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A Study on Inventory Management at Mann Hummel Pvt Ltd Tumkur

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ABSTRACT

Business owners greatly benefit from inventory management systems because they enable stores to safely keep sales and purchase records. Poor inventory management results in unhappy customers, slower sales, excess cash on hand, and warehouses. By using this inventory method, less manual labor, human error, and manual delays occur.

concurrently accelerating the process. The ability to track sales data will be provided by this inventory management system. Added to inventories. A online application for Windows called inventories Management System focuses on inventories andsales reduction. For Windows operating systems, it was developed. Numerous features of the inventory management system features. The logical features in this web application allow users to assess ideal inventory levels and choose the best automated replenishment techniques. It can also do things like points automatically and draws attention to possible stock shortages. This method eliminates the possibility of fast-moving good shortages. items by cutting down on delays.

INTRODUCTION

Controlling and managing a company's inventory of products and resources is an essential component of corporate operations. This procedure is crucial for maintaining the proper equilibrium between keeping just enough inventory on hand to satisfy consumer demand and reducing surplus stock that takes up money and storage space. Regardless of a company's size or industry, efficient inventory management is crucial to its overall success and profitability.

The following are the main goals of inventory management:

Optimizing Stock Levels: Businesses try to find a balance between keeping just enough inventory on hand to fill orders from customers and staying away from overstocking, which can result in higher carrying costs, obsolescence, and the use up of financial resources.

Managing inventory ensures that products are accessible to meet customer demand. to satisfy client demand. Accurate demand forecasting and stock level maintenance are required to avoid stockouts (inadequate inventory) and overages.

Keeping extra inventory incurs a variety of expenditures, such as warehousing, insurance, and possible depreciation. The goal of efficient inventory management is to reduce these holding expenses.

Reducing stockouts: Stockouts can result in missed sales opportunities and disgruntled consumers. By ensuring that products are available when needed, inventory management systems try to reduce these occurrences.

Streamlining Operations: Effective inventory management procedures can raise the general effectiveness of a company's operations and supply chain. It may result in shorter lead times, better order fulfillment, and better resource management.

In inventory management, a variety of strategies and approaches are employed, including:

Just-In-Time (JIT): This strategy entails acquiring merchandise just when It is necessary, eliminating the need for big warehouses and an abundance of inventory.

Using the ABC Analysis, inventory items are divided into groups (A, B, and C) depending on their value and intended use, enabling prioritized control and monitoring.

Economic Order Quantity (EOQ): The process of determining the ideal order quantity to reduce overall inventory costs while taking into account factors like ordering expenses and holding costs.

Maintaining a safety stock lowers the likelihood of stockouts by allowing for fluctuations in demand or lead times.

Inventory Turnover: Measuring the rate at which inventory is sold or consumed, revealing information about the effectiveness of the inventory.

Technology, data analysis, forecasting, and an established inventory control system are all necessary for effective inventory management. Businesses that perform in this field can boost their cash flow, client happiness, and competitiveness in general. Technology, data analysis, forecasting, and an established inventory control system are all necessary for effective inventory management. Businesses that perform in this area can increase their cash flow, customer satisfaction, and general market competitiveness. On the other hand, ineffective inventory management can result in monetary losses, operational disruptions, and lost potential for expansion. To achieve their strategic goals and keep a competitive edge, businesses of all sizes must pay close attention to their inventory management procedures.

COMPANY PROFILE

An international filtration company called MANN+HUMMEL focuses on offering solutions for clean air and clean water. Here are some details about MANN+HUMMEL as of my most recent knowledge update in September 2021:

Adolf Mann and Erich Hummel established the family-owned business MANN+HUMMEL in 1941. The company's main office is in Ludwigsburg, Germany.

Filtration solutions for a variety of industries, including the automotive, industrial, and environmental ones, are the company's key business. They manufacture filtration components and systems for a range of uses, including cabin air filters, fuel filters, oil filters, and vehicle air filters.

Global Presence: MANN+HUMMEL has several production facilities, R&D facilities, and sales offices spread out across the world. They are widely spread over Asia, North America, and Europe.

