

A STUDY ON MATERIAL MANAGEMENT IN SUGAR INDUSTRIES

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Abstract: Management of materials has the biggest problems for many years to most of the firms in sugar production. Therefore the effective material management will increase the level of production and reduced inventory cost. The major problem in delaying the production process is poor material planning and improper inventory control. This study helps to found out the general problems and challenges in material management that occurs in the sugar industries and suggestion will be given for better material management in future.

Keywords: Material management, Problems in material management, Process and Stages.

INTRODUCTION:

The material management is one of the greatest tools used in many organizations to improve the efficiency of the production process at the same time make profitability by minimizing the cost. In sugar industries it plays a vital role in the progress of economic growth of industry. Material management is the process of planning, executing and controlling the flow of material and goods and the main aim of material management is to provide materials at right quality at the same time right quantity and available at right price and deliver at right time in order to improve the process of production activity. So the material management is very essential for a sugar industry. Without the concept of the material management it result in purchase of materials in early and the materials stored in the inventory will leads to damaged. This indicating the poor material management in the sugar industry. Material management is one the important tool in material planning and control at the same time to optimize performance in meeting customer service requirements. Material management encloses all operation of functions in management from purchasing of raw materials for the production process to the final delivery of the products.

There are many problems encountered by material management like lack of flexibility, lack of information flow, poor material handling and improper inventory control. In sugar mills they facing multiple challenges like low crushing capacity, cost of sugar production is high, poor factory maintenance, sugar extraction rate is low, old technology, insufficient storage of canes, and wastage in cane yard. These problems can be overcome by proper planning and controlling by adopting good material management in sugar industries.

REVIEW OF LITERATURE:

Theoretical Background

According to Barker(1989), has identified five areas of functions in the material management, that are purchasing, production and inventory control, storage, quality control and warehousing & distribution of materials. In other literatures(Donald, 1975 ;Why Bark& William,1986; Linton etal., 2007) expanded the area to include better supplier and customer relationship, quantity materials requirements and demand forecasting, foreign materials have source of supply, improving skills for worker in material management, increase the efficiency of research and development (R&D) department. Purchasing, controlling, material handling and their training is also managed by department of material management.

According to Chary (2008), observed that the inventory control helps the organization to improve the inventory by economic order quantity (EOQ) and by tracking the level of system by two bin method and red line method. Inventory control prevents the company from unnecessary losses by other departments. Material inventory is kept for three reasons; precaution, speculation and transactions.

According to Navon & Berkovich (2006), in an organization the main responsibility of logistics is to formulate the programmer for the work in progress and timely provision of components and materials. Stevenson (2001) explained that logistics is playing big vital role in the competitive advantage of organization, including flow of materials and goods in and out of the production. Bowersox & Closs (2002) identified that improvement in continuity of supplies with reduced lead time will results in the improvement in cooperation, communication and enhancement

According to Grant, Lambert, Stock and Ellram (2006) supply chain management refers to the corporate business process integration to end users by suppliers that will provide information, value for customers, services and goods. It is the interconnected activities of planning, controlling, coordination of the materials and final products from the supplies to the customer.

Materials are heart for the manufacturing systems, without the materials organization cannot operate. They made available at right price at right quality, in right quantity in right time at right place in order to schedule and coordinate the activity of production. In a manufacturing firm if the materials were under stocked, overstocked remains the poor management of materials (Banjoko, 2000).

OBJECTIVES OF MATERIAL MANAGEMENT:

- Continuity of supply
- Low procurement
- Effective material planning
- Delivery of materials
- Good supplier relation and information system
- Product improvement

STAGES IN MATERIAL MANAGEMENT:

MATERIAL PLANNING:

Material planning is the initial stage of the process, it provides the proper way of planning all activities. It is to determine the raw materials, spare parts, ordering and scheduling of materials. It carries out the process of planning and forecasting of procurement of materials.

