

MATERIALS MANAGEMENT

CHAPTER – I

SCOPE AND FUNCTIONS OF MATERIALS MANAGEMENT

INTRODUCTION :

Materials management is one of the important activities of business. There is no general agreement about precisely what activities are embraced by materials management. Some managers would associate materials management with their material or production control departments, which schedule materials requirements and may also control inventories of both raw materials and in-process materials. Others would associate it with the activities of their purchasing departments in dealing with outside suppliers.

If we analyze the total cost of any product nearly 60 to 70% is because of materials. Only the rest is for labour, overhead and profit. So any reduction in the material cost, even by a very less percentage will give rise to a greater profit. Moreover the materials management being a staff function, the introduction of new techniques to reduce the cost of the product is much easier than in any other field.

Hence, the rate of return on capital employed is of prime concern and is given by the ratio:

$$\begin{aligned}\text{Rate of Return (ROR)} &= \frac{\text{Profit}}{\text{Capital employed}} \\ &= \frac{\text{Profit}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Fixed Assets} + \text{Current Assets}} \\ &= \text{Profitability} \times \text{Capital turnover ratio}\end{aligned}$$

So as to increase the rate of return on investment, one way is to increase the capital turnover ratio. For this if capital employed is reduced, naturally capital turnover ratio will go high. Fixed assets constitute capital already sunk and only scope for improving the Return on Investment (ROI) lies in the efficient management materials which constitute the bulk of current assets.

As materials constitute the major cost component, large amount of capital is locked up in materials with the associated burden interest which further increases the cost of the product.

So, because of the greatest percentage of cost associated with materials and also any possible reduction in material cost will result in the increase of profit, the industries are now thinking of introducing the concept of scientific materials management.

If we analyze the above graph we find that previously the break even point was at A. Because of reducing the cost the break even point shifted to B. For the given output 'C' the profit margin has increased by X2, from X1 to (X1 – X2) amount.

SCOPE OF MATERIALS MANAGEMENT :

Materials Management strives to ensure that the material cost component of the total product cost be the least. In order to achieve this, the control is exercised in the following fields.

1. Materials Planning.
2. Purchasing.
3. Store Keeping.
4. Inventory Control.
5. Receiving, Inspection and Despatching.
6. Value Analysis, Standardization and Variety Reduction.
7. Materials Handling & Traffic.
8. Disposal of Scrap and Surplus, Material Preservation.

The function of material planning department is to plan for the future procurement of all the required materials as per the production schedule. At the time of material planning, the budget allocated for the materials will also be critically reviewed, for better control.

After material planning, purchasing is to be done. Purchasing department buys material based on the purchase requisitions from user departments and stores departments and annual production plan. There are four basic purchasing activities.

- a) Selecting suppliers, negotiating and issuing purchase orders.
- b) Expediting delivery from suppliers.
- c) Acting as liaison between suppliers and other company departments.
- d) Looking for new products, materials, and suppliers that can contribute to company objectiveness.

At the time of purchase, right quantity and quality of materials must be purchased at right time, at the lowest possible cost and select the efficient purchasing system, to derive maximum benefit. Purchasing is done based on 'make or buy' decisions and also using PERT / CPM effectively.

When the items are purchased, proper storage facilities must be provided so that, the wastage is reduced to a minimum. Sometimes to protect the quality, greater care must be taken during storage.

The duties of the inventory control department is to decide about the types of ordering system, fixing the safety stock limits, fixing up the reorder level & maximum / minimum stock level.

The responsibility of Receiving, inspection and despatching department is to receive the materials when delivered by the suppliers. After receiving it, the quantity and quality must be checked. Production parts and materials are checked against blueprints and specifications. Non-production items are also reviewed. When once it is as per the specifications given, the goods will be accepted.

The Value Analysis and Standardization offer greatest scope, in reducing the materials cost. It also reduce the number of varieties and also helps in finding the substitute for the materials at lesser cost.

Materials handling section is responsible for the transport of materials to various departments. There are four basic traffic activities.

- a) Selecting common or charter carriers and routings for despatch / shipments as required.
- b) Tracing in-bound shipments of material in short supply as requested by production control or purchasing. Assisting customers in tracing out-bound shipments when asked.
- c) Auditing invoices from carriers and filing claims for refunds of excess charges or for damaged shipments when required.
- d) Developing techniques to reduce transportation cost. This may involve negotiation with competing shippers, special studies in selecting the most advantageous plant location for new products, analysis of tariffs, and negotiation of any number of special arrangements for handling certain traffic.
- e) The activity includes packaging of finished product, labeling and loading of end products in the trades.

Finally the disposal of scrap and surplus must be done periodically to release the capital locked in those items.

H NON-PRODUCTION STORES :

Techniques and procedures used to control non-production material (office supplies, perishable tools, and maintenance, repair, and operating supplies) resemble those used for production material, although they are usually less elaborate. Specifically, the stores department.

- a) Maintains physical stocks of non-production items to be drawn on as needed for operations or maintenance.
- b) Manages inventories of non-production materials and prepares purchase requisitions for needed material when stocks drop to the re-order point.
- c) Keeps records and maintains controls to prevent duplication of inventories, minimize losses from pilferage and spoilage and prevent stock-outs.

NEED FOR INTEGRATED CONCEPT :

In an integrated set-up, the materials manager is responsible to exercise control and coordinates with an overview that ensures proper balance of conflicting objectives of the individual functions. Integration also helps in the rapid transfer of data, through effective and informal communication channels. This is crucial as the materials management function usually involves handling a vast amount of data. Therefore, integrating the various functions ensures that message channels are shortened and the various functions identify themselves to a common materials management department which, in turn, results in greater co-ordination and better control.

ADVANTAGES IN INTEGRATED MATERIALS MANAGEMENT CONCEPT :

Organizations which have gone in a big way for the integrated materials management usually enjoy the following advantages :

H BETTER ACCOUNTABILITY :

Through centralization of authority and responsibility for all aspects of materials function, a clear cut accountability is established. This helps in evaluating the performance of materials management in an objective manner.

H BETTER CO-ORDINATION :

When a central materials manager is responsible for all functions, the departments under the materials manager create an identity which is common. This results in better support and co-operation in the accomplishment of the materials function. The user departments also find that they have to approach one department for discussing and solving their materials problems. This creates an atmosphere of trust and generally better relations between the user departments and the materials management department.

H BETTER PERFORMANCE :

As all the inter-related functions are integrated organizationally, greater speed and accuracy results in improved communication. Need for materials is promptly brought to

notice by materials planning. Purchase department is fed with stock levels and order status by stores and inventory control departments. All this calls for judicious decisions leading to lower costs, better inventory in paper work.

H ADAPTABILITY TO EDP :

The centralization of the materials function has made it possible to design data processing system. All information with regard to materials function is centralized under the integrated materials management function. This has facilitated the collection and analysis of data, leading to better decisions. Advanced and efficient electronic data processing systems can be economically introduced under in integrated set-up.

H MISCELLANEOUS ADVANTAGE :

Under a Centralized Materials Manager, a team spirit is inculcated and this results in better morale and co-operation. The opportunities and exposure available for the individuals for growth and development are better in an integrated set-up.