

MANAGEMENT OF INVENTORY IN A FASTENER COMPANY

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ABSTRACT

Inventory is an asset that is owned by a business that has the express purpose of being sold to a customer. Inventory refers to the stock pile of the product a firm is offering for sale and the components that make up the product. Inventory management is the practice overseeing and controlling of the ordering, storage and use of components that a company uses in the production of the items it sells. A component of supply chain management, inventory management supervises the flow of goods from manufacturers to warehouses and from these facilities to point of sale.

KEYWORDS: EOQ, ABC Analysis, Inventory Control.

I. INTRODUCTION

The inventory may be classified into three categories:

Raw material and supplies: It refers to the unfinished items which go in the production process.

Work in Progress: It refers to the semi-finished goods which are not 100% complete but some work has been done on them.

Finished goods: It refers to the goods on which 100% work has been done and which are ready for sale.

$$EOQ = \sqrt{\frac{2 \times D \times Co}{Ch}}$$

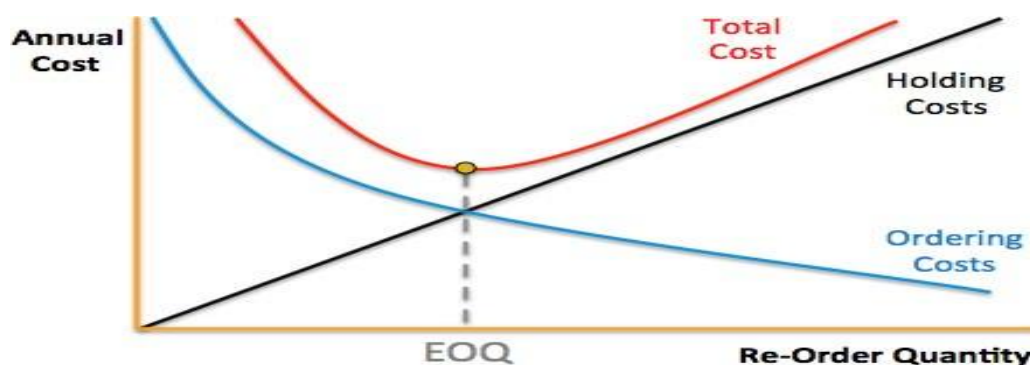


Figure 1: EOQ Graphical method

ABC analysis is based on Pareto principle (80-20 rule) which states that 80% of the overall consumption value (expense) is based only on 20% of the total items.

- “A” item: money value is highest 70%, represent only 10% of items
- “B” item: money value is medium 20%, represent about 20% of items
- “C” item: money value is lowest 10%, represent about 70% of items

II. PROBLEM DEFINITION

Sundaram fasteners manufactures different varieties of turbine shaft, stator shaft, sockets sun gear slip yoke, output shaft etc. Hence the task of maintaining inventory is quite difficult Since the demand for products is varying for each month, hence it is necessary to maintain optimum inventory in order to minimize the total inventory cost.

III. DATA COLLECTIONS

Table 1: Product lists

S.NO	PRODUCT NAME		DEMAND (units/month)	COST (Rs/unit)	ORDERING COST (Rs/order)	HOLDING COST (Rs/unit/month)
1	Turbine Shaft	6L80	108000	3000	40000	14
2		6L50	105000	2800	42000	12
3	Output Shaft	6L80	135000	2500	35000	8.9
4		6L50	120000	2000	30000	7
5	Slip Yoke	long	90000	4000	28000	5.2
6		short	85000	3000	25000	4.8
7	Sprocket	3Q	130000	890	10000	9
8		2Q	125000	860	8000	8.6
9	Sun Gear	s1	150000	3500	10000	6.8
10		s2	100000	3000	8500	6

IV. RESULTS AND DISCUSSION

Table 2: Results of the products

INVENTORY MANAGEMENT									
S.NO	PRODUCT NAME	DEMAND (units/month)	COST (Rs/unit)	ORDERING COST (Rs/order)	HOLDING COST (Rs/unit/month)	EOQ	TOTAL COST (Rs)	% COST	ANALYSIS
1	Turbine Shaft	6L80	108000	3000	40000	14	24842.36014	74527080.41	11.25624695 B
2		6L50	105000	2800	42000	12	27110.88342	75910473.59	11.46518866 B
3	Output shaft	6L80	135000	2500	35000	8.9	32585.23827	81463095.66	12.30383261 A
4		6L50	120000	2000	30000	7	32071.34903	64142698.06	9.687834886 C
5	Slip Yoke	long	90000	4000	28000	5.2	31132.4713	124529885.2	18.80845369 A
6		short	85000	3000	25000	4.8	29755.95179	89267855.36	13.48262966 A
7	Sprocket	3Q	130000	890	10000	9	16996.73171	15127091.22	2.284730242 C
8		2Q	125000	860	8000	8.6	15249.85703	13114877.05	1.980814142 C
9	Sun Gear	s1	150000	3500	10000	6.8	21004.20126	73514704.41	11.10334207 B
10		s2	100000	3000	8500	6	16832.50823	50497524.69	7.626927088 C
Total=							662095285.6		

V. CONCLUSION

Traditionally, ABC analysis has been used to classify various inventory items into three categories - A, B, and C. This has been done based on the criterion of cost value of the items. In the current globalized hyper-responsive business environment, a single criterion is no longer an adequate guide to the management of inventories and multiple criteria have to be considered.

VI. REFERENCES

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