MATERIAL PROCUREMENT:

Material procurement means determination of requirements of users. In material procurement it includes vendor selection, negotiation of contracts, establishing payment terms, strategic vetting and purchasing of goods and raw materials for the manufacturing process.

INVENTORY CONTROL:

Inventory control generally refers to the materials in stock and forecasting the future demands. To control the inventory system the various inventory control techniques are implemented, they are ABC analysis, just in time (JIT), Material Requirement Planning (MRP) method, Economic Order Quantity (EOQ), VED analysis, Fast, Slow & Nonmoving method, HML classification, SDE classification, two bin techniques.

PRODUCTION CONTROL:

Production control means it is the basic planning stock holdings, delivery periods of customer and developing policy decisions. It will control the production scheduling, shortage control and avoidance of potential delays.

MATERIAL HANDLING:

Material handling is the movement of raw materials from their native place to the point of manufacturing unit. It also controls the products and materials. It has two major types they are manual handling and automated handling.

PACKAGING AND SHIPPING:

In packaging and shipping, material management playing major role for proper shipping and packaging. It integrates inventory, transportation, and manufacturing. Product packaging and shipping is the long term customer satisfaction strategy.

WAREHOUSING AND DISTRIBUTION:

In distribution, material management has the role of movement of goods from the manufacture to the point of sale or customer. In warehousing it is for proper storing and maintenance of goods. It is very essential to gain the customer satisfaction and loyalty.

MATERIAL MANAGEMENT PROCESS:

Usually the material management process begins from procurement of materials to delivery of the materials. Material management is scheduling the production process, procuring the materials, material storing, distribution of materials. The material management functions are planning, procuring, handling, storing and control the materials and made the perfect co ordination between the functions to provide the best service to the customer at reduced cost. Here the materials are stored in the store department to reduce the damage. The selection of vendor is carried out for good items. Then materials are arrived at store department and the inspections are made.

Planning: Material planning is the initial stage in process, in order to provide the proper guidance to all the activities. Planning process is the way of determining requirements of raw materials, ordering, spare parts, and scheduling.

Procurement: Material procurement means identifying the requirements of users and it involves the vendor selection, negotiation of contracts, purchasing of goods and raw materials for the manufacturing.

Handling: Some of the materials have different features and material properties so it very critical to handle it. So there should be effective material handling to control the materials. The effective material handling includes handling, controlling and storing of materials.

Testing: Testing is one of important factor to analyze and measure the performance of a project. Quality is playing the vital role in material management to ensure good quality of final product.

BENEFITS OF MATERIAL MANAGEMENT:

- With reduced lead time there is increase in continuous of supplies.
- Improvement in quality control.
- Reduction in cost of materials.
- Improvement in flow of communication and information.
- Improvement in handling of materials and flexibility.
- Reduction in surplus and improved inventory control.

PROBLEMS AND CHALLENGES IN MATERIAL MANAGEMENT:

- Rise of inefficiency in milling, transportation and sugar production.
- Improper handling of materials leads to damage.
- Selection of vendor for material procurement.
- Receiving raw materials in advance will increase the inventory cost.
- Materials not receiving at the time of requirements will affect the productivity.
- Failure in on time order will delay the production.
- Poor scheduling of materials.
- Lack of space to store materials in the inventory.
- Lack of space for movement of vehicles for unloading materials.

CONCLUSION & FUTURE SCOPE:

From this study we can draw the conclusion that the material management plays major role in the Sugar industries and other organizations to improve the productivity of materials and goods. It resolves all the issues faced by the sugar industries and potential to overcome all the struggles by proper material management. By implementing proper material management in sugar industries it ensures that improves the productivity, reduced inventory cost, make good supplier relation, proper material handling, good flow of communication and reduce unnecessary wastages.

In future due to emergence of demand and timely deliveries becomes high for the finished products. So material management have to implemented in industries to the great extent to avoid major difficulties in proper planning and controlling the flow of materials.

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