

■■■■ CHAPTER - IV ■■■■

" MATERIALS MANAGEMENT "

A THEORITICAL FRAME WORK.

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4.1 INTRODUCTION:-

Every industrial house has to perform two functions namely, production and marketing of its product. Production means creation of utilities and includes the activities of procurement and utilisation of factors of production, viz. Manpower, materials, Bldg., equipments etc. In a manufacturing Organisation production is the fabrication of a physical object through the use of men, materials and equipments. In a service organisation the production is the discharge of a function which has some utility, this ranges from such acts as repairing of automobiles to providing a client with legal advice. Marketing includes the engagement in such activities as market research, promotion, selling and distribution.

In the present era of cut-throat competition, production needs some effective and scientific planning and regulation. It plays a very important role in economic sense. The production management can be defined as 'Management which by scientific planning and regulation sets into motion that part of an enterprise to which it has been entrusted the task of actual transformation of raw materials into finished products'.

In the broader sense production management actually deals with decision making related to production processes, so that the resulting goods or services are produced according to the specifications, in the amounts

and by the schedule demanded, and at minimum cost. In obtaining their objectives, production management is associated with two broad areas of activity, the design and the control of production systems.

Thus in production management the effective planning and control is very essential. If there is not effective planning and regulation for any production activity, we will not reach the goal, can not satisfy the customers and ultimately may be forced to close certain activities which may lead to social evils.

4.2 SCOPE OF PRODUCTION MANAGEMENT:-

production management is most often associated with factory management rather than with the broader definition given above and logically so, because the significant problems of production first occurred in the factory. Before evolving the factory system, the large number of one man shop that produced goods presented insignificant problem of production management, with the factory system. However, the situation changed and the problem to organise, layout facilities, control quality and meet schedule had to be tackled with. Thus the field of production management began to develop. In early stage steps concentrated to control labour cost, since, at that time, the labour cost constituted most of the production cost with the continuing development of factory system,

the trend towards mechanization and automation developed. In the factory, indirect costs, has had to develop in the position of fields of designing and packing of products, indirect labour cost control. Since, nearly thirty years of the business has rapidly developed into large scale units. Here, the facility designer, location, layout, quality control and inventory control take a new significance. Thus today, production management has to cover a wide range of different types of activities to be performed in factories and industries.

In short, the following major activities constitute the scope of production management.

- 1) Designing and packing the products.
- 2) Production administration-Production Engineering production planning and production control.
- 3) Execution and
- 4) Dependent services and departments.

4.3 MATERIALS MANAGEMENT:-

Important advances have been made in businesses and commercial management in recent years, if judged only by traditional standard, such as the development of specialisms and membership growth within the professional bodies concerned, but a further significant measure of development must be applied now a days in the general

management field, the rationalisation of functions common to related disciplines. Material management is a good example of this kind of development and the range of tasks now undertaken by people engaged with field reflects the scale of their responsibility for meeting one of the sternest challenges facing business today—improving overall the performance of enterprises operating in both private and public sectors.

Material management has been defined in a variety of ways and most definitions stress the importance of the control element in achieving cost effectiveness, irrespective of the range of particular disciplines which may be applied within this functional field in meeting the need of individual situations. Materials Management is the planning, directing, controlling and co-ordinating of all those activities concerned with materials and inventory requirements, from the point of their inception to their introduction into the manufacturing processes. It begins with the determination of materials quality and quantity, and ends with its issuance to production in time to meet customer demands on schedule and at the lower cost. Under this definition, material management could include, in addition to purchasing any or all the following functions in bound and out-bound traffic, receiving and receiving inspection, determination and control of inventories including raw material, warehousing, shipping, material

handling and production planning and scheduling. Materials management concept under the organisational frame work concept includes the planning and policy activities covering an wide range of related and complimentary activities covering storekeeping, inventory control, salvage and reclamtion, value analysis and such activities an the research development required for the proper selection of materials may be tought the follow-up procedures, necessary to ensure proper delivery, the inspection of incoming shipments to both quality and quantity compliance with orders placed, the development of proper procedures, methods and forms to enable the departments to carry but established policies, the co-ordination of the activities of the purchasing department with such other internal divisions of the concern as traffic, receiving, storekeeping and accounting so as to facilitate smooth operation, and the development of the company so that a true picture of the performance of the supply function is presented.

Inventory means, stock of items kept in reserve for certain period of time. The items can be in the shape of raw materials, finished products, spare parts for the maintainance of equipments manufacturing itself. Inventory helps in economic utilisation of men, machines and material, in a system e.g. one way decide to produce

more during slack period and increase the size of inventory which can be will utilised in boom period. This will lead to proper and uniform utilisation of production resources.

Inventory also tries to minimise the difference, between actual and scheduled production. If there are items in the stock then the difference between actual and scheduled production can be balanced. Another important function of inventory in to purchase or manufacture products in economic lot size.

