualification Pack (QP) & National Occupational Standards for a Receiving Assistant in Warehousing.

About this Book

This Participant Handbook is designed to facilitate training to the Receiving Assistant Qualification Pack (QP). It provides learners with the necessary knowledge to major warehousing topics, such as receiving goods, moving goods, loading, unloading, operating receiving equipment's to record goods and segregate them for storing, binning, delivering, stock counting, putting away and shipping, getting knowledge on various storage area in the warehouse.
Its decision-making orientation provides a real-world approach focusing on large and small warehouse industry. The book elaborates how Individuals in this position to perform general physical activities for receiving goods for packaging or storing, creating labels and understand other Receiving Operations and using the process of operating the different receiving equipment and binning processes. This handbook also provides the latest information on the usage of technologies to perform these operations. Many modules have been revised to capture the diversity, varied perspectives, and current spirit of Receiving operations. The handbook is divided into 4 NOSs.

NOSs are Occupational Standards which have been endorsed and agreed to by the Industry Leaders for various roles. The NOSs are based on the educational, training and other criteria required to perform the job/role of a Receiving Assistant.

Key characteristics of this handbook:

(i) It discusses concept of warehouse management in an easy to learn manner.

(ii) It presents warehousing concepts in interactive and professional way.

(iii) It gives opportunity to learners to visualize themselves in a professional warehouse set-up.

Key Learning Objectives for the specific NOS mark the beginning of the Units for that NOS. The symbols used in this book are described below.

Symbols Used


Key Learning Outcomes


Summary


Unit Objectives


Tips


Notes

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6. Employability Skills - 30 hours (DGT/VSQ/N0101)

The book on New Employability Skills is available at the following location:

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Employability Skills - 120 hours (DGT/VSQ/N0104)
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1. Introduction to Receiving Assistant

Key Learning Outcomes

At the end of this module, participant will be able to:

1. Classify the components of supply chain and logistics sector
2. Detail the various sub-sectors and the opportunities in them
3. Explain job roles in warehousing
4. Detail your job role as Receiving Assistant and its interface with other job roles
5. Explain various activities in a warehouse
6. Describe the various MHEs and equipment used in warehouses
7. Discuss the documentation requirements in warehousing operations
8. Identify various activities in a warehouse
9. Perform your job role as Receiving Assistant
10. Identify the various MHEs and equipment used in warehouses
11. Prepare necessary documents for warehousing operations

Unit 1.1: Logistics and Supply Chain Management

Unit Objectives

At the end of this unit, participant will be able to:

1. Describe supply chain management
2. Explain Logistics management
3. Explain the significant flows in Supply Chain Management

1.1.1 What is Supply Chain Management?

"Supply chain is like nature; it is all around us." Dave Waters.

All actions starting from point of origin through point of utilization till End of Life of the Product or Service are enveloped by Supply Chain Management. It involves Planning and implementing part of satisfying the consumer demand.

Supply Chain definition: The material movement and its flow, from the source to the end consumer. Supply chain entails manufacturing, purchasing material, transporting, warehousing, demand and supply planning, customer service, and management of all the supply chain processes.
This process is based on integration. The primary responsibility of supply chain is to connect major business procedures and functions across and within different firms and create a unified and high performing model for business. The several logistics management processes mentioned above are a part of supply chain, furthermore to manufacturing processes and processes across product design, marketing, sales, IT and finance.

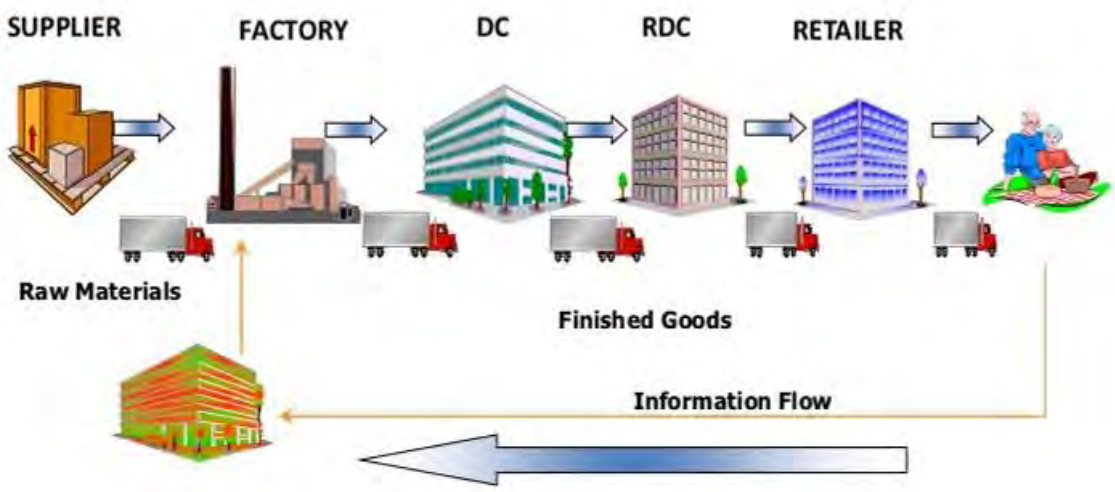


Fig 1.1.1 Supply Chain Flow

1.1.2 Introduction to Supply Chain Management

The supply chain is a system of storage and distribution. It performs the role of procurement of resources / material, conversion of these materials into semi-finished and finished goods, and the supply of these final products to consumers. The existence of Supply chains cannot be denied in both service and manufacturing establishments, even though the complexity of the process may vary significantly from one industry to another industry and one firm to another firm.

This system of supply chain is typically seen to lie between fully vertically integrated organizations, where the entire product and material flow is owned by one firm and those where each network member operates self-sufficiently. Therefore synchronization between the various players in the chain is the key in its operative management.

Above given picture is a specimen of a very simple supply chain for a sole product, where raw material is acquired from suppliers, converted into finished goods in a single step, and then transported to supply centers, and ultimately, consumers. Genuine supply chains have manifold of end products with collective components, facilities and capacities.

Components of Supply Chain Management
Five main components of Supply Chain Management are as follows:

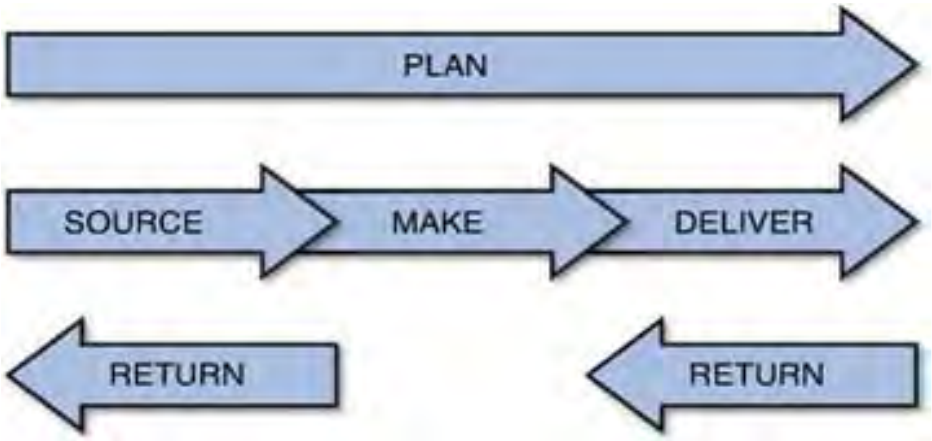


Fig. 1.1.2. Components of Supply Chain Management

Supply chain management is defined as *"The movement of materials as they flow from their source to the end customer. Includes purchasing, manufacturing, warehousing, transportation, demand & supply planning and inventory management. It is made up of people, activities, information and resources involved in moving a product from its supplier to customer."*

As per SCOR, the five important components of supply chain management are -

PLAN - SOURCE- MAKE- DELIVER- RETURN

PLAN: This stage addresses how customer demand will be met through the supply. As can be seen in the picture, plan function interacts with customer to get demand forecast. This gets translated into supply plan and communicated to the supplier for sourcing raw material.

SOURCE: This is the step where one must identify the various possible vendors for the raw materials required for the manufacturing. Just identifying suppliers will not be enough. It should also include the availability of products, the cost involved, ease in transporting goods and even the payment terms.

MAKE: The third component involve the activities like designing, producing, testing, packaging and then synchronizing all these activities for delivery. The raw material from suppliers are transformed to finished goods for the customer.

DELIVER: This stage involves the delivering the right product at the right place at the right time in the right quantity and at the right price. Here the supply chain transports the finished goods from factory to the warehouses, warehouse to distributors, distributors to retailers and finally retailers to final consumer.

RETURN: This is the last stage in supply chain which is becoming increasingly important. Here the defective, damaged or even the rejected goods are returned by the customer. The supply chain must respond to the customer quickly and return the goods by optimizing the cost.

1.1.3 What is Logistics Management?

Logistics Management

Logistics management is the fragment of supply chain management that devices, implements, and controls the effective forward, and reverse flow as well as storage of goods, material, services, and linked information between point of development and point of utilization to meet customer's requirements.

Logistics management comprises activities such as Inventory control, warehousing, and transportation management. Logistics management mainly focuses on the transportation and storage of products as a part of the supply chain.

Logistics management encompasses two main processes:

Inbound logistics: Includes the activities connected to obtaining, storage and transport of Raw Materials.

Outbound logistics: Involves the storage and delivery of final products to customers.

How is it different from Supply Chain Management?

SCM is an overarching concept and it includes logistics management as one of its components.

Logistics mainly deals with warehousing, inventory management, transportation, import and export management, track and trace and related processes.

SCM is a wider concept and is a tool to create competitive advantage for any company. Besides logistics, it carries various other functions like supply chain planning and strategy, forecasting and demand planning, production and supply planning, procurement and vendor management, collaborations and coordination with upstream and downstream partners, information flow management.

Supply chain management essentially ensures three flows:

a. Product flow / Service Flow
b. Information Flow
c. Finance/Money Flow

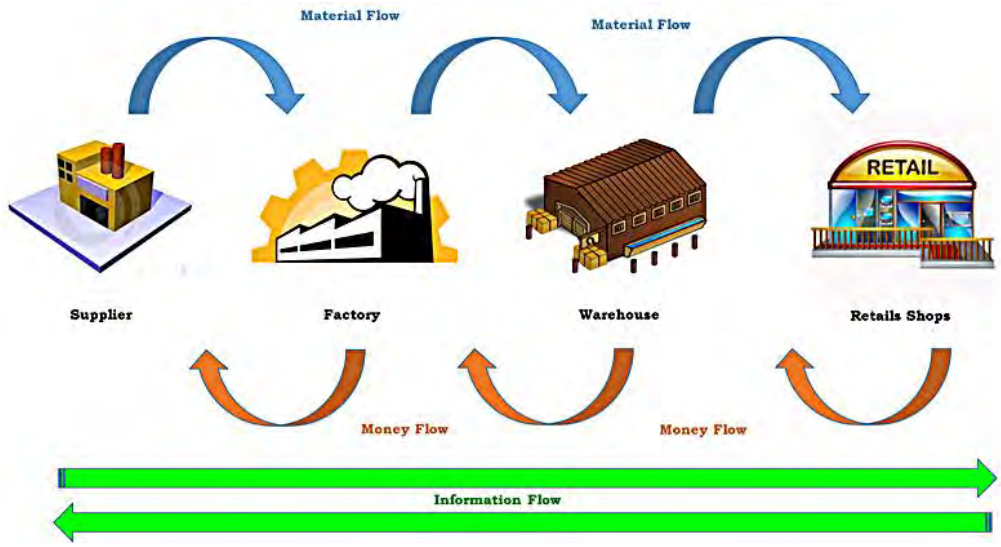


Figure 1.1.3 Supply Chain Flow

Product flow simply means the flow of products between the supplier, manufacturer and the end consumer. This taps the sale of the products as well as the return in case it doesn't meet customer satisfaction.

Information flow involves the exchange of information amongst the manufacturers and the suppliers as well as updating the status of the delivery on a real time basis, deprived of any delay or distortion to make sure that the demands are met with right supplies. This process includes the market monitoring amongst the supply chain associates to understand end-user preferences.

Finance flow is a product of the Product flow and the information flow. It includes credit terms, consignments and payment schedules as well as ownership arrangements. A Receiving assistant works in a warehouse, and their prime duty is to receive consignments, check the packaging for goods, check for quality and return any damaged packages as well as to assist in daily warehousing or storage operations. They are expected to be sound in technical matters concerning these machines and are expected to know the operations concerning labeling, packaging and customer orders for shipment making sure of the quantity and type specified in the Pick list. We will learn about this in greater detail in the next unit.

Exercise

1. The three important flows in Supply Chain Management
2. Note down the components of Supply chain

Notes

Unit 1.2: About the Course

Unit Objectives

At the end of this unit, participant will be able to:

1. Explain the importance of the Receiving Assistant
2. Describe the organizational structure
3. Elucidate the main objectives of this course

1.2.1 Receiving Assistant

Another term for Receiving Assistants is receiving clerks. Persons in this job role are accountable for carrying out inbound activities like filling paperwork and receiving consignments, identifying missing or damaged items, scrutinize them against invoices, and dealing with returns to the distributor. There are a few more activities they are responsible for like cross docking, updating information systems regarding goods received and their storage location and managing invoices and forwarding them. Following is a chart showing their position in the warehouse operations:

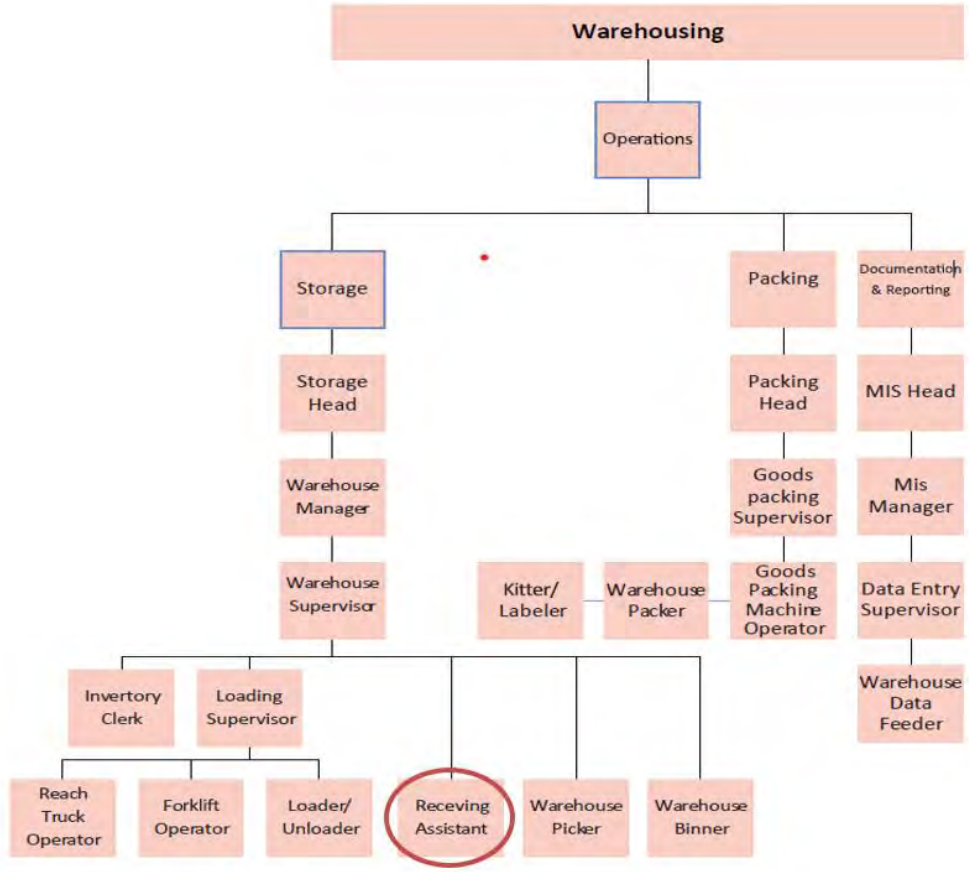


Figure 1.2.1: Warehouse Organization Structure

A Receiving Assistant is a proficient worker who keeps track of and check on an incoming shipment to make sure inventory doesn't get lost in transport. They also keep a track of inventory for outgoing goods. They require to also have adequate physical strength to unload shipments along with the clerical skills to bring up-to-date the records and follow up with suppliers.

This job entails that the assistant is a team worker and values achieving joint goals. The worker must prioritize and perform tasks within given time limits. The receiving assistant should be equipped to maintain high levels of attentiveness throughout his/her shift.

A successful Receiving Assistant should have a critical eye for detail, be good with numbers, and have the capability to multitask. They must also confirm efficient processes to on time resolve any problems or inconsistencies that arise during the shipping and receiving procedure. The goal is to make sure we receive the correct packages and stock them aptly.

1.2.2 Objectives of the Course

- The main objective of this course is to make individuals to perform general physical activities in order to recognize goods, package and label then and takeover procedures at the warehouse through the use of receiving processes and assisting equipment
- An individual should develop the knowledge of organizational products, policies and procedures.
- Trainees should understand the risk and impact of not following defined procedures/work instructions
- They should be able to demonstrate clear technical knowledge about nature and characteristics of components being received and stored, the appropriate machines to be used to carry out a procedure, the inspections to be conducted and the binning techniques
- Provide knowledge of how to use equipment such MHE, IT Systems, Barcode scanners, densimeters etc.
- To learn how to read invoices, handling instructions and understand the codes as per company procedures and read safety manuals and safety signs on the warehouse floor
- To demonstrate clear communication with the supervisor, and peers regarding the chain of activities on the shop floor to learn smooth running of daily activities
- To demonstrate the ability to judge workloads and loading/ unloading limitations like missing product, damage and spillage; volume, capacity, and manpower need during peak and nonpeak hours.
- To understand customer timelines and ensure that they are efficiently met
- To possess analytical skills and demonstrate an ability to track progress, complete tasks without errors and notice common incidents and take necessary safety measures.

Tips

1. Be open to learning and understand the expectation of the course
2. Gain knowledge about your position in the organizational flow and your supervisors

Notes

Unit 1.3: Introduction to Warehousing

Unit Objectives

At the end of this unit, participant will be able to:

1. Explain the importance of warehouse in supply chain
2. Describe the various activities carried out in a warehouse
3. Identify the significance of policy and procedures

1.3.1 Need for Warehouse

Whenever goods are created or manufactured, they are not directly sent to the markets for sale. They are stored and released as and when required. This process of storage requires proper arrangement for conserving goods from the moment of their production or acquisition till the moment of their use or sale. Storage operation when done on a large scale in addition to a quantified manner it is termed as 'warehousing'. **'warehouse'** is the term used for the place where goods are stored.
Warehouse is used for storage or assembling of goods, in order to make goods available whenever required. A warehouse can store various different types of goods such as, RM-Raw materials, WIP-Work in progress goods, FG-Finished goods, etc.

RM - Raw Material

WIP - Work in Progress

FG - Finished Goods

Figure 1.3.1: Types of Goods / Inventory

Moving and storing products is a part of Logistics. Warehouses used for storage carry out the function of holding products that have recently been made, are awaiting transit, or are at source location awaiting consumer order. The image above depicts that a Warehouse may contain several forms of goods such as raw material storage, in transit storage, finished good storage, and storage in distribution centers.
Warehouses play a pivotal role in supply chain management. As the word indicates, supply chain consists of various links and warehouse is one of its strongest links. As mentioned earlier, the biggest challenge of supply chain is the ever-widening gap between the demand and supply. Warehouse plays the role of a stabilizer during these fluctuations. Warehouse can be called as a place for everything and everything in its place.

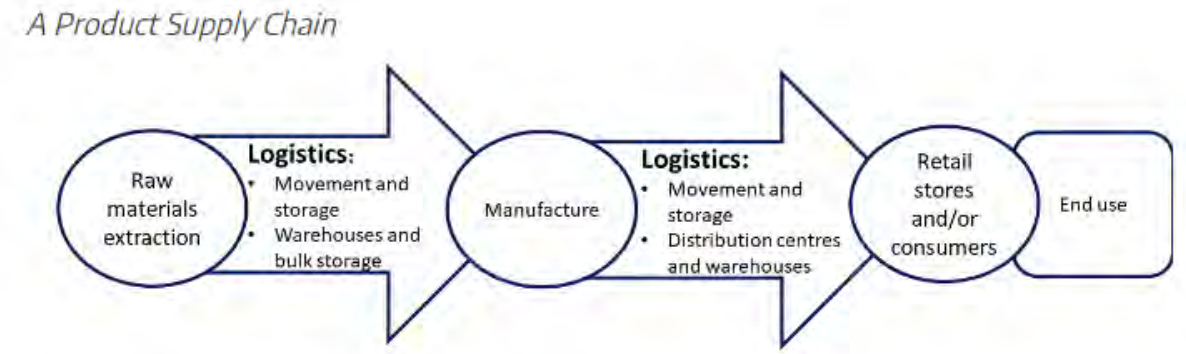


Figure 1.3.2: Product Supply Chain

Some of the major roles of warehouse are:

1. ***Facilitating regular and constant flow of goods:*** This is done by balancing between the demands forecast and supply constraints.
2. ***Provide safe custody of goods:*** In supply chain goods are always exposed to various risks. A warehouse can mitigate these risks by playing the role of an intermediary.
3. ***Consolidation of cargo:*** Volume always provides cost benefit. The goods can be procured from various sources. Warehouse is a place where these goods can be stored for maximization of various cost benefits.
4. ***Break bulk point*:** While consolidation can be one advantage, then even breaking the bulk can also provide much benefit. In this case, bigger shipments can be customized thus making it easier for the supplier and the customer.
5. ***Value added services*:** The strength of supply chain is in adding value at every step in the process. It is difficult to add value while the goods are in motion or in transit. Warehouse is an ideal place for many value additions for the goods.
6. ***Managing seasonal supplies*:** This is one big challenge many of the stake holders face. Seasonal goods demand many facilities which will vary from season to season. A warehouse can act as a transshipment point where all such facilities can be tailor made.
7. ***Product Mixing*:** Product mixing gives great cost benefit to the supplier who in turn can pass on this benefit to the end user. Warehouse is a place where different products can be gathered and stored. Thus, it becomes the ideal place for the companies to mix their products for maximization of profits.
8. ***Defining the time to market*:** Markets always demand the right product at right place in right quantity for the right price. The unreliable production, unpredictable transits and unforeseen constraints during movement of goods makes this a difficult task. However, this can be easily achieved by holding the right amount of inventory at the warehouse.
9. ***Specialized services*:** Warehouse also provides many specialized services like customs bonding and so on.