Innovation: To continuously advance filtration technology, the company places a great emphasis on research and development. To fulfill the rising need for clean air and water in diverse industries, they work on creative solutions.

Environmental Commitment: MANN+HUMMEL is dedicated to environmental responsibility and sustainability. They want to create goods and procedures that lessen emissions and enhance the quality of the air and water.

Products and Services: Some of their main offerings include water filtration systems, industrial filters, car filters (for both personal and commercial vehicles), and filters for various uses.

Customers: MANN+HUMMEL works with a wide range of clients, such as public utility providers, industrial firms, and car manufacturers.

Acquisitions: The business has made acquisitions to grow its business. For instance, in 2018 they purchased Tri-Dim Filter Corporation. Significantly improved their position in the filtration sector in North America.

Please be aware that this information is based on what I knew as of September 2021, and that the company may have changed or developed since then. I suggest checking out the official MANN+HUMMEL website or recent news sources and reports for the most updated information.

OBJECTIVE OF THE STUDY

- A research the inventory management strategy used by the business
- To establish MANN AND HUMMEL PVT LTD's inventory holding period
- Knowing the company's working capital position and its net profit are both important.
- To be aware of the company's maintained safety stock
- To model stock management procedures after corporate structures.
- To assess this quality of Asian artistic works in stock.
- To determine whether the company can improve stock exchange execution

RESULT ANALYSIS METHODS

This study's research methodology takes a systematic approach to the research problem, concentrating on the inventory management procedures used by the Asia Colors Company. The primary goal is to evaluate the effectiveness of the company's strategies and inventory management system. The study also intends to evaluate the company's financial ratios from 2017 through 2021. The following is an outline of the research methodology:

Research Design: The research design outlines the structure of the study. In this case, the study is likely to adopt a descriptive and analytical research design. Descriptive research involves describing the characteristics of a phenomenon, and analytical research focuses on understanding the relationships between variables.

Primary Data: Primary data may be gathered by questionnaires, interviews, or direct observation. Surveys or interviews with pertinent Asia Colors Company employees may be undertaken in the context of inventory management to learn more about their practices, plans, and difficulties.

Secondary Data: The information that is previously available and is therefore regarded as secondary information. This can comprise the company's financial reports, balance sheets, income statements, and other relevant information for the years 2017 through 2021. This data would be crucial for examining financial ratios and performance trends.

Sampling: In order to make sure that the data gathered is representative of the company's inventory management procedures, a suitable sampling technique would be used if surveys or interviews were to be done. The sampling strategy and sample size would depend on the goals of the study and the resources that may be used.

Limitations of the Study:

- The examination is limited by the advanced data available.
- The study relies primarily on secondary data from financial statements.
- The analysis is based on historical data and is not predictive of the future.
- Variations in accounting ratios might be incompletely addressed.
- Time constraints prevented a more comprehensive temporal analysis

DATA ANALYLIS AND INTERPRETATION

INVENTORY TURNOVER RATIO

It is the cost of goods sold in a time period divided by the average inventory level during that period .it denotes the spend at which the inventory will be converted into sales there by contributing for the profits of the concern.

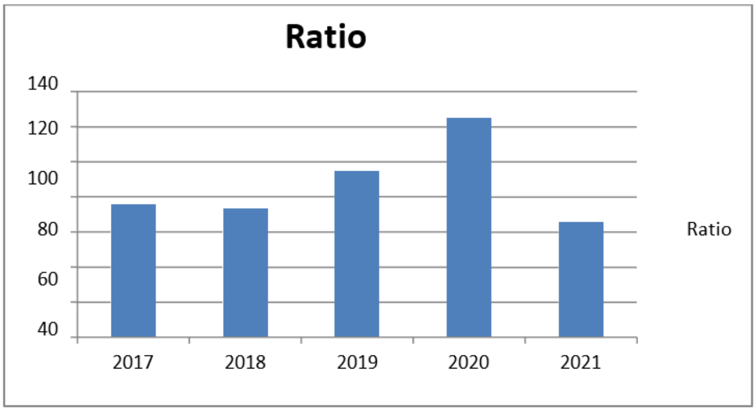
INVENTORY TURNOVER RATIO = COST OF GOODS SOLD / AVERAGE INVENTORY COST OF GOODS SOLD = SALES – DEPRECIATION – OPENING STOCK AVERAGE INVENTORY = OPENING STOCK + CLOSING STOCK/2S