The quantity of materials which is ordered at one time is known as ordering quantity. The quantity to order should not be set arbitrarily. Economic lot size must be determined which will balance the saving in costs from large orders (eg. special discount economy of bulk transport, saving in costs of placing orders), and the carry cost of inventories (eg. sent of storage space, cost of insurance and maintainece, interest on capital blocked). Economic order quantity is determined at that level where the total of ordering costs and carring costs is the minimum.

The importance, of materials management is slowly financing is way among management circle in India. But materials Management is yet to get recognised as a major functional area of management.

The term 'Materials Management' is very wide import, encompassing within its scope all the activities relating to -

- 1) Material planning and control.
- 2) Purchasing.
- 3) Store keeping.
- 4) Inventory control.

4.4 MATERIALS MANAGEMENT:-

Why should anyone care about purchasing and materials management:-

1. Our economic relationships are interdependent.
2. The supply process is not automatic.
3. Our basic economic well being is related to how skillfully we carry out the purchasing and materials management process.
4. Purchasing and materials management offers professional level employment in almost every organisation.

Materials management is simply the process by which an organisation is supplied with the goods and services that it needs to achieve its objectives.

The materials management process begins with the supplier and ends when the materials are either consumed or incorporated into some product. The executives who engage in materials management are concerned with three

basic activities, buying, storage of materials and movement.

Materials management is as essential to producers of services as it is to goods. Material management is common to every organisation simply because none is completely self-sufficient. Application to materials management, measure that, capital is employed and costs are incurred to produce something of economic value. There are five basic costs:-

1) Purchase:-

This represents what you paid to outsiders for parts, materials used in your product and is the contribution added by your supplier.

2) Materials Management:-

In the course of getting purchased materials from your supplier to the point where the material was actually used you have incurred major cost, than of manufacturing & marketing cost.

3) Manufacturing:-

Wages paid to factory production workers and who employees such as-supervisors, inspection, etc. In addition, you include depreciation, power and all other cost directly associated with factory operation.

4) Marketing:-

This includes marketing expenses i.e. salaries,

advertising, depreciation on both office and warehouse facilities, equipments etc.

5) Executive Office and Staff:-

Marketing, manufacturing & materials, management are the company's three line activities, that directly add value to your product. But the company has other activities - accounting, personnel engineering that you can not get along without even though, their major role is to help the value address rather than add value themselves.

4.5 SCOPE OF MATERIALS MANAGEMENT:-

Purchasing is the single most important materials management activity in most companies and institution. In fact, the term, materials management, and purchasing are often used interchangeably. Executives whose responsibility is limited to purchasing sometimes have titles like materials manager and executives with titles like director of purchase. We often given responsibilities that make them defacto materials manager.

The fact is that purchasing is a specialised part of materials management, just an advertising is a part of marketing. Thus materials management is a basic function of the business that adds value directly to the product.

The scope of materials management in any particular industry is at least as much a product of historical development as it is of economic logic. Organisation in which materials management plays its optimum line and staff roles have rarely been created with a single stroke of the organisation planner's pen. They have evolved gradually and, in most cases have not yet matured.

To do its job effectively, purchasing must have a particularly close relationship with the traffic and production control departments. In most companies the three departments together control partically all materials management activities.

Management in progressive companies realise that their purchassing production control and traffic department have jobs so clearly/closely related that they can work together better to achive common objectives if they are linked organisationally. With this integrated approach to materials management all of the jobs encompassed by these activities would be under the overall direction of a materials manager.

4.6 FUNCTIONS OF MATERIALS MANAGEMENT:-

There is no general agreement on what functions should be grouped organizationally for unified materials management.

Receiving Inspection:- Some materials managers fell that receiving inspection should be under their jurisdiction, so that they have control over the complete materials cycle. The specific duties of these departments vary considerably from company to company and industry to industry. In general however they include the following.

1) Production and material control:-

There are basic five activities -

- a) Computing detailed requirement for parts and materials both purchased and manufactured from upto date bills of material and specifications supplied by the product engineering department.
- b) Scheduling production or purchase of parts, materials needed to meet overall schedules for completed end products. Such includes, inventory, lead time, on-order position and so on.
- c) Issuing work orders to manufacturing depts. and purchase requisition to purchasing for parts and materials needed to meet over all production schedules.
- d) Keeping detailed records of inventory, on order status and potential demand for each production part and material, and making periodic physical counts of stock to verify the accuracy of records.
- e) Maintaing physical inventories of all direct (production) materials in various storages of fabrication

and administering controls herestory to maximize turnover and limit losses from spoilage, pilferage or obsoleseence.