1.3.2 Warehouse Activities

Post reception of goods and right before shipping, several of internal warehouse processes are carried out in order to ensure an effective flow of inventories within the warehouse and the the process of organization and maintenance of company inventories. The following enlists the activities performed in most of the warehouses;

1. **Receiving** – Wherein you receive the products from the supplier; Schedule Carrier, Unload Vehicle and finally Inspect
2. **Stow** – Scanning the received goods, checking it for damages, and place goods in storage
3. **Put Away** - Classify Product, Recognize Product Location, Move Products, Storage of goods and Update Records
4. **Storage** – storing products on the basis of size, popularity, reachability, etc.
5. **Order Picking** - Data, Batch Picking, Walk & Pick
6. **Shipping** - Plan Carrier, Load Vehicle, Bill of Loading, Record Update

Fig. 1.3.3. Warehouse activities

1.3.3 Introduction to Warehouse Operations

A typical warehouse will receive, store, rearrange and repackage goods. When goods reach at the warehouse, those are placed larger units called pallets and at the time of shipping the goods have to be packed individually or in smaller cases. Therefore, the outbound activities are usually labor intensive. For instance, to transfer 10,000 separate boxes of paper clips, the participation of labor force would be wide. But, for transporting 48 case boxes, the labor prerequisite is relatively low. And much lower for moving a pallet loaded with 24 cases. Eventually, warehouses that receive bulk shipments, they tend to store them in a way to simplify the process and push faster recovery so as to get them picked, organized and repacked to reduced units as per customer needs.
The restructuring of a product involves the subsequent processes:

1. **Inbound Processes**
   - Receiving
   - Stow
   - Put-away

2. **Outbound processes**
   - Processing customer orders
   - Order-picking
   - Checking
   - Packing
   - Shipping

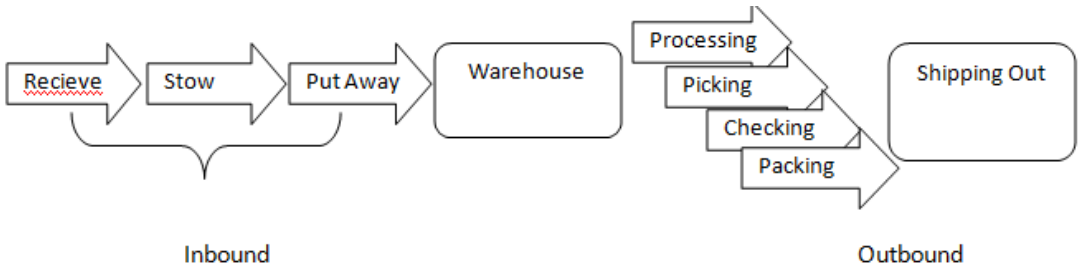


Fig. 1.3.4. Warehouse Process

1.3.4 Warehouse Management System - An Introduction

The software used to manage and track all the warehousing processes is called Warehouse Management System. The main purpose of WMS is to regulator the storage and movement of goods as well as to monitor the transactions related to material movement. An industrial strength relational database product such as Informix, Oracle, Sybase, DB2 or other are used in order to build this system. The processes of WMS comprise directed picking, directed replacement and directed put away, but are not just limited to these. The primary logic will utilize a blend of location, item, quantity, order information and unit of measure to determine the location to stock and the sequence to perform these operations.

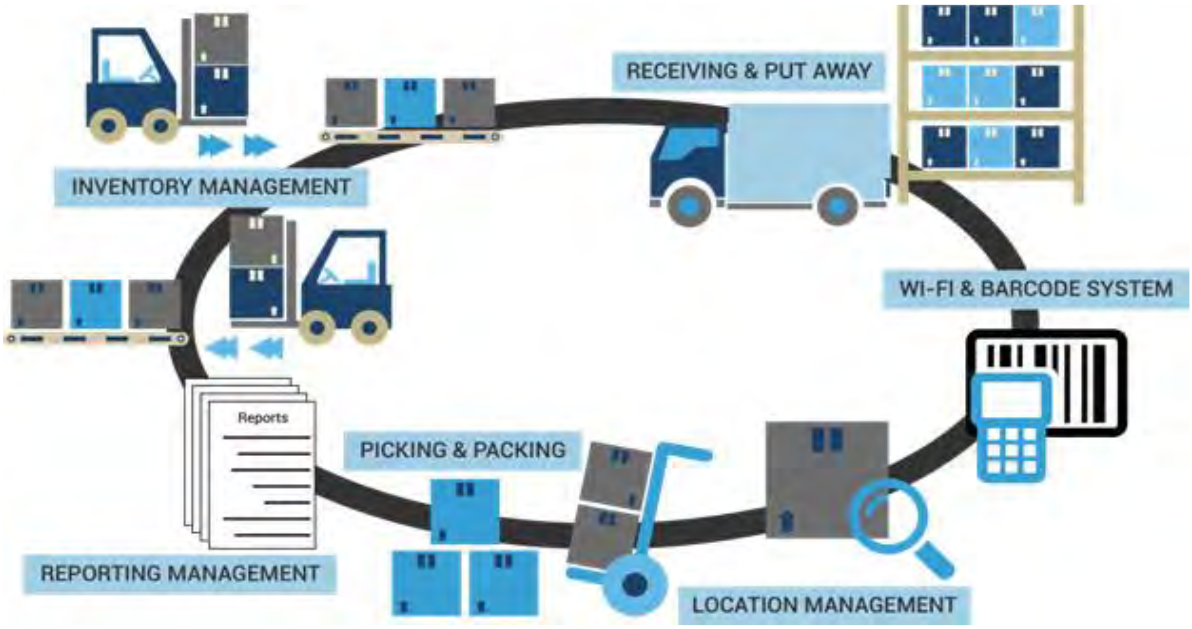


Fig 1.3.5: Warehouse Management System

WMS aids in keeping down inventory costs while cumulating overall efficacies. WMS comprises:

- Warehouse capacity management
- Cross docking
- Load Planning
- ABC Stratification
- Picking optimization

The benefits of WMS include:

- Transparency in storage and accuracy
- Higher space utilization
- Decrease in shipping errors and thereby cost
- Reduction of Inventory carrying cost

1.3.5 Prerequisites for WMS Implementation

WMS needs are quite widespread. The features of each SKU and the location of the same should be maintained at the thorough level or it can also be done by combining similar items and locations into categories. For instance, every SKU characteristics includes at the detailed level, the unit measure of the item stocked and the weight of an unit and (cases, pallets) and information for example the possibility of mixed storage with other SKU s, maximum quantity for each location, hazardous categorization, maximum stack height, feasibility of racking, nature of the item (raw material or finished good), acceptance of the item etc. However, only a limited number of operations require information of individual items as mentioned above and most other operations will profit by creating groups of products that are similar.

The picking, replenish and put away location of the item will be decided by the system automatically. The systems have to follow a precise logic that has to be allocated to various combination of item/location/order which is likely to occur. Few such locations are as follows:

Location sequence:
The movement through the warehouse is well-defined and every location is allocated a sequence number. The sequence numbers will help the movement inside the warehouse especially in preparing the order for packaging. However, in the put-away process, the logic will look for the primary location in the sequence in which the product can be stored.

Zone Logic:
By breaking the storage locations into several zones activities like, direct picking, replenishment and put-away to and from specific areas can be done easily. This logic has to be united with some other logic to determine the precise location within the zone as zone logic can stipulate the area alone.

Fixed location:
Regulate fixed locations for specific items that enable direct picking, put away and replenishment. Fixed locations are usually utilized as primary picking locations in case or piece picking.

Random Location:
These are like fixed locations however these are not assigned with any items. However, a different logic has to be combined to point out the exact location.

First-in-first-out:
Picking directed to older inventories first.

Last-in-first-out:
This is appropriate for handling perishable products for exports. This logic is the opposite of the previous one; picking from the latest inventory first.

Unit of measure or quantity:
Picking based on the quantity or unit-of-measure mentioned in the order. For example, if the order is for 20 items, pick from the fixed locations and for more than 20 go to reserve storage locations.

Fewest Locations:
This logic concerns much around the productivity. Pick-from-fewest needs quantity information to allocate least number of locations to store the items. Ultimately the logic finds the fewest possible locations to store the entire quantity of items. Even though, it is attempting to reduce the put-away time and increase the efficiency, it does not hold good in terms of space utilization.
Pick-from-fewest will leave small quantities of items scattered in the warehouse and put-to-fewest leaves small locations empty.

Reserved locations:
In case of requirement of predetermined specific locations to put-away or pick-from, this logic can be used. While attempting to cross dock, reserved locations can be used to move the specified items to inbound shipping or staging or directly to an awaiting outbound trailer.

Nearest location:
This logic looks for the closest location required to put-away or pick from. During setup, it is better to test whether the logic is choosing the shortest route or closest location. The logic always chooses a straight line route for calculating the shortest distance. The logic may suggest the picker a location (straight line calculation) that is 30 feet away, for which the picker has to move 200 feet up and down the aisle while there might be another location available at just 50 feet away in the same aisle. But, for the logic 50 is greater than 30.

Maximum cube:
Cube logic uses unit dimensions to calculate cubic inches per unit and then compares it with the cube capacity of a location to determine how much can the location hold. If all units are of equal size and if they can be stacked one over the other, cube logic will work. As it is practically rare, this logic is not relevant to the practical world.

Consolidate:
If a location has the same SKU as it appears in a put-away list, the same location can be used, so as to keep the like items consolidated.

Lot sequence:
The Lot Sequence uses the logic that uses lot number or lot date to find out the locations to pick or restock. Combination of logics can fetch good results. For example, if a warehouse has multiple locations with same receipt date, then one may employ pick-to-clear logic with first-in-first-out.

Need for WMS:

It is essential for introducing best practices within a warehouse but it also assists in activities like ergonomic improvements, refining warehouse layout and minimalizing travel time by having fast moving items nearer to the dispatch area. The warehouse efficiency can be improved through the inclusion of a software technology. Consumers have become extremely demanding these days and with the influence of communication technologies, the expectation for real time response to all their queries has increased. Even Marketing, Sales, and Finance teams needs real-time data for their seamless operations.

The inventory will be managed by a stock-control system at stock location and quantity level but this cannot manage the productivity of the warehouse. A WMS can perform data processing and movement co-ordination within the warehouse thus, increasing the competitive nature and response towards consumer or client demands. Hence, WMS is a priceless tool for refining an organization's productivity and client focus.

Notes

Unit 1.4: Warehouse Equipment and Layouts

Unit Objectives

At the end of this unit, participant will be able to:

1. Detail on the different types of storage systems in a warehouse
2. Detail on various MHE equipment used in a warehouse
3. Understand the concept of Warehouse layouts

1.4.1 Warehouse Handling Equipment

Warehouse equipment are used for storage, movement, protection and control of material and people throughout the end-to-end process of the warehouse. Materials handling includes moving, packaging, and storing all the materials used inside the warehouse. The different kinds of equipment which are used in a warehouse can be broadly classified into three categories, viz, storing equipment, material handling equipment and safety equipment. A judicious selection of different store equipment is a key to the successful operation of a storeroom

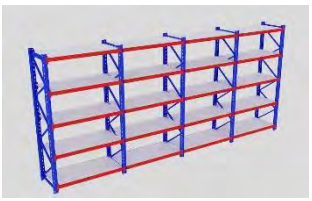
Forklifts, reach stackers, pallet trucks, heavy duty racks, slotted angle racks, cranes, hoists, handrails, bollards, wire partitions are all example of warehouse handling equipment. Warehouse equipment are used to increase output, control costs, and maximize productivity. A well-designed handling system attempts to achieve the following:

- Improve the efficiency of the warehouse with fewer efforts.
- Allow handling of several types of goods which cannot be manually handled or lifted.
- Cut down on manual efforts and labor costs.
- Reduce potential damage to material during storage and handling.
- Maximize the utilization of the cube space inside the warehouse.
- Minimize the accidents inside the warehouse.
- Reduce the overall cost of operations of the warehouse.
- Improve service levels of the warehouse

Following are the ways, warehouse equipment may be classified.

Fig. 1.4.1. Warehouse Equipment Classification

Storage Equipment

Name	Picture	Description
Selective Pallet Racking		This is the simplest & most economical racking system that allows 100% approachability to each pallet. This racking is suitable for large variety of SKU's irrespective of quantity.
Heavy Duty Racks		Heavy duty shelving or racking is a modest storage solution which facilitates storage of non-palletized items. Ideal for large assortment of medium to big sized items that can be handled manually.
Long-span Shelving Racks		Long-span Shelving is ideally suited for items which are light/medium in weight and voluminous in nature. This types of racking is used for Auto, Retail, Engineering Sectors
Bin Racking		Usually used in Spares part storage for storing smaller items.
Slotted Angle Racks		This shelving is a versatile system best suited for storage of small components, bins, cartons having light loads up to (300 kgs) level.
Mezzanine Flooring		Column based Mezzanine floor system is a light weight steel flooring system provided at a suitable height above the ground. The system can be configured to suit the layout of the room, taking into account pillar positions, door positions etc.

Cantilever Racking System		Generally used where the need is to hang the products like tyre.

Table. 1.4.2. Storage Equipment

Material Handling Equipment (MHE)

Name	Picture	Description
Hand Pallet Truck (HPT)		One of the most important equipment in the Warehouse. Used to lift and move pallet within the warehouse.
Battery Operated Pallet Truck (BOPT)		This is Battery Operated version of Hand Pallet Truck. Used in large warehouses for fast movement of Material.
Integrated Dock Levelers		Aids loading and unloading of goods by acting as bridge between truck and Loading Bay edge.
Forklifts		Another very important equipment in the Warehouse. A forklift is a powered industrial truck used to lift and move materials over short distances. It can pick up goods a height with HPT or BOPT cannot do.
Reach Trucks		Reach trucks are designed for 'reaching' extreme heights. They are used for highly racked warehouses for lifting of Pallets.

Stackers		Suitable for stacking, double pallet handling, order picking and horizontal transport. Available both in Manual and Electric version.
Chain Pulleys and Hoists		These are used to lift and lower heavy loads in the warehouse. Again, available in Electric of Manual versions.
Dollies		Used to move heavy equipment, boxes, and other bulky items within the warehouse.
Trucks		Can be made wooden, steel, aluminium, or plastic, used for movement within the warehouse.
Utility Carts		Movement of material like Garments and tools inside the warehouse.

Table. 1.4.3. Material Handling Equipment (MHE)

Safety Equipment

Name	Picture	Description
Emergency Wash Station		Used in Chemical Warehouses for body and Eye Wash in case of any spillage or leak.

Anti-fatigue Mats		Used in the warehouses which deal with oil, grease and other slippery material.
Barrier Rails		These barricades protect valuable equipment and workers from hazards in the workplace.
Bollards		Heavy-duty bollards provide a physical barrier between fork trucks and valuable equipment.
Column Protectors		Universal rack protectors protect rack columns from damaging impact that can be caused by forklifts or heavy machinery.
Wire Partitions		Wire enclosures work well as tool rooms, security cage, or to store hazardous material.
Traffic Visibility Mirrors		Wide angle convex mirrors designed to increase surveillance, provide security, and promote safety.
Handrails		Safety guardrails make overhead walkways and mezzanines safe with easy to install guardrails.

Miscellaneous Equipment		Floor signs and other range of products for safety in the warehouse.

Table. 1.4.4. Safety Equipment

1.4.2 Warehouse Layouts

A warehouse layout which if created well can streamline the flow of work and create quicker shipping times. Nevertheless, if your warehouse is not proficiently utilizing the space it can negatively impact the supply chain, shipping time and workflow. Augmenting the warehouse layout can radically improve operations, however, each warehouse is different, and what works for one might not be replicated. Though, there are a few limited base design choices that may very well work and anybody working in a warehouse should be mindful of these.

Here are the top three warehouse layout designs:

1. U- Shaped Design

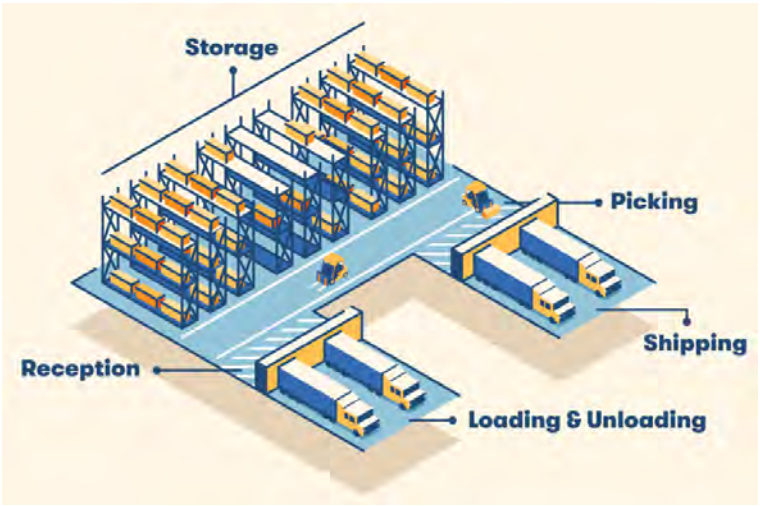


Figure 1.4.1: U shaped Layout

This layout is an incredible option for any warehouse pertaining to its simplistic design that can be replicated almost anywhere. As suggests, the warehouse is created in a “U” shape, like a semi-circle. The plan suggests the loading and shipping area to be put close together. Followed by this, place the reception area, also recognized as the staging area. The Staging area is a place where the unloaded products are segregated and sorted before they are positioned in the suitable storage spaces. The back end of the warehouse would be filled by storage area with active storage — or the most

widespread products if the warehouse — squeezed in the center of static storage — which goods are the most inclining to sit on the shelves.

I- Shaped Layout

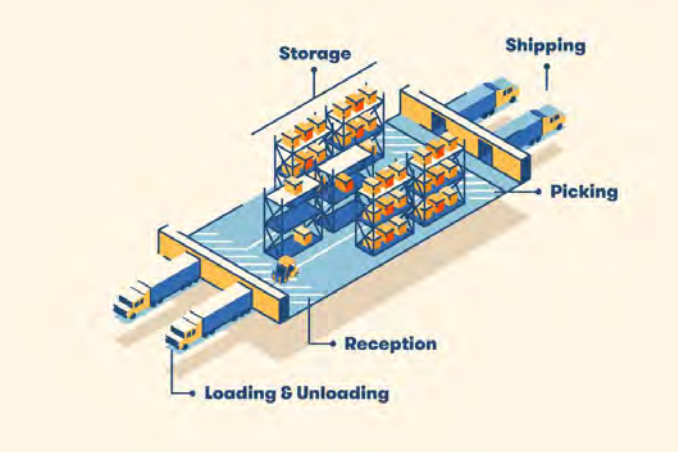


Fig 1.4.7: I shaped Layout

This is also referred to as a through-flow design. The I-shaped layout is brilliant for high-volume warehouses. It's created in an "I" shape, with the storage area in the middle, loading and unloading area on one end and the shipping area on the other. The products are ordered in a way that the higher-volume objects are retrieved easily. Nevertheless, products typically need to travel the entire length of the warehouse to go for shipping.

L- Shaped Layout

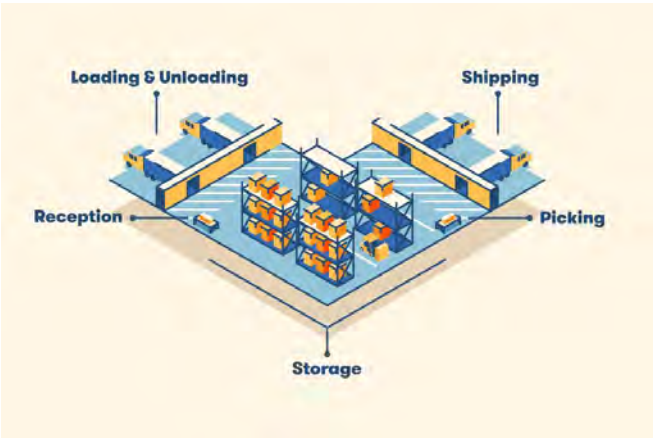


Fig 1.4.8: L shaped Layout

The rush hour flow of the warehouse is set up in the shape of "L" in this warehouse design. Reception and loading areas are situated on one side of the building, while the picking and shipping areas are set up together, next to each other. The left over space is filled with goods and it has a plenty of space for storage.

Notes

Unit 1.5 - Documentation in Warehousing

Unit Objectives

At the end of this unit, participant will be able to:

1. Explain the importance of documentation in warehousing.
2. Detail the various documents used in warehousing operations.

1.6.1 Types of Warehouse Documents

Documentation is another vital part of warehousing operations. The way, bank is the custodian of depositor's money, warehouse is also the custodian of the value in the form of inventory. Any loss to inventory is a loss of money.

