

**INVENTORY MANAGEMENT AND TECHNIQUES WITH
REFERENCE TO BULL MACHINES PVT LTD**

POOJA SEN.D

(20PBA013)

A major Project Submitted to

**Avinashilingam Institute of Home Science and Higher Education for
Women**

Coimbatore – 641 043

In Partial fulfillment of the requirements for the Degree of

Masters in Business Administration

May 2022

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CERTIFIED BONAFIDE RESEARCH WORK

Signature of the

Supervisor

Signature of the

Head of the Department

Signature of the

External Examiner

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SYNOPSIS

The aim of the study is to examine the inventory management process. The significance of this research is based on the benefits that can be obtained by identifying the issues of inventory control. The methodology used are unstructured interviews, on-site study, and annual report analysis. Inventory management is an important area of manufacturing industry. If company fails to manage inventory, they will face failure. It is a challenge for the company to maintain fair inventory. There are various inventory management techniques available for maintaining fair inventory level in the company. The basic objective of this paper is to study about inventory management techniques used in Bull machines Pvt. Ltd. and find out some measures for improvement on inventory management process of the concerned.

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CHAPTER 1

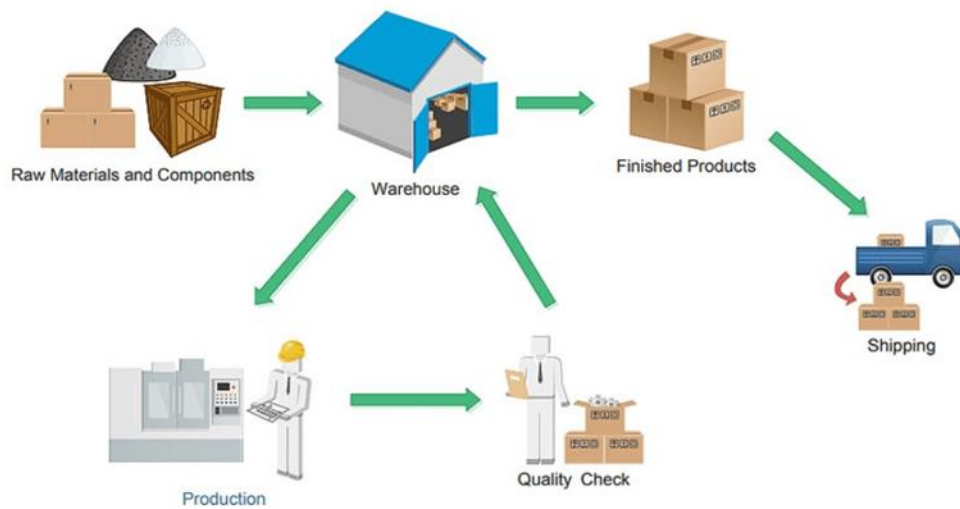
INTRODUCTION

1.1 INVENTORY MANAGEMENT:

Every enterprise needs inventory for smooth running of its activities. It serves as a link between production and distribution processes. There is generally a time lag between the recognition of a need and its fulfilment. The greater the time lag, the higher the requirements for inventory. The unforeseen fluctuations in demand and supply of goods also necessitate the need for inventory.

The investment in inventories constitutes the significant part of current assets/ working capital in most of the undertakings. Thus it is very essential to have a proper control and management of inventories. The purpose of inventory management is to ensure the availability of materials in sufficient quantity and also when required and also to minimize investment in inventories.

The most important objective of inventory control is to determine and maintain an optimum level of investment in the inventory. The basic building blocks for the Inventory Management system and Inventory Control activities are **Sales Forecasting or Demand Management, Sales and Operations Planning, Production Planning, Material Requirements Planning, Inventory Reduction**. The emphases on each area will vary depending on the company and how it operates, and what requirements are placed on it due to market demands.



1.2 THEORETICAL BACKGROUND OF THE STUDY:

Inventory management is a science-based art of ensuring that enough inventories are held by an enterprise to meet both its internal and external demand commitments economically. Each and every industrial undertaking makes all possible effort to minimize the cost of their products for better existence in the competitive market. The purpose of inventory management is to keep the stocks in such a way that there is neither over-stocking nor under-stocking. The over-stocking will mean a reduction of liquidity and starving of other production processes; under-stocking, on the other hand, will result in stoppage of work. Inventory types can be grouped into following classifications:

- Raw material
- Work-in-process
- Finished goods

1.3 IMPORTANCE OF INVENTORY MANAGEMENT:

Scientific Inventory Management not only brings about substantial cost savings but also results in improved production capacity of plants, savings in labor cost and time, reduction in material cost, reduction in storage space, reduction in damage of materials, smooth flow of production, easier

production control, reduced employee fatigue and so on. Thus scientific and effective inventory management will result in a relatively high inventory utilization ratio and few instances of work stoppages or lost sale due to stock outs. And ultimately these contribute to a high profit margin, high total assets utilization and a high rate of return on investment.

1.4 BENEFITS OF INVENTORY CONTROL:

The benefits of inventory control are:

- Improvement in customer's relationship because of the timely delivery of goods and services.
- Smooth and uninterrupted production and hence, no stock out.
- Efficient utilization of working capital.
- Eliminating the possibility of duplicate ordering.

1.5 RISK AND COST OF HOLDING INVENTORIES:

The holding of inventories involves blocking of a firm's funds and incurrence of capital and other costs. It also exposes the firm to certain risks. The various costs and risks involved in holding inventories are as below:

- Capital Costs
- Storage and Handling Costs
- Risk of Price Decline
- Risk Deterioration in Quality

1.6 INDUSTRY PROFILE:

Tractors are all purpose, off-road utility vehicles' for everything from sophisticated commercial farming and construction to personal gardening. There are tractor attachments for just about any job to undertake. Tractors range from small ride mowers, or lawn tractors, for yard and landscaping to very significant, heavy-duty equipment tractors made for agricultural, excavation, farming and industrial purposes. Typically, a tractor refers to heavy equipment.

Most tractors attached that are used for jobs such as digging or cutting

attach to a power take-off (PTO) drive shaft. The PTO allows tractor attachments to run the power of the tractor engine. This saves significant time and money as this turns the tractor into an all-purpose vehicle.

Some of the most common tractor attachments are backhoes, blades, buckets, bush hogs (mowers), harrows, loaders, dozers and hole drillers. The backhoe is a valuable piece of equipment as it allows you to dig precise holes from the comfort of your tractor. Many of the more sophisticated ones have GPS and depth gauges to allow construction to dig specific alignment for foundations.

Blades are great for ploughing snow and large quantities of dirt. Tractor attachments also offer snow blower attachments to move the snow out of range. Buckets, which are a semi permanent attachment can also be used for moving but also can carry rock, equipment and many other options. They have a hydraulic lift for greater mobility.

For the lawn tractors, many of the tractor attachments available for the standard tractor that can be purchased for the smaller home versions. Snow blades and blowers, buckets, and wagons are available. In addition, these Mowers have attachments that will bag the lawn clippings. This vacuum device will store clippings until you are ready to empty. These tractor attachments are available for the zero turn radius mowers as well.

A backhoe loader, also called as a loader backhoe, a digger, and commonly shortened to backhoe, is a heavy equipment vehicle that consists of a tractor fitted with a shovel/bucket on the front and a small backhoe on the back. Due to its (relatively) small size and versatility, backhoe loaders are very common in urban engineering and small construction projects.

Backhoe loaders are very common and can be used for a wide variety of task such as construction, small demolitions, and light transportation of building materials, powering building equipment, digging holes/excavation, landscaping, breaking asphalt, and paving roads. The backhoe bucket can also be replaced with powered attachments such as a breaker, grapple, auger, or a stump grinder.

1.7 COMPANY PROFILE

BULL MACHINES PVT LIMITED ,established in 1998 at Chinthamanipur, coimbatore in TamilNadu , is leading exporter, manufacturer, supplier of material handling equipment in India .BMPL is one of India's verified and trusted sellers of listed products.

