

PROCESS INVENTORY CONTROL

Inventory:-

It is a detailed list of movable goods such as raw materials, materials in process, finish products, general suppliers and equipments etc. and gives the quantity and value of each item.

Inventory Control:-

Inventory control is a planned method of determining what to indent, when to indent, how much to indent and how much to stock, so that purchasing and storing costs are the lowest possible without affecting production or issues. Without proper control, inventories have a tendency to grow beyond the economical limits. Funds are tied up unnecessarily in surplus stores and productive operations are starved and finances of the plant are severely strained. Lack of control over inventory also leads to excessive consumption as consumers are liable to become careless with unrationed supply of materials.

The Need of Inventory Control:-

The necessity of inventory control is to maintain a reserve of goods that will ensure manufacturing according to a production plan based on sales requirement and the lowest possible ultimate cost. Losses from improper inventory include purchases in excess than what needed; the cost of slowed up production resulting from material not being available when wanted. Each time a machine must be shut down for lack of materials or each time sale must be postponed or cancelled for lack of finished goods. Thus a factory loses money.

To promote smooth factory operation and to prevent piling up of stock or idle machine time proper material must be on hand when it is wanted. Proper inventory control can reduce such losses to a great extent.

Function of Inventory Control:-

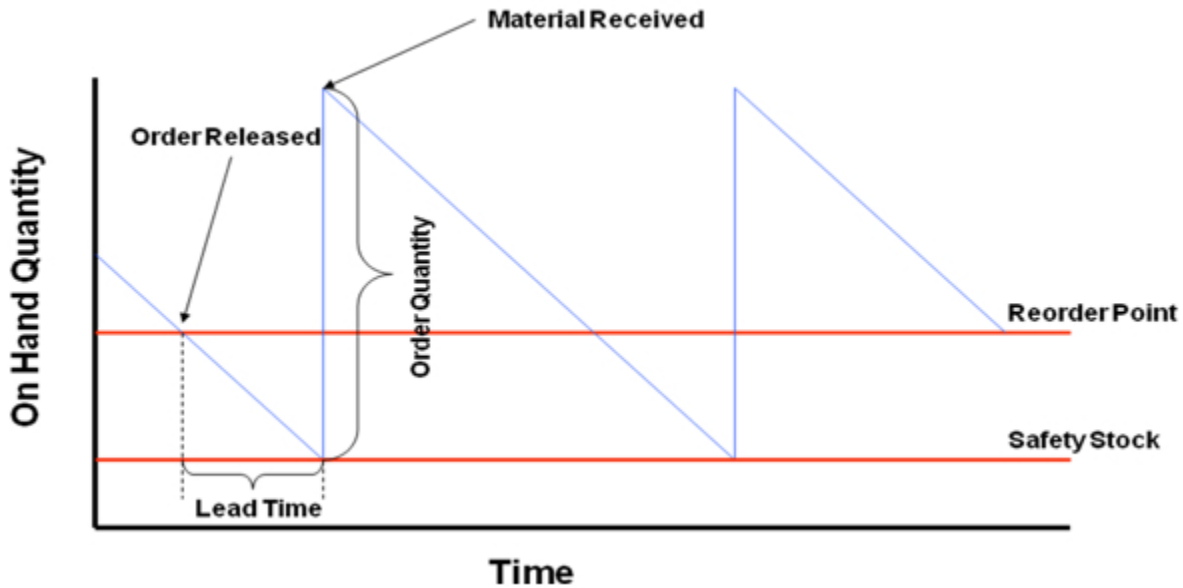
- (a) **To run the stores affectively** – This includes layout, storing media (bins, shelves and open spare etc.), utilization of storage space, receiving and issuing procedures etc.
- (b) To ensure timely availability of material and avoid built up of stock levels.
- (c) **Technical responsibility for the state of materials-** This includes methods of storing, maintenance procedures, studies of deterioration and obsolescence.
- (d) **Stock control system-** Physical verification, maintenance of records, ordering policies and procedures for the purchase of goods.
- (e) **Maintenance of specific raw materials-** General suppliers, work-in-process and component parts in sufficient quantities to meet the demand for production.
- (f) Protecting the Inventory from losses due to improper handling and unauthorized removal from stores.
- (g) Pricing all materials supplied to the shops so as to estimate material cost.

Essential steps in Inventory Control:-

It is essential that the necessary materials shall be on hand when required and it is just as essential that no more stores shall be carried as is necessary. The maximum and minimum quantities of all stores should, therefore, be fixed with much care. In several cases these limits can be set only by experience and carefully observation. It is found that this results in a great reduction of inventory.

Quality Standards:

There are five important quality standards used as tool to control inventory.



1. The maximum stores
2. The minimum stores
3. The standard order
4. The ordering point
5. Lead or procurement time

1. The Maximum store:- This term is applied to designate the upper limit to the Inventory and represents the largest quantity which in the interest of economy should generally be kept in stores.