Documentation carries following purposes in a warehouse:

Operations Management: Documents like pick list, Goods Receipt Check List (GRCL), Bill of Material (BOM) are several others which are essential to conduct warehousing operations on day to day basis. They facilitate the allocation of work, picking and put away of right quantities in a timely manner and correct processing of customer orders.

Record Keeping: The inventory stored in the warehouse carries economic value. The primary functions of stores is to maintain account for each material received in stores by keeping proper records of all the inward, stored and outward-bound materials so that appropriate accounting and audit trail is sustained.

Transit Documentation: Whenever the goods are transported from the warehouse to the consignee, they need to carry the transit documentation. Transit documents meet the regulatory requirements during transit in India and establish the consignor, consignee and nature of the goods being transported.

Audits: Warehousing are subject to frequent audits for inventory reconciliations, adherence to Standard Operating Procedures (SOP) and regulatory compliances. Documentation provide the complete history and trail of all the transactions which happened in the warehouse.

In section 1.4, the five stages in the warehousing operations is explained. Following are the key documents used during these five stages.

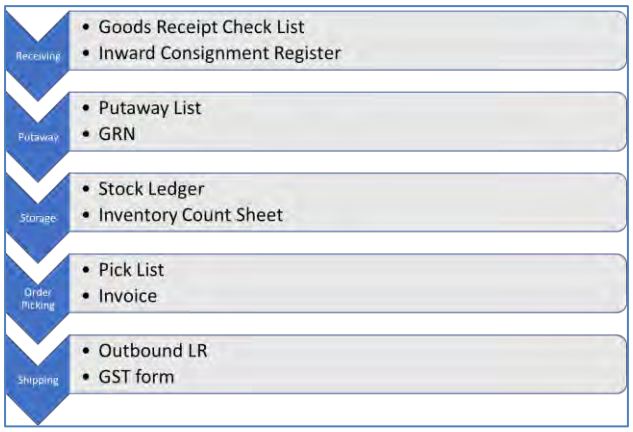


Fig. 1.6.1. Documentation in Warehouse

Inward Consignment Register

This is a register which is used to record all the incoming shipments into the warehouse.

Gate Inward Register

Sl no.	Material Receiving Date	Invoice Number	Invoice Date	Supplier Name	Name of Place / City	Material Description	Qty Received	Qty Delivered	Material Deliver's name	Invoice Details

Fig. 1.6.2. Inward Consignment Register

Put away List

This list also called as Binning list; guides associate to the appropriate bin of location where the incoming goods must be kept.

Putaway List

Warehouse _____ Date _____

Supplier Invoice No. _____ Time _____

Sr No.	Item Code	Item Description	UOM	Quantity	Bin Location

Fig. 1.6.3. Put away List

Goods Receipt Check List (GRCL)

It is a check list to be followed at the time of receipt of material at the warehouse.

Sample Goods Receipt Check List				
Date and Time of Reporting		To be filled by Warehouse Associate/ Supervisor		
Vehicle Number				
Consignor Name				
Invoice No.				
Allowed for Unloading	Yes / No - If no, why:-			
Remarks				
Name				
Signature				
Security				
Gate Entry #		To be filled by Security		
Signature				
Date				
Time				
Blind Count				
Item Name		**Quantity**		To be filled by the person did blind count
			TOTAL QTY: -	
Blind Count Remarks				
Damage Remarks				
Name, Signature				
Date & Time				
Sample Quality and Compliance Check				
Legal Metrology Check		Yes / No		
Any Unit Damaged		Yes / No		
Any Unit Leaking		Yes / No		
Labels Check		Yes / No		
Packaging Check		Yes / No		
Sample Weight Check				
No. of Boxes				
Remarks				
Name, Signature				
Date & Time				
Scanning				
Qty.		To be filled by person who did Scanning		
Remarks				
Name, Signature				
Date & Time				
SAP Updation				
		Date	Time	Filled by person who did Data entry
GRN				
Remarks				
Sign and Signature				
(WAREHOUSE ASSOCIATE)			**(SUPERVISOR)**	

Fig. 1.6.4. Goods Receipt Checklist

Good s Receipt Note (GRN)

When the incoming shipment details are entered into the system, the computer system generates a document called Goods Receipt Note (GRN).

eZee Technosys Pvt. Ltd.
International Trade Center
Majura Gate

Goods Receipt Note

GRN #	CSGRN20	**Vendor**	Seven Eleven
Voucher No	123	**Reg. No.**	12
Date	29-03-2019	**Print Date**	29-03-2019 1227:39
Receiving Store	Central Store	**Print By**	Admin
Purchase Order#	CSON22		

Item Name	Quantity	Unit	Rate	Dis. Amount	Tax	Amount
Ajwaan	2.000	Kgs	120.0000	0.0000	48.0000	288.0000
Action	10.000	Pair	6.8100	0.0000	0.0000	68.1000

Total	Amount	Tax	Discount %	DiscountAmount	Add/Less	Bill Amount
	308.1000	48.0000	0.0000	0.0000	0.0000	356.1000 $

Purchasing Clerk _____ **Store** _____

Director / Manager _____ **Security** _____

Fig. 1.6.5. Goods Receipt Note (GRN)

Stock Ledger

This is a ledger which maintains the inwards and outward entries of various products and indicates the current stock level at any point of time.

STORE STOCK LEDGER

					Facility Code			
Name of facility					Item code			
Item Description					Unit of issue			
Date	Received From/Issued to:	Delivery note/ Issue V. No.	Batch no.	Expiry Date	Qty Received	Qty issued	Stock balance	Signature

Fig. 1.6.6. Stock Ledger

Inventory Count Sheet

This is a sheet used to count the physical stock of the warehouse, tally with the system stock and identify shortages or excess.

STOCK COUNT SHEET

Date

Name of facility

Sl No.	Product Code	Product Description	Unit of Mesaurement	Physical Good Stock	Physical Damage Stock	Total Physical Stock	Stock Balance as per System	Excess / Shortage	Remarks if Any
				A	B	C=A + B	D	C-D	10
Name & Signature of Associate			Signature Of Verifyng Officer				Signature of WH Manager		

Fig. 1.6.7. Inventory Count Sheet

Pick List

This document indicates the various products, their quantities and locations to process a customer order.

Pick List

Warehouse _____ Date _____

Order No. _____ Time _____

Sr No.	Item Code	Item Description	UOM	Required Quantity	in Hand	Location	Picked Quantity
1	ABCD01234	Plastic Pots	No.s	7	84	BIN 365	
2	XYZ78910	Compost	Kgs	10	95	BIN 789	

Fig. 1.6.8. Pick List

Sale Invoice

This is an important document evidencing the sale and transfer of ownership of the goods from the warehouse to the buyer.

TAX INVOICE

ABC ENTERPRISES

123 B 20/8 XXXXXX
PUSA ROAD,NEW DELHI-110005
GSTIN No 07APAFD8245XXXX

Bill to	Place of Supply	INVOICE No	Dated
RK Electrical Works A-10 Rajouri Garden,New Delhi GSTIN No:-07BBUPS5252XXXX	RK Electrical Works A-10 Rajouri Garden,New Delhi	DD-TI-01	1-Jul-17

Description of Goods	HSN CODE	QTY	Units	RATE	Amount
LED LIGHTS	8501	50	pcs	200	10000
Bulbs	8501	5	Dozens	3000	15000
Total					**25000**
Less Discount 20%					5000
Taxable Value					**20000**
ADD CGST 6%				6%	1200
ADD SGST 6%				6%	1200
Total					**22400.00**

Amount Chargeable (in words)
Rupees Twenty Two Thousand Four Hundred only

Company's PAN: AAKFD6723D

Note-Please make cheques in favor of "DD Enterprises"

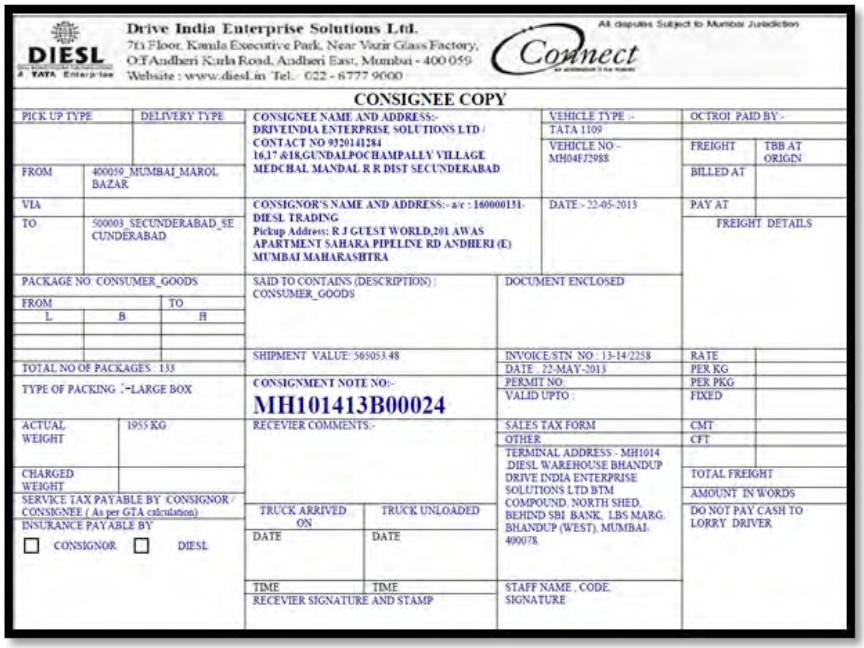
For ABC ENTERPRISES

Authorised Signatory

Fig. 1.6.9. Sale Invoice

Lorry Receipt (L/R)

It is an acknowledgement of goods given by the lorry owners (transport companies) to the persons who are sending the goods, in this case the warehouse.



Drive India Enterprise Solutions Ltd.
7th Floor, Kamla Executive Park, Near Vazir Glass Factory, Off Andheri Kurla Road, Andheri East, Mumbai - 400 059
Website : www.diesl.in Tel. : 022 - 6777 9000

All disputes Subject to Mumbai Jurisdiction

CONSIGNEE COPY

PICK UP TYPE	DELIVERY TYPE	CONSIGNEE NAME AND ADDRESS:- DRIVEINDIA ENTERPRISE SOLUTIONS LTD / CONTACT NO 9320141284 16,17 &18,GUNDALPOCHAMPALLY VILLAGE MEDCHAL MANDAL R R DIST SECUNDERABAD	VEHICLE TYPE :- TATA 1109	OCTROI PAID BY :-	
FROM	400059_MUMBAI_MAROL BAZAR		VEHICLE NO :- MH04FJ7988	FREIGHT	TBB AT ORIGIN
VIA				BILLED AT	
TO	500003_SECUNDERABAD_SECUNDERABAD	CONSIGNOR'S NAME AND ADDRESS:- a/c : 160000131- DIESL TRADING Pickup Address: R J GUEST WORLD,201 AWAS APARTMENT SAHARA PIPELINE RD ANDHERI (E) MUMBAI MAHARASHTRA	DATE :- 22-05-2013	PAY AT	
				FREIGHT DETAILS	
PACKAGE NO: CONSUMER_GOODS		SAID TO CONTAINS (DESCRIPTION) : CONSUMER_GOODS	DOCUMENT ENCLOSED		
FROM L	TO B H				
TOTAL NO OF PACKAGES : 133		SHIPMENT VALUE: 569053.48	INVOICE/STN NO : 13-14/2258	RATE	
			DATE : 22-MAY-2013	PER KG	
TYPE OF PACKING :-LARGE BOX		CONSIGNMENT NOTE NO:- MH101413B00024	PERMIT NO: VALID UPTO :	PER PKG FIXED	
ACTUAL WEIGHT	1955 KG	RECEVIER COMMENTS:-	SALES TAX FORM	CMT	
			OTHER	CFT	
CHARGED WEIGHT			TERMINAL ADDRESS : MH1014 DIESL WAREHOUSE BHANDUP DRIVE INDIA ENTERPRISE SOLUTIONS LTD BTM COMPOUND, NORTH SHED, BEHIND SBI BANK, LBS MARG, BHANDUP (WEST), MUMBAI- 400078.	TOTAL FREIGHT	
SERVICE TAX PAYABLE BY CONSIGNOR / CONSIGNEE (As per GTA calculation)				AMOUNT IN WORDS	
INSURANCE PAYABLE BY ☐ CONSIGNOR ☐ DIESL		TRUCK ARRIVED ON: DATE / TIME	TRUCK UNLOADED: DATE / TIME	DO NOT PAY CASH TO LORRY DRIVER	
		RECEVIER SIGNATURE AND STAMP	STAFF NAME , CODE. SIGNATURE		

Fig. 1.6.10. Lorry Receipt

Transit Documents

These are regulatory documents which are required during transit in India. These could be documents such as filled GST Transit forms.

Unit 1.6 – Roles and Responsibilities of a Receiving Assistant

Unit Objectives

At the end of this unit, participant will be able to:

1. Detail several job roles of a Receiving Assistant
2. Understand the responsibilities of a Receiving Assistant

1.5.1 Roles of a Receiving Assistant

- **Prepare for Receiving Consignments**

To be competent at receiving, a receiving assistant should know the details of a day's activities like work schedules, understanding the different types of goods, and handling special situations. He/ she should b aware of different equipment used for receiving process and how to handle them effectively to carry out the operations. Lastly, they should be aware how to maintain safe working conditions at a warehouse

Fig 1.5.1: Preparing for Receiving

- **Receiving Operations**

The assistant should be able to use basic IT technologies and do simple Math to effectively receive consignments. They should be able to make entries in computer systems about inbound goods. The most important part of the job is doing inspection of goods received and check them for damage or spillage. They should be able to fill in the required documentation, understand company SOP and carry out Binning process effectively in order to store received consignments. Lastly, they should be able to read labels effectively and segregate products for storage or outbound process.

Fig 1.5.2: Receiving Operations

- **Post Receiving Activities**

At the end of the day, a receiving assistant should be able to handle all the closing activities like, doing system entries, maintaining physical data, comparing the two for cross checking work, preparing invoices etc. The assistant should know how to shut down machines and put away equipment that are not being used. The assistant should make sure to carry out proper housekeeping post shift for the receiving area and prepare it for the next day's work. Lastly, before leaving for the day the assistant should be able to prepare a report for the day, delays, damages etc.

Figure 1.5.3: Post shift activities

- **Maintain Health, Safety, and Security Measures**

Figure 1.5.4: Maintain Health and Safety

It is essentially the most important role and responsibility of a Receiving assistant in order to ensure the safety of themselves as well as the other workers. The operators need to comply with all the safety guidelines and procedures lay down by the company and with assistance from their managers. They need to ensure that their safety gear is in place and the environment that they are working in is hazard-free. They also need to ensure that they are extremely well trained and follow regulations to their best abilities.

1.5.2 Responsibilities of a Receiving Assistant

Collaborate with purchasing staff to list probable deliveries

- Accept shipments and sign paperwork upon receipt
- Unload packages from incoming trucks
- Examine contents to make sure they are not damaged
- Authenticate packages according to invoices and orders (quantity, quality, price etc.)
- Connect with supplier or shipper if an error is identified
- Accept responsibility for returning unacceptable shipments or receiving replacements
- Label deliveries and assign them to their designated place
- Make sure invoices are signed and payment is made for satisfactory deliveries
- Uphold accurate records and support in inventory control

Scan the QR code to watch the related videos

What is Logistics?
https://youtu.be/kT_toh5 NbxE

Sub-sector of Logistics
https://youtu.be/NuLzlZu QoLA

Tips

To be a successful Warehouse Associate

- Carry Achievement motivation
- Keen to learn.
- Train yourself to finish what you started.
- Dream big.
- Do not hesitate to ask for Help.
- Do not be afraid to make mistakes.
- Do not limit your working hours during the learning phase

Summary

At a fundamental level, the fundamentals of supply chain management are covered, along with the significance of logistics linkage in managing an effective supply chain. In this unit, the three primary supply chain management flows are covered in detail. With the established goals, the participant will be able to comprehend the primary responsibilities of the individual as a receiving assistant. The requirement of a warehouse and various tasks performed inside the warehouse are also covered in this unit.

Notes

Exercise

Multiple Choice Questions

1. The correct sequence of supply chain process is
   A. Plan – Make - Source – Make - Return
   B. Plan – Source – Make – Deliver – Return
   C. Plan – Make – Deliver – Source - Return
   D. Plan – Source – Deliver - Make – Return

2. Which of the following is not a classification of equipment being used in the warehouse?
   A. Storage
   B. Safety
   C. Earth moving
   D. Material handling

3. Which of the following activity is part of the shipping activity in the warehouse process?
   A. Order processing
   B. Unload vehicle
   C. Cycle count
   D. Filling bill of transport

4. Which of the following is not a role played by the warehouse?
   A. Consolidation hub
   B. Break bulk
   C. Value added services
   D. None of the above

Fill in the Blanks

1. What are the three important flows in logistics management?
2. The _____flows in both directions in logistics management?
3. A Receiving assistant reports to a _____?
4. What are the different types of goods stored inside a warehouse?
5. Receiving is an _____ process?
6. A receiving assistant is responsible for receiving, _____ and housekeeping

True or False

1. Logistics management is part of supply chain management.
2. Audit is not one of the requirements for conducting documentation in the warehouse.

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Transforming the skill landscape

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Logistics Skills Council

2. Prepare to Receive Consignments

Unit 2.1 – Introduction to Receiving Operations

Unit 2.2 – Prepare Receiving Area

Unit 2.3 – Prepare Receiving Equipment

LSC/N2201

Key Learning Outcomes

At the end of this module, participant will be able to:

1. Detail the activities listed in a typical work schedule
2. Differentiate the different types of goods and their corresponding checklists
3. Explain priorities and special conditions encountered in a warehouse
4. Describe the different types of PPE to be used in warehouse
5. Explain the usage of equipment and forms used in receiving operations
6. Detail the usage of barcode scanners, densimeters and other equipment used in warehouse
7. Describe safe work condition requirements
8. Perform the activities listed in a typical work schedule
9. Demonstrate the different types of goods and their corresponding checklists
10. Identify the priorities and special conditions encountered in a warehouse
11. Demonstrate the usage of equipment and forms used in receiving operations
12. Show the usage of barcode scanners, densimeters and other equipment used in warehouse
13. Identify safe work condition requirements

UNIT 2.1: Introduction to Receiving Operations

Unit Objectives

At the end of this unit, participant will be able to:

1. Understand Receiving
2. Detail on the types of Goods and checklists to be handled while receiving
3. Understand the Unloading Process

2.1.1 What is Receiving Process

The warehouse activity flow starts with receiving of the goods. Conducting the first step right ensures that mistakes are not carried forward to subsequent steps. Receiving process starts with checking on the incoming shipment. It is an Inbound Process. Whether the shipment is destined for this warehouse or not it is determined and processed in this process.

Unloading of the material has to be done effectively as a part of this process to ensure zero breakages, during the process. Doing physical and quality check of the incoming material and finally put away of the material at the right location and updating the system on the quantities received are some important activities performed during receiving.

The following flow chart indicating a typical day of work in receiving process.

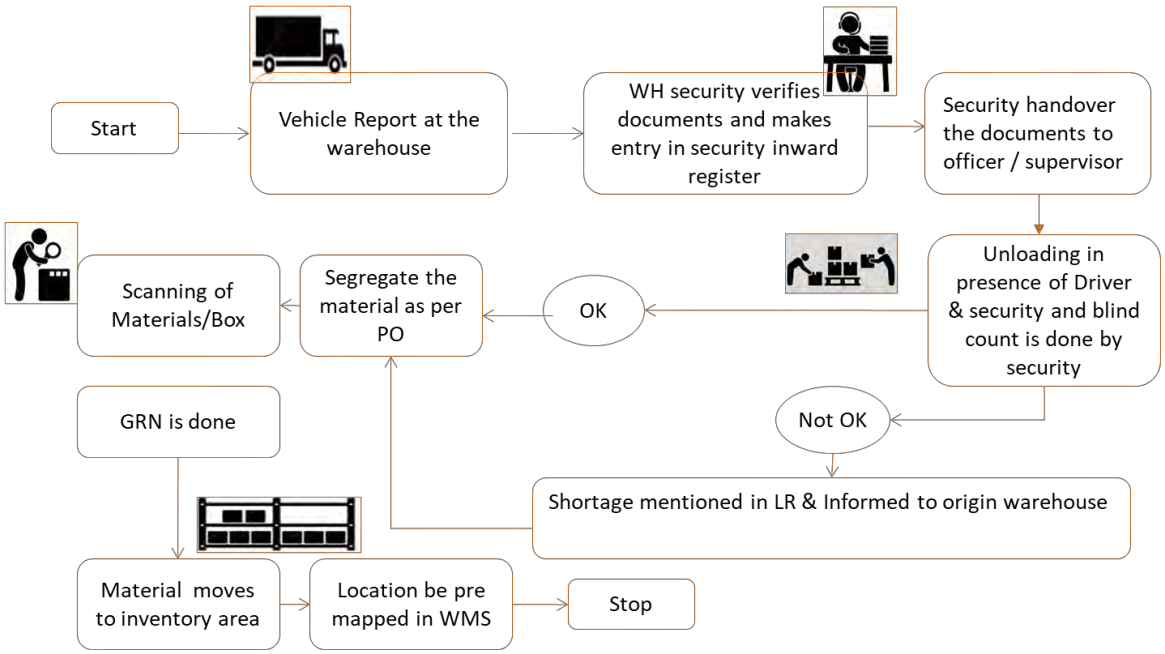


Fig. 2.1.1. Receipt Process – Work Schedule for a day

2.1.2 Work Schedule and Employee Coordination

A typical day of work in the life of a receiving assistant includes the process mentioned in the above flow chart. Apart from following the process, the receiving assistant has to work and coordinate tasks with other employees at the warehouse as well. Though the assistant has the sole responsibility of receiving shipments, but in order to prepare for the receiving process several employees are included in the process

Receiving Assistant: is responsible for receiving incoming goods and ships outgoing materials, or products. They need to count items received or shipped plus maintain checks against packing lists, and record any discrepancies. He / She prepares receiving or shipping reports and notes any shortages or damages. The assistant is responsible for coordinating with the Supervisor for creating Invoices, Goods Receipt Note (GRN) and Advance Shipment Notes (ASN). He / She also have to coordinate with the Data entry operator for creating invoices, ASN, GRN, weight and description entries in SRM and Excel entries for tracking goods. Co-ordination also happens at the Security front, with the security officer and the driver of the Lorry to ensure safe transit and arrival.