BMPL is manufacturing tractor attachments such as LOADER, RADIAL LOADERS, DOZERS and BACK HOES etc.The products are manufactured for various tractors like john Deere, Mahindra & Mahindra, Sweraj Mazda, New Holland and the like. The company is manufacturing equipments for municipal solid waste management such as self-propelled aero tiller and pulverier with latest technology. BMPL is the leaders in this tractor attachment business having more than 85% of market share. The annual turnover of this company is nearly 60 crores. BMPL has been recognized as in house R&D unit by Ministry of Science & Technology.

This company is manufacturing agricultural products in harvester department. The harvester department is established in 2004 for manufacturing harvest machine for paddy harvesting. More than 4000 machines are running successfully in various segments. The company is manufacturing 40 types of industry specific interchangeable bucket options for loader.

BMPL has recently started its new unit for manufacturing tractor attachments in Suler. The main objective of this company is to expand the company units all over India by which employment opportunities can be increased.

The products manufactured by this company is low Diesel consumption and suitable for all tractors. Nationwide, there are more than 600 dealers with strong sales and service.

The bull machines private limited has its Head office in Coimbatore, Tamilnadu & branch offices allover India for serving the customers. The Director of the company is Mr. V. Parthiban – Bull Machines (P) Ltd

Vision:

To build the number one supply chain management ecosystem, that controls the cost of goods , reduce waste and increase savings for our region.

Mission:

To deliver products at optimum cost and deliver world class performance, backed by excellent after sales service.

1.8 OBJECTIVES OF THE STUDY

The main objectives of inventory management are as follows:

- To analyze the maintenance of inventory level.
- To identify the slow moving, defective and obsolete (out of date) items.
- To analyze the ABC analysis of the company.

CHAPTER 2

REVIEW OF LITERATURE

2.1 REVIEW OF LITERATURE

Anichebe Naemeka Augustine (2013) in his study “Effect of Inventory Management on Organisational Effectiveness” concluded that there is highly positive correlation between good inventory management and organizational profitability. The study concluded that Inventory Management is very vital to the success and growth of organizations. The entire profitability of an organization is tied to the volume of products sold which has a direct relationship with the quality of the product Against this background the study recommended that Organizations should diversify their inventory system to suit specific needs of production, and that management should closely monitor and manipulate their inventory system to maintain production consistency for organizational profitability and effectiveness.

Iyer et al. (2016) conducted a series of studies and concluded that construction project slippages in India are mainly due to the following three sectors- Project planning, designing, implementation and material procurement and storage. Efforts have been made during the last sixty years, to improve technology in the construction industry. These efforts have resulted in the adoption of new technology.

Jalel Ben Hmida (2013) in his study “Inventory Management and Maintenance in Offshore Vessel Industry” concluded that the company with a very large inventory could effectively reduce its size by focusing on key parts.

Navon et al. (2016) analyzed that materials resources constitute a large portion of a project’s total cost and this makes them an important and attractive subject to control. Proper control and management of materials can meaningfully increase productivity by 6%, or more. Some model based on automatic, or semiautomatic, data collection for materials

management and control said that the main benefits of improving materials management, increased productivity and avoiding delays 8-10% productivity gain due to the availability of materials prior to commencing the work; reduction in the man hours that storekeepers, or foremen, currently spend searching for materials and following up purchase orders and reduction in the cost of the materials due to reduced waste.

Cynthia Mito Mukopi (2015) in his study “An Analysis of the Effects of Inventory Management on the Performance of the Procurement Function of Sugar Manufacturing Companies in the Western Kenya Sugar Belt” inventory management affects the performance of the procurement function of sugar manufacturing companies in the western sugar belt. Use of a lean inventory system improves the performance of the procurement function. A strategic relationship with suppliers in inventory management is important in the performance of the procurement function. Finally legal policies in the sugar industry contributed to the performance of the procurement function of the sugar manufacturing companies in the western sugar belt.

Gupta et al. (2017), Madan et al. (2014) applied that ABC (Always Better Control) and selective inventory control techniques are applied for cutting tool inventory modeling and medical stores in an industry. An ABC-VED matrix was constructed for economic analysis of drug expenditure and cutting tools of priced of different items. It was suggested that to sell off the scraps and extra unused items in order to reduce the inventory holding costs and empty the space which have been un-necessarily being occupied. By this study of selective inventory control techniques they concluded that their inventory more effectively and hence later it helped them to reduce the inventory which added increased productivity, business growth and reduce the losses.

M.Sharafali (2014) in this paper considers a one-product, one-machine production-inventory problem operating under an (s, S) policy. The production facility may be set up and in production, shut down and idle or

failed and under repair. Back-order is not permitted. By identifying a semi-regenerative process, expressions for the probability mass function for the inventory process at any time and in the stationary regime are obtained. The distribution for the total duration of idleness of the machine up to any time is derived. Cost analysis is also indicated.

Lee E. Richmond et al (2018) have conducted a study on Just-in-Time in the plastics processing industry. This paper reviews the applicability of just-in-time concepts to the plastics processing industry focusing on three specific areas: quality management, technological requirements, and raw material purchasing practices. The authors found that a number of just-in-time concepts are quite applicable to plastics processing.

Lalith Goonatilake (2020) examines the industrialization policies adopted by developing countries and assesses its impact on inventory management. Factors influencing inventory demand are identified and the interaction between production planning and control and inventory control is considered as a key parameter. A reversal of inventory management objectives in a developing country environment is brought to light where the efficiency objective is given more significance than the cost objective.

M.C.Bonney (2014) states that current changes in inventory management consider the total logistics chain under the term logistics management place a greater emphasis on purchasing rather than producing in-house and use more international sourcing. Changes to recording methods include the use of different methods of information collection and processing, e.g. bar coding in retailing and manufacture and electronic exchange of information. Control methods are more computer based and are becoming part of increasingly integrated systems.

Ogbadu et al. (2018) said that one of the problems facing Manufacturing Company is the growing trend towards the high cost of materials and services and constant shutdown of factories business profit. They have found out that there is a positive and significant relationship between inventory management problems and the frequent breakdown of the plant.

It becomes very necessary to re-organize the materials management department, establish good relationship with suppliers of spare parts in order to minimize losses arising from frequent breakdown and improve profitability.

G.Padmanabhan et al (2015) presents inventory models for perishable items with stock dependent selling rate. The selling rate is assumed to be a function of current inventory level and rate of deterioration is taken to be constant. Under instantaneous replenishment with zero lead time, the model incorporates aspects such as complete, partial, and no backlogging. EOQ is determined for maximizing the total profit in each of the situations. The models developed are illustrated through numerical examples and sensitivity analysis is reported.

Amy ZhaohuiZeng et al (2019) evaluates two popular service measures, which are the probability of no stock out during lead time and the fill rate, in the context of continuous inventory systems. The performance of the two measures is examined by evaluating the tradeoff among the cost, the level of service, and the inventory turnover ratio.

Tapan Kumar Datta et al (2011) analyses an inventory system where the demand rate is influenced by both displayed stock level and selling price. A finite period system has been considered under multi-replenishment scenario. Optimal selling price and the optimal order quantities have been treated as decision variables. An algorithmic solution procedure is provided on the basis of some observations and is illustrated by some numerical examples. A sensitivity analysis has been performed to study the effects of changes of the demand parameters on the net profit.

Kumar et al. (2019) studied that Inventory constitutes the most significant part of current assets of larger majority of Indian manufacturing industries. In the Manufacturing company can be evaluated and understood using inventory management technique ABC (Always Better Control) analysis Data collection is mainly through the interviews with the manager, annual reports, sales report, purchasing report of the company and the related

journals. After data collection they concluded that future performance and past result projected investment and purchasing capacity and minimum and maximum inventories to investigate the potential for alternative stocking levels arrangements that would reduce investment liability and associated carrying costs.

Charles S. Tapiero (2003) provides applications to inventory management based on Value at Risk (VaR) approach based on ex-post, disappointment decision making arguments. Although the mathematical problems arising from an application of the VaR approach, tuned to current practice in financial risk management, are difficult to solve analytically, solutions can be found by application of standard computational and simulation techniques.

