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A STUDY ON INVENTORY MANAGEMENT OF TATA MOTORS

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ABSTRACT

In the study contain the Inventory management of the Tata motors Limited. To know about the raw materials of the company for the last five years. The data's are to be collected from the secondary. This analysis to know about the stock levels under EOQ method. Finally shows the company economic order quantity of the stock levels for the last five years (2012-2016).

Keywords: Inventory Management, Economic Order Quantity

Introduction

A term inventory refers to the stock file of the products a firm is offering for sale and the components that make up the product. In other words, inventory is composed of assets that will be showed in future in the normal course of the business operations. The assets which firms store as inventory in anticipation of need are:

- ✓ Raw materials
- ✓ Work in process (Semi Finished goods)
- ✓ Finished goods

The raw material inventory contains item that are purchased by the firm from other and are converted into finished goods through the manufacturing (production) process. They are an important input of the final product. The working process inventory consists of items currently being used in the production process.

Review of the literature

1. Prem Virat(27) highlights the importance of increasing materials productivity in Indian industries.
2. Ravindra Kumar(28) describes materials management as a truly creative, productive and profit centre
3. Renuka Raja Gopalan(29) stresses the importance of productivity through efficient materials management in manufacturing enterprises.
4. Suresh Krishna(30) advocates the need for professionalism in materials management to achieve the organizational goals.
5. Krishna Swamy(31) emphasises the need for maintaining good vendor relations.

Objective of the Study

- To Analyze and measure economic order quantity for the selected raw material items.

Research Methodology

The data has been gathered through interaction and discussions with the executives working in the division. Some important information has been gathered through couple of unstructured interviews of executive. Annual reports and other magazines published by the company are used for collecting the required information.

DATA COLLETION METHOD:

Both primary data and secondary data were collected for doing research.

PRIMARY DATA

The information collected under "primary data" is mainly based on TATA MOTORS analysis. A structured questionnaire is used to collect the primary data.

SECONDARY DATA

The secondary data was obtained through the dealers, sales record, and internet also from various books and journals.

Analysis of the Study

ECONOMIC ORDER QUANTITY:

EOQ= $\sqrt{\frac{2AB}{CS}}$ **or** $\sqrt{\frac{2AO}{C}}$

Where, A=Annual Consumption

B or O = Ordering Cost

C = Carrying cost

S = Storage Cost

ECONOMIC ORDER QUANTITY:

EOQ = $\sqrt{\frac{2AO}{C}}$ Where, A=Annual Consumption

O = Ordering Cost

C = Carrying cost

During 2012-13:

The firm requires below given units of raw material for manufacturing. The following are the details of their operation during 2012-13.

PARTICULARS	
RAW MATERIAL	33168.73
Ordering Cost Per Order	3500
Carrying Cost	10 %
Purchase Price Per Unit	550

Calculation of EOQ:-

Total units required (A) =33168.73

The ordering cost per order (O) = Rs.3500

Carrying cost per unit (C) = 10%

(i.e.) 10% of Rs.550 =Rs.55

EOQ =√2AO/C

$=\sqrt{2 * 33168.73 * 3500}$ / 55

=Rs.2054.62

During 2013-14:

The firm requires below given units of raw material for manufacturing. The following are the details of their operation during 2013-14.

PARTICULARS	
RAW MATERIAL	25542.69
Ordering Cost Per Order	4000
Carrying Cost	10 %
Purchase Price Per Unit	600

Calculation of EOQ:-

Total units required (A) =25542.69

The ordering cost per order (O) = Rs.4000

Carrying cost per unit (C) = 10%

(i.e.) 10% of Rs.600 =Rs.60

EOQ =√2AO/C

$=\sqrt{2 * 25542.69 * 4000 / 60}$

=Rs.1845.45

During 2014-15:

The firm requires below given units of raw material for manufacturing. The following are the details of their operation during 2014-15.

PARTICULARS	
RAW MATERIAL	27920.47
Ordering Cost Per Order	4500
Carrying Cost	10 %
Purchase Price Per Unit	650

1.Calculation of EOQ:-

Total units required (A) =27920.47

The ordering cost per order (O) = Rs.4500

Carrying cost per unit (C) = 10%

(i.e.) 10% of Rs.650 =Rs.65

EOQ =√2AO/C

$=\sqrt{2 * 27920.47 * 4500 / 65}$

=Rs.1966.19

During 2015-16:

The firm requires below given units of raw material for manufacturing. The following are the details of their operation during 2015-16.