Receiving Supervisor: oversees the transfer of materials, components, or goods from one location to another. Examine the efficiency of the shipping and receiving operations. suggests changes to the distribution process and takes action to speed things up or cut costs. information about shipping or receiving documents. reports for management are finished.

Data Entry Officer	Security Officer	Driver
• Assistance in system enteries of items received • Keeping the SRM & Excel up to date • Updating E-way bills and checking important dates	• Maintaining entries of all inward vehicles • Document hand over to assistant after enteries for record	• Responsible for vehicle parking at the dock • Responsible for following MHE Safety rules

2.1.3 Processes to Prepare for Receiving

The process of receiving and its efficiency, cannot just depend in the hands of a Receiving assistant. There is a need for certain streamlined processes that help in planning the receiving process. Following are a few systems or processes that help to achieve efficient Receiving:

- **Dock to stock time** – the maximum time required to move materials from the system to usability. The process aids in increasing optimization of time
- **Receiving error reporting** – This system is placed to double check the structure through label scans to highlight to errors throughout the warehousing process
- **Dock utilization** – The process to track the utilization of dock doors, in addition to, space to ensure maximum efficacy
- **Supplier shipping problems** – Make record of errors by the shipper, such as inappropriate quality, the incorrect product or paperwork errors, so shippers can be forewarned to problems and the errors can be condensed

Cross-Docking

Once receiving process is optimized and there will be a lot of wide-open spaces, that should be able to utilize for other cutting-edge processes like cross-docking. Cross-docking is a process used when you have a high-volume, fast-moving goods that require to go out as soon as they come into the warehouse and includes product transporting directly from receiving to shipping without being put away for storage in the inventory or in the picking aisles. The key is to get the paper work right and to minimize errors and maximize the speed. With the right groundwork and equipment, it is unbelievably cost-effective.

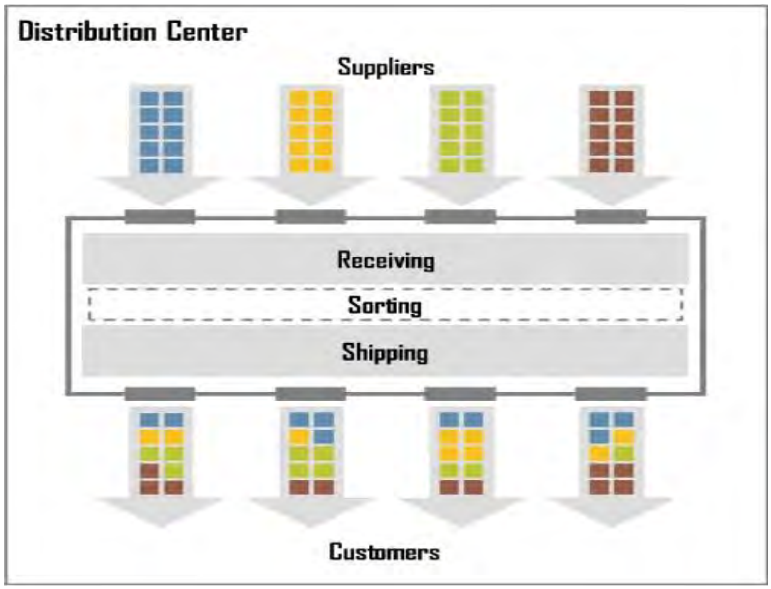


Fig. 2.1.2. Cross Docking technique

Tips

- There are several other types of receiving techniques specifically associated with a warehouse.
- Each warehouse has its own protocol for ensuring efficient receipt of goods
- Keep in mind the preparations to be made before receiving a product, like making sure the dock is clear and available etc., your supervisor will guide you in this process.

Notes

UNIT 2.2: Prepare Receiving Area

Unit Objectives

At the end of this unit, participant will be able to:

1. Understand the process of preparing the Receiving area
2. Prepare for required housekeeping

2.2.1 Guidelines to Prepare Receiving Area

The receiving area not only aids as a landing spot for new goods but also as sorting and quality control area; thus, the receiving area should be big enough to accommodate numerous deliveries, and large enough to sort and separate products.

The receiving area will act as a sorting station as well, where you will separate and sort products for correct placement on the warehouse floor. This will be where you split pallets and label goods for their precise location in bins and on shelves.

On receiving most products will need to be entered in the electronic systems. Creating space for RFID readers, inventory tracking systems and label makers, in your receiving area will aid your team in efficiently sorting and storing new arrivals.

Following are some points to keep in mind while preparing the Receiving area:

1. Use reliable information to identify what is to be received into storage
2. Make sure the receiving area is clean, tidy and free from obstructions and hazards before deliveries arrive
3. Make sure that the area is large enough to carry out sorting of products and so that it does not block the movement around the area
4. Make sure appropriate handling equipment is available and is in good working order
5. Make enough arrangement for accommodating MHE like forklifts and reach trucks in case needed
6. Check there is enough storage capacity for anticipated deliveries, telling appropriate people when there is not
7. Make sure that all the documentation is complete, accurate and up to date
8. Check deliveries to confirm that the type, quality and quantity of goods is as expected

2.2.2 Guidelines to prepare for Housekeeping

1. Inspect the area while considering the different surfaces
2. Determine the cleaning materials needed for the areas that were inspected, taking into account the risk, efficiency, and stain kind.
3. Verify that the cleaning tools are in good working order.
4. In the event that the relevant options are not available, choose the appropriate equipment and materials are not available and inform the appropriate person
5. Make a cleaning plan to prevent re-soiling clean areas and surfaces.
6. Let everyone who will be impacted know about the cleaning effort.
7. Make sure the work is properly signposted;
8. Verify that there is enough ventilation for the work being done.
9. Wear the personal protection equipment required for the cleaning method and materials being utilized
10. Use the correct cleaning method for the work area, type of soiling and surface
11. Carry out cleaning activity without disturbing others
12. Deal with unintentional damage, if any, caused while carrying out the work
13. report to the appropriate person any difficulties in carrying out your work
14. Recognize and account to the appropriate person any additional cleaning required that is outside ones responsibility or skill

Notes

UNIT 2.3: Prepare Receiving Equipment

Unit Objectives

At the end of this unit, participant will be able to:

1. Detail on the different types of Receiving Equipment used in a Warehouse
2. Illustrate equipment used according to the type of goods
3. Understand guidelines to keep in mind to Prepare for Receiving

2.3.1 Types of Receiving Equipment

Articulated Robotic Arms and Automated Guided Vehicles

In the warehouse, objects are moved and lifted by articulated robotic arms and legs with many joints. In production settings, they are frequently utilised for receiving tasks including moving things from pallets to racks, for choosing, packing, and shipping. Forklifts and pallet trucks are generally used in loading and unloading activities, however AGVs like automated forklifts are speeding up these processes in warehouses. The removal of pallets from tractor trailers and the subsequent placement of those pallets on conveyor belts or other systems for transportation to sorting areas are some other robotics jobs that can be accomplished.

Fig. 2.3.1. Robots for Receiving Goods

Bar Code Scanners

When doing receiving, inventory counts, and other tasks using spreadsheets and manual data entry, mistakes may occur. Staff members are unable to react rapidly to changes as a result. Each warehouse product can be marked with a barcode label that can easily be scanned at any time, marking its location and identifying it on a pallet, bin, rack, or container. This is helpful for moving goods

between sites and performing semi-automated cycle counts. It facilitates effective tracking of both incoming and outgoing cargo.

Barcodes offer a few distinctive advantages that are crucial for warehouse operations in addition to automated scanning.

- Greater inventory and cycle count accuracy
- Lower clerical and operating costs
- Fewer errors during receipt count
- Faster order processing speed
- Excellent scalability for future expansions

Fig. 2.3.2. Bar code scanners

Densimeters

A densimeter uses the displacement method to control the density of liquids and solids. The densimeters are very helpful for figuring out the densities of non-metallic materials including rubber, plastic, metals, glass, and ceramic. These densimeters provide for extremely accurate and quick reading generation when defining density. Displacement from a glass container completes the density measurement of liquids. Using a weight and the volume of a trail sample, density in solids can be accurately measured. By estimating the liquid displacement caused by a sample that causes displacement within a liquid, the weighing mechanism employed by densimeters regulates weight and volume.

Fig. 2.3.3. Densimeter

MHE Equipment used for Receiving FMCG Goods

The FMCG products are usually not in large sizes. They are packed in cartons which weigh up to 20 Kgs allowing manual unloading. As the products are packed in cartons MHE is needed to handle cartons and pallets. One of the most difficult part of FMCG warehousing is receiving. There are specialized equipment which are being used for receiving purposes in FMCG warehouses to prevent damages.

Following are the key MHE used in FMCG warehouse for receiving and unloading processes.

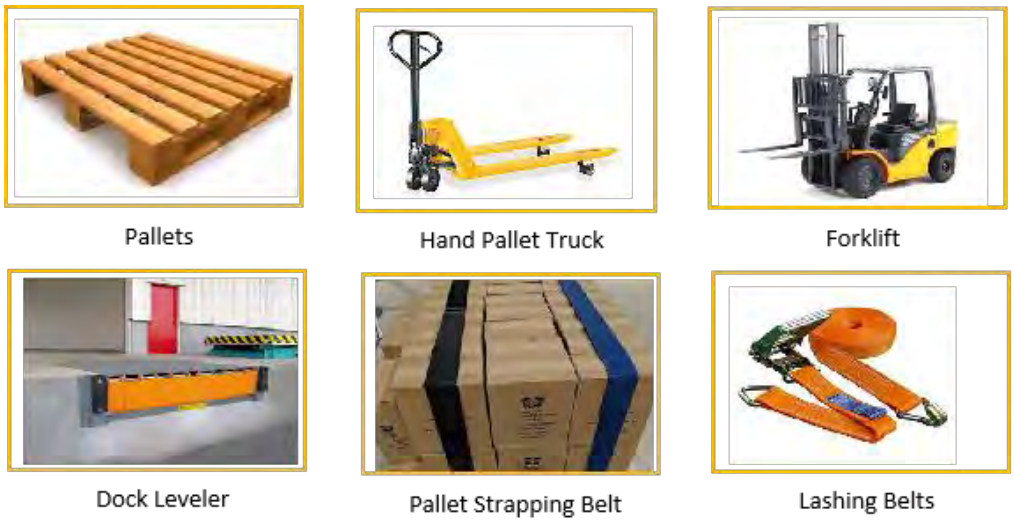


Fig 2.3.4. MHE used for Receiving and Unloading process

MHE Equipment used for Receiving Heavy Goods

The heavy industrial goods like automobile parts etc. are usually large in sizes. They are packed in containers or protective material like crates as they are heavy in weight not allowing manual unloading. As the products are heavy MHE is needed to handle the crates and pallets. Following are some of the key MHE used for automotive warehousing:

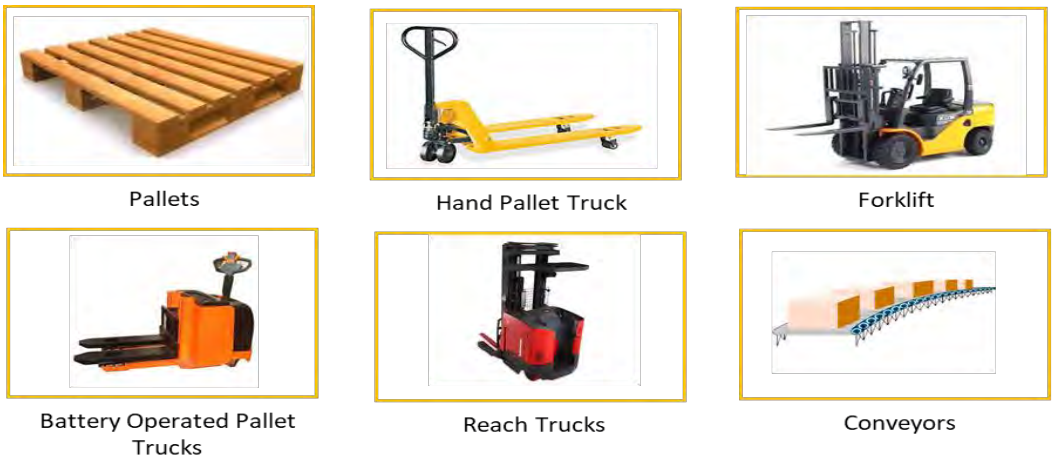


Fig. 2.3.5. MHE for Automotive/ Industrial material Warehouse

Docks

Docks are used in warehouses to load and unload cargo from lorries. Forklift accidents that involve docks and incorrectly positioned goods falling on workers are among the risks associated with them.

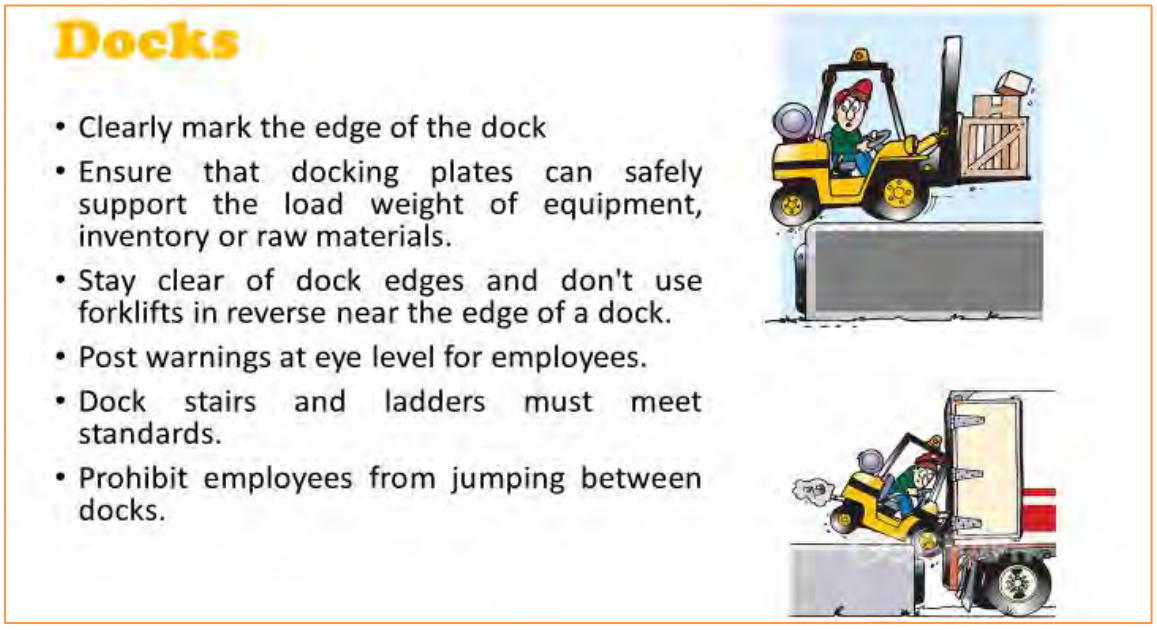


Fig. 2.3.6. Docks

2.3.2 Steps to Prepare for receiving goods

- Ask the transport manager for the day's work schedule and the anticipated arrival times for trucks.
- Request from the warehouse manager a list of incoming consignments, information about the quantity and type of items in each consignment, and inspection checklists.
- Determine the locations of the parking spaces for each truck and the unloading zones for each shipment.
- Recognize any specific circumstances or order of importance for the consignments.
- Acquire and put on any necessary personal safety gear (ppe)
- Ensure that the necessary stationery, such as pens, paper, and other supplies, is available for use during business hours.
- Gather any necessary receiving equipment, such as bar code scanners, densimeters, etc., and make sure they are in good working order.
- Before beginning work, check the receiving area to make sure it is tidy and secure, and have any difficulties or problems resolved.

Notes

Tips

- Every warehouse has their own machines and operating systems, learn these systems and operations from your supervisor
- Understand the safety precautions and pre inspections to be carried out
- Give value to PPE and learn its proper usage
- Demonstrate an understanding of receiving and equipment used for the same

Summary

In this chapter we discussed the process to prepare for receiving of goods. A receiving assistant needs to be aware about the several receiving pre-requisites, techniques, equipment and machines and we discussed about these in detail. Personal Protection equipment are the important tool for a warehouse operation, this will ease the work and maintain safety in operations. We have discussed the process of receiving, the different employees to work with for effective receiving processes, and processes that make work easy. Different forms of receiving technologies used in the warehouse operations are explained in this unit. We have highlighted in great detail the need for receiving operations and benefits.

Exercise

Multiple Choice Questions

1. Arrange the process of receiving in the right order
    a. Vehicle report to warehouse
    b. Segregate material
    c. Unload material
    d. Verify documents
    e. Scanning of material

2. Who is not the part of a goods receiving team?
    a. Receiving assistant
    b. Packaging operator
    c. DEO
    d. Security
    e. Driver

3. Which of the following process helps in optimum utilization of docks?
    a. Dock to stock time
    b. Dock utilization
    c. Cross docking
    d. Receiving error report

Fill in the Blanks

1. The activity flow of the warehouse starts with _____
2. The receiving assistant coordinates with _____ for creating invoices
3. _____ is a total time needed to move materials through the system to usability
4. _____ is essential to prepare the receiving area
5. _____ is the equipment needed to check the density of products being received

Explain

1. Any two receiving equipment used at a warehouse
2. Illustrate the process of Receiving

Scan the QR Code to watch the related videos

https://youtu.be/F2LIzwYs k9E

Receiving process

https://youtu.be/qPlRi- RWNlY

Housekeeping

Skill India
कौशल भारत-कुशल भारत

सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

N·S·D·C
National
Skill Development
Corporation
Transforming the skill landscape

LSC
Logistics Skills Council

3. Receiving

Unit 3.1 – Receiving Consignments

Unit 3.2 – Segregate Goods: Storage and Transfer

Unit 3.3 – Resolve Discrepancies

LSC/N2202

Key Learning Outcomes

At the end of this module, participant will be able to:

1. Describe the usage of IT system for receiving and managing consignment
2. Explain consignment inspection procedure
3. Detail damaged goods quarantine process
4. Discuss documentations involved in consignment receiving
5. Detail binning and staging in warehouse
6. Discuss consignment segregation and aggregation based on transport location
7. Demonstrate usage of IT system for receiving and managing consignment
8. Inspect consignments as per standard operating procedure
9. Demonstrate the quarantine process for damaged goods
10. Demonstrate consignment inspection process using testing equipment
11. Demonstrate usage of barcode and allied equipment for managing inventory
12. Record non-conformities and damages in consignment
13. Prepare damage claim forms, missing goods forms and other documentation

UNIT 3.1: Receiving Consignments

Unit Objectives

At the end of this unit, participant will be able to:

1. Identify the steps involved in receiving consignment
2. Enlist the IT systems used in Receiving process
3. Discuss the guidelines and SOP for receiving goods
4. Detail the documents required while receiving goods

3.1.1 Steps in Receiving Process

All inbound products must be thoroughly inspected, tagged with tags, and recorded as having been received. The company will discover that its inventory data are incorrect if there is even a small inaccuracy in this process. When the records are erroneous, it is challenging and time-consuming to effectively carry out industrial activities or fulfil customer orders.

Inspect Incoming Goods

Once the delivery has been made, compare the incoming items to both the description on the connected purchase order and the description on the associated bill of lading. Major discrepancies may cause the delivered products to be rejected.

1. One must reject the acquired items if there is no sanctioning purchase order and the buying manager does not grant a waiver.
2. To inspect each delivery, use a printed receiving checklist. The quantity received, comparison to a quality standard, and the date and time of delivery are items that probably need examination. Any differences should be noted on the checklist. Once the review is over, start the checklist.
3. A copy of the bill of lading must be signed in order to indicate that the transfer has been reviewed and is acceptable.

In each of these circumstances packaging has to be designed to overcome such situations and protect goods from damage. However, it should be light enough so that it doesn't increase the weight of the finished goods so much that the shipping costs are significantly increased.

Identify and Tag All Received Inventory

1. Identify individual item in a delivery and confirm that it is properly labeled with a bar coded tag that comprises the item number, quantity, and unit of measure. If there is any uncertainty concerning which item number to use, check with the senior warehouse staff or purchasing department.

Log in Received Items

1. Receiving log should be updated with the date and time of receipt of each delivery, in addition to the name of the supplier, shipper, purchase order number, and account of goods received.
2. Direct a copy of the signed bill of lading to the billing clerk in the accounting department.
3. File the master copy of the billing of lading by date in the warehouse filing area.

3.1.2 Warehouse Management Systems and Receiving

An enterprise can manage warehouse operations from the moment products or materials enter a warehouse until they leave by using a warehouse management system (WMS), which is made up of software and procedures.