Brent D. Williams et al (2008) found that two major themes emerge from logistics research focused on inventory management. First, logistics researchers have focused considerable attention on integrating traditional logistics decisions, such as transportation and warehousing, with inventory management decisions, using traditional inventory control models. Second, logistics researchers have more recently focused on examining inventory management through collaborative models.

Tom et al. (2022) carried out the different inventory control technique like Always Better Control (ABC) analysis and Economic Order Quantity (EOQ) for efficient inventory management system. It 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. From the ABC classification A, B, C classes are those whose unit value are more than Rs.100 and constitute 45%, between Rs.25-100 constitutes 35%, less than Rs.25 constitutes 30% of total components. It is good that the company maintains its inventories based on its value using controlling techniques.

Dimitrios P. Koumanakos, (2008) Lean management is getting more and more attention in today's highly competitive environment. In this context, the aim of this study is to test the hypothesis that efficient (lean) inventory management leads to an improvement in a firm's financial performance. Data for the analysis came from the ICAP database, which contains financial information on all medium to large Greek firms. The sample period extended from 2000 to 2002. For each year all manufacturing firms with the corporate form of *sociétés anonyms* operating in any one of the three representative industrial sectors in Greece: food, textiles and chemicals were selected. Preliminary results, obtained by cross-section linear regressions, reveal that the higher the level of inventories preserved (departing from lean operations) by a firm, the lower its rate of returns. Findings are additionally tested by the use of pseudo-likelihood ratio test which constitutes a more reliable tool, thus verifying the robustness of the linearity of the relationship.

Akila et al. (2020) founded that Inventories constitute the most significant part, 30% of current asset of a majority of companies in India because of the large size of the inventory maintained by the firm a considerable amount of fund is locked in the form of inventory. The tools that are used like: ABC (Always Better Control) Analysis, Economic Order Quantity, Economic Batch Quantity, Inventory Ratios, Correlation Analysis, Trend Analysis. Inventory is considered as almost important as it covers up to 70% of the current assets of any firearms. The company can use proper technique to control the inventory to reduce the inventory level to a considerable degree reduction in excess inventories carries a favorable impact on the profitability of the company by way of unnecessary locking up of capital.

Rajeev et al. (2017) observed that a study of forty small and medium enterprises (SMEs) India in an inventory intensive manufacturing industry sector, Inventory management practices was poor. He went further that the use of formal practices for managing inventories was also inadequate. According to him, poor material management practices were characterized

by a lack of an integrated approach in the form of the absence of links between physical stock and accounting system.

Kuo En et al. (2018) described an Always Better Control (ABC) classification is a method of classifying inventory items according to the dollar value to a firm. Class A items, though smaller volumes, but tends to generate higher sales value, followed by the class B items. The class C items are of a very large volume, but generate a very small sales value. Class A items normally range from 5% to 20% of all inventory items and account for between 50% and 80% of sales value. The class B items normally range from 20% to 40% of all inventory items and account for 20% to 40% of sales value. The class C items normally constitute 50% to 70% of all inventory items and account for 5% to 25% sales value.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN

A Research Design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with the economy in procedure. In fact, the research design is the conceptual structure with in which research is conducted; it constitutes the blue print for the collection, measurement and analysis of data the research design utilized in this study is analytical research.

3.2 NATURE OF RESEARCH DESIGN

Nature of research design of this study has the analytical research. It includes already available facts or information and analysis these to make a critical evaluation of the material.

3.3 SAMPLING METHODS

Sampling Plan:

The samples (balance sheet) are collected from the company for last five years from 2016-2017 to 2020-2021.

Sample area:

Sample area is Bull machines Pvt.Ltd., Chindhamanipudur, Coimbatore only.

Nature of Data:

There are two types of data: primary data and secondary data.

3.4 DATA COLLECTION

The information was gathered in two ways: primary and secondary sources.

Primary Data

The primary data was gathered from a group of employees in the divisional office. Interaction with finance department employees in their respective areas will provide primary data. A report was prepared based on the information they provided.

Secondary Data

The information was gathered from a variety of sources, including publications, journals, corporate reports, and industrial magazines (annual reports). Here are the annual reports of Bull machines Pvt Ltd for the five years from 2016-2017 to 2020-2021. The secondary data for the analysis is obtained from the company; it is the information gathered through Annual Reports, Published Financial Statement Books, Magazines, and Internet browsing, as well as the company's profile and among other sources.

3.5 TOOLS USED FOR THE STUDY:

The tools used in the analysis are as follows

- ABC Analysis.
- Inventory turnover ratio.
- FSN Analysis

ABC analysis:

ABC analysis is an inventory management technique that determines the value of inventory items based on their importance to the business. ABC ranks items on demand, cost and risk data, and inventory managers group items into classes based on those criteria.

The most important stock keeping units (SKUs), based on either sales volume or profitability, are “Class A” items, the next-most important are Class B and the least important are Class C.

Inventory Turnover Ratio:

Inventory turnover ratio is the rate that inventory stock is sold, or used, and replaced. A higher ratio tends to point to strong and a lower one to weak sales.

FSN Analysis:

FSN analysis is an inventory management technique which is based on the rate of consumption of the spares and goods in an organization. This analysis divides the inventory into three categories based on their speed or rate of utilization, their consumption rate and average stay, FSN stand for Fast - moving, Slow - moving and non-moving goods. Fast moving goods are the items in the stock that are utilized regularly. Slow moving goods are only used for a particular period of time. Non - moving goods are not utilized at all over a specific timeframe and has a turnover rate below one. FSN analysis is an inventory management technique. It is an important aspect in logistics.

If we want to know which items are moving quickly and which items are dead stock, then an FSN analysis can help you categorise your inventory stock. The classification helps derive a pattern of issues from stores. It will help shape decisions around what items are becoming redundant and sitting there, costing you money.

3.6 LIMITATIONS OF THE STUDY:

- Only one company was taken into consideration for the study and the result may vary with different companies.
- The majority of data was derived from secondary sources.
- The study will take over a period of 5 years.

CHAPTER 4

ANALYSIS AND INTERPRETATION

4.1 ABC ANALYSIS:

An inventory management technique that determines the value of inventory items based on their importance to the study. ABC method of inventory control involves a system that controls inventory and is used for materials and throughout the distribution management. It is also known as selective inventory control or SIC.

ABC analysis is a method in which inventory is divided into three categories, i.e. A, B, and C in descending value. The items in the A category have the highest value, B category items are of lower value than A, and C category items have the lowest value

- Category 'A'-It cover a small portion based on the number of units in the inventory but constitute a significant portion of the inventory value.
- Category 'B'-The items in category 'B' have a moderate contribution to both quantity and inventory value.
- Category 'C'-The items in category 'C' covers a significant portion of the inventory in terms of quantity but have a tiny .

Advantages:

One class things: These stocks help recognize high esteem things and distinguish tight command over the procedure control, physical security and review recurrence. Chairmen and stock organizers help keep up exact records and help deal with the treatment of substance in convenient ways to settle on speedy basic leadership simpler.

- Things of the B-area: These can be given a second need with low recurrence survey and can be less firmly controlled with chronicles, review controls at spot.
- C class objects: Basic and basic reports can be kept up. Stock rates might be bigger with less occasional audits.

Disadvantages:

Stock characterization does not mirror the recurrence of development and in this manner misdirects the controllers. B and C classes are normally disregarded and are probably going to get captured or lost in mass accumulations, columns, and slower in record control.