YEAR	COGS	AVERAGE INVENTORY	RATIO
2017	2960	39	75.89744
2018	3093	42	73.64286
2019	3221	34	94.73529
2020	2874	23	124.9565
2021	3215	49	65.61224

Analysis;

In the above table inventory Turnover ratio during the year 2017 is 75.89 times , in the year 2018 it was decreased to 73.64 times , in the year 2019 it was increased to 94.73 times , in the year 2020 it was increased to 124.95 times and in the year 2021 it was decreased to 65.61 times.

INVENTORY TURNOVER RATIO



Interpretation:

The In above table inventory Turnover ratio during the year 2017 is 75.89, in the year 2018 it was decreased to 73.64 , in the year 2019 it was increased to 94.73 , in the year 2020 it was increased to 124.95 and in the year 2021 it was decreased to 65.61.

INVENTORY HOLDING PEROID

A High number of days inventory indicates that there is a lack of demand for the product being sold.

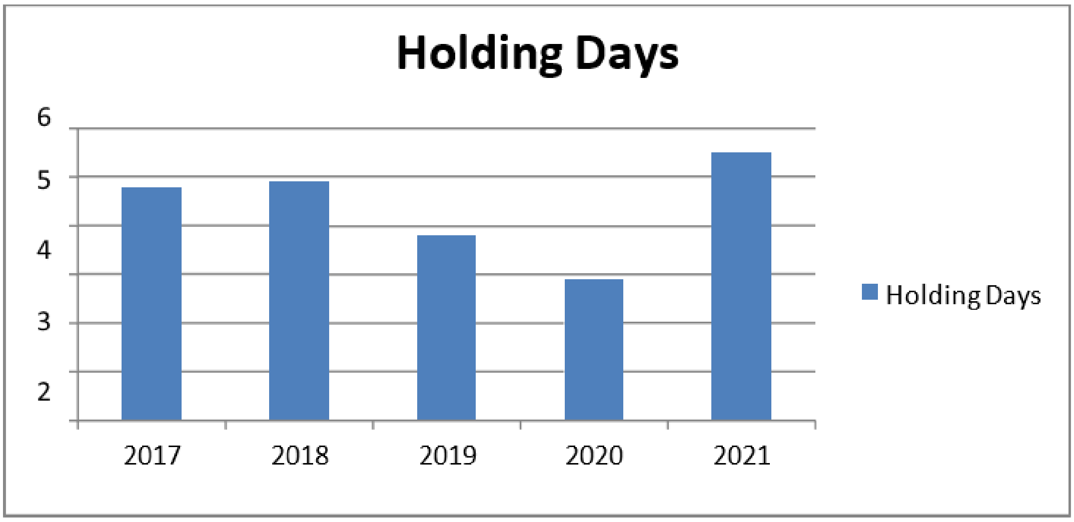
Inventory Holding Period = Number of days in a Year / Inventory turnover ratio

Year	No of days	Ratio	Holding Days
2017	365	75.8974359	4.809121622
2018	365	73.6428571	4.956353055
2019	365	94.7352941	3.852840733
2020	365	124.956522	2.921016006
2021	365	65.6122449	5.562986003

Analysis:

From the above table it shows that the Inventory Holding Period in the Year 2017 was 4.8 Days. In the Year 2018 it was same in the Year 4.9 Days, in the Year 2019 it was decreased to 3.8 Days, it the Year 2020 it was decreased to 2.9 Days, it the Year 2021 it was increased to 5.5 Days.

INVENTORY HOLDING PERIOD (DAYS)



Interpretation:

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RAW MATERIALS TURNOVER RATIO

If this ratio is high it indicated the efficiency of management in converting stock into cash quickly.

