

■■■■ CHAPTER - V ■■■■

**MATERIALS MANAGEMENT IN AJINKYATARA SAHAKARI
SAKHAR KARKHANA LTD., SHAHUNAGAR
AN ANALYSIS.**

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5.1 INTRODUCTION:-

The materials management is an integrated function of purchasing and allied activities so as to achieve the maximum co-ordination and optimum expenditure in the area of materials. The materials management concept advocates the assignment of all major activities which contribute to materials cost. This includes the primary responsibilities which are generally found in the purchase department, inventory management, traffic, receiving, warehousing, surplus and salvage and production planning and control.

Generally, the following activities come within the sphere of materials management.

A) Stock control or Inventory control:-

It includes planning and maintaining stock of raw materials, tools, general supplies etc. as well on its handling, classification, ~~codification~~, ABC analysis etc.

B) Purchasing:-

It includes developing sources of supply, finalising prices, placing orders, obtaining materials by the right time, contributing to standardzation, value analysis etc. and effecting disposal of surplus and scrap.

C) Storekeeping:-

It includes receiving, storing, issuing as well as materials handling.

D) Traffic or C & F:-

It includes clearing incoming materials, both inland and foreign and despatching finished goods.

While in the past, in many organisations the stock control, purchasing, stores and traffic were being grouped into two/three departments, it is now being realised all over the world that a combined set up is the best from the point of view of co-ordination, efficient working and cost reduction. The modern nomenclature for this set up is 'Materials Management'.

There is an opinion that production control should form part of materials management. The function of production control is planning and controlling of manufacturing operations. The materials manager may question excessive consumption or misuse of materials.

The inspection department is independent, It can also act as a countercheck on the quantity and quality received by the Receiving section, particularly of the expensive items. Therefore, inspection should be independent of the purchase and store.

The various sections of the materials department viz. stock control, purchases, stores and traffic are

connected with other departments in one way or the other.

Among the various departments, material department is more concern with the production department. This is because, the materials, tools, operational supplier, spare parts etc. Which are required by the production department, are stored by the materials department.

The materials management Department is concerned with Accounts Dept. as far as preparation of budgets, programming delivery of expensive raw materials and capital equipments are concerned. This relationship is put into practice in such a way that it avoids strain on company's finance, selection of suppliers and price determination through, tender committees, payment of supplier bills, preparation of annual inventory etc.

It is also essential that, the various forms used in the materials department i.e. purchase orders, requisition, delivery notes, etc. correspond to accounting requirements so that, essential accounting data can be collected without difficulty. It means, the efficiency of a company's overall operations depends to a great extent on the amount of co-operation and understanding among various departments. The materials manager must therefore maintain good relations with other departments. Without their co-operation the departments

can not function efficiently. Procedures and policies affecting other departments should be introduced in consultation with them. Approach to other departments should be constructive and their suggestions should be given due consideration while implementing material policies.

This is also true in continuous process industries like sugar factories, stoppage in the process due to shortage of materials is a costly affair. Naturally, The materials manager has to be very alert in supplying the required materials without any interruption.

5.2 ESSENTIALS OF MATERIALS MANAGEMENT:-

For the purpose of making materials management effective in any industry/unit the following are its essentials which should be observed.

1. Assigning a proper place to every item.
2. Keeping every item in its assigned place.
3. Maintaining adequate and simple records of items in store.
4. Easy and prompt receipts and issues of items.
5. Providing protection against damage and pilferage.
6. Issuing oldest material first.
7. Using proper method of identifying and coding.
8. Providing enough space and storage equipments viz. shelves, racks, almirhas, cupboards, bins etc.
9. Having regular programme of inspection, physical

varification and maintaince of store.

10. Employing and training reliable men in the stores, purchases and other departments.
11. Keeping records and inventory of stores up-to-date

The above essentials are applicible to every industrial unit, including a co-operative sugar factory.

5.3 THE FACTORY AND THE MATERIALS MANAGEMENT:-

The factory, 'Ajinkyatara Sahakari Sakhar Karkhana Ltd., Situated at Shahunagar-Shendre near Satara city, is one of the eminent sugar factory in co-operative sector in Maharashtra.

It comes under contineous process industry in which too, materials management is important. The study deals with various aspects of materials management with relation to the said factory, viz organisation of stores, purchasing, and receiving ,issuing, inventory control and disposal of scrap and surplus.