PARTICULARS	
RAW MATERIAL	29099.37
Ordering Cost Per Order	5000
Carrying Cost	10 %
Purchase Price Per Unit	700

1.Calculation of EOQ:-

Total units required (A) =29099.37

The ordering cost per order (O) = Rs.5000

Carrying cost per unit (C) = 10%

(i.e.) 10% of Rs.700 =Rs.70

EOQ =√2AO/C

$=\sqrt{2 * 29099.37 * 5000 / 70}$

=Rs.2038.89

During 2016-17:

The firm requires below given units of raw material for manufacturing. The following are the details of their operation during 2016-17.

PARTICULARS	
RAW MATERIAL	31600.37
Ordering Cost Per Order	5500
Carrying Cost	10 %
Purchase Price Per Unit	750

1.Calculation of EOQ:-

Total units required (A) =31600.37

The ordering cost per order (O) = Rs.5500

Carrying cost per unit (C) = 10%

(i.e.) 10% of Rs.750 =Rs.75

EOQ =√2AO/C

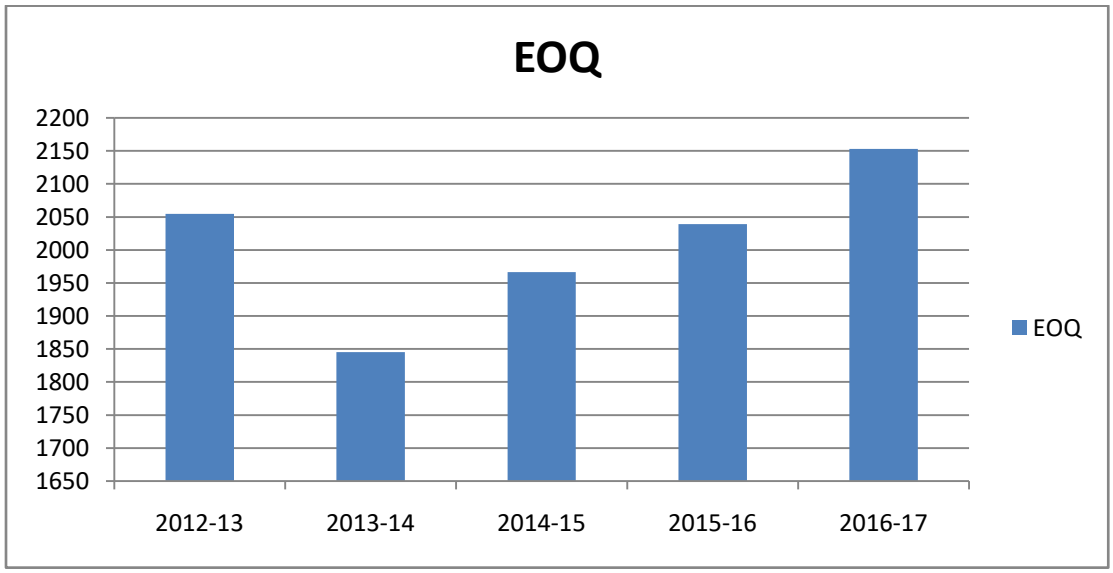
$=\sqrt{2 * 31600.37 * 5500 \ /75}$

=Rs.2152.84

TABLE SHOWING 5 YEARS RESULT OF EOQ:

YEAR	EOQ
2012-13	2054.62
2013-14	1845.45
2014-15	1966.19
2015-16	2038.89
2016-17	2152.84

CHART:



INTERPRETATION:

The above graph shows the economic order quantity of the company. In 2013 the EOQ is 2054.62 which decrease to1845.45 in the year 2014. But increases further and reaches 2152.84 in the year 2017.

Conclusion

Inventory management has to do with keeping accurate records of finished goods that are ready for shipment. This often means posting the production of newly completed goods

to the inventory totals as well as subtracting the most recent shipments of finished goods to buyers. When the company has a return policy in place, there is usually a sub-category contained in the finished goods inventory to account for any returned goods that are reclassified or second grade quality. Accurately maintaining figures on the finished goods inventory makes it possible to quickly convey information to sales personnel as to what is available and ready for shipment at any given time.

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