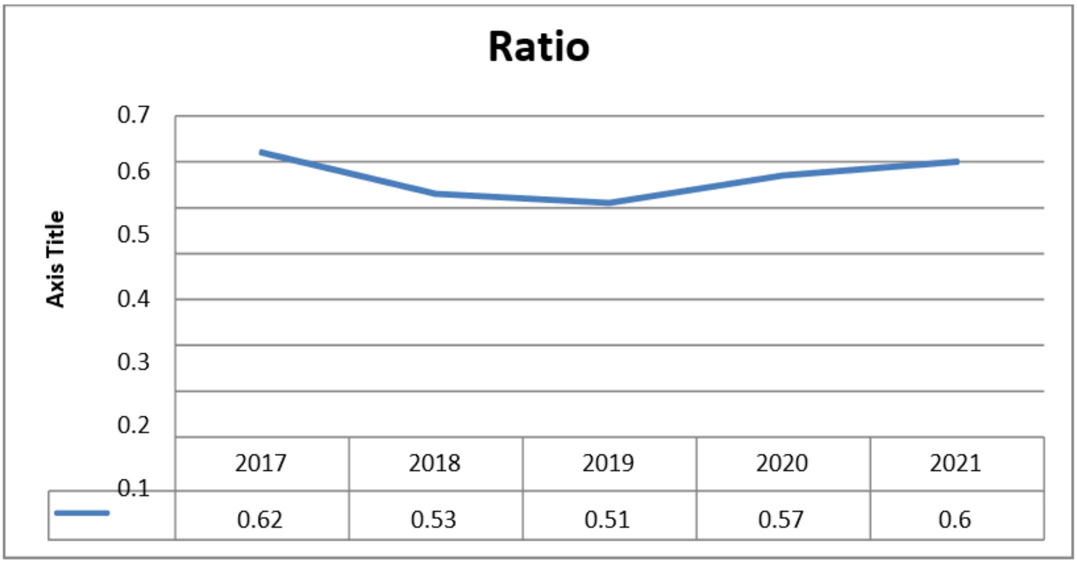
Raw Materials Turnover ratio = Raw Materials / Net Sales

Year	Raw Materials	Sales	Ratio
2017	2104	3223	0.652808
2018	2113	3955	0.53426
2019	2188	4213	0.519345
2020	2221	3839	0.578536
2021	2524	4200	0.600952

Analysis:

From the above table it shows that the Raw materials turnover ratio in the Year 2017 was 0.62, in the year 2018 it was 0.53, in the Year 2019 it was 0.51, in the Year 2020 it was 2020 it was 0.57, in the Year 2021 it was 0.60.

RAW MATERIALS TURNOVER RATIO



Interpretation:

We know that as raw material consumption increases there in increase in production which in turn increases sales. Form this goods can be Dispatched on time. Here also we can see that the company's raw material turnover ratio in increasing to decreasing year by year because there is demand for some products during the Year.

FINISHED GOODS TURNOVER RATIO

It indicates the number of times the average finished goods turned into sales during a Year. This Ratio indicates the efficiency of the firm in selling the Products.