Table No: 4.1.1(a)**ABC analysis (2021)**

2021			
Item description	Stock value	Stock value percentage	ABC analysis
Body	17098	0.13	C
Bonnet	654254.76	4.95	C
Stem	257307.83	1.95	C
Stem nut	306505.5	2.32	B
Key	132642.54	1.00	C
Heavy hex nut	202298.89	1.53	C
Stud+2heavy hex nut	2109254.73	15.96	A
Pin	2161321.98	16.35	A
Gland packing set	103654.7	0.78	C
Flat gasket	108981.6	0.82	C
Name plate	7442.7	0.06	C
Grease nipple	1672908.76	12.66	B
Hand wheel nut	1240934.8	9.39	B
Bonnet bush	683078.14	5.17	B
Hand wheel	1345568.83	10.18	B
Wedge	1958568.39	14.82	B
Seat ring	257489.78	1.95	C
Total(1)	13219311.93		
Unit 2			
Gland bush	4378.54	0.45	C
Gland flange	356543.76	36.99	A
Gland bolt	9087.78	0.94	C
Back seat	2018	0.21	C
End cover	934	0.10	C
Chemicals	98376.76	10.21	B
Iron & steel	54367	5.64	B
Oil & lubricants	438265	45.46	A
Total(2)	963970.84		

Table No: 4.1.1 (b)

ABC Analysis

	Units	Percentage
A Type(in units)	4	16
B Type(in units)	8	32
C Type(in units)	13	52
Total	25	100

Interpretation

The above table shows about the ABC analysis of stocks for the financial year 2021. The table shows that A type units has 16% impact on inventory, B type product has 32% impact on inventory, C type product has 52% impact on inventory.

Chart No: 4.1.1

ABC Analysis

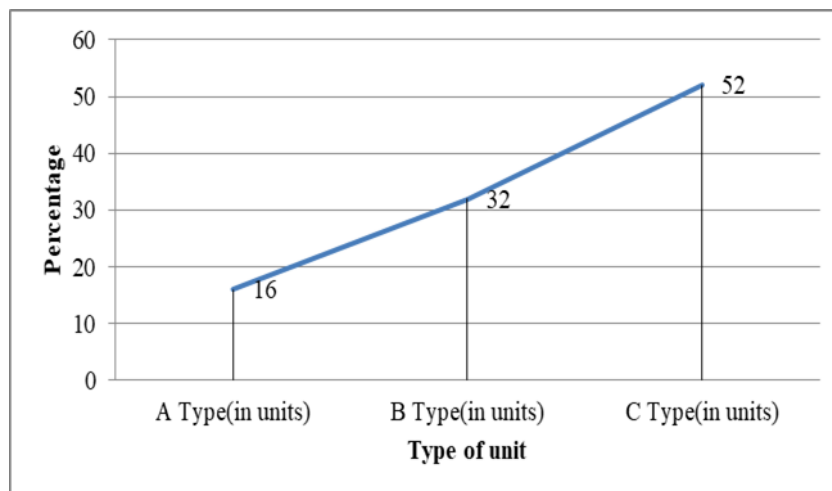


Table No: 4.1.2(a)

ABC analysis (2020)

2020			
Item description	Stock value	Stock value percentage	ABC analysis
Body	17213.9	17213.9	C
Bonnet	414378.28	431592.18	C
Stem	257307.83	688900.01	C
Stem nut	425650.3	1114550.31	C
Key	117539.94	1232090.25	C
Heavy hex nut	222364.57	1454454.82	C
Stud+2heavy hex nut	2069212.33	3523667.15	A
Pin	1961626.72	5485293.87	A
Gland packing set	101362.23	5586656.1	C
Flat gasket	127071.21	5713727.31	C
Name plate	8472.8	5722200.11	C
Grease nipple	1668209.81	7390409.92	B
Hand wheel nut	238966.87	7629376.79	C
Bonnet bush	703013.26	8332390.05	B
Hand wheel	1945903.63	10278293.68	A
Wedge	1758378.38	12036672.06	B
Seat ring	236507.51	12273179.57	C
Total(1)	12273179.57		
Unit 2			
Gland bush	3511.85	3511.85	C
Gland flange	299711.68	303223.53	A
Gland bolt	5132.95	308356.48	C
Back seat	1819	310175.48	C
End cover	685.95	310861.43	C
Chemicals	193508.06	504369.49	B
Iron & steel	17929	522298.49	B
Oil & lubricants	458119	980417.49	A
Total(2)	980417.49		

Table No: 4.1.2 (b)

ABC Analysis

	Units	Percentage
A Type(in units)	5	20
B Type(in units)	5	20
C Type(in units)	15	60
Total	25	100

Interpretation

The above table shows about the ABC analysis of stocks for the financial year 2020. The table shows that A type units has 20% impact on inventory, b type product has 20% impact on inventory, c type product has 60% impact on inventory.

Chart No: 4.1.2

ABC Analysis

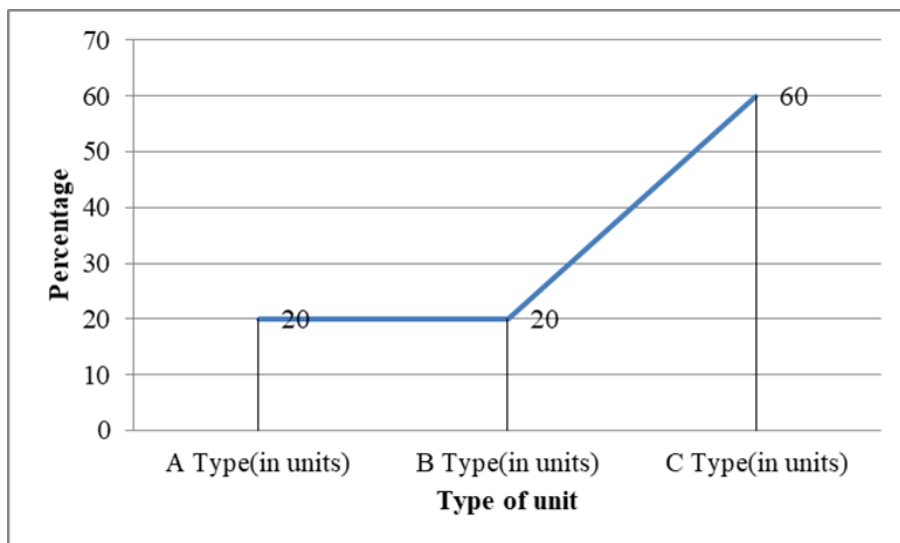


Table No: 4.1.3 (a)**ABC analysis (2019)**

2019			
Item description	Stock value	stock value percentage	ABC analysis
Body	17213.9	0.15	C
Bonnet	752147.56	6.36	B
Stem	290982.58	2.46	C
Stem nut	779837.06	6.60	B
Key	90408.99	0.76	C
Heavy hex nut	399998.12	3.38	C
Stud+2heavy hex nut	1051313.57	8.90	B
Pin	1659452.29	14.04	B
Gland packing set	75238.61	0.64	C
Flat gasket	151805.46	1.28	C
Name plate	14889.8	0.13	C
Grease nipple	102881.99	0.87	C
Hand wheel nut	2376732.71	20.11	A
Bonnet bush	729219.8	6.17	B
Hand wheel	903735.62	7.65	A
Wedge	2146001.85	18.16	A
Seat ring	276787.5	2.34	C
Total(1)	11818531.51		
Unit 2			
Gland bush	6791.85	0.40	C
Gland flange	657564.78	39.17	A
Gland bolt	12234	0.73	C
Back seat	2190	0.13	C
End cover	403276	24.03	A
Chemicals	48426.34	2.89	C
Iron & steel	79833	4.76	C
Oil & lubricants	468239	27.90	A
Total(2)	1678554.97		

Table No: 4.1.3 (b)

ABC Analysis

	Units	Percentage
A Type(in units)	5	20
B Type(in units)	6	24
C Type(in units)	14	56
Total	25	100

Interpretation

The above table shows about the ABC analysis of stocks for the financial year 2019. The table shows that A type units has 20% impact on inventory, b type product has 24% impact on inventory, c type product has 56% impact on inventory.