Fig. 3.1.1 WMS and Receiving

Only as fast, precisely, and effectively as warehouse processes allow the supply chain to function. By coordinating order fulfilment procedures from acquiring raw materials to exporting finished items, a WMS plays a crucial part in supply chain management.

The supply chain may be slowed down or disturbed, for instance, if raw materials are not received correctly or parts are misplaced in a warehouse. By controlling inventory and ensuring that goods are kept, sorted, transported, and accurately monitored during manual activities, WMSs are essential in

ensuring that these processes go smoothly. This increases packaging productivity, especially for businesses with a smaller workforce. Returns increase along with increasing output and more effective procedures.

A WMS is often used alongside or integrated with other related systems, including ERP, transportation management systems (TMS) and inventory management systems.

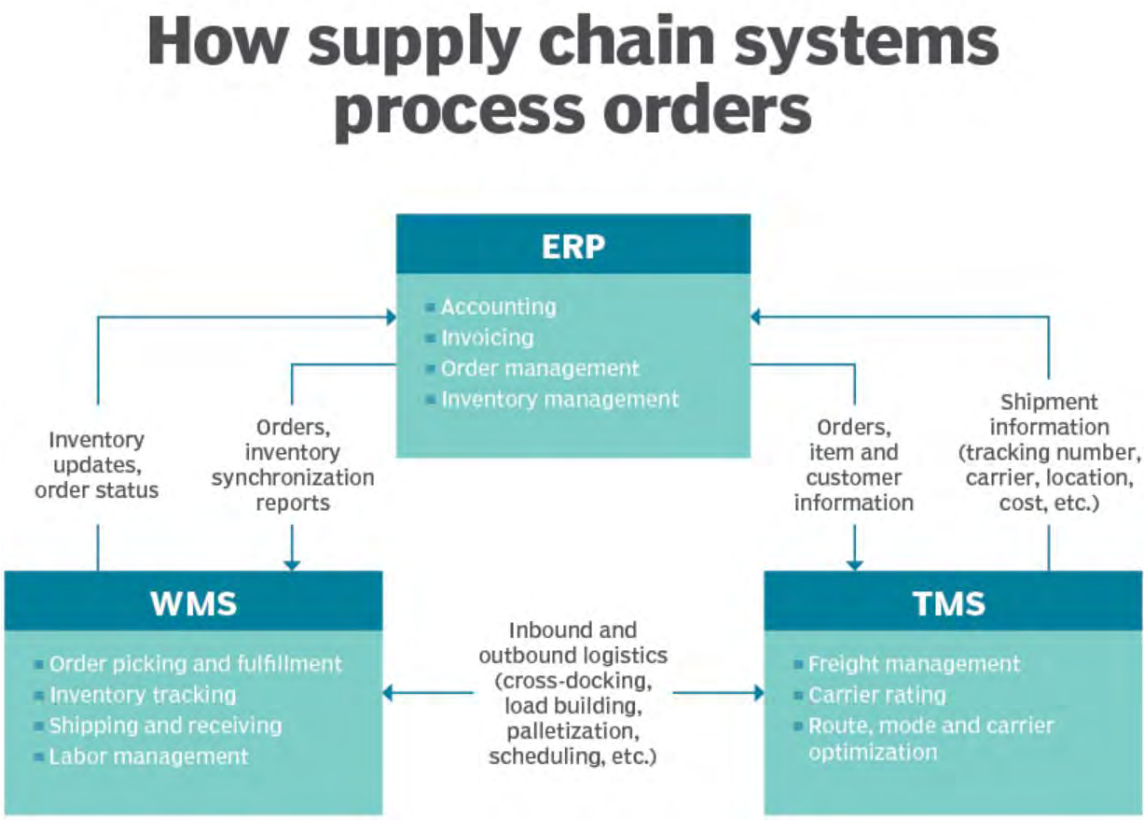


Fig. 3.1.2 IT Systems and Receiving

The purpose of a warehouse management system (WMS) is to assist users in managing fulfilment, shipping, and receiving duties in a warehouse or distribution centre, such as selecting items from shelves for dispatch or storing items that have been received. Its job in inventory is to keep track of the information about inventory that is received from barcode scanners and radio frequency identification (RFID) tags and to update the ERP system's inventory management module so that it has the most recent data. The ERP system's and the WMS's inventory data are synchronised using an integration link.

The accounting, the majority of the invoicing, order management, and inventory management are all handled by the ERP system. Sometimes a TMS will be connected with the WMS to enable better coordination of the inbound and outward logistics processes, such as palletizing of goods, labour scheduling, yard management, load building, and cross-docking, that occur at the interface of warehouses and freight shippers.

3.1.3 Documents Required for Receiving

Following is the list of various documents used in a warehouse for Receiving a consignment:

Inward Consignment Register

This is a register which is used to record all the incoming shipments into the warehouse.

Gate Inward Register										
Sl no.	Material Receiving Date	Invoice Number	Invoice Date	Supplier Name	Name of Place / City	Material Description	Qty Received	Qty Delivered	Material Deliver's name	Invoice Details

Fig. 3.1.3. Inward Consignment Register

Put away List

This list also called as Binning list; guides associate to the appropriate bin of location where the incoming goods must be kept.

Putaway List

Warehouse		_____		Date	_____
Supplier Invoice No.		_____		Time	_____
Sr No.	Item Code	Item Description	UOM	Quantity	Bin Location

Fig. 3.1.4. Put away List

Goods Receipt Check List (GRCL)

It is a check list to be followed at the time of receipt of material at the warehouse.

Sample Goods Receipt Check List				
Date and Time of Reporting		To be filled by Warehouse Associate/ Supervisor		
Vehicle Number				
Consignor Name				
Invoice No.				
Allowed for Unloading	Yes / No - If no, why:-			
Remarks				
Name				
Signature				
Security				
Gate Entry #		To be filled by Security		
Signature				
Date				
Time				
Blind Count				
Item Name		**Quantity**		To be filled by the person did blind count
			TOTAL QTY: -	
Blind Count Remarks				
Damage Remarks				
Name, Signature				
Date & Time				
Sample Quality and Compliance Check				
Legal Metrology Check		Yes / No		
Any Unit Damaged		Yes / No		
Any Unit Leaking		Yes / No		
Labels Check		Yes / No		
Packaging Check		Yes / No		
Sample Weight Check				
No. of Boxes				
Remarks				
Name, Signature				
Date & Time				
Scanning				
Qty.		To be filled by person who did Scanning		
Remarks				
Name, Signature				
Date & Time				
SAP Updation				
		Date	Time	Filled by person who did Data entry
GRN				
Remarks				
Sign and Signature				
(WAREHOUSE ASSOCIATE)			**(SUPERVISOR)**	

Fig. 3.1.5. Goods Receipt Checklist

Good s Receipt Note (GRN)

When the incoming shipment details are entered into the system, the computer system generates a document called Goods Receipt Note (GRN).

eZee Technosys Pvt. Ltd.
International Trade Center
Majura Gate

Goods Receipt Note

GRN #	CSGRN20	**Vendor**	Seven Eleven
Voucher No	123	**Reg. No.**	12
Date	29-03-2019	**Print Date**	29-03-2019 1227:39
Receiving Store	Central Store	**Print By**	Admin
Purchase Order#	CSON22		

Item Name	Quantity	Unit	Rate	Dis. Amount	Tax	Amount
Ajwaan	2.000	Kgs	120.0000	0.0000	48.0000	288.0000
Action	10.000	Pair	6.8100	0.0000	0.0000	68.1000

Total	Amount	Tax	Discount %	DiscountAmount	Add/Less	Bill Amount
	308.1000	48.0000	0.0000	0.0000	0.0000	356.1000 $

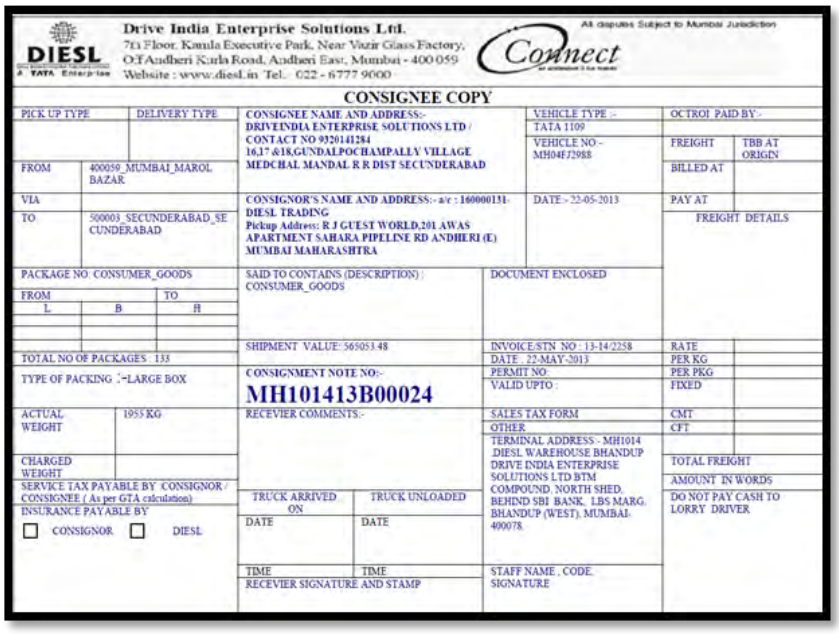
Purchasing Clerk _____ **Store** _____

Director / Manager _____ **Security** _____

Fig. 3.1.6. Goods Receipt Note (GRN)

Lorry Receipt (L/R)

It is an acknowledgement of goods given by the lorry owners (transport companies) to the persons who are sending the goods, in this case the warehouse.



Drive India Enterprise Solutions Ltd.
7th Floor, Kanula Executive Park, Near Vazir Glass Factory, Off Andheri Kurla Road, Andheri East, Mumbai - 400 059
Website : www.diesl.in Tel.: 022 - 6777 9000

All disputes Subject to Mumbai Jurisdiction

DIESL — A TATA Enterprise — Connect

CONSIGNEE COPY

PICK UP TYPE	DELIVERY TYPE
FROM	400059_MUMBAI_MAROL BAZAR
VIA	
TO	500003_SECUNDERABAD_SECUNDERABAD
PACKAGE NO CONSUMER_GOODS	
FROM	TO
L / B / H	
TOTAL NO OF PACKAGES : 133	
TYPE OF PACKING :-LARGE BOX	
ACTUAL WEIGHT	1955 KG
CHARGED WEIGHT	
SERVICE TAX PAYABLE BY CONSIGNOR / CONSIGNEE (As per GTA calculation)	
INSURANCE PAYABLE BY	☐ CONSIGNOR ☐ DIESL

CONSIGNEE NAME AND ADDRESS:-
DRIVEINDIA ENTERPRISE SOLUTIONS LTD /
CONTACT NO 9320141284
16,17 &18,GUNDALPOCHAMPALLY VILLAGE
MEDCHAL MANDAL R R DIST SECUNDERABAD

CONSIGNOR'S NAME AND ADDRESS:- a/c : 160000131-
DIESL TRADING
Pickup Address: R J GUEST WORLD,201 AWAS
APARTMENT SAHARA PIPELINE RD ANDHERI (E)
MUMBAI MAHARASHTRA

SAID TO CONTAINS (DESCRIPTION) :
CONSUMER_GOODS

SHIPMENT VALUE: 565053.48

CONSIGNMENT NOTE NO:-
MH101413B00024

RECEVIER COMMENTS:-

TRUCK ARRIVED ON	TRUCK UNLOADED
DATE	DATE
TIME	TIME

RECEVIER SIGNATURE AND STAMP

VEHICLE TYPE :-
TATA 1109
VEHICLE NO :-
MH04FJ2988
DATE :- 22-05-2013

DOCUMENT ENCLOSED

INVOICE/STN NO : 13-14/2258
DATE : 22-MAY-2013
PERMIT NO :
VALID UPTO :
SALES TAX FORM
OTHER

TERMINAL ADDRESS :- MH1014
DIESL WAREHOUSE BHANDUP
DRIVE INDIA ENTERPRISE
SOLUTIONS LTD BTM
COMPOUND, NORTH SHED,
BEHIND SBI BANK, LBS MARG,
BHANDUP (WEST), MUMBAI-
400078.

STAFF NAME , CODE,
SIGNATURE

OCTROI PAID BY :-
FREIGHT | TBB AT ORIGIN
BILLED AT
PAY AT
FREIGHT DETAILS

RATE
PER KG
PER PKG
FIXED
CMT
CFT
TOTAL FREIGHT
AMOUNT IN WORDS
DO NOT PAY CASH TO LORRY DRIVER

Fig. 3.1.7. Lorry Receipt

3.1.4 SOP for Receiving Consignment

1. Vehicle reports to receiving dock by following PCS (Physical count sheet) mentioned store location. Handover documents & Vehicle Key to receiving person.
2. Check Whether the Vehicle has come from Warehouse (Movement) or from Supplier?
3. If Vehicle from Warehouse, Count the Qty. against the DC & Do the Entry in the ILS/Register for Vehicle Inward Entry & follow the process for Unloading.
4. If Vehicle from Supplier, Check invoice, Store Location, inward stamp and check space availability as per material location capacity.
5. If found space is not available, then hold the vehicle and inform the inventory cell for PCS cancellation with proper approval taken from SCM team. After PCS Cancellation, sent the vehicle back to supplier
6. If Space available & documents found OK then Enter all the details in ILS / Register for Vehicle Inward Entry & Time.
7. After register entry done, take vehicle on the dock and start unloading with the using of proper MHE and pallets whichever is required as per material type.
8. Also count the Vehicle as per counting Scope (A&B Class - 100% & C Class - Weighing Scale)
9. After unloading the material from vehicle, start inspection for damage, Rusty, quantity against the invoice with PCS sticker of material. If found any discrepancy, then follow the SOP of Rejection.
10. If material found Shortage, Mention the note on the document, paste the Shortage Sticker, and take the driver sign for acknowledgement & Handover the Invoice to GRN Team. If material found excess, Then inform the SCM Team for 511 Movement.
11. For PP Boxes received, Do tick mark on cycle table for every time received & after the whole cycle completion it should be disposed
12. After inspection done, put FIFO, FEFO sticker on the material and all the material hand over to store team for storage.
13. After done unloading activity, Acknowledgement should be given to the driver on LR (for Ex-works) for taking the vehicle out from the Dock. Close the ILS Entry (if any) in system and then put receiving done stamp on the invoice.
14. Then receiving supervisor mention remarks and sign on the invoice and handover all the invoice to GRN office for acknowledgement given to driver.

Notes

UNIT 3.2: Segregate Goods: Unloading, Storage and Transfer

Unit Objectives

At the end of this unit, participant will be able to:

1. Understand the Unloading process
2. Discuss and demonstrate the Binning process for storage
3. Manage Unexpected challenges during Receiving process

3.2.1 Unloading Process

Unloading is the start of the warehouse operations. It brings in the cargo to be stored, processed and further dispatched. Being the step one of the cycle, it is essential that it is done in the right manner. The scope of unloading activities start from parking of the incoming vehicle, unloading, staging, quality check, scanning, put away to the right location and finally updating the records in the system to generate the GRN.

Following are the details of the steps to be undertaken in unloading process.

Step 1 Get the Vehicle unloading plan for the day from the supervisor.

Daily Vehicle Plan				
Date	07-02-2020			
Vehicle Number	Bay	No. of Units	Material	Time
UP16BA2199	4	1000	Detergents	10.30
NL16BA2200	3	500	Multiple	12.00
HR19BA8956	5	125	Air Conditioners	11.30

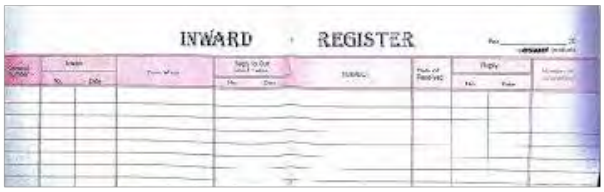
Step 2 Check which Bay Associate Duty has been assigned by the Supervisor

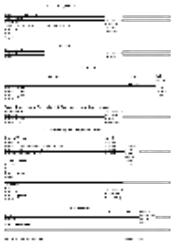
Duty Chart		
Date	07-02-2020	
Associate Name	Bay	Shift
Umang	4	9.30 to 6.00
Munnilal	3	9.30 to 6.00
Ishwar	5	9.30 to 6.00

Step 3 Depending upon the material to be unloaded arrange for appropriate MHE

Step 4 Depending upon the material to be unloaded wear the appropriate PPE

Step 5 Park the incoming vehicle at the Dock. Use stoppers like tyres to ensure that it does not hits the bay.

Step 6	Make the entry of the incoming vehicle in the Gate Inward Register. This can be done either by the Associate or the Guard	
Step 7	Open the vehicle in the presence of the driver. See if there are any visual damages to the material on the opening of the vehicle doors	
Step 8	Start Unloading the material. Use the MHE based on the cargo. Refer section.	
Step 9	Unload the complete Cargo in the Staging Area. Do not move this inside the warehouse as yet.	
Step 10	Let the security Guard or Supervisor complete the Count of the material unloaded. This should be blind without tallying with the documents.	

Step 11	Tally Blind Count with the number of boxes on the documents. The number should match.	
Step 12	Inform the supervisor about the completion of unloading and let him fill the complete Goods Receipt Check List (GRCL).	
Step 13	Inspect the material for any damages on the cartons, any damages, leaks or spillages.	
Step 14	In case of any exception found please inform the Supervisor	
Step 15	Once Supervisor confirms, start moving the cargo to the scanning area.	

Step 16	There could be separate designated area for scanning or supervisor may provide the scanning gun for scanning at the staging area itself	
Step 17	Confirm the putaway/Binning location with the supervisor.	
Step 18	Move the cargo to the putaway location. In case it can kept manually unload the material at Binning/Putaway location	
Step 19	In case The material needs to be racked, call the MHE operator and ask to mount the pallet at the designated rack location.	
Step 20	Handover the documents to the WH Executive confirming the completion of loading done, for him to create the GRN. Submit daily unloading report to the Supervisor.	

Table. 3.2.1. Unloading process

3.2.2 The Binning Process

Bin is the smallest unit of space in a warehouse. It defines the place and position where the shipment is or can be stored. This is a main part of the supply chain controlling the movement and storage of goods and/or materials within a warehouse, while processing the associated transactions, including shipping, receiving, put away and picking.

The concept of binning is like storing material in our home refrigerator. There are different areas dedicated for different types of material. Deep freezer to store refrigerated material. Vegetable basket to store vegetables. Egg plates to store egg. Door shelves to store water bottle and inner shelves to store dairy products. Same is the concept of bins in warehouse. They are in different size and colour to store different category of material.

- Storage Bins Help to organize Warehouse Better
- Storage Bins Allow Workers to easily access Items

Overall, storage bins can be powerful tool to create an organizationally optimized warehouse, which saves time and efforts.

Fig. 3.2.1. Bin Racks

Bin Card

Bin card is the ledger of any SKU. It records all debits and credits or receipts and dispatches of any SKU.

Bin card helps to find the current stock on hand in the warehouse for any item. As the material is added or pulled out, bin card is updated. The bin card may also carry information on reorder point, the level at which the fresh order needs to be placed. Unit price and order lot sizes are also indicated on bin cards.

BIN CARD

Store Location :
Item Name :
Item Code :

No	Date	In	Out	Balance	Notes	Sign

Fig. 3.2.2. Bin Card Format

Creating Binning Location Names

Step 1 – Dividing warehouse space into different zones

Dividing a warehouse space into zones. Apart from splitting only the storage area into zones, other areas like office, dispatching, packing etc., can be segregated into a separate zone.

Fig. 3.2.3. Binning Locations

Step 2 – Segregating zones into sections

The zones can be segregated into segments to ease in locating the bins.

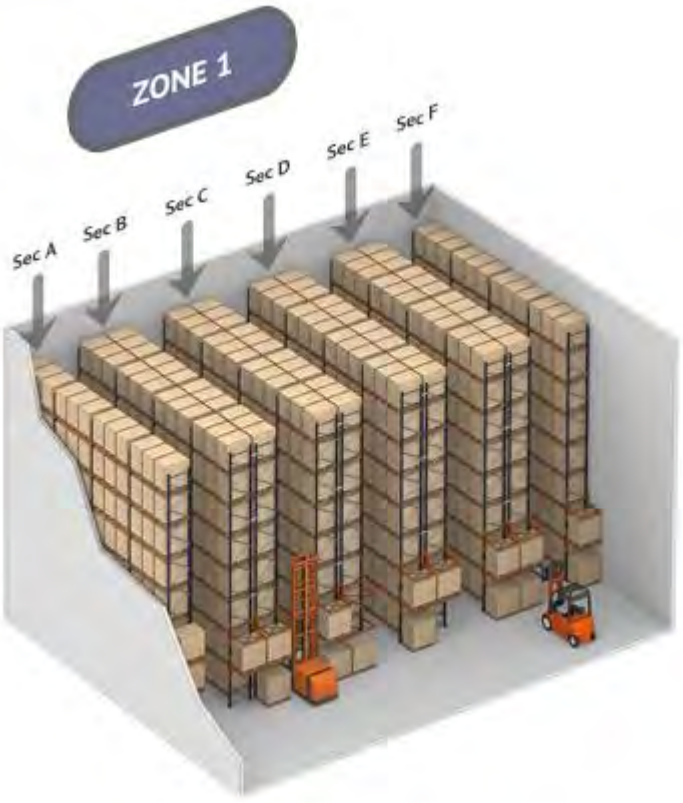


Fig. 3.2.4. Segregation of Zones

Step 3 – Drilling down to the last step, the 'exact Bin'

The 'exact bin location' of a product is a location in particular area within a section. The numbering of bin locations should be done in such a way it starts with the top and ascends all the way till the end.