5.4 THE FACTORY AND ORGANISATION OF STORE:-

The store department, in any organisation is organised; mainly on two basis. Firstly, Centrally Organised store and secondly. Decentralised store. When the store is situated at the central place convinent to all the departments, it is called centrally organised

store. Sometimes, for the benefit of various departments, besides main store, there are sub-stores situated in the departments such an organisation is called Decentralised store. In case of centralised store the organisation gets more advantages viz. effective control; convenience and reduction of cost of storing easy inspection, accounting and handling, reduce staff and overheads, simplification of purchase, and disposal procedure, Standardized quality, better price due to bulk purchasing.

~~The purchase procedure for tools and spares in the factory is as given below.~~

Of the above two types of stores organisation, in the factory the store is organised centrally. This is in order to take the advantages of General store. In the opinion of the office bearers this type of organisation is convenient and suitable to the available staff. The researcher is also of the opinion that, the type of stores organisation (Central store) is suitable and beneficial to the factory.

5.5 THE FACTORY AND PURCHASE PROCEDURE:-

Every manufacturing unit requires a number of things viz. raw materials, finished parts, consumable stores, tools, equipments, furniture, stationary etc. For purchasing all these requirements a separate purchase

department is, generally, created. All purchases are channalised through this department. The present study deals with the purchase procedure of the factory concerned to raw materials (Sugar cane), spare parts and tools; leaving aside the other types of materials.

The purchase procedure for tools and spares in the factory is as given below-

The tools include gauges, files, screw drivers, pilers, milling cutters, remers etc. Purchases of most of these items in the factory are made aganist, Recoupment purchase requisition. this requisition is prepared by the department requiring the tools. In case of spares parts too, the concerned department (e.g. Engineering department, Production department and Maintaince department) prepares the requisition and sends it to purchase department, Through the store. The storekeeper after verifying the stock gives his remark on the requisition. If the tools, spares are to be purchased, the requisition will be sent by the storekeeper to purchase department. On receipt of requisition, purchase department initiates puchase procedure, as shown below.

1. Inviting tenders/quotations from the suppliers.
2. Preparing comparative statement of tenders/quotation.
3. Selecting the supplier.

4. Issuing the order to the supplier.
5. Follow up of order.
6. Receipt of materials.
7. Inspecting the received material.

1. For inviting quotations purchase department sends enquiry letters to the suppliers. If the quantity of materials to be purchased is large enough, tenders are invited. The suppliers are generally asked to send quotations or tenders within a period of fifteen days from the receipt of a letter or publication of tender notice.

2. After the period within which tenders & quotation are asked to be submitted is over the purchase department prepares a comparative statement of tender/quotation, for the purpose of assisting the tender committee to select a tender/quotation.

3. The factory, for selecting the supplier, a tender committee is formed. It consists of, seven members which includes, Managing Director, five Directors and Purchase Officer. The committee asked the suppliers to be present themselves on a particular date and time for finalising terms of supplier. After considering the past experience, price, quality and integrity of supplier, the supplier is selected by the committee.

4. After selection of a supplier, the purchase order is prepared, and sent to supplier. The purchase order is prepared in Quadraplicate, Which are used as follows:

Original is sent to the supplier, second copy sent to the Account department, ~~third is sent to the~~ stores and last copy is the referance copy.

5. In order to see that the ordered materials arrives in the factory in a specific time limit, follow-up is carried on for this purpose printed forms, telephone, telegrame etc. are used.

6. After placing orders, the suppliers are sent materials. That all incoming materials must be carefully checked by counting, weighting and measuring. Not only the quantity on the challan or delivery note and the quantity actually received may be tallied before acceptance, but care may also be taken to ensure that the quantity supplied is due againse the purchase order.

7. Within receiving, following discrepancies are normally occur -

- a) Loss of packages.
- b) Damage of packages.
- c) Minor/Major shortages.
- d) Wrong items.
- e) Excess supply.

The quality, quantity etc. are to be inspected by

store keeper and the head of the department, who required that concerned materials. For this work, the 'Approval Slips' are used. If items are approved the remark on approval slip is recorded and the same material is stored in store house.

5.6 THE FACTORY AND ISSUING PROCEDURE:-

Generally every received materials viz. raw materials, finished parts, tools, equipment, furniture etc. must be stored in one place, is called store house. In the factory, there is central store house. Materials received in the store is classified or batching by twenty groups viz. Electrical group, chemical group, Hardware group, Spare parts group, Pipe-fitting group tools and Tackle group etc. Before storing all these items, They must be recorded on the 'Bin Card'. These Bin Cards are kept on the table in trays. They arranged according to classification and will show the receipts, issues and stock balance of the items.