Chart No: 4.1.3

ABC Analysis

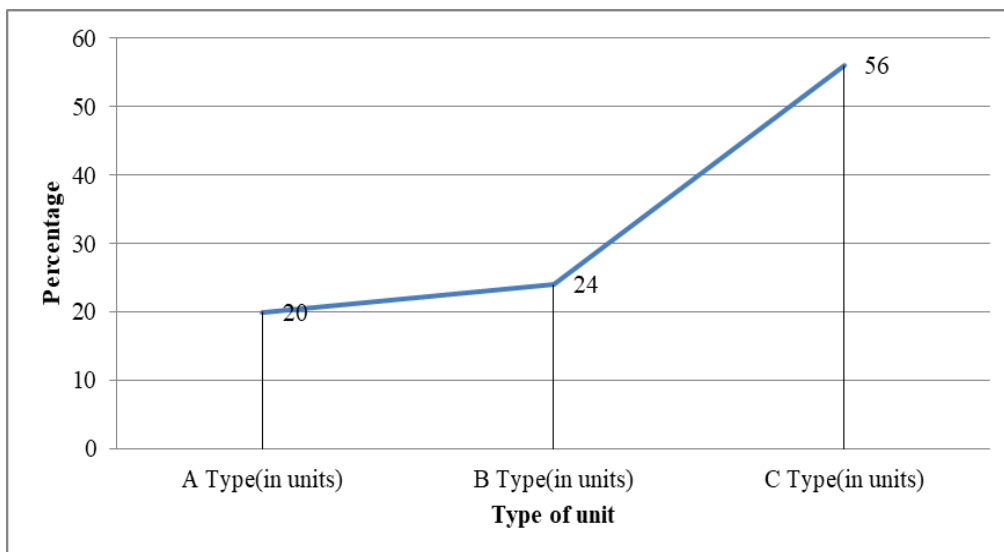


Table No: 4.1.4 (a)**ABC Analysis(2018)**

2018			
Item description	Stock value	Stock value percentage	ABC analysis
Body	17213.9	0.15	C
Bonnet	676932.804	5.73	B
Stem	261884.322	2.22	C
Stem nut	701853.354	5.94	B
Key	81368.091	0.69	C
Heavy hex nut	311998.5336	2.64	C
Stud+2heavy hex nut	946182.213	8.01	B
Pin	1493507.061	12.64	B
Gland packing set	33857.3745	0.29	C
Flat gasket	136624.914	1.16	C
Name plate	13400.82	0.11	C
Grease nipple	92593.791	0.78	C
Hand wheel nut	2186594.09	18.50	A
Bonnet bush	656297.82	5.55	B
Hand wheel	813362.058	6.88	B
Wedge	1909941.64	16.16	A
Seat ring	265716	2.25	C
Total(1)	10599328.8		
Unit 2			
Gland bush	6112.665	0.36	C
Gland flange	591808.302	35.26	A
Gland bolt	11010.6	0.66	C
Back seat	1971	0.12	C
End cover	362948.4	21.62	A
Chemicals	43583.706	2.60	C
Iron & steel	71849.7	4.28	C
Oil & lubricants	421415.1	25.11	A
Total(2)	1510699.473		

Table No: 4.1.4 (b)

ABC Analysis

	Units	Percentage
A Type(in units)	4	16
B Type(in units)	6	24
C Type(in units)	15	60
Total	25	100

Interpretation

The above table shows about the ABC analysis of stocks for the financial year 2018. The table shows that A type units has 16% impact on inventory, b type product has 24% impact on inventory, c type product has 60% impact on inventory.

Chart No: 4.1.4

ABC Analysis

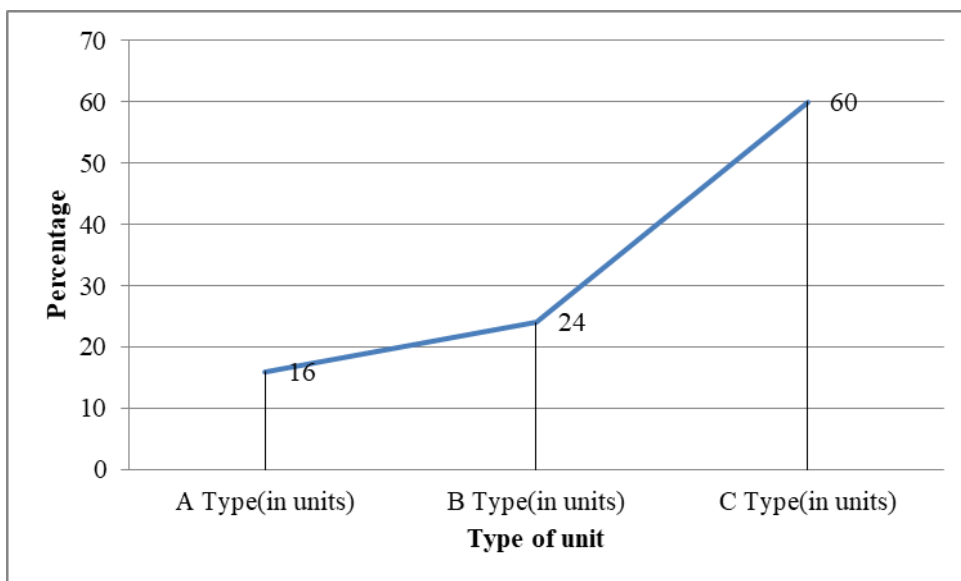


Table No: 4.1.5 (a)**ABC Analysis(2017)**

2017			
Item description	Stock value	stock value percentage	ABC analysis
Body	14459.676	0.12	C
Bonnet	631803.9504	5.35	B
Stem	244425.3672	2.07	C
Stem nut	655063.1304	5.54	B
Key	71423.1021	0.60	C
Heavy hex nut	335998.4208	2.84	C
Stud+2heavy hex nut	883103.3988	7.47	B
Pin	1294372.786	10.95	B
Gland packing set	63200.4324	0.53	C
Flat gasket	110817.9858	0.94	C
Name plate	12507.432	0.11	C
Grease nipple	86420.8716	0.73	C
Hand wheel nut	1996455.476	16.89	A
Bonnet bush	612544.632	5.18	B
Hand wheel	732025.8522	6.19	B
Wedge	1802641.554	15.25	A
Seat ring	232501.5	1.97	C
Total(1)	9779765.568		
Unit 2			
Gland bush	5705.154	0.34	C
Gland flange	552354.4152	32.91	A
Gland bolt	9297.84	0.55	C
Back seat	1839.6	0.11	C
End cover	338751.84	20.18	A
Chemicals	39225.3354	2.34	C
Iron & steel	67059.72	4.00	C
Oil & lubricants	346496.86	20.64	A
Total(2)	1409986.175		

Table No: 4.1.5 (b)

ABC Analysis

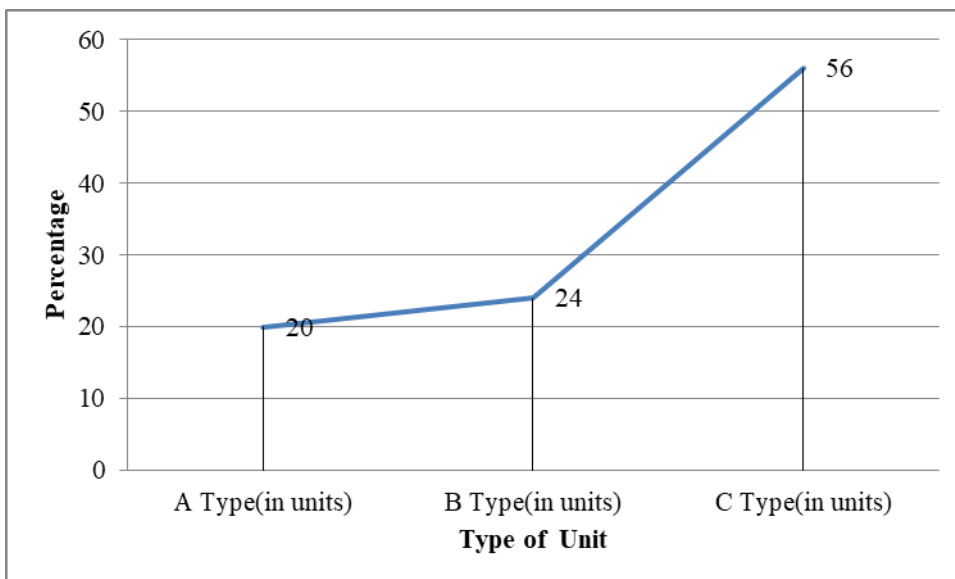
	Units	Percentage
A Type(in units)	5	20
B Type(in units)	6	24
C Type(in units)	14	56
Total	25	100

Interpretation

The above table shows about the ABC analysis of stocks for the financial year 2017. The table shows that A type units has 20% impact on inventory, b type product has 24% impact on inventory, c type product has 56% impact on inventory.