2. The Minimum stores:- This term is applied to designate the lower limit of the Inventory and represents a reserve or margin of safety to be used in case of emergency. When requirements have been abnormal it is intended that there must always be at least this quantity available in stores.

3. The Standard order:- It is the quantity to be purchased at any time. Repeat order for a given product are always for this amount until this is revised.

4. The Ordering point:- This represents the quantity required to ensure against exhaustion of the supply during the interval between the placement of an order and delivery. When the balance fall to this level, it is an indication that a new purchase order must be placed.

5. Lead Time:- It is time which takes the stock to reach from recorder point to minimum stock level.

In setting maximum, minimum, and order quantities each item should be considered separately in terms of the following factors:

- (a) Economic size of each purchase order.
- (b) Increased lock-up in capital.
- (c) The time required to receive the goods after requisitioning.
- (d) The probable depreciation and obsolescence.
- (e) The rate of demand etc.

Advantages of Inventory Control:-

1. It creates buffer between input and output.
2. It ensures against delays in deliveries.
3. It allows for possible increase in output.
4. It allows advantage of quantity discounts.
5. It ensures against scarcity of materials in the market.
6. It utilizes the benefit of price fluctuations.

Inventory Control Techniques:

- ABC analysis
- VED analysis

ABC analysis:

In order to exercise effective control over materials, A.B.C. (Always Better Control) method is of immense use. It is an inventory control method based upon a statistical principle

discovered by **Vilfredo Pareto**. Under this method materials are classified into three categories in accordance with their respective values.

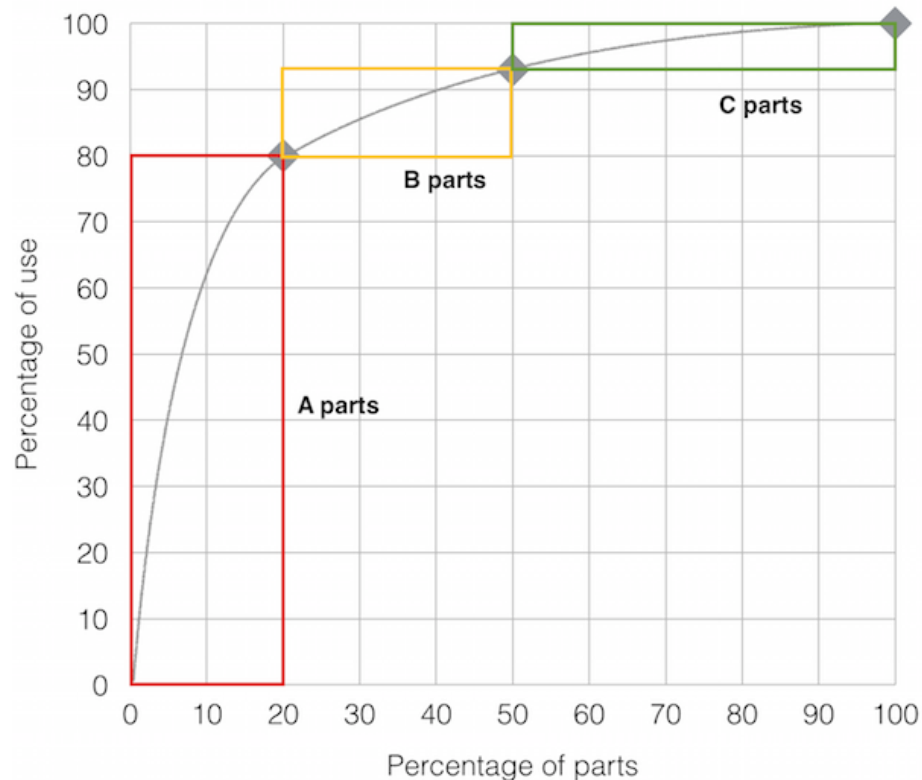
Group 'A' constitutes costly items which may be about 20% of the total items but account for about 80% of the total value of the stores. A greater degree of control is exercised to preserve these items.

Group 'B' consists of items which constitutes about 30% of the store items and represent about 15% of the total value of stores. A reasonable degree of care may be taken in order to control these items.

In the last category i.e. group 'C' about 50% of the items is covered costing about 5% of the total value. This can be referred to as residuary category. A routine type of care may be taken in the case of third category.

This method is also known as 'stock control according to value method', 'selective value approach' and 'proportional parts value approach'.

If this method is applied with care, it ensures considerable reduction in the storage expenses and it is also greatly helpful in preserving costly items.



VED analysis:

It means Vital, Essential, and Desirable. This is a device to measure service level and to avoid the stock-out cost. Under this analysis, the working of equipment is given priority to achieve the higher service level.

Vital- Items without which the equipment stops working and there is no time left for procurement.

Essential- Items without which the equipment may work but with less efficiency and there is time left for procurement e.g., grease and oil.

Desirable- Without which the equipment can work e.g., passenger amenities in coaches.

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