The researcher observed that, the issuing procedure very simple, which stated as below:-

A) Requisition of 'Indent Form' is a written and signed by authority, section heads may signes the Indent forms and these documents are examine by stores department. Stores should ensure that materials are issued only against appropriate authority. While issuing the materials following rules are followed.

- a) To prevent deterioration earlier receipts may be issued earlier i.e. first in first out.
- b) Some items viz. accessories, instruments etc. should be issued in rotation to ensure that wear and tear is distributed evenly on all the accessories.
- c) Small quantities of materials should be issued from cut pieces and not from full length.
- d) When issuing last piece in stock, ensure that the Bin Card balance is also nil.

5.7 THE FACTORY AND INVENTORY CONTROL:-

The factory, 'Ajinkyatara Sahakari Sakhar Karkhana Ltd. ', is a continuous process industry. Because of its nature, Inventory control is must. The following clarify the importance of Inventory Control.

- a) Ensure that production is not hampered for want of various recurring items.
- b) Effective control over investment on materials. This is achieved by keeping stocks within pre-determined levels. Large stocks not only tie up working capital which is required for other purposes but also cause high carrying cost by way of rent for storage space, spoilage, obsolescence etc. The result is reduction of profit.
- c) Bring to light cases of abnormal consumption for investigation.

- d) Put up from time to time list of obsolete and surplus materials.
- e) Point of un-used items purchased against purchase requisitions received from various departments.
- f) Provide accurate information for financial control in the way of budgetary figures.
- g) Act as a duplicate record of stock of various materials.

In such type of industries there are so many methods followed for inventory control viz. Classification and codification, minimum and maximum stock levels, Economic order quantity, ABC technique etc.

I observed that, in this factory, all stocks and store are denoted by their common or proper names and this is the most readily understandable method of describing them, but difficulty arises when the same article is known by different names and slightly different nomenclature may lead to wrong issue, codification aroids these variation.

Therefore, the researcher, suggested that, if in store codification system is followed the routine work may be done efficiently and without mistakes. Also in order to take advantage of modern technology i.e. computer system codification must be there.

It is observed that, the factory at present not using Inventory control system called, ABC Analysis. Because of the inventory control the materials manager is-

a) To keep the investment low.

b) To avoid stock outs of critical items. (critical items are those which are not readily available in the market and which may not have substitute). viz. spare parts, machine tools etc.

Now a days, ABC analysis system of inventory control has come into vogue and the control is exercised over the variety of inventory according to value.

Therefore, the researcher suggests, the use of this technique in the factory.

5.8 THE FACTORY AND STOCK TAKING & STOCK VERIFICATION:

In every organisation, the stock taking and verifications is very essential. Stock taking is the work of finding out by stores staff the physical balance of various items by means of counting, weighing, measuring or estimating.

Because of this, we know any discrepancies in the posting, whether any pilferage is taking place; whether materials are in good condition. It also helps the preparation of the final inventory for balance sheet purpose.

Stock varification is the process of asceataining by internal auditors, the correctness of the stock shown in the bin card. The verification discloses irregularities and induces stores staff to maintain records correctly.

The factory at present using Annual stocks system. The checking is done once a year Generally, when factory will be closed for a few days the stock taking is over. Checking of large number of items within a limited period will be a rush job and may entail lack of concentration, unisplace of material etc.

The bin card balance and physical balance agree on the day of checking.

Now, in stores department the persons looking after daily work is five, which is insufficient according to the concerned officer also.

The researcher thinks that, as taking into consideration the availability of staff, perpetual stock checking is more useful than the annual stock checking.

5.9 THE FACTORY AND DISPOSAL OF SCRAP AND SURPLUS:-

The factory, requires a number of things viz. raw materials, finished parts, tools, consumable stores, equipment, stationary, pipes fitting, hardware etc.

The factory, have following categories of materials which come under the term 'scrap'-

- a) Some tools wear out after a period and some break during usage. They properly store, lest they may be exchanged for new ones by someone.
- b) Items which are spoiled during the course of manufacture, the items will be covered by Scrap Notes.
- c) When certain spare parts and equipments become irreparable after some years e.g. crankshaft, rods, bearings etc. Replacement is taken from stores on requisition and the old ones are thrown into scrap and sold by weight.
- d) Obsolete components which can not be sold as spares and therefore witten off from the books are sold as scrap.

In this factory, there is not much more surplus items purchased and stored.