Chart No: 4.1.5

ABC Analysis



4.2 INVENTORY TURNOVER RATIO

$$\text{Inventory turnover ratio} = \frac{\text{cost of goods sold}}{\text{Average inventory}}$$

$$\text{Average inventory} = \frac{\text{beginning inventory} + \text{end inventory}}{2}$$

Table No: 4.2.1

Inventory Turnover Ratio

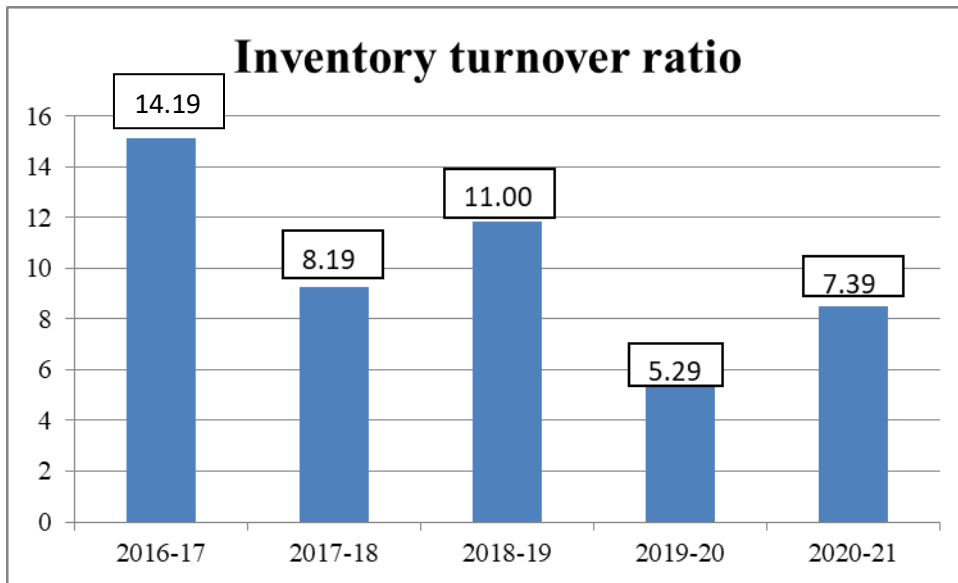
Inventory Turnover Ratio					
Year	2016-17	2017-18	2018-19	2019-20	2020-21
Sales	2139.43	1103.16	1170.41	707.28	847.49
Gross profit	134.32	128.43	82.06	14.83	111.31
Cost of goods sold	2005.11	974.73	1088.35	692.45	736.18
Opening inventory	136.53	145.97	92.01	105.87	155.81
Closing inventory	145.97	92.01	105.87	155.81	43.21
Average inventory	141.25	118.99	98.94	130.84	99.51
Inventory turnover ratio	14.19	8.19	11.00	5.29	7.39

Interpretation

The above table shows about the inventory turnover ratio of the company for the past five years. The ratio was high in the year 2016-2017 at 14.19 and was low in the year 2019-20 at 5.29. The ratio shows that the inventory was not stable in the company as there was ups and downs in the inventory every year.

Chart No: 4.2.1

Inventory Turnover Ratio



4.3 FSN Analysis

FSN analysis is one of the important aspects in the logistics. And this is classified based on the frequency of usage of the material. It looks at quantity, consumption rate and how often the item is issued and used. This analysis helps the company to where the which products should be placed in the warehouse. FSN analysis is used to know what are the non – moving items in the store department. The items are broadly classified into three categories they are F stands for the fast – moving goods, S stands for Slow – moving goods and N stands for non – moving goods.

This classification helps in establishing most suitable layout by locating all fast-moving items near the dispensing window to reduce the handling efforts.

In this the fast – moving goods will regularly watched and they control regularly because it is the frequent items which is used in the production of the product. So, the company will concentrate more on these types of fast - moving goods. The slow – moving goods, they use it very slowly compared to fast – moving goods. So, the company will have the periodic control in these types of goods. Because if these goods take less time also doesn't have more impact on the business. And in the non – moving goods, the company will not take any control in that type of goods and they will not concentrate in that type of goods. Because that type of goods is used in more less frequent only. This is known as FSN analysis.

Table No: 4.3.1(a)**FSN Analysis****FSN Analysis(2020-2021)**

2020-2021			
Item description	Stock value	Stock value percentage	FSN analysis
Body	17098	0.13	F
Bonnet	654254.76	4.95	F
Stem	257307.83	1.95	F
Stem nut	306505.5	2.32	F
Key	132642.54	1.00	N
Heavy hex nut	202298.89	1.53	F
Stud+2heavy hex nut	2109254.73	15.96	F
Pin	2161321.98	16.35	F
Gland packing set	103654.7	0.78	S
Flat gasket	108981.6	0.82	S
Name plate	7442.7	0.06	N
Grease nipple	1672908.76	12.66	F
Hand wheel nut	1240934.8	9.39	F
Bonnet bush	683078.14	5.17	S
Hand wheel	1345568.83	10.18	S
Wedge	1958568.39	14.82	S
Seat ring	257489.78	1.95	S
Gland bush	4378.54	0.45	F
Gland flange	356543.76	36.99	F
Gland bolt	9087.78	0.94	S
Back seat	2018	0.21	N
End cover	934	0.10	N
Chemicals	98376.76	10.21	S
Iron & steel	54367	5.64	S
Oil & lubricants	438265	45.46	S

Table No: 4.3.1(b)

FSN Analysis

Category	FSN analysis(No. of items)
F	11
S	10
N	4

Interpretation:

The above table shows the FSN Analysis for the year 2020 – 2021. The ‘F’ category items are body ,bonnet, stem, stem nut, heavy hex nut, stud + 2 heavy hex nut, pin, grease nipple, hand wheel nut, gland bush, gland flange, ‘S’ items are gland packing set, flat gasket, bonnet bush, hand wheel, wedge, seat ring, gland bonnet, chemicals, iron and steel, oil and lubricants . And ‘N’ items are key, name plate, end cover, back seat.

Chart No: 4.3.1

FSN Analysis

FSN Analysis (2020-2021)

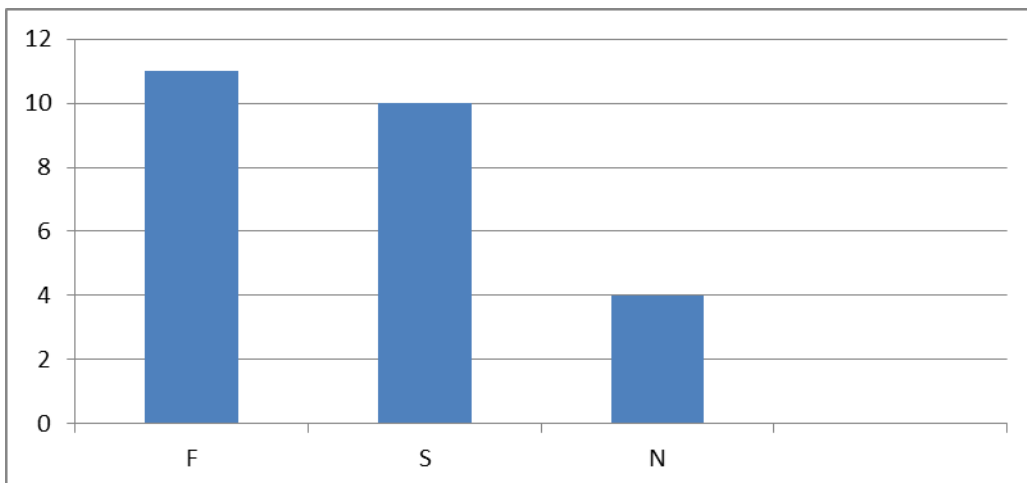


Table No: 4.3.2(a)