2) Non production stores:-

Techniques and procedures used to control non production materials i.e. office supplies, perishable tools, maintainance, repairs and operatively supplies, resemble those used for production material, although they are usually less elaborate. Store dept. to be drawn on as needed for maintainance, Manager inventories of non production materials and prepare purchase requisition for needed material when stock drop to the reorder point, keeps records and maintains controls to prevent duplication, spoilage and prevent stockouts.

3) Purchasing:-

This department buys materials in amounts authorised by requisitions it receives from production control and stores department. There are form basic activities - selecting suppliers, negotiating terms of purchase with them and issuing necessary purchase orders.

Expending delivery pan suppliers:-

to asuure intime, as per schedules, negotiating any changes in purchase schedules dictated by cirecuntances. Acting as a liaison between suppliers and other company departments i.e. Engineering quality control,

manufacturing, production control and finance on all problems involving purchased materials. Looking for new products, materials and suppliers that can contribute to company profit objectives.

4) Traffic:-

The traffic department buys transportation service. There are four basic traffic activities- Selecting common carriers and routes for shipments as required, finding invoices from carriers and filing claims for refunds of excess charges or for damages when required. Developing techniques to reduce transportation cost i.e. selecting most advantageous plant location, analysis of traffic, negotiations of any number of special arrangements for handling certain traffic.

5) Physical Distribution:-

Finished goods must be moved from the production line to company warehouse and to a customer this process is called physical distribution/Physical movement of partially finished products within the plant. The traffic function may also be included in the physical distribution department, but it is independent in many companies.

4.7 OBJECTIVES OF MATERIALS MANAGEMENT:-

Primary materials objectives

Normally, there are nine primary objectives in purchasing and materials management.

1) Low Prices:-

Obtaining the lowest possible price for purchased materials, It is one of the most important objective in purchasing. If it reduces the prices of items it buys, the operating cost are reduced and profits are enhanced, it includes services and transportation.

2) High inventory turnover:-

When inventories are low in relation to sales (Inventory turnover sales - average inventories), less capital is tied up in inventories. This inturn increases the efficiency with which company's capital is used, so return on investment in higher, also storage and carrying cost of inventories are lower when turnover is high.

3) Low cost acquisition and possession:-

It materials are handled and stored efficiently, their real cost is lower. Acquisition and possession cost are low when the receiving and stores depts. operate efficiently.

4) Continuity of supply:-

When there are discriptions in the continuity of supply, excess costs are inevitable. Production cost go by excess expending and transportation cost are likely and so on.

5) Consistency of quality:-

The purchase department is responsible for the quality only of the materials and services furnished by outside suppliers. Quality may become the single most important materials management objective.

6) Low payroll costs:-

This objective is common to every organisation. The lower the pay-roll, higher the profit-all other factors being equal. But no any department can do its job without a payroll.

7) Favorable supplier relations:-

Business rely on outside suppliers to a for greater degree than is generally reconized. This makes favorable relations with supplier, which extremely important. A company with a good reputation in supplier relation is more likely to attract customers than one with a bad name.

8) Development of Personnel:-

Every department in the company should be interested in developing the skills of its personnel. They should try to develop there high potential men & women on the company's further executives, the company's future profits will depend on the talents of its managers.

9) Good records:-

Paper work is a means to an end, not an end itself. They are necessary and useful, they help material personnel do a better job.

Secondary Objectives:-

1) Favorable reciprocal relation - Sound reciprocity involves a balancing of the advantages. The purchase manager must work with marketing to be certain that the relationship with the customer supplier is in the company's best interest.

2) New materials and Product :- Engineering and manufacturing manager are always interested in new products, that will help them operate more efficiently and thereby achieve one of their primary objective. The purchase department can help because it deals regularly with the suppliers responsible for the new developments.

3) Economic make or buy:- However, make or buy decision should be committee effort, representing the points of view of all departments in the company. The purchase department, in its regular views of cost and availability of materials, often will spot the need for new make or buy decision and should refer them to the committee for action.

4) Standardization:- The engineering groups are primarily responsible for standards and specifications but materials management personnel can make a substantial contribution. It refuses, to reduce cost and promote standardization with suppliers.

5) Product improvement:- Product is basically a compromise between design and economic objectives. Purchasing personnel can help to engineers achieve their design objective more economically by suggesting materials or components that will do a better or equivalent job at lower cost.

6) Interdepartmental harmony:- To prevent disputes they are careful to define departmental responsibilities clearly, and also try to familiarize others with materials objectives, policies and organisation.

7) Forecasts:- To manage materials well, some conception of the future outlook for prices, costs and general business activity is necessary.

11) Acquisitions:- Most company management are interested in growing, not only by internal expansion but also by acquiring other business. Purchase manager can play an important role on acquisitions, since, they normally have, through dealing with many suppliers, more contacts with the outside business world than other executives in the company.

Referance:-

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