Look at the figure given below:

Fig. 3.2.5. Exact bin location

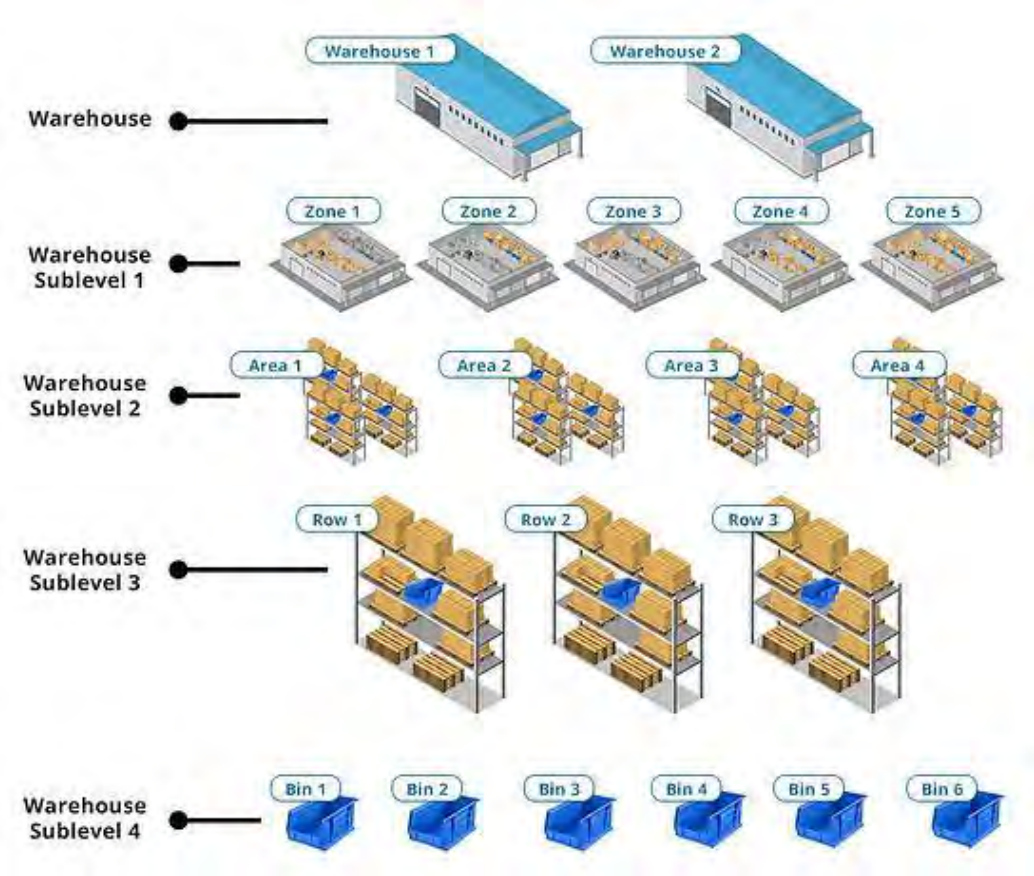


Fig. 3.2.6. Bin Location

2.5.2 Binning Process

The following are the steps in the Binning Process.

Step 1	Planning	Get the Binning instructions for the day from the Supervisor.	
Step 2	Assembling	Arrange for the various requirements for Binning like Bins, Bar Codes, Product Tag, Stationery and Equipment.	
Step 3	Receipt	Receive the material for binning. In case of any damaged parts, report to the supervisor.	
Step 4	Segregating	Segregate the products in various bins based on the binning locations. In case of ship quantities, Bin them into Bins based on geographical regions	

Step 5	Binning	Attach the bar codes and product codes and complete the Binning Process.	
Step 6	Dispatch	For shipping items hand it over to the transport supervisor for dispatch.	
Step 7	5S of kitting area	Clean the Binning area for any leftovers and trash. Submit the final Binning report to the supervisor.	

Table. 3.2.2. Binning process

3.2.3 Exceptions Management

In real life and particularly in logistics operations, not everything happens as scripted. There are several exceptions which happens during the process. Following is the list of possible exceptions and the way to deal with these exceptions.

Process	Stage	Exception	How to Handle
Unloading	During unloading	The carton found to be open or tampered	Inform the supervisor. Open the carton to check the condition of the contents. Count the number of units.
Unloading	During unloading	The incoming material was found to be damaged	Handle it carefully not to further damage. Segregate this unit. Inform the Supervisor.
Unloading	During unloading	Associate drops a material while unloading, which gets damaged.	Associate should have ideally taken preventive measures to avoid any such occurrence. Now that it has occurred, keep the unit separately. Inform the Supervisor immediately and proceed with Insurance formalities if possible.
Unloading	During unloading	A liquid/Chemical leaks during unloading process.	The leak should be confined as far as possible. The leaked unit should be kept separately. In case it is a Chemical, MSDS should be immediately referred to take appropriate action. Inform the Warehouse Manager immediately about the incident. All Safety measured should be immediately taken.
Unloading	During unloading	Proper MHE not available	If Associate finds that proper MHE is not available to unload the incoming cargo and manually unloading is either not possible or a safety concern, he should inform the Supervisor and not undertake the unloading operations.
Unloading	During unloading	Proper PPE not available	If Associate finds that proper PPE is not available to unload the incoming cargo and unloading the cargo is a safety concern, he should inform the Supervisor and not undertake the unloading operations.
Unloading	At the staging Area	The blind count numbers are not matching the documented number of pieces	Count the pieces again. If they are still not tallying inform the supervisor immediately.

Unloading	At the scanning stage	Bar code is Mutilated. Scanning not possible.	Inform the Supervisor immediately. The originating location need to be informed to provide the data so that Bar codes can be reprinted if possible. Keep such units separately.
Unloading	At the Putaway Stage	The Putaway location already occupied	The putaway location given is already carrying cargo. The Associate should not, in such a case, unload at any other location. This will multiply the error. He should pause, hold unloading, inform the Supervisor and unload once he gets fresh instructions.

UNIT 3.3: Resolve Discrepancies

Unit Objectives

At the end of this unit, participant will be able to:

1. Describe the process to handle shortage, damages or breakages in the warehouse.
2. Detail the various documents required for handling discrepancies

3.3.1 Handling Discrepancies

Warehouse is an action-packed place. Goods are continuously coming in, getting stored and moving out. Despite all precaution there are still some chances of shortage, damage or breakage during warehouse operations, especially during receiving operations like unloading or binning.

In case of any such incident, the receiving assistant is supposed to report immediately to the warehouse supervisor and fill in a damage report along with supervisor on immediate basis. Following are certain guidelines that should be followed in case of discrepancies:

- Appeal the driver to open consignment in front of them
- If there is damage, take essential precautions, this includes quarantining the goods, taking notes/snapshots, obtaining drivers' signature, etc.
- Visual inspection of the consignment is must, sign the agreement sheet and hand it over to the documentation assistant to formulate the arrival report
- Report to the supervisor in case of discrepancy in consignments against the agreement sheet
- Segregate damaged goods from the good ones. Place the other goods back into the packages and make note of the shortage
- Make note of the results of inspection for every delivery, with precise details about condition of packaging, damaged goods and value of incoming consignment as per procedures provided. Report on non-conformance. Check steps completed with the inspection checklist.
- Convey damages or shortages with the distributor.
- Organize so that the compensatory goods are sent at the earliest and negotiate the terms
- Escalate any issues in negotiation to the warehouse manager.
- Fill out damage claim forms, missing goods form as required and give them to the documentation assistant for subsequent processing.

3.3.2 Documentation for Handling Discrepancies

Loss / Damage Report

Following figure is a small example of a damage report. The key thing in this report is to describe the event as it happened and what actions will be taken in the future to prevent it.

LOSS / DAMAGE REPORT

Format No.: Rev. No. : Rev. Date. :	☐ **Loss Report** ☐ **Damage Report**	Report No: Report Date:

Internal References

Shipment Ref. No.	Shipped Date	Order No.	Material ID	Material Qty	Values	BL No.

Description of Shipment

Destination	Nos. of Days	Insurance No.	Description of Insurance on Loss / Damage

Loss / Damage Date & Time	Responsible person	Authority	Details

Description of Loss / Damage

Item Loss / Damage

Particulars	Item Name	Qty	Value	Repair / Recovery / Loss / damage status

Investigation / Impact – Corrective Actions / Preventive Actions

Nature of Loss / Damage	Responsible Agency	Current Location of Material	Contacts

Remarks

	Prepared by
	Approved by

Fig. 3.3.1. Loss and Damage Report Specimen

Scan the QR Code to watch the related videos

https://youtu.be/o5D9uK 3WVc0
GRN

https://youtu.be/2NqAZ_ aoSvg
Unloading process

Return to Vendor Form

INSERT YOUR LOGO
INSERT YOU COMPANY NAME
INSERT YOUR ADDRESS
INSERT YOUR PHONE AND FAX
INSERT YOUR WEB ADDRESS

Return to Vendor

#0000	
Date:	
Our PO No.	Authorization No.
Shipping Charges ☐ Prepaid ☐ Collect	Person Authorizing Return

QTY Returned	Your invoice number	Stock Number	Description	Unit Price	Total Amount

Reason for Return	Action Requested
☐ Overstock	☐ Repair and Return
☐ Overshipmenton P.O. #	☐ Repair and Bill
☐ Substitution on P.O. #	☐ Replace at No Charge
☐ Defective	☐ Issue Full Credit
☐ Other	☐ Other

SUB-TOTAL _____
TAX _____
HANDLING/SHIPPING
TOTAL

Tips

- Be aware of the emergency number to call at the time of a workplace accident or mishap.
- Practice the unloading and binning process regularly to avoid chaotic situations.
- Keep an updated reporting and inspection schedule

Summary

In this chapter we discussed the process of Receiving goods. A Receiving assistant needs to be aware about the several steps in the process of receiving. They should be thorough with the process and steps of Unloading process and Binning process. The assistant has to be very sharp in order to note down any discrepancies, shortages or damages of products so that they can effectively resolve issues. The receiving operator should be aware of the WMS process and should know how to update data as well as read data through scanning bar codes etc. The operator should also be aware about the process of getting optimum use out of a machine and the warehouse area.

Exercise

Multiple Choice Questions

1. Which of the following activity is part of the receiving activity in the warehouse process?
   A. Order processing
   B. Unload vehicle
   C. Cycle count
   D. Filling bill of transport

2. Which of the following activity is a part of the receiving process?
   A. Generating the pick list
   B. Issuance of Lorry Receipt
   C. Cycle count
   D. Loading the vehicle

3. The daily unloading plan will not contain the following.
   A. Vehicle number
   B. Unloading bay
   C. Number of cartons
   D. Product description

4. The document which guides the associate from the staging area to the storage area is
   A. Pick list
   B. Put away List
   C. GRN
   D. Goods receipt check list

5. If the proper PPE is not available for unloading, associate should
   A. Follow supervisor instruction and go ahead
   B. Try using MHE more carefully
   C. Refuse to unload and bring to the notice of WH in charge
   D. None of the above

True and False

1. Storage bins act as powerful tool to create an organizationally optimized warehouse.
2. Dock leveler acts as bridge between loading bay area and truck.
3. During the unloading process, driver's presence is not required to the time of opening of vehicle gate.
4. Staging area is the buffer area between the unloading bay and actual storage area.
5. After unloading the material GRN has to be completed by associate.

Fill in the Blanks

1. The details of all incoming vehicles are noted at the warehouse gate in the _____.
2. If during the loading or unloading process of chemicals, the drum leaks, _____ document should be referred for the actions to be taken.
3. The attachment to the forklift required to unload drums is called _____.
4. _____plays a in managing order fulfillment processes, from receiving to shipping finished goods

Notes

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N·S·D·C
National
Skill Development
Corporation
Transforming the skill landscape

LSC
Logistics Skills Council

4. Post Receiving Activities

Unit 4.1 – Update Information in IT Systems

Unit 4.2 – Report to Management

Unit 4.3 – Clean up Post Receiving

LSC/N2203

Key Learning Outcomes

At the end of this module, participant will be able to:

1. Describe physical data and system entries comparison process
2. Detail the information requirements for invoice preparation
3. Discuss end of day reports and status update requirements for manager
4. Detail safe and clean working environment requirements in work area and receiving area
5. Inspect information update status for damaged/missing goods
6. Prepare end of day reports and status update requirements for manager
7. Identify safe and clean working environment requirements in work area and receiving area

UNIT 4.1: Update Information in IT systems

Unit Objectives

At the end of this unit, participant will be able to:

1. Describe the process of updating the IT system for record
2. Detail the information requirements for invoice preparation

4.1.1 IT System updating process

The Receiving assistant is responsible for managing the complete cycle of movement of material from unloading from inbound vehicle till loading onto outbound vehicle.

Major Deliverables:

- Unloading the incoming material from vehicles.
- Staging, checking and scanning the inbound material.
- Physical movement of stocks from receiving area to put-away location. Binning of material.
- Stacking / storing of stocks as per set norms.
- Operating the MHE for whole gamut of warehouse activities.
- Loading of the outbound material into vehicle.
- Daily cycle count of material and periodic physical count of material.
- Ensure cleanliness & hygiene in entire warehouse (Including open space, rack, material cleaning).
- Managing and reporting all exceptions.
- Updating immediate supervisors on daily basis.

Receiving Assistants are a vital part of the supply chain process. They manage movement, material and method and make sure warehouse productivity targets are met. The foremost important job of an assistant is to perform cycle counting and update the systems in time with physical data.. To get the detail list and relevant documents to start the work, the assistant needs to get help from the ***warehouse executive - (Data Entry Operator)*** to finish the following tasks:

- Upload all the details taken down by you in the system
- In case bar codes are used, check that the data in the system matches the data noted down.
- Make sure that actions taken/agreed upon for missing or damaged items are also fed in the system
- Make available information in the system so that the documentation assistant can prepare invoices

4.1.2 Creating Invoice

Once the goods are received and recorded, the receiving assistant moves ahead with the Put-away process. This consists of putting everything in a designated place so that everything can be quickly accessed and quickly returned to the same place. The assistant designates the position the items in the warehouse according to their frequency of use. They put the frequently used items next to the workplace. As a part of this process the receiving assistant must learn how to create invoices for these products as well as how to read invoices.

Following is an example of an invoice to help with learning the different parts of an invoice:

TAX INVOICE

ABC ENTERPRISES

123 B 20/8 XXXXXX
PUSA ROAD,NEW DELHI-110005
GSTIN No 07APAFD8245XXXX

Bill to	Place of Supply	INVOICE No	Dated
RK Electrical Works A-10 Rajouri Garden,New Delhi GSTIN No:-07BBUPS5252XXXX	RK Electrical Works A-10 Rajouri Garden,New Delhi	DD-TI-01	1-Jul-17

Description of Goods	HSN CODE	QTY	Units	RATE	Amount
LED LIGHTS	8501	50	pcs	200	10000
Bulbs	8501	5	Dozens	3000	15000
Total					**25000**
Less Discount 20%					5000
Taxable Value					**20000**
ADD CGST 6%				6%	1200
ADD SGST 6%				6%	1200
Total					**22400.00**

Amount Chargeable (in words)
Rupees Twenty Two Thousand Four Hundred only

Company's PAN: AAKFD6723D

Note-Please make cheques in favor of **"DD Enterprises"**

For ABC ENTERPRISES

Authorised Signatory

Fig.4.1.1 Sales Invoice

Notes

Scan the QR Code to watch the related videos

https://youtu.be/yyTchG8 Pmtk
Invoice

https://youtu.be/mOUvhs TJcRk
Housekeeping in Warehouse

UNIT 4.2: Report to Management

Unit Objectives

At the end of this unit, participant will be able to:

1. Prepare reports on daily activities done in the warehouse.
2. Discuss the importance of reporting and maintaining daily activity sheet.

4.2.1 Reporting Process

After completing all the activities for the day, the receiving assistant must update status of the entire activities to his/her reporting manager and make notes of the pending tasks in each activity to plan for the next day work.

The manager will conduct a sundown (closing) meeting with the assistant and explain work to be done for the next day. He/she may perform safety inspection in all areas in the warehouse and check on the condition of every equipment and personal protective equipment.

Report to management for any shortage shipments, customer claims, cycle count discrepancies, breakages, damages, accidents, near misses happened during the day. Notify manager regarding any concerns faced during the day for appropriate actions. Complete the daily activity forms as required by management.

Below are the reports which can be maintained on daily activities –

DAILY WORK REPORT										
NAME OF WAREHOUSE:										
NAME OF ASSOCIATE:					DATE:					
S.NO	**DATE**	**NAME OF TASK**	**COMPLETED**			**PENDING**				**SIGNATURE**

Fig 8.7.1. Workers daily Activity Sheet

Keep in mind the following points:

- Inform the warehouse manager about any delays in inbound consignments or missed deliveries
- Report any issues faced in negotiation with distributors regarding replacement for damaged or missing goods.
- Prepare reports on the quality of inbound goods, number of damaged or missing goods, etc.

Tips

Safety precautions while handling automobile goods

- Utilize accumulation conveyors that hold product in place until signaled to release it.
- Load & wrap pallets right.
- Watch weight: do not overload shelving or racks.
- Install safety equipment.

Notes

UNIT 4.3: Clean Up: Post Receiving

Unit Objectives

At the end of this unit, participant will be able to:

1. Discuss the importance of cleanliness in receiving area and warehouse.
2. Explain the procedure for maintaining proper housekeeping post receiving goods.

4.3.1 Housekeeping in Receiving Area

Housekeeping is not just cleanliness. It also means ensuring a safe work environment for the people working. Good housekeeping means so much more in case of a warehouse:

- Save all data, safely log off and switch off the computer.
- Return any PPE and testing equipment used to their respective storage racks.
- Have any spillages or breakages in the unloading and receiving areas cleaned up by the loader
- Check to ensure that the computer is off, the work area is clean and ready for the next work day
- Keeping the floor free from slip or trip hazards
- Preventing any fire hazards
- Preventing any hazards around conveyors or charging stations.
- Removing any obstructions in the path for forklifts.
- Ensuring level surface for movement of hpt and bopt.

Effective housekeeping is an ongoing daily exercise and not a onetime effort.

Docks -
Keep your dock productive and safe every day with these dock cleaning tips:

1. DE-CLUTTER- With all of the loading and unloading that takes place throughout operating hours, clutter is inevitable. Unfortunately, even seemingly innocuous clutter can lead to dangerous and costly slip and fall injuries. Between each load, make sure that your team **Clears out any Clutter** that accumulated in the process:

    - Wooden pallets
    - Shrinkwrap
    - Cardboard boxes
    - Broken or loose items on the floor

2. SECURE - When loading and unloading items at your dock, ensure that all of your items are **Properly Secured to Their Pallets**. Loose things can easily fall, create clutter, slip hazards, and even damage your dock's floors. **Securing your items with Banding** helps prevent significant accidents and allows your team to quickly clean up any minor spills that could occur during the loading process

3. CLEAN-UP ALL MOISTURE- Whether a liquid item spilled or rainwater **Cleaning up any Moisture** on your floor is essential. Not only does it prevent long-term respiratory threats, but it also helps mitigate the risk of slip and fall injuries on the job. Have a policy in place that ensures:

    - All spills are immediately cleaned
    - Your loading dock area is always free of ice and rain
    - Regular sweeping, dusting, and power washing maintenance is scheduled, ensuring that no oils or grease slipped passed your team

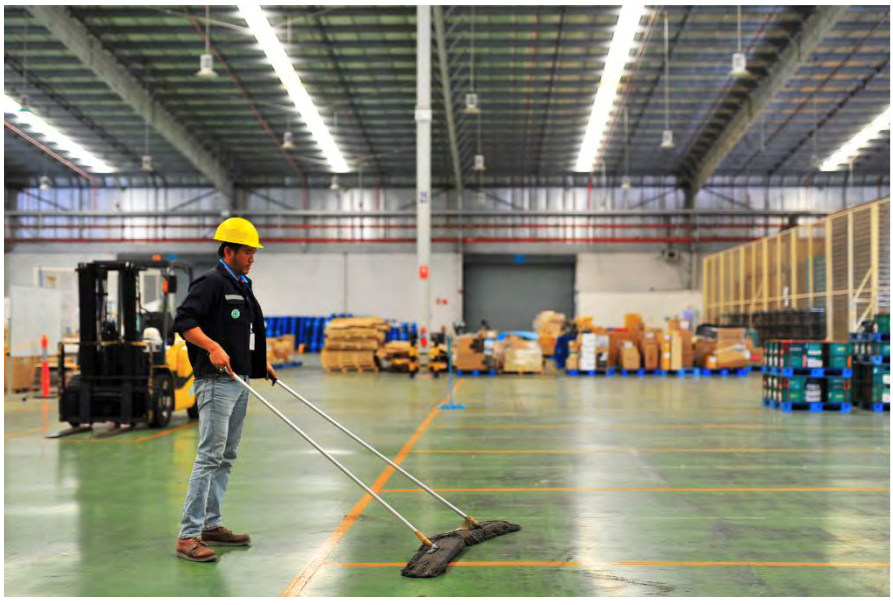

Fig 4.3.1. Cleaning of Docks

Aisles –

Aisles should be wide enough to safely and easily accommodate the MHE and the people operating there. Aisle should allow movement of material, machines and manpower. Keeping aisles clean is important. Any excess material should not be kept in aisles and block them. The lighting should be installed on the top of the aisles to provide effective illumination for the work. There should be proper warning signs and mirrors at the bling corners. Keeping aisles functional and free is essential to good housekeeping.