FSN Analysis

FSN Analysis(2019-2020)

2019-2020			
Item description	Stock value	Stock value percentage	FSN analysis
Body	17213.9	17213.9	F
Bonnet	414378.28	431592.18	F
Stem	257307.83	688900.01	F
Stem nut	425650.3	1114550.31	F
Key	117539.94	1232090.25	S
Heavy hex nut	222364.57	1454454.82	F
Stud+2heavy hex nut	2069212.33	3523667.15	F
Pin	1961626.72	5485293.87	F
Gland packing set	101362.23	5586656.1	N
Flat gasket	127071.21	5713727.31	S
Name plate	8472.8	5722200.11	N
Grease nipple	1668209.81	7390409.92	F
Hand wheel nut	238966.87	7629376.79	F
Bonnet bush	703013.26	8332390.05	F
Hand wheel	1945903.63	10278293.68	S
Wedge	1758378.38	12036672.06	S
Seat ring	236507.51	12273179.57	S
Gland bush	3511.85	3511.85	F
Gland flange	299711.68	303223.53	F
Gland bolt	5132.95	308356.48	S
Back seat	1819	310175.48	N
End cover	685.95	310861.43	N
Chemicals	193508.06	504369.49	S
Iron & steel	17929	522298.49	S
Oil & lubricants	458119	980417.49	S

Table No: 4.3.2(b)

FSN Analysis

Category	FSN analysis(No. of items)
F	12
S	9
N	4

Interpretation:

The above table shows the FSN Analysis for the year 2019 – 2020. The ‘F’ category items are body ,bonnet, stem, stem nut, heavy hex nut, stud + 2 heavy hex nut, pin, grease nipple, hand wheel nut, gland bush, gland flange, bonnet bush, ‘S’ items are gland packing set, flat gasket, hand wheel, wedge, seat ring, gland bonnet, chemicals, iron and steel, oil and lubricants . And ‘N’ items are key, name plate, end cover, back seat.

Chart No: 4.3.2

FSN Analysis

FSN analysis (2019-2020)

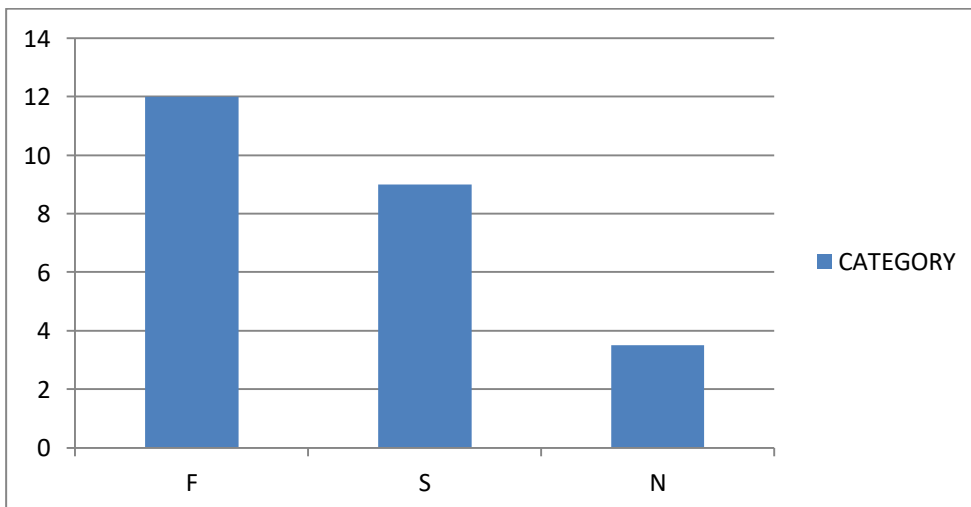


Table No: 4.3.3(a)**FSN Analysis****FSN Analysis(2018-2019)**

2018-2019			
Item description	Stock value	stock value percentage	FSN analysis
Body	17213.9	0.15	F
Bonnet	752147.56	6.36	F
Stem	290982.58	2.46	F
Stem nut	779837.06	6.60	F
Key	90408.99	0.76	N
Heavy hex nut	399998.12	3.38	F
Stud+2heavy hex nut	1051313.57	8.90	F
Pin	1659452.29	14.04	F
Gland packing set	75238.61	0.64	S
Flat gasket	151805.46	1.28	S
Name plate	14889.8	0.13	N
Grease nipple	102881.99	0.87	F
Hand wheel nut	2376732.71	20.11	F
Bonnet bush	729219.8	6.17	S
Hand wheel	903735.62	7.65	S
Wedge	2146001.85	18.16	S
Seat ring	276787.5	2.34	N
Gland bush	6791.85	0.40	F
Gland flange	657564.78	39.17	F
Gland bolt	12234	0.73	S
Back seat	2190	0.13	N
End cover	403276	24.03	N
Chemicals	48426.34	2.89	S
Iron & steel	79833	4.76	S
Oil & lubricants	468239	27.90	S

Table No: 4.3.3(b)

FSN Analysis

Category	FSN analysis(No. of items)
F	11
S	9
N	5

Interpretation:

The above table shows the FSN Analysis for the year 2018 – 2019. The ‘F’ category items are body ,bonnet, stem, stem nut, heavy hex nut, stud + 2 heavy hex nut, pin, grease nipple, hand wheel nut, gland bush, gland flange, ‘S’ items are gland packing set, flat gasket, bonnet bush, hand wheel, wedge, gland bonnet, chemicals, iron and steel, oil and lubricants . And ‘N’ items are key, name plate, end cover, seat ring, back seat.

Chart No: 4.3.3

FSN Analysis

FSN Analysis (2018-2019)

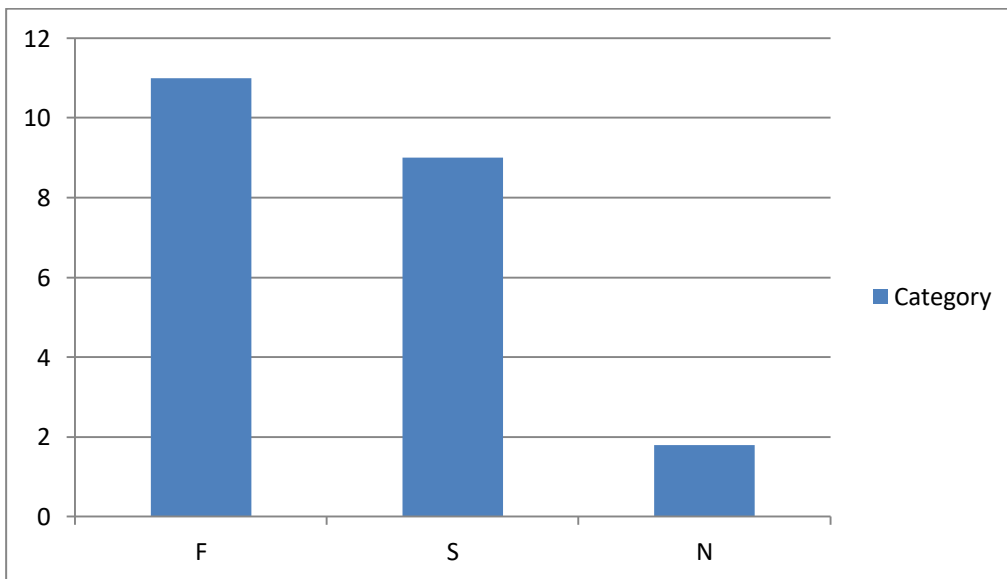


Table No: 4.3.4(a)

FSN Analysis

FSN Analysis(2017-2018)

