

Inventory Control Technique

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Abstract: - “Material management is the process to provide right material at right place at right time in right quality. so as to minimize the cost of project”. Company has problems in procurement and handling of raw materials not for finished products. Our analysis makes a contribution to the management of inventory in the company. It helps to improve inventories.

I. INTRODUCTION

“Material management is the process to deliver right material at right place at right time in right quantity so as to minimize the cost of project”. Materials Management is related to planning, procuring, storing and providing the Appropriate material of right quality, right quantity at right place in right time so as to co-ordinate and schedule the production activity in an integrative way for an industrial undertaking. Effective management of materials can reduce these costs and contribute significantly to the success of the project Inventory technique Minimize of cost of entire project by controlling the inventory.

Inventory Control is the process by which inventory is measured and regulated according to predetermined norms such as economic lot size for order or manufacture, safety stock, minimum level, maximum level, order level etc. Inventory control pertains primarily to the administration of recognized policies, systems & procedures in order to reduce the inventory cost Inventory control technique Maintain sufficient stock of raw material in period of short supply and anticipate price changes.

II. LITERATURE REVIEW

Author Suggested that the total cost of material may be 50% of total cost; so that it is important for contractor to consider that timely availability of material. Material Manager should maintain reports such as material to order between two dates, material assignments, waste control, when to purchase construction material, when material must be on site, and purchase order between two dates. They had mention that the efficient procurement of material represents a key role in the successful completion of the work. Poor planning and control of material, lack of material when needed, poor identification of material, remanding and inadequate storage cause losses in labour productivity and overall delays that can indirectly increase total project cost.^[1] Ashwini R. Patil (2013)

They Suggested that materials management has become a critical component of successful project execution. Moving away from a sheer tactical role, it has earned strategic

value, and organizations have become conscious of the many benefits that effective material management practices can drive, including reduced costs, higher productivity, warranted quality, increased reliability, and added the development that is going in the material management on fast track construction. Material wastage in construction projects resulted into huge financial setbacks to builders and contractors. In addition to this, it may also cause significant effects over aesthetics, health, and the general environment. These wastes needs to be managed as well as their impacts needs to be ascertained to pave way for their proper management, however in many cities of India wastes materials management is still a problem. They have discussing the method for the management and control of waste construction materials.^[2] Aditya Pande

Author studied that, management system that is required in planning and controlling the quality & quantity of the material, punctual equipment placement, good price and the right quantity as required. . Capability to coordinate and integrate purchasing, shipping and material control from suppliers is required for material cost control. Material management is a management system that integrates purchasing, shipping and material control from suppliers. The original site layout was redesigned, then the proper management was bought in and a whole new concept was derived.^[3] T. Phani Madhavi (2013)

III. INVENTORY CONTROL TECHNIQUES

Inventory management and control technique

A. A.B.C. Analysis.

B. EOQ Analysis.

C. V.E.D. Analysis.

A. A.B.C. Analysis.

The ABC inventory control technique is based on the principle that a small portion of the items may typically represent the bulk of money value of the total inventory in construction process, while a relatively large number of items may from a small part of the money value of stores.

Classifications A, B, C based on annual consumption unit.

“A” items money value is highest **70%**, represent only 10% of items.

“B” items money value is medium **20%**, represent about 20% of items.

“C” items money value is lowest 10%, represent about 70% of items.

Category A should be under the maximum control, items of category B may not be given that much attention and item C may be under a loose control.

Case study

Inventory sales and management of Blue Gem Tiles MIDC. The company is principally engaged in the business of manufacturing Marble mosaic Tiles. The company required aggregate, well graded sand & colour marble mosaic for making marble mosaic tiles. Marble Mazak tiles factory is making the marble Mazak tiles, this marble mosaic are free of dust & cleaned washed.

The company required well graded fine sieve sand, uniformly graded aggregate & colour marble mosaic for making marble Mazak tiles.

Table No. 1

Item No.	Product list	Annual Demand	Unit cost (Rupee s)	Annual Cost (Rupees in lack)
1	well graded fine sieve sand	1760	900	15.84
2	uniformly graded aggregate	1540	1450	22.33
3	colour marble mosaic	2234	2900	64.786
4	Cement	700	5000	35
Total				137.956

Table No. 2

Class	Item	Percentage of item	Cost Percentage Lacks
A	colour marble mosaic, Cement	50%	72.331
B	sand uniformly graded aggregate	25%	16.18
C	well graded fine sieve sand	25%	11.17

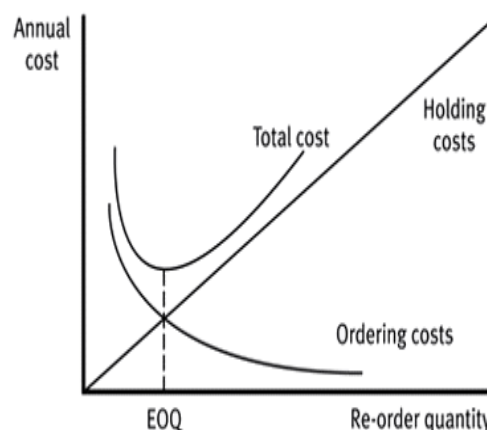
Advantages of ABC Analysis

1. The inventory control of different categories of items will be improved if costlier items are not stored for large period, which reduces capital investment.

2. The quantities of various categories of items are economically ordered and stored as per need. It saves the cost of ordering and carrying the inventories.
3. The procuring of various categories of items becomes easy and discounts are also obtained on large purchase of items of C category.

B. EOQ Analysis.

The EOQ refers to the order size that will result in the lowest total of ordering and carrying costs for an item of inventory. If a firm place unnecessary orders it will incur unneeded order costs. If a firm places too few order, it must maintain large stocks of goods and will have excessive carrying cost.



$$\text{Most economic ordering quantity} = \sqrt{2AP/C}$$

C. V.E.D. Analysis.

Accordingly the items are classified into V(Vital), E(Essential) and D(Desirable) categories. Vital items are the most critical having extremely high opportunity cost of shortage and must be available in stock when demanded. Essential items are quite critical with substantial cost associated with shortage and should be available in stock by and large. Desirable group of items do not have very serious consequences if not available when demanded but can be stocked items. Obviously the % risk of shortage with the 'vital' group of items has to be quite small- thus calling for a high level of service. With 'Essential' category we can take a relatively higher risk of shortage and for 'Desirable' category even higher.

IV. CONCLUSIONS

Company have problems in procurement and handling of raw materials not for finished products. Our analysis makes a contribution to the management of inventory in the company. It also develops an approach if adopted by company, would result in more efficient utilization of financial resources for finished inventories.

The study thus suggests some recommendations to improve certain things in the company inventory policy. If these recommendations are considered, the company's inventory management situation will rise a lot.

Identifying items for potential consignment – Since “A” items tend to have a greater impact on investment, these would be the best inventories to investigate the potential for alternative stocking arrangements that would reduce investment liability and associated carrying.

Review of stock-levels –There is no guarantee of future performance by following past results. However, “A” items have greater impact on projected investment and purchasing capacity, and therefore should be managed most in terms of minimum and maximum inventory levels.

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