



## **ASSESSMENT OF MATERIAL MANAGEMENT & IMPORTANCE IN MANUFACTURING BUSINESS ENTERPRISE.**

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### **ABSTRACT**

The efficient material management is important for any industry. The need for material management in any manufacturing industry plays a major role in production process. This paper aims to describe the roles and tools of material management for manufacturing sector. The tools are currently being used in many industries. The various barriers to implementation of materials associated with any manufacturing industry is highlighted. The poor handling of materials may cause serious drawbacks for any industries.

**Keywords:** Material management, Manufacturing industry, tools and technique.

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### **INTRODUCTION**

Material is a vital component for any industry. It involves a portion of budget cost. The smooth flow of materials up to company's warehouse doesn't delay the work at factory. A proper planning of material is very much needed for any company to meet the supply and demand in the market. As material management involves cost, effective material management can reduce business enterprise cost associated with materials. Material management ensures the success of an organization by proper adjusting the items needed.

The following are the raw materials for manufacturing environment

1. Raw materials

These type of materials are purchased items and ready for processing

2. Work-in-process (WIP)

These materials are under process and not final item

3. Purchased parts

Parts that a company may buy from supplier

4. Finished goods.

The complete product that are ready for sell in the market.

5. MRO (Maintenance, repair and operational supplies)

Items which can be used in production process and are not finish product

Functions of inventory

The following are the main functions material management

Material planning

This is planning of material according to the requirement of production.

Scheduling

This refers to lead time of delivery of products

Warehouse and material Handling

This involves handling of both raw materials and finish product

Stores Management

### **The main objectives of inventory management are**

Better customer service

Operation at very minimal cost

Invest very low at inventory

For a company to use best strategy with regard to inventory strategy, a company has to focused on major associated cost. The following are the cost associated with inventory are:

**Inventory Costs.**

Item Cost	Cost paid for purchased goods
Carrying Cost	Cost related to inventory carrying Types of Carrying cost are Capital Cost, Storage Cost, Risk cost
Ordering Cost	Cost related to ordering materials Types of ordering cost are Production control cost, set up and tear down cost, lost capacity cost, purchase order cost
Stock out cost	Cost associated with purchased of items during stockout
Capacity associated cost	Cost associated with extra shifts, hiring, overtime.

The best four methods to evaluate inventory are:

i. FIFO (first in first out)

This method of inventory valuation is that the first item purchased is also the first item to be sold first.

ii. Last in first out (LIFO)

This method of inventory valuation is that the last item purchased is the first item to be sold first

iii. Average Cost

Assumes average price for ending inventory and cost of goods sold for a period of time

iv. Standard Cost

Identifies cost before production.

**ROLES OF MATERIAL MANAGER**

The manager has to plan for materials and check if any shortage has occurred in the plan. He has to control the material problems

The material manager is responsible for procurement of material and selecting the right raw material at right time.

The material manager is held responsible for storing materials and maintain the stock records in the factory.

The material manager is also responsible for production control and distribution of finished goods to warehouse and to final customers.

Material manager has to have co-ordination with functional department of the industry.

**IMPORTANCE OF MATERIAL MANAGEMENT TO MANUFACTURING INDUSTRY**

Material management is an important factor to industry. Improper planning of materials can be complex problem for any industry.

The poorly managed inventory records can cause a serious problems for any industry. Material management keeps inventory accurate for the industries. The fluctuation in prices of items can be managed by material management. Sometimes the prices rises overnight. The important function of material management is to check smooth flow of raw materials into the production process without shortage of materials. It increases efficiency of workers, reduces material obsolescence, better records and control and improves quality of the product

**COMPONENTS OF MATERIAL MANAGEMENT**

The components of material management are

Inventory management

Supplier relationship management

Purchase and contract management

Supply chain and logistics

Stores management



*Fig: Components of material management*

## **INVENTORY CONTROL TECHNIQUE**

### 1. ABC analysis

This is a method of dividing items into A, B and C classification based on usage of items. This is inventory optimization technique of reducing cost associated with inventory. Optimization of inventory cost plays very significant role in present scenario. The total cost cannot be invested in inventory which can slow down the operation of the enterprise. This amount can be invested for other business in the sector.

## **CHALLENGES OF MATERIAL MANAGER**

Any manager will find it difficult to manage smooth flow of materials into the operations parts. The issues relating to the problem can be a complex one. The following are the issues relating to material manager are

Large number of scraps and not done at regular time

Shipping errors to the final customers.

Unable to maintain production reports

Making mistakes while receiving raw materials.

Errors in automated handling of materials

Not updating inventory records and failing to order inventory.

Limitation of automated system

A company has to invest heavily

Need additional staff

Need more space

Training of staff to use automated system which incur cost

No flexibility

Purchasing is an important function of material management. The elements of purchasing are

a. Right quality

b. Right quantity

c. Right price

d. Right time

e. Right source.

The process of purchasing are:

a. Materials requisitions from various departments

b. If the material is of priority to the department

c. Formulate policy and procedures for purchasing

d. Identify various supplier

e. Identify the source of supply

f. Issue of tender based on requirement

g. Purchase material with low cost

h. Delivery at right time

i. Inspect the materials before storing at factory

j. Payments of materials to the vendor



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Benefits of effective purchasing are:

1. Improvement in quality of materials delivery
2. Performance of quality of product
3. Short production cycle
4. Continuous improvement of quality
5. Building trust between buyer and supplier

### ANALYSIS AND DISCUSSION

The above has discussed about various information of material management. But the question is, whether is it possible to function smooth in the materials department without any disorder. The problems can happen due to its dynamic nature of business environment. The disturbances are unavoidable but it needs to be taken precautionary measures by material manager. Sometime the problem may arise from functional department, where these department has given quotation of materials. But these department does not required of any material immediately. The problem has to be monitored by material manager and analyse the records of the department which is in need of the immediate raw material. The supplier may not able to supply the material on date provided. If that is the case, the delivery date to customers can delay the schedule causing serious loss to the business. The contract with vendors has to be verified as there are numerous vendors working in the same business. The material manager has to check for possible discount from their end. Employee safety is one the factor which every material manager has to take very seriously. Safety is a concern for employee working at material department. Measures has to be take to provide safety to the employees.

### CONCLUSION

This paper has highlighted the mandatory requirement and role for material managers in the dynamic business environment. Without proper planning, there can be haphazard and disruption in the production process. Firm has to build on strategy to manage materials and uninterrupted flow of materials in the production process. Further there are scope of future value addition in the material management areas.

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