Fig 4.3.2. Cleaning of Aisles

Product Slots - Cleaning of product slots may require use of dusters, brooms, mops, or shovels. To clean these rack locations, pull product out of the location with an HPT or forklift and clean slot with cleaning supplies and electric scrubber. This has to be done with utmost care to avoid breakages and damages to product.

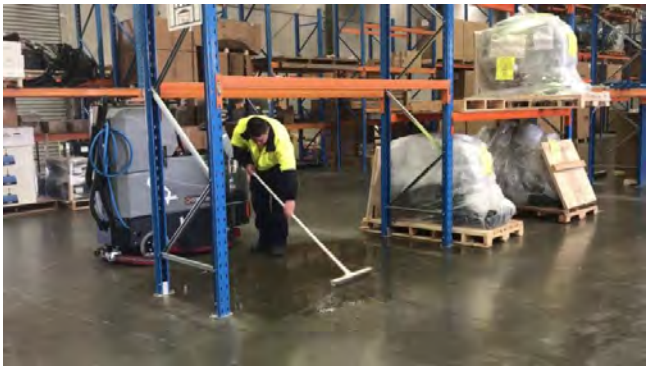

Fig 4.3.3. Cleaning of Product Slots

Tips

"*A stitch in time can save nine* **"**- If the goods are properly packed as per instructions and inspected before dispatch, lot of damages can be avoided.

Summary

In this chapter we discussed the post shift activities of a receiving assistant. A receiving assistant has to carry out all these activities with great skill, as these activities determine the next day's workload and process. A receiving assistant needs to be aware about the several steps in creating a report, updating the IT Systems and maintaining hygiene for the safety of the staff.

Exercise

1. Enlist the major deliverables of a Receiving assistant

2. Create an Invoice using the sample given

3. Which of the following is not a housekeeping activity
    a) Have any spillages cleaned up
    b) Check to ensure that the computer is off, the work area is clean and ready
    c) Put the MHE at charging stations
    d) Preventing any fire hazards

4. If bar codes are not used to
    a) Track consignment
    b) Label product
    c) Update WMS with the physical information
    d) Check product type

True and False

1. A documentation assistant helps a receiving assistant prepare invoices
2. De-clutter is an important step in good houskeeping
3. A invoices includes the product name, weight, barcodes, SKU's etc
4. Reporting can be done on a weekly basis rather than daily

Notes

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Unit 5.1 – PPE for Receiving Assistant

Unit 5.2 – Implement Safety in Warehouse

Unit 5.3 – Handling Hazardous Goods

Unit 5.4 – Managing Breach of Safety, Accidents and Emergency Situations

LSC/N2205

Key Learning Outcomes

At the end of this module, participant will be able to:

1. Discuss the health, safety and security norms to be followed in receiving consignments
2. Detail fire safety regulation
3. Discuss fire and bio hazards handling procedures
4. Detail the data safety regulations
5. Discuss documentation procedures for health, safety and security violations
6. Explain the escalation matrix for reporting deviation
7. Demonstrate the usage of PPEs in work environment
8. Identify unsafe working conditions and practices
9. Demonstrate the health, safety and security norms to be followed in receiving consignments

UNIT 5.1: PPE for Receiving Assistant

Unit Objectives

At the end of this unit, participant will be able to:

1. Understand PPE Requirements
2. PPE needs based on product and environment

5.1.1 Personal Protective Equipment

Personal protective equipment (PPE) is the equipment or clothing designed to be worn by workers or visitors to shield their bodies from workplace hazards. The hazards managed by protective equipment include physical, chemical, electrical, bio-hazards, heat, and airborne particulate matter.

After receiving the schedule for the day and before starting the operations for the day the goods packaging machine operator needs to prepare for the next process which is usage of Personal Protective Equipment - PPE before entering into the parking area.

Nearly 2 million work related injuries that can cause disability happens every year around the world and nearly 5 lakhs or more will involve head, eye, hands and feet. Using proper Personal Protective Equipment is a tool to do the job.

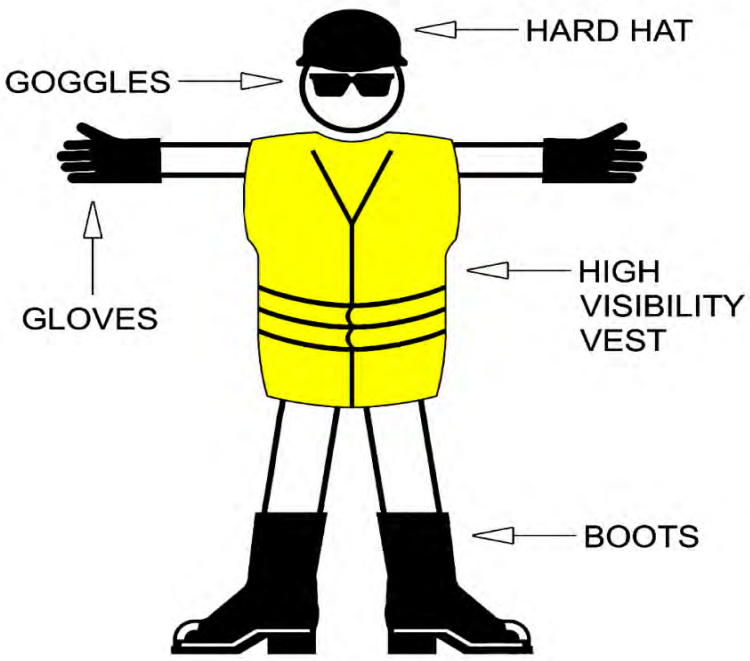


Fig. 5.1.1. Personal Protective Equipment

PPE can include: -

- Devices for Hearing protection, for example earmuffs and ear plugs
- Protective equipment for respiration
- Eye and face protection, for example safety glasses and face shields
- Safety helmets
- For working at heights the Fall arrest harnesses need to be used
- Skin protection, for instance gloves, gauntlets and sunscreen
- High visibility vests, life jackets and coveralls these are some of the clothing that should be used
- Footwear, such as safety boots and rubber boots.

5.1.2 Types of PPE

Common Dust Mask	
Respiratory Protection for example, disposable, cartridge, air line, half or full face	

Eye protection for example, spectacles/goggles, shields, visors	
Hearing protection for example, ear muffs and plugs	
Hand protection for example, gloves and barrier creams	

Foot protection for example, shoes/boots	
Head protection for example, helmets, caps, hoods, hats	
Working from heights for example, harness and fall arrest devices	

PPE Used in handling FMCG Goods

As the material being handled is not too large or bulky or hazardous in nature, those specialized MHE are not required. The general PPE used in warehouses will suffice for FMCG Warehouses.

Fig. 5.1.2. Personal Protective Equipment

PPE Used in handling Heavy / Bulk Goods

Like any other warehouse, in case of bulk warehouse too, the safety of the people working there is paramount. Following are some of the key PPE to be used in bulk warehousing.

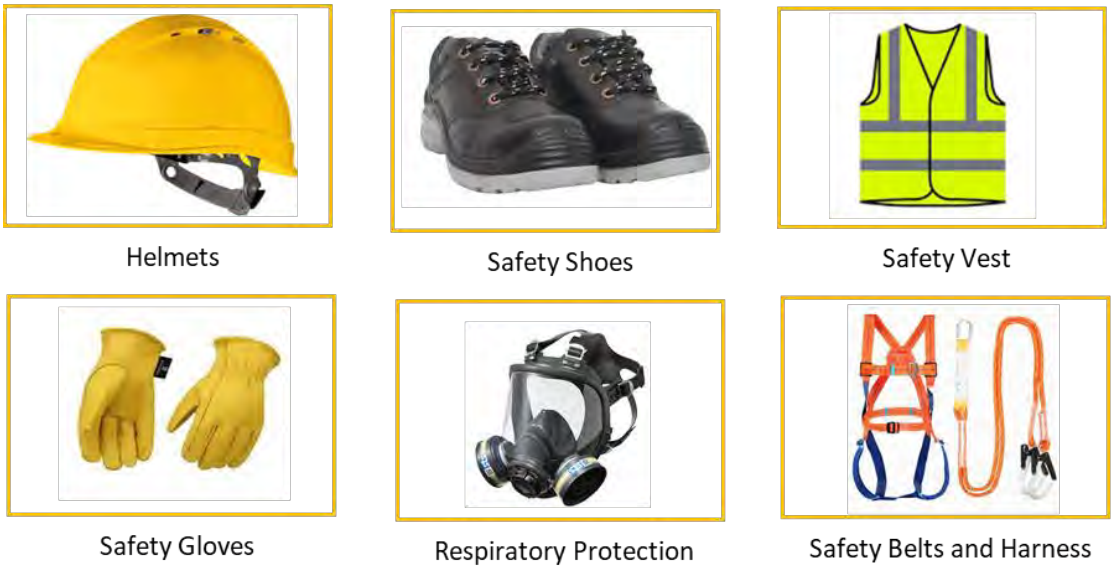


Fig. 5.1.3. Personal Protective Equipment

UNIT 5.2: Implementing Safety in the Warehouse

Unit Objectives

At the end of this unit, participant will be able to:

1. Discuss the criticality of safety.
2. Describe the various safety precautions to be undertaken.
3. Explain the importance of training to warehouse team.

5.2.1 Safety and its Criticality

"Nothing is more important than the safety of the people and goods stored inside the warehouse".

Working in warehouse creates several health and safety risks. If not controlled, it may lead to accidents, injury to people, illness, high employee turnover, lost working hours and at worst even fatalities. Safety rules and procedures are often disregarded to save money, cut corners, lack of focus or insufficient time. Well implemented safety procedures lead to minimum risk of injury, fewer disruptions, lesser absenteeism, higher employee satisfaction and finally better productivity.

As discussed in earlier chapters, companies store their finished goods inventory in the warehouse, they store raw materials on the manufacturing side. The nature of the products stored in the warehouse determine the rules and practices to be adopted to save the people from injuries or mishaps.

As a corporate, companies are also officially bound to implement and maintain safety procedures. The safety procedures should protect the workers from any danger and ensure that they operate in a safe and comfortable environment. However, the companies should maintain safety procedures not just for legal compliance; well implemented safety rules indicate the concern the company carries for its employees well-being.

Safety Rules in a Warehouse -

1. Make sure that safety equipment is being utilized at all times.
2. Remove anything that can be a possible safety hazards.
3. Properly Label designated hazardous zones.
4. Safe lifting techniques should always be used
5. Deliver training and provide refresher courses.
6. Promote safety awareness in the warehouse.

5.2.2 Safety Procedures to be observed in a Warehouse

A. Vehicle Safety -

When forklifts and reach trucks are used in the warehouse, it is essential to prevent any injury due to impact or crush. It is observed that most of the times the accidents happen while reversing. Following are some of the safety procedures for using Forklifts:

Fig. 5.2.1 Rules for Forklift Safety

B. Slips, Trips, and Falls -

Various reports indicate slips and falls are the single biggest reason for work related injuries across the world. *To prevent slips, trips, and falls, company should follow the tips mentioned:*

Fig. 5.2.2. Rules for Slips

C. Lifting -

Lifting can be done both manually and using MHE. Both the situations pose safety hazards if not done properly.

To minimize lifting risks, Company should follow the tips mentioned

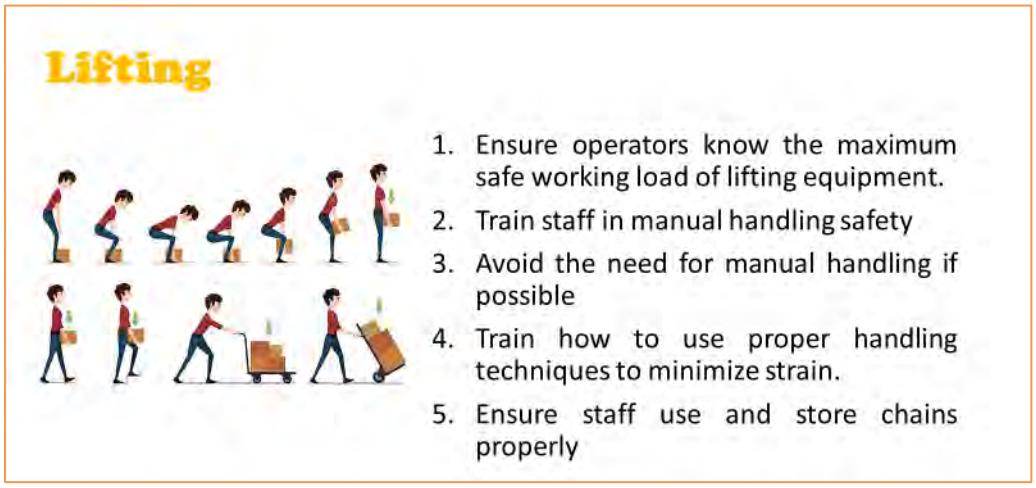


Fig. 5.2.3. Rules for Lifting

D. Fire Safety -

Fire is the biggest hazard warehouse faces. Along with loss of valuable material stored in the warehouse, Fire can even lead to injuries or fatalities to the people working there.

To maintain fire safety, company should follow the tips mentioned

Fig. 5.2.4. Rules for Fire Safety

E. Charging Stations -

Charging stations in warehouse facilities are used to recharge forklifts, BOPT and other power equipment. If proper guidelines are not followed, fires and explosions can occur.

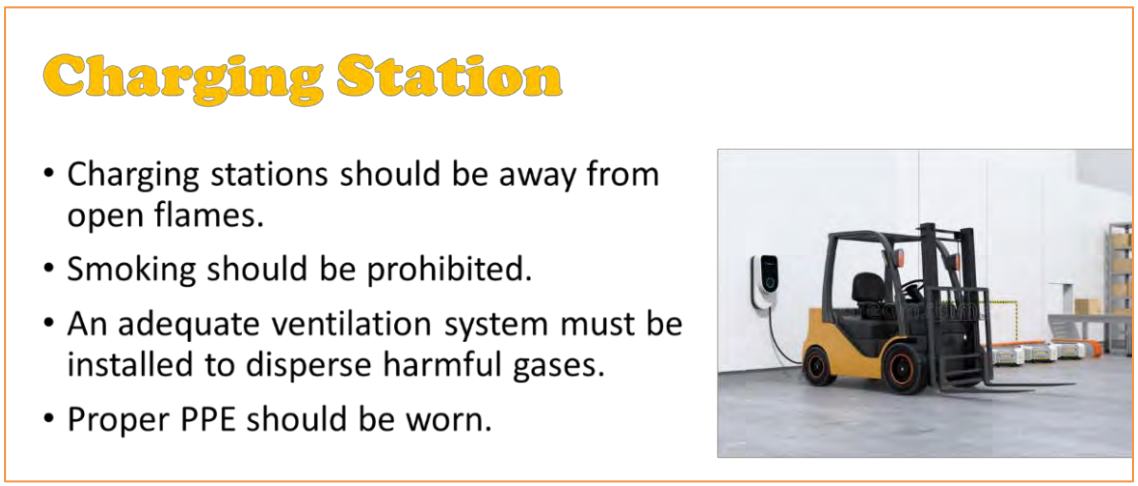


Fig. 5.2.5. Rules for Charging Station

F. Conveyors -

To move goods across a warehouse facility, conveyor machinery is frequently employed. However, there are significant risks associated with conveyors for employees, such as getting entangled in machinery and being hit by flying debris. To remain safe, it is important to:

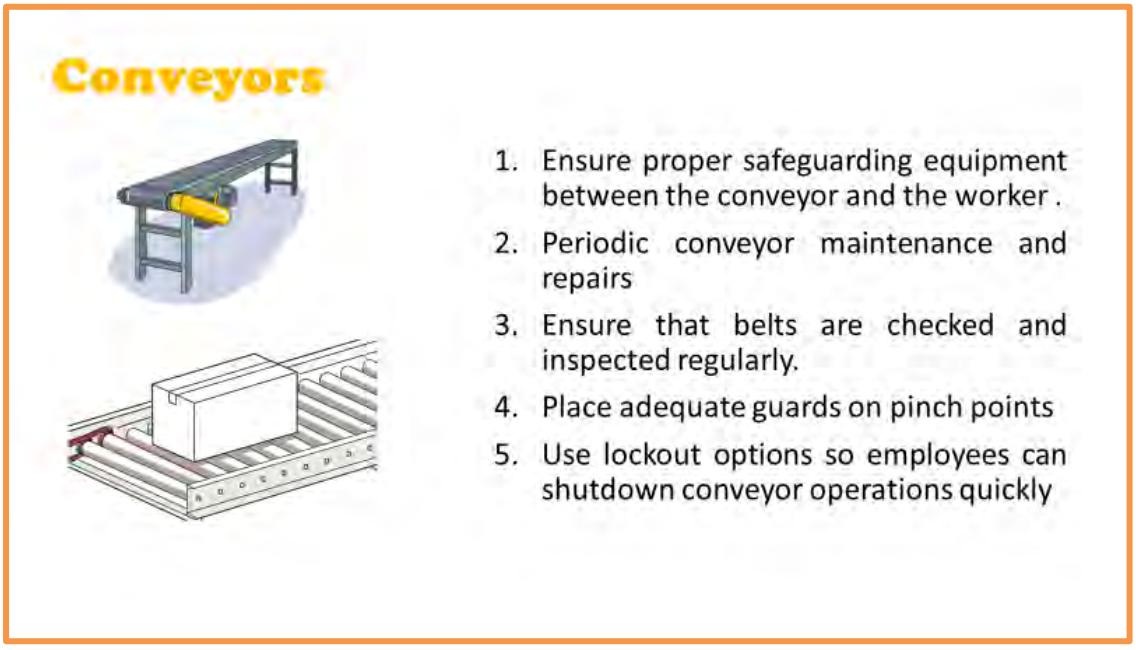


Fig. 5.2.6. Conveyors

G. Docks -

Docks are used in warehouses to load and unload cargo from lorries. Driving forklifts off docks and accidents involving merchandise that are incorrectly placed and fall on workers are two risks associated with docks.

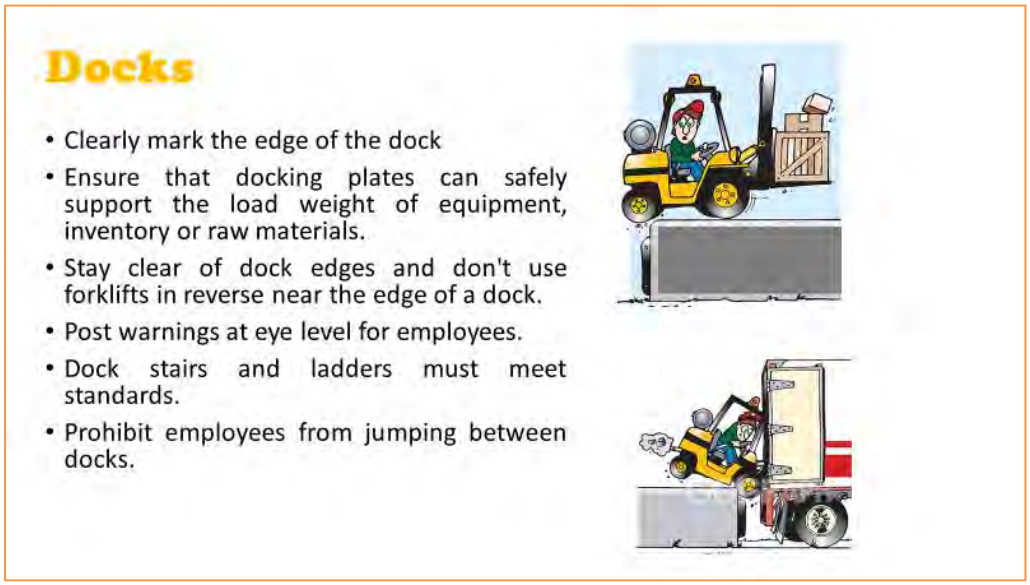


Fig. 5.2.7. Docks

Besides the above precautions, two important points in safety are usage of PPE and employee training.

H. Personal Protective Equipment -

Employees need to wear PPE all the time while working in the warehouse. If PPE is not worn and an accident occurs, it can lead to serious injuries or even fatalities.

It is seen in previous sections PPE to be used to protect head, fingers, feet, eyes and the rest of the body.

One needs to assess the risks in the warehouse to determine which type of PPE the associates need to wear.

I. Training to Staff -

Sense of awareness about safety is the most important factor in safety implementation. Most of the companies run formal safety training programs where all safety related measures are explained and formally practiced. There are regular refresher courses to further reinforce the concept of safety.

- Ensure that all employees are trained and carry up to date knowledge on safety procedures

- Employee should be educated about the consequences which originate by following unsafe work practices
- Any employee not following safety procedures should be strongly dealt including terminating services if required.
- To guarantee the avoidance of collision accidents, all staff members should be urged to remain alert to their surroundings and communicate their locations.
- Companies may implement incentives for zero-accidents and zero near-misses.

5.2.3 Inspection of Work Area

A Warehouse is an active place and its fast-paced nature often leads to injuries. The safety management program should ensure safety of the employees at all times.

The warehouse must continually inspect all areas of the warehouse, identify unsafe operating conditions and properly correct them for safe operation. Tools and equipment should be checked, cleaned and repaired regularly, and damaged or worn tools should not be used.