Scrap is saleable. All scrap materials are collected, properly segregated and stored in store yard. The sugar factory has disposed of scrap by way of

- a) Annual contract and
- b) Public auction.

It means, an advertisement in news paper showing approximate quantity expected to be available during a year.

Some items are disposed off by public auction, the procedure is as follow-

1. The materials for auction will be properly listed giving lot number, full description of the material, quantity etc.
2. Sale will be effected on 'as is where is ' basis.
3. Auction will be published in news papers.
4. Auction will be supervised by a representative each from stores, purchase and accounts section.
5. A reserve price is fixed for each item, and before a bid is accepted the officers attending the auction must satisfy themselves.
6. A statment showing the highest bid obtained will be signed by the officers attending the auction.
7. An amount of 25% of the accepted bid will be taken as earnest money from the bidders concerned, receipt for the same is issued by the accounts section. The balance of money is to be deposited within 15 days.

5.10 THE FACTORY AND SUGAR CANE PURCHASE PROCEDURE:-

As we have seen the procedure of general purchases, stores, inventory control and issue, but, because of seasonable nature of the factory and raw material viz. sugar cane is an agricultural product, the factory purchased sugar cane only from shareholders or members of the factory, who are the producers of sugar-cane.

In the operating area of the factory, there are 230 villeges from Satara and Koregaon talukas. These villeges are divided into six groups. The agriculture Department of the factory, in the month of May/June enters into contract with producers members for supply of sugar-cane.

For establishing ownership, the agriculture department goes through 7/12 Extract of the concerned land and the sugar cane produce in that particular plot is purchased by the factory at that name only.

The final sugar-cane cutting programme of all plots recorded is done by agriculture department, with the help of date of sowing, type of seed swon, type of water facility, site of plot etc. This programme is to be notified to the members before one month from date of starting the factory. If any one has any doubt about the recording, then it should be corrected in time.

The agriculture department prepares total requirement of sugar cane depending on the crushing capacity and the number of crushing days available. This requirement is compared with the availability of sugar-cane in the operating area of the factory, and if sugar can is in short supply, the agriculture department will make the necessary arrangement to purchase it from the outside the operating area.

For cutting, loading, unloading of sugar cane etc. the agriculture department of the factory enters into contracts with-

- a) Mukadam
- b) Transport Vehicle owners.

The labours which belongs to the talukas of Bhir, Pathardi, Jat, Atpadi etc. The vehicles viz. Truck, Tractors etc. are available from the districts of Satara, Kolhapur, Sangli etc.

On entering into contracts the factory provides them with the following: Wire-rope tyres, cutting tools, Nets, etc. on credit basis. The vehicles are allotted according to the groups of villeges.

Before taking sugar-cane for crushing, the sample testing is done. There are so many varieties of sugar-cane viz. co-740, co-7219, co-671, co-7704, co-8014, etc. In these varieties some are 'Early variety' 'Mid Variety' and 'Late Variety'. They matured on 10 months, 11 month and 12 months respectively. also, there are three types of plants/farms viz. plant, Pre-Seasonal, and Aadsali, which take more time for maturity i.e. 12 months, 15 months and 18 months respectively.

Sample testing is done in the 'laboratory' of the factory. On the basis, of this chemical testing the

'Recovery Report' is prepared. If this report is satisfactory (i.e. 9 to 10 percent recovery), the cutting of that sugar-cane is made.

When loaded vehicles arrives at the gate of the factory, the driver is required to get the serial No. from the cane yard office and record his vehicle No. in the office within 2/3 hours, that vehicle may go for unloading of sugar-cane.

Before this, the weight of loaded and unloaded vehicle is taken and only weight of sugar-cane is made easy with the help of calculating machines.

This 'Weight Slip' of sugar-cane is then delivered to 'Cane Accounts Department'. Daily all such slips are classified and tabulated as ownershipwise. The payment of sugar-cane may not be made fully at one time, but by installments, in owner's subsequent bank's account.

For wastage control of sugar-cane, the factory may allowed to vehicles, to come direct inside the factory site, and within transporting the 'Net' must be used by all vehicles. Care is taken that, after cutting of sugar-cane it must be crushed within 24 hours, otherwise the recovery may be downwards.

After crushing of sugar-cane the by-products viz. Bagasse and Molasses have opened up fresh areas of utilities. Bagasses is used for fuel requirement of industry, offers also potential to attain self-sufficiency in the production of paper and news-print. Molasses, another important by-product is utilised for production of alcohol and down stream chemicals.

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