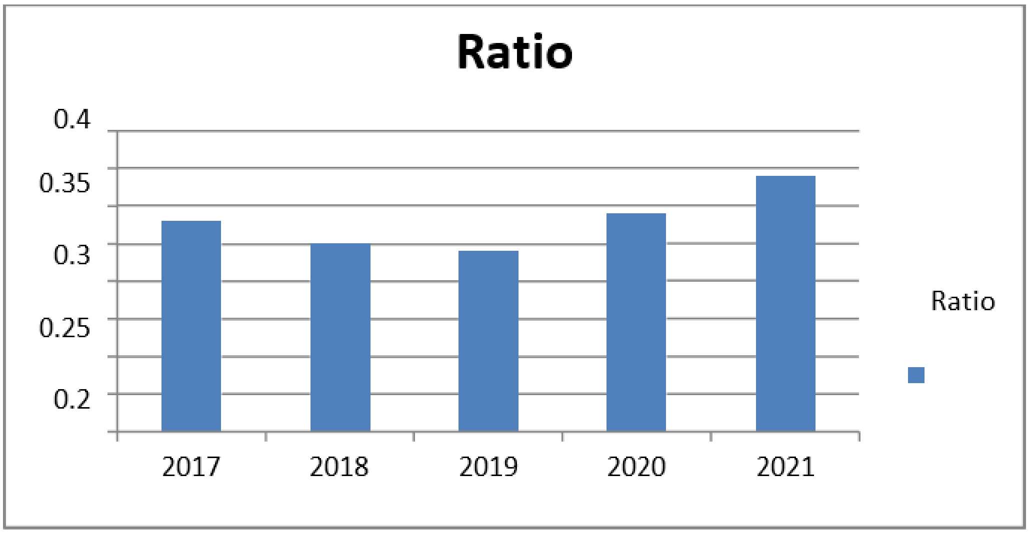
Finished goods turnover ratio = Closing Stock of Finished goods/Sales

Year	Closing stock	Sales	Ratio
2017	934	3223	0.289792
2018	998	3955	0.252339
2019	1012	4213	0.240209
2020	1145	3839	0.298255
2021	1432	4200	0.340952

Analysis:

From the above calculation it is found that in the Year 2017 was 0.28, in the Year 2018 it was decreased to 0.25, in the Year 2019 it was decreased to 0.24, in the year 2020 increased to0.29 and in the year 2021 it was increased to 0.34.

FINISHED GOODS TURNOVER RATIO



As we know that Increasing in finished goods turnover ratio is favourable for the company so here also we can see that increasing trend in finished goods turnover ratio is due to the abrupt demand we can observe. Company finished goods Ratio is increased to decrease by Year by Year and finally 2021 in the year increased by 0.34.

FIXED ASSETS TURNOVER RATIO

Higher the ratio indicates that effective utilization of the fixed assets lower the ratio indicates in effective utilization of fixed assets.

Fixed assets turnover ratio = Sales/ Fixed assets

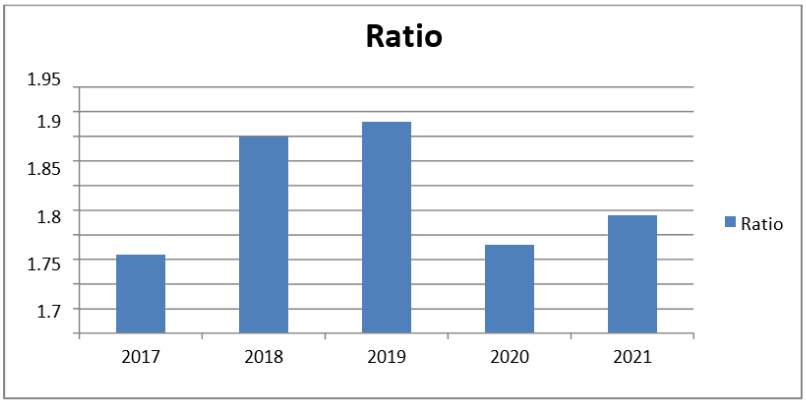
Year	Sales	Fixed Assets	Ratio
2017	3223	2006	1.60668
2018	3955	2134	1.853327
2019	4213	2236	1.884168

2020	3839	2346	1.636402
2021	4200	2484	1.690821

Analysis:

With respect to the above table of sales to fixed assets ratio in the Year 2017it was 1.60, in the Year 2018 it was increased to 1.85, in the Year 2019 it was increased to 1.88, in the Year 2020 it was decreased to 1.63. And in the Year 2021 it was increased to 1.69.

FIXED ASSETS TURNOVER RATIO



Interpretation:

In the above chart it shows that there Is a 1.61 ratio in the 2017 and it was increased to 1.85 in the Year 2018, in the year 2019 also increased to 1.88, in the Years 2020 & 2021 it was decreased to 1.63 and 1.69.