- The stored materials must not block corridors, stairs, exits, fire extinguishers, emergency wells, emergency showers or first aid stations. All storage areas must be clearly marked.
- Check the fire hoses and fire extinguishers regularly. Remove all obstacles and make these articles available immediately. Only personnel trained in appropriate firefighting methods should handle this equipment.
- Ensure that approved containers are used to store flammable, combustible, toxic and other hazardous materials in designated areas.
- Make sure that all power cables are disconnected by holding the connector and pulling it gently. Never pull on the rope. If the power cord is broken or the cables are exposed, take it out of service.
- Warehouse should not store highly combustible chemicals in a warehouse. There should be a separate location for it.
- Inspect the dock area daily to ensure that fire extinguishers are not blocked or damaged.
- Check the conveyor belts regularly to ensure that they are not damaged and in a safe condition.
- Check the sprinkler systems every month and conduct flow and alarm testing. Document inspections.
- If pulleys or hoists are used lift heavy material, inspect pulley and hoisting slings. Ensure that hook latches and appropriate PPE are available.
- Inspect all ladders on weekly basis for any damage. All types of ladders, whether wooden, metal, or fiberglass, should be checked frequently for possible defects resulting from prolonged wear and necessary repairs and/or replacements must be made.

Fig. 5.2.8. Inspection of Work area and Equipment

General unsafe working environment -

- Slip or trip of the employee caused by spillages or wet floors.
- Uncovered power cords or hoses.
- Working overtime, much beyond scheduled hours can also cause accident due to fatigue.
- Lack of proper ventilation.
- Broken windows, damaged doors, defective plumbing and broken floor surfaces can cause accidents and affect work practices.
- No proper usage of PPE by the employees while carrying out warehousing activities. It is warehouse associate's responsibility to ensure that all the workers are using all the required Personal Protective Equipment (PPE) for safe working.

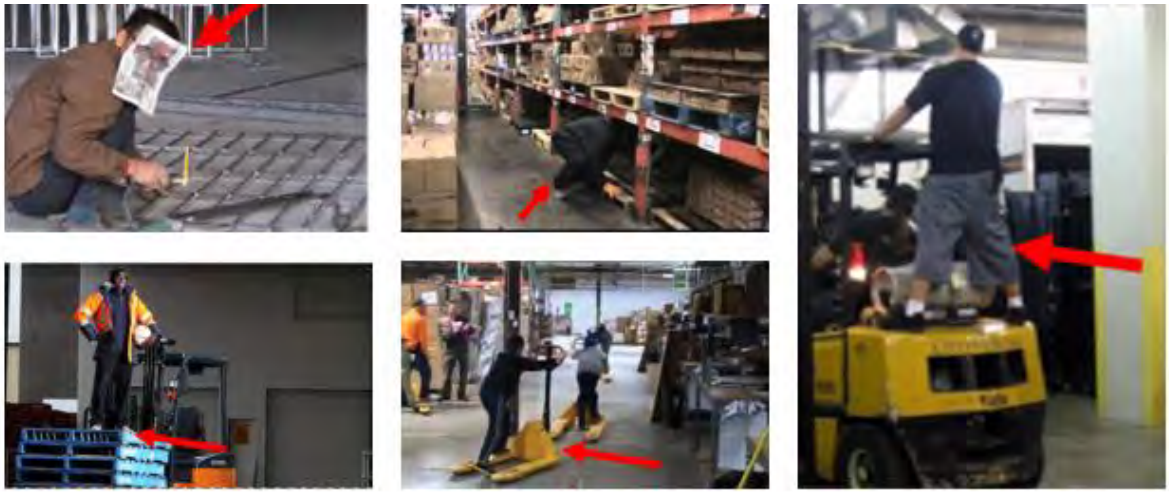


Fig. 5.2.9. Unsafe work practices

Notes

UNIT 5.3: Handling Hazardous Goods

Unit Objectives

At the end of this unit, participant will be able to:

1. Classify the hazardous materials.
2. Explain the concept of safety data sheet.
3. Describe the various do's and don'ts in handling hazardous chemicals.

5.3.1 Handling Procedures for Dangerous Goods

Dangerous and hazardous materials require special handling and attention whenever they are stored in warehouse. A specific Standard Operating Procedure (SOP) is set for each type of such cargo and strict adherence to it to ensure safety of the employees and the warehouse. Following are some of the key points that should be taken care of when dangerous goods are kept in warehouse. Material Safety Data Sheets (MSDS) and container labels will be the basis of reference to conduct the evaluation

All items and substances that are deemed to be dangerous goods must be identified, categorised, and given one of the standard names used for dangerous goods transportation and storage.

Warehouse must identify the material which cannot be stored together and create separate designated places for them.

Hazardous materials are generally assigned to one or more of the following classifications.

- Any liquid with a flash point below 37 degrees Celsius is considered flammable.
- Combustible Liquid - Any liquid that produces enough vapours to ignite when exposed to an ignition source and has a flash point between 37 and 94 degrees Celsius.
- Flammable Solid - A substance that, when ignited, will burn so vigorously that it causes a hazard. It can catch fire due to friction, moisture absorption, or spontaneous chemical changes.
- Oxidizer: an ingredient that easily releases oxygen to promote the burning of organic material.
- Corrosive - a liquid that corrodes steel (SAE 1020) at a rate greater than 0.250 inches at a test temperature of 130 degrees Fahrenheit or has a PH less than 2 or greater than 12.5.
- Organic peroxide is an organic molecule that has an oxygen-oxygen chemical link.
- A chemical that poses a risk to life or health is considered poisonous.

- Compressed gas is a material that is either a liquid or a gas that is kept under pressure in a container. This includes aerosol cans, lecture bottles, and cylinders. These compounds might be dangerous, inflammable, or neither.
- Cryogenics - extremely cold substances like dry ice, liquid helium, and liquid nitrogen. If these compounds spill in unventilated spaces, they could also pose a threat of asphyxiation.
- Any substance with a specific activity more than 0.002 microcuries per gramme (uCi/g) is considered radioactive.
- Biomedical - human and ape blood, organs, and tissues.

Fig. 5.3.1. Dangerous goods classification

Safety Data Sheet -

A safety and health data sheet, also known as a safety data sheet (SDS), material safety data sheet (MSDS), or product safety data sheet (PSDS), is a written record that provides information on how to stay safe when using various products and chemicals.

• Safety data sheet (formerly known as material safety data sheet) contains information such as the properties of each chemical. Risks to health, and the environment; Safety measures; and precautions when handling, storing, and transporting the chemical.

• Provides clues for each chemical:

1. Personal protective equipment (PPE)
2. First aid procedure
3. Spill cleaning procedure

All employees must be trained to read, understand, and access safety data sheets.

The safety rules and procedures to be followed in a hazardous cargo warehouse:

Hazardous material is one which is capable of producing effects such as fire, explosion, sudden release of pressure and may cause acute health effects like burns, injuries, convulsions or even organ damage. In spite of several challenges hazardous material is required in various stages of manufacturing and need to be stored in a warehouse.

Following are some of the suggestions for handling hazardous material in the warehouse:

Have the right procedures and that works according to the current regulations -

Procedures are made to ensure that the company requirements are met in warehouse. The requirements for safety, to prevent cargo damage, to ensure correct and punctual delivery of goods from warehouse. Meeting all of these requirements is what makes procedures right. Ensure the warehouse is operating the right procedures for cargo and organization requirements.

Staff needs to be certified for handling dangerous goods:

The storage and transport of dangerous goods is a complex practice. It requires detailed understanding and knowledge of the relevant regulations.

The people in the warehouse need to the have the knowledge and skills for dealing with the transportation and security of hazardous materials/dangerous goods -

Only proper trained staff is able to successful apply rules concerning the transport and storage of dangerous goods. Trained staff with the right knowledge and skills know about the risks involved and how to work with these risks, and without training it is extremely difficult to achieve a detailed understanding of the regulations.

Some hazardous goods need to be stored separately as per their classification:

Many dangerous goods are incompatible with other substances. Knowing this is one thing, working in a way that ensures these substances are safely and separately stored is something else. It is a legal requirement that dangerous goods which are not compatible with other substances are stored and handled separately. Avoid interaction that creates serious risks for incidents. A good warehouse and organization know this and uses a barrier or a suitable separation distance to avoid problems.

Documentation should be up-to-date and available to staff at all locations to enable them to perform their role in the quality system:

The people in the warehouse should be aware of the cargo and goods that are stored at any minute. Nobody expects an incident involving dangerous goods but in case it happens, it is better be prepared. Having precautionary statements near the dangerous goods everybody knows that to do when an incident happens. And with proper work instruction cards every employee, even those who are less trained, can follow instruction. Avoid a surprise and have documentation complete.

Below is a ready checklist for associate to refer while conducting the inspection for dangerous /hazardous cargo in warehouse –

Hazardous Material Check List		
1	Product Name	
2	Hazard Class	
3	PPE required to handle	
4	Engineering Controls/ Ventilation	
5	Special Handling Procedures	
6	Storage Requirements	
7	Special Containment	
8	Accident Procedures	
9	Waste Disposal	
10	Special Precautions	
11	Decontamination	
12	Designated Areas	
13	Approved by	

Fig. 5.3.2. Checklist for Dangerous cargo inspection

Notes

UNIT 5.4: Managing Breach of Safety, Accidents and Emergency Situations

Unit Objectives

At the end of this unit, participant will be able to:

1. Describe how to handle emergency situations.
2. Explain the steps to be taken in case of any accident.
3. Describe the documentation to be followed in case of any accident.
4. Explain the details on evacuation plan and safe assembly point.

5.4.1 Protocol in case of Emergency Situations

In ideal warehouse should try to prevent accidents from happening as far as possible. Despite all precautions, if accidents still occur, following action needs to be taken.

At the time of incident

- Take control at the scene and try to restore order.
- First aid and emergency calls. Provide immediate assistance to the injured; else call for help. Caring for injured personnel is the top priority.
- Monitor any secondary accidents. This includes banning people who should not be on area. For example, if the spill happened, other employees need not pass by.
- Identify people and conditions on the scene. The people are the witnesses to the event.
- Keep material evidence. Protect the scene and control access again. You do not want to modify or delete any evidence.

Once the immediate emergency is stabilized, the following measures must be taken:

- Assess how much damage is, how severe it can be, and that you need additional resources to investigate.
- Make proper notifications. Make sure senior management is aware. Also call the affected families, any regulatory agencies you need, and your insurance companies.

Other Actions

- The initial report should be completed and submitted for all assessments within 24 hours of the accident.
- Subsequent reports, including recommended actions, should be completed within 48 hours and 30 days.

Finally

- If an accident occurs, it is best to follow a written procedure and learn about the process from staff and management.
- The learning from the incident and how to prevent it in future should be clearly documented.

Below is the standard protocol to be implemented in case of any emergency situation -

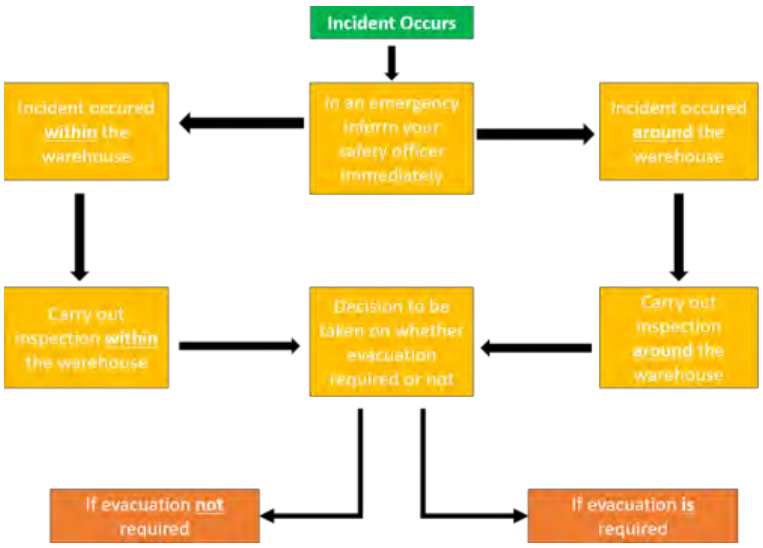
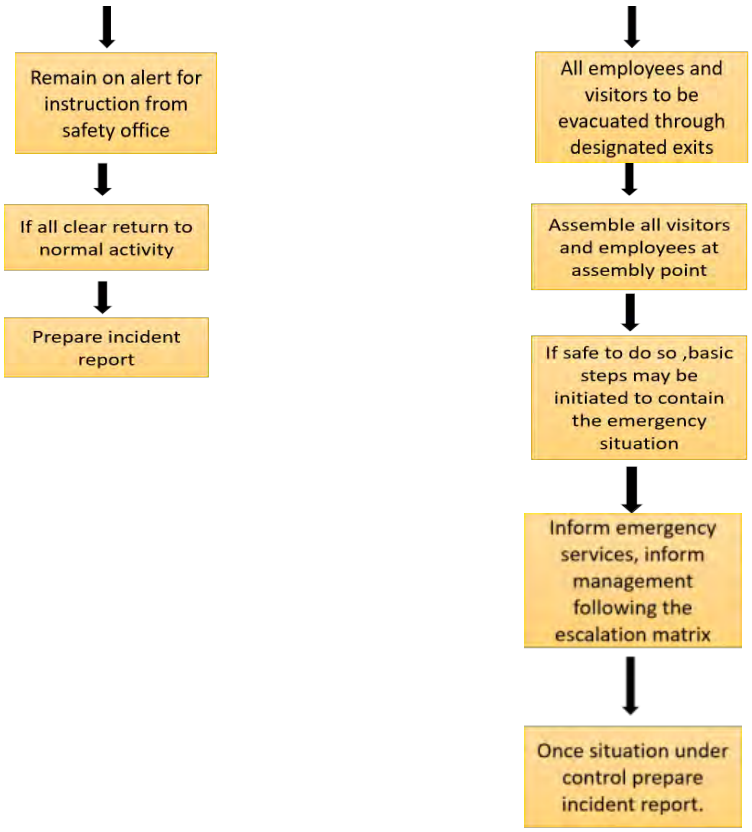
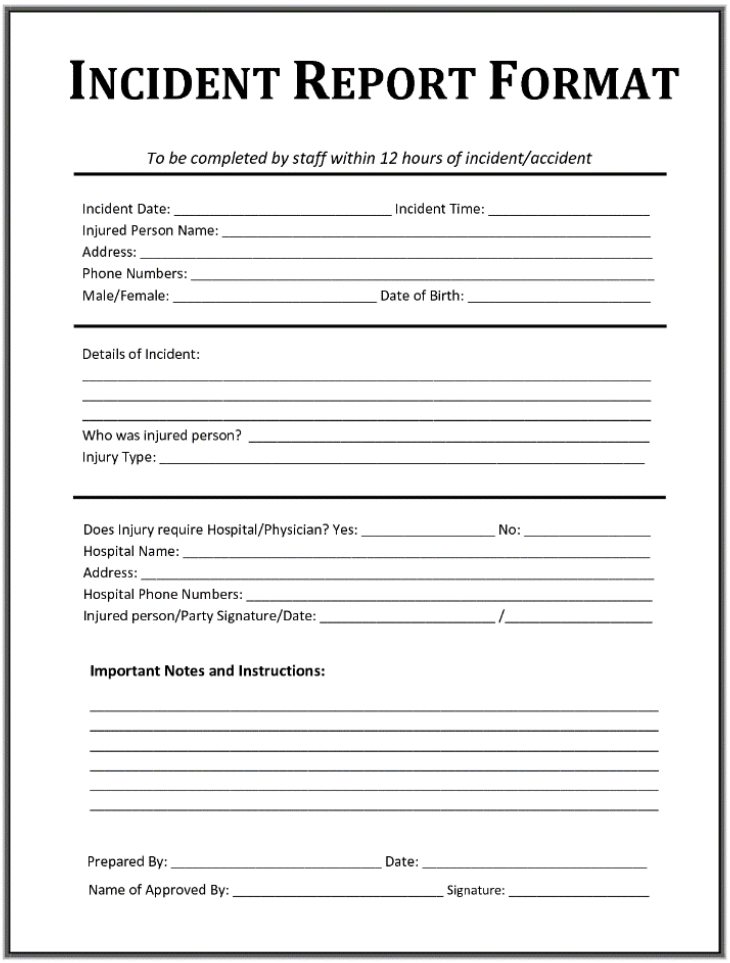


Fig 5.4.1. Flowchart for emergency situation





INCIDENT REPORT FORMAT

To be completed by staff within 12 hours of incident/accident

Incident Date: _____ Incident Time: _____
Injured Person Name: _____
Address: _____
Phone Numbers: _____
Male/Female: _____ Date of Birth: _____

Details of Incident:
_____
_____
_____
Who was injured person? _____
Injury Type: _____

Does Injury require Hospital/Physician? Yes: _____ No: _____
Hospital Name: _____
Address: _____
Hospital Phone Numbers: _____
Injured person/Party Signature/Date: _____ /_____

Important Notes and Instructions:

_____
_____
_____
_____
_____
_____

Prepared By: _____ Date: _____
Name of Approved By: _____ Signature: _____

Fig. 5.4.2. Incident Report Format

Managing Deviations in Health, Safety and Security -

Warehousing with its whole range of activities can result in various hazards and risks. An effective safety and health management system tries to assess to assess every possible safety risk and tries to put in measures to prevent them. By doing this the management is trying to protect its most valuable asset, employees, as well as other members of the public from harm. Safety measures not only protect premises, goods, equipment but the reputation too.

- There should be regular inspection with regards to safety and security of the warehouse.
- A periodic checklist should be asked to fill in by the employees with regards to following the safety procedures and their personal hygiene.
- Any employee, if seen violating health and safety norms should be immediately warned. In case if he still does not improve, appropriate actions may be taken.

Tips

- Following healthy and hygienic practices every day will make you feel good mentally and physically.
- Hygiene is two-thirds of health – so good hygiene will help stay strong and healthy!

Notes

Summary

This chapter deals with the health, safety and security norms to be followed within the warehouse to avoid any accidents. 5S is clearly explained and is a helpful tool in organizing the warehouse. Process to be followed while handling hazardous goods is very crucial.

Scan the QR Code to watch the related videos

https://youtu.be/- 8Nxd9ILKoQ
5 Common Warehouse Safety Hazards

https://youtu.be/loQ9Dbs y2ag
PPE in warehouse

Exercise

Multiple Choice Questions

1. Which of the following is not an activity to maintain fire safety in the warehouse?
   A. Banning the entry of any match boxes and lighters
   B. Building an emergency response team
   C. Identify the escape routes
   D. Regular inspection and maintenance of forklifts

2. Assigning every area of the workplace to a person or a group for cleaning is part of which S in the 5S methodology
   A. Set in Order
   B. Shine
   C. Standardize
   D. Sort

3. Which of the following is not a part of material safety data sheet?
   A. Properties of the chemical
   B. Storage and handling instructions of the chemical
   C. Price of the chemical
   D. Risk to health of the chemical

4. Which of the following is not a safety hazard?
   A. Employee working for long hours much beyond the shift hours
   B. Employee not being trained on safety procedures
   C. Safety signs not being displayed in the warehouse
   D. Not holding a sunrise or sunset huddle meeting

Fill in the Blanks

1. _____ are the single biggest reason for work related injuries across the world.
2. Removing unnecessary items if the part of _____ S in the 5S at the warehouse.
3. _____in warehouse facilities are formal locations used to recharge Forklifts, BOPT and other Power Equipment.
4. An employee not following safety procedures should be _____.

True and False.

1. Material Safety Data Sheet will carry instructions to clean in case of any spill
2. Conveyors are simple set of rollers and do not pose any threat to the safety of the people working near.
3. It is optional to send an incident report after an accident as long as all the steps have been taken and everything is restored to normal.

Annexure QR Code

S. No	Chapter	Unit	Topic Name	URL	Page No	QR Codes
1	Chapter 1: Introduction to Receiving Assistant	Unit 1.1 - Supply Chain and Logistics Management	1.1.1 What is Logistics?	https://youtu.be/kT_t oh5 NbxE	36	What is Logistics?
2	Chapter 1: Introduction to Receiving Assistant	Unit 1.2 - Subsectors of Logistics Industry	1.2.1 Sub-Sectors of Logistics Industry	https://youtu.be/NuLz lZu QoLA	36	Sub-sector of Logistics
3	Chapter 2: Prepare to Receive Consignments	Unit 2.1 - Introduction to Receiving Operations	2.1.1 What is Receiving Process	https://youtu.be/F2Lz wYs k9E	54	Receiving process
4	Chapter 2: Prepare to Receive Consignments	Unit 2.2 - Prepare Receiving Area	2.2.2 Guidelines to prepare for Housekeeping	https://youtu.be/qPlRi RWNlY	54	Housekeeping
5	Chapter 3: Receiving	Unit 3.1 - Receiving Consignments	3.1.3 Documents Required for Receiving	https://youtu.be/o5D 9uK 3WVc0	78	GRN
6	Chapter 3: Receiving	Unit 3.2 - Segregate Goods: Unloading, Storage and Transfer	3.2.1 Unloading Process	https://youtu.be/2Nq AZ_ aoSvg	78	Unloading process
7	Chapter 4: Post Receiving Activities	Unit 4.1 – Update Information in IT Systems	4.1.2 Creating Invoice	https://youtu.be/yyTc hG8 Pmtk	87	Invoice

8	Chapter 4: Post Receiving Activities	Unit 4.3 - Clean Up: Post Receiving	4.3.1 Housekeeping in Receiving Area	https://youtu.be/mOUvhs TJcRk	87	Housekeeping in Warehouse
9	Chapter 5: Compliance to Health, Safety and Security Measures	Unit 5.1 - Safety Instructions to be followed in Workplace	5.1.1 Health and Safety Procedures	https://youtu.be/-8Nxd9ILKoQ	116	5 Common Warehouse Safety Hazards
10	Chapter 5:Compliance to Health, Safety and Security Measures	Unit 5.2 - Importance of PPE	5.2.1 PPEs Role in Warehouse	https://youtu.be/loQ9Dbs y2ag	116	PPE in warehouse

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