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ANALYSIS OF INVENTORY CONTROL TECHNIQUES A COMPARATIVE STUDY

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ABSTRACT

Every organization needs inventory for smooth running of its activities. It serves as a link between production and distribution processes. The investment in inventories constitutes the most significant part of current assets and working capital in most of the undertakings. Thus, it is very essential to have proper control and management of inventories. The purpose of inventory management is to ensure availability of materials in sufficient quantity as and when required and also to minimize investment in inventories. So, in order to understand the nature of inventory management of the organization, In this paper we analyzing different inventory control techniques for efficient inventory management system.

Index Terms- Assets, Distribution, Inventory, Production, Working capital .

INTRODUCTION

So inventory control is vitally important to almost every type of business, whether product or service oriented. Inventory control touches almost every facets if operations. A proper balance must be struck to maintain proper inventory with the minimum financial impact on the customer. Inventory control is the activities that maintain stock keeping items at desired levels. In manufacturing since the focus is on physical product, inventory control focus on material control.

“Inventory” means physical stock of goods, which is kept in hands for smooth and efficient running of future affairs of an organization at the minimum cost of funds blocked in inventories. The fundamental reason for carrying inventory is that it is physically impossible and economically impractical for each stock item to arrive exactly where it is needed, exactly when it is needed.

Inventory management is the integrated functioning of an organization dealing with supply of materials and allied activities in order to achieve the maximum co-ordination and optimum expenditure on materials. Inventory control is the most important function of inventory management and it forms the nerve center in any inventory management organization. An Inventory Management System is an essential element in an organization. It is comprised of a series of processes, which provide an assessment of the organization’s inventory. For example we are considering the inventories in a company which make washing machines in all these analysis.

ECONOMIC ORDER QUANTITY

Economic Order Quantity is the Inventory management technique for determining optimum order quantity which is the one that minimizes the total of its order and carrying costs.

In the given table the EOQ & the no. of orders purchased per year for various components are calculated. The calculated EOQ is compared with the no. of units of each component purchased in the organization. It is found that, there is a variation in the EOQ & no. of unit purchased. It is understood that the company is not following EOQ for purchasing the materials & therefore the inventory management is not satisfactory.

There are two major cost associated with inventory. Procurement cost and carrying cost.

Annual procurement cost varies with the numbers of orders. This implies that the procurement cost will be high, if the item is procured frequently in small lots. The annual procurement cost is directly proportional to the quantity in stock. The inventory carrying cost decreases, if the quantity ordered per order is small. The two costs are diametrically opposite to each other. The right quantity to be ordered is one that strikes a balance between the two opposition costs. This quantity is

$$EOQ = \sqrt{\frac{2 * Demand * Re-order Cost}{Carrying Cost}}$$

SAFETY STOCKS

Safety stocks are the minimum additional inventories which serve as a safety margin to meet an unanticipated increase in usage resulting from an unusually high demand and an uncontrollable late receipt of incoming inventory.

In the given table, safety stocks for the various components calculated are shown. Actual demand is given for each component for a period of 1 year and the lead-time is calculated at a maximum of 100 days & normal of 60 days and these were converted into per annum. So, from calculation of safety stock, we can able to determine how much the company can hold the inventory in reserve stock per annum.

ABC ANALYSIS

The ABC system is a widely used classification technique to identify various items of inventory for purposes of inventory control. On the basis of unit cost involved, the various items are classified into 3 categories:

- (1) A, consisting of items with the large investment,
- (2) C, with relatively small investments but fairly large number of items and
- (3) B, which stands mid-way between category A & C.

Category A needs the most rigorous control, C requires minimum attention and B deserves less attention than A but more than C.

- ✦ A Class (High Value)
- ✦ B Class (Moderate Value)
- ✦ C Class (Low Value)

CONCLUSION

It is found that, there is a variation in the EOQ & no. of unit purchased. It is understood that the company is not following EOQ for purchasing the materials. So, the inventory management is not satisfactory. From calculation of safety stock, we can able to determine how much the company can hold the inventory in reserve stock per annum .

From the classification A classes, B classes and C classes It is good that the company maintains its inventories based on its value using controlling techniques.

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