WORKING CAPITAL TURNOVER RATIO

This ratio is calculated to study the efficiency of the working capital is utilized in the business. This ratio is also called as “Net Current assets turnover”

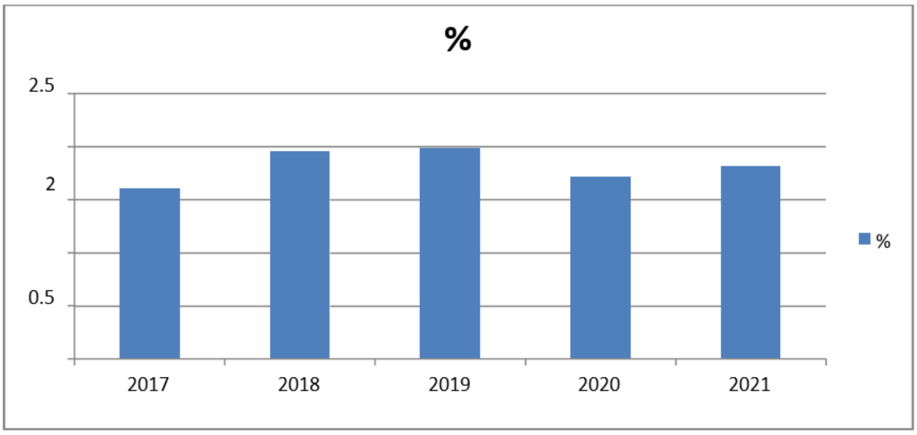
Working capital turnover ratio = Net Sales / Net working Capital

Year	Sales	NWC	%
2017	3223	1998	1.613113
2018	3955	2012	1.965706
2019	4213	2116	1.991021
2020	3839	2226	1.724618
2021	4200	2306	1.821336

Analysis;

From the above table it shows that the working capital turnover ratio during the period in the Year 2017 it is having 1.61, in the Year 2018 it is having 1.96, in the Year 2019 it was 1.99,in the Year 2020 it was 1.72 and in the Year 2021 it was 1.82.

WORKING CAPITAL TURNOVER RATIO



Interpretation:

From the above graph we can say that MANN HUMMEL has increasing and decreasing both are involved in the trend may be because of no proper cash management so measures can be taken to increase the ratio in order to make effective utilization of working capital in order to meet day to day expenses.

TOTAL ASSETS TURNOVER RATIO

Asset turnover ratio indicates of how efficiently the firm utilizes its assets. They sometimes are referred to as efficiency ratios, asset utilization ratios or asset management ratios. A high is an indicator of total assets while a low ratio reveals idle capacity.

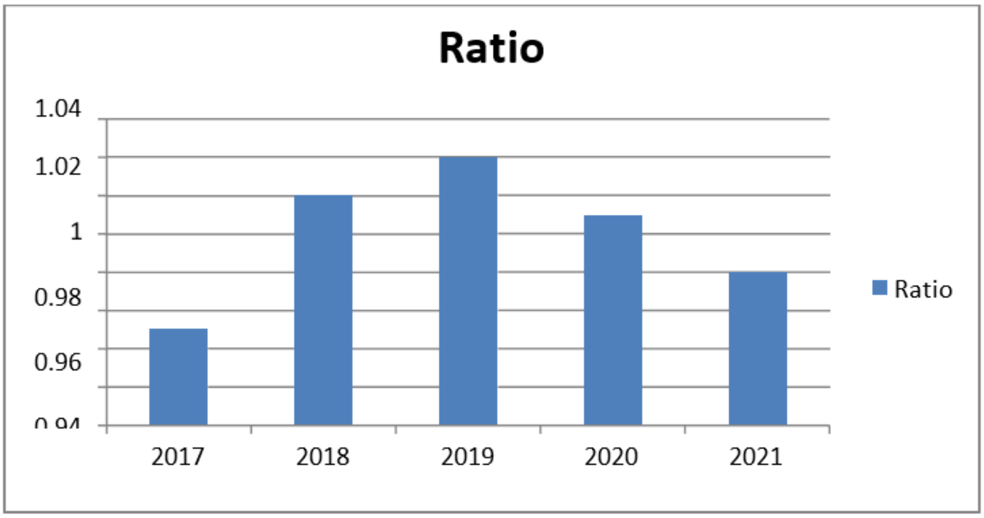
Total assets turnover ratio = Net Sales / Total assets

Year	Sales	Total assets	%
2017	3223	3446	0.93528729
2018	3955	3937	1.00457201
2019	4213	4127	1.02083838
2020	3839	3855	0.99584955
2021	4200	4346	0.96640589

Analysis:

From the table it shows that the table assets turnover ratio during the period in the year 2017 it is having 0.93, in the year 2018 it is having 1.00, in the Year 2019 it was 1.02, in the Year 2020 it was 0.99, in the year 2021 it was 0.96.

TOTAL ASSETS TURNOVER RATIO



Interpretation;

As we can interpret that the company has utilized the total assets effectively as a result it has increasing and decreasing both are involved in the trend but in the last 2 Years it has negligible decrease we can say. It shows that the efficiency of the company. But still measures can be taken to improve it.

FINDINGS

- The inventory turnover ratio is favorable for the company.
- Inventory holding period is increasing and decreasing is both involved.
- The company is having the favorable inventory holding period from year to year and continues flow.
- Raw materials and finished goods were not kept in idle in the Year.
- Economies of scale have not been achieved.
- The company has incurred reasonable expenses so the company's net profit ratio is having the increase and decrease trend both are involved.

CONCLUSION

At MANN HUMMEL PVT LTD – Inventory is maintained in a systematic manner. by the overall study at MANN HUMMEL PVT LTD I would like to conclude that by preventing over and under investment in inventories, company able to maximize result and minimize the waste and helps to obtain results efficiently and effectively. Company has to take some preventive measures in terms of maintenance of machinery so that there is no scope for stoppage in production.

Company is using just in time as an inventory technique. By using this we can take better decision regarding procurement of raw materials and production.

Stock Management helps and guarantees the accomplishment of creation organizations. Fruitful execution of stock fundamentally improves the entire business. Current stock administration forms use new and increasingly refined strategies for dynamic enhancement of stock to limit shopper administrations, diminished stock and ease.

The objective of good stock administration isn't flawlessness however improvement. These enhancements ought not be seen as a transient exertion, yet should proceed consistently. The ROI of stock administration is found in expanded pay and benefit shapes, a positive increment in the representative condition and in general consumer loyalty.

A really compelling stock administration framework diminishes the unpredictability of arranging, keeping up and controlling a basic production network organize for business achievement.

RESOURCES

[1] S. Angel Raphella, S. Gomathi Nathan, and G. Chitra, "Inventory Management- A Case Study", International Journal of Emerging Research in Management & Technology, e-ISSN: 2278-9359, Vol. 3 (3)June-2014,pp:94-102.

[2] Aditya A. Pande and S. Sabihuddin, "Study of Material Management Techniques on Construction Project", International Journal of Informative & Futuristic Research, Vol. 2 (3), May 2015, ISSN-p: 3479-3486.

[3] Dipak P. Patil, Pankaj P. Bhangale, and Swapnil S. Kulkarni, "Study of Cost Control on Construction Project", International Journal of Advanced Engineering Research and Studies, Vol. 02, April 2014, e-ISSN 2249-8974.

[4] P. G. Matsebatlela and K. Mpofu, "Inventory Management Framework to attenuate Supply and Demand Mismatch on a producing Organization," International Federation of Automatic Control, Vol. 3, No. 48, March 2015, p-ISSN: 260-265.

[5] Punam Khobragade, Prof. Manjusha Tamale, Roshni Selokar, Rina Maraskolhe, and others, "Research Paper on Inventory Management System", International Journal of Research and Technology, e-ISSN: 2395-0056, Vol. 5(5), April 2018, p-ISSN: 2395-0072.

[6] Professor Daniel Atnafu, Assefa Balda, and Shaofeng Liu. "The Impact of Inventory Management Practice on Firm Competitiveness and Organizational Performance: Empirical Evidence from Micro and Small Enterprises in Ethiopia"