2017-2018			
Item description	Stock value	Stock value percentage	FSN analysis
Body	17213.9	0.15	F
Bonnet	676932.804	5.73	F
Stem	261884.322	2.22	F
Stem nut	701853.354	5.94	F
Key	81368.091	0.69	N
Heavy hex nut	311998.5336	2.64	F
Stud+2heavy hex nut	946182.213	8.01	F
Pin	1493507.061	12.64	F
Gland packing set	33857.3745	0.29	S
Flat gasket	136624.914	1.16	S
Name plate	13400.82	0.11	N
Grease nipple	92593.791	0.78	F
Hand wheel nut	2186594.09	18.50	F
Bonnet bush	656297.82	5.55	S
Hand wheel	813362.058	6.88	S
Wedge	1909941.64	16.16	S
Seat ring	265716	2.25	S
Gland bush	6112.665	0.36	F
Gland flange	591808.302	35.26	F
Gland bolt	11010.6	0.66	S
Back seat	1971	0.12	N
sEnd cover	362948.4	21.62	N
Chemicals	43583.706	2.60	S
Iron & steel	71849.7	4.28	S
Oil & lubricants	421415.1	25.11	S

Table No: 4.3.4(b)

FSN Analysis

Category	FSN analysis(No. of items)
F	11
S	10
N	4

Interpretation:

The above table shows the FSN Analysis for the year 2017 – 2018. The ‘F’ category items are body ,bonnet, stem, stem nut, heavy hex nut, stud + 2 heavy hex nut, pin, grease nipple, hand wheel nut, gland bush, gland flange, ‘S’ items are gland packing set, flat gasket, bonnet bush, hand wheel, wedge, seat ring, gland bonnet, chemicals, iron and steel, oil and lubricants . And ‘N’ items are key, name plate, end cover, back seat.

Chart No: 4.3.4

FSN Analysis

FSN Analysis (2017-2018)

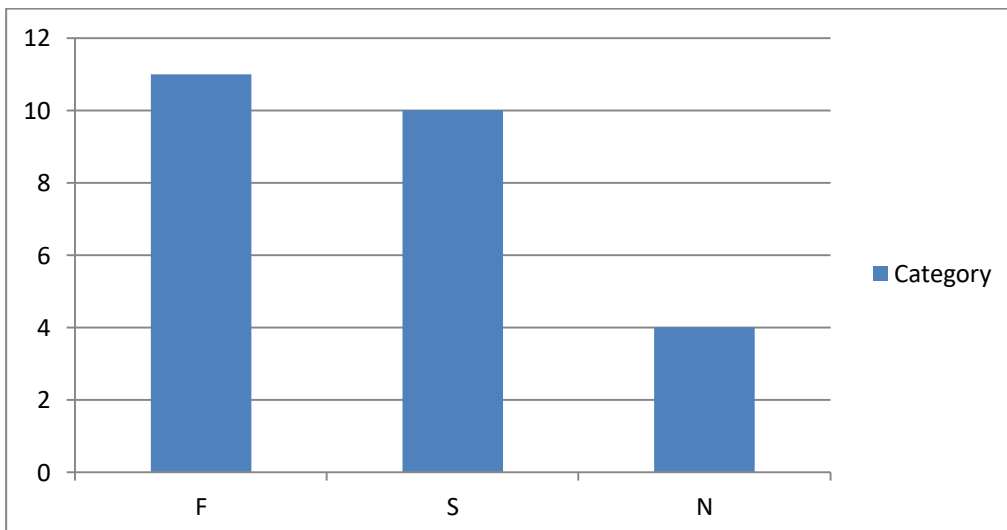


Table No: 4.3.5(a)**FSN Analysis****FSN Analysis(2016-2017)**

2016-2017			
Item description	Stock value	stock value percentage	FSN analysis
Body	14459.676	0.12	F
Bonnet	631803.9504	5.35	F
Stem	244425.3672	2.07	F
Stem nut	655063.1304	5.54	F
Key	71423.1021	0.60	N
Heavy hex nut	335998.4208	2.84	F
Stud+2heavy hex nut	883103.3988	7.47	F
Pin	1294372.786	10.95	S
Gland packing set	63200.4324	0.53	S
Flat gasket	110817.9858	0.94	S
Name plate	12507.432	0.11	S
Grease nipple	86420.8716	0.73	F
Hand wheel nut	1996455.476	16.89	F
Bonnet bush	612544.632	5.18	S
Hand wheel	732025.8522	6.19	S
Wedge	1802641.554	15.25	S
Seat ring	232501.5	1.97	S
Gland bush	5705.154	0.34	F
Gland flange	552354.4152	32.91	F
Gland bolt	9297.84	0.55	S
Back seat	1839.6	0.11	N
End cover	338751.84	20.18	N
Chemicals	39225.3354	2.34	S
Iron & steel	67059.72	4.00	S
Oil & lubricants	346496.86	20.64	S

Table No: 4.3.5(b)

FSN Analysis

Category	FSN analysis(No. of items)
F	10
S	12
N	3

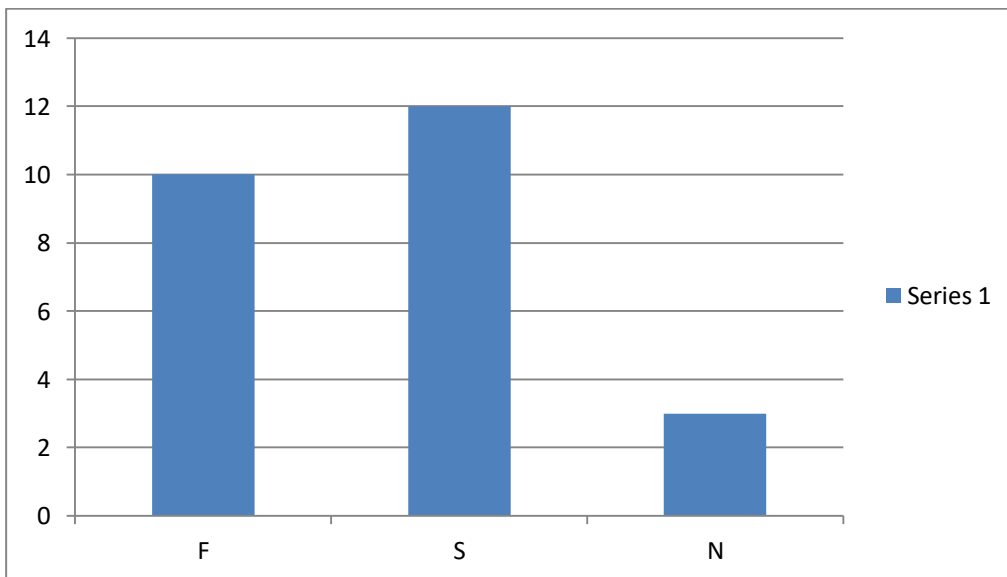
Interpretation:

The above table shows the FSN Analysis for the year 2016 – 2017. The ‘F’ category items are body ,bonnet, stem, stem nut, heavy hex nut, stud + 2 heavy hex nut, pin, grease nipple, hand wheel nut, gland bush, gland flange, ‘S’ items are gland packing set, flat gasket, bonnet bush, hand wheel, wedge, seat ring, gland bonnet, name plate, chemicals, iron and steel, oil and lubricants . And ‘N’ items are key, end cover, back seat.

Chart No: 4.3.5

FSN Analysis

FSN Analysis (2016-2017)



CHAPTER 5

SUMMARY

5.1 FINDINGS

- The inventory ratio shows that the inventory was not stable in the company as there was ups and downs in the inventory every year.
- The inventory turnover ratio was high in the year 2016-17 at 14.19 and was low in the year 2019-20 at 5.29. The ratio shows that the inventory was not stable in the company as there was no stable in the company as there was ups and downs in the inventory every year.
- A type units has 16% impact on inventory, b type product has 32% impact on inventory and c type product has 52% impact on inventory in the year 2021.
- A type units has 20% impact on inventory, b type product has 20% impact on inventory and c type product has 60% impact on inventory in the year 2020.
- A type units has 20% impact on inventory, b type product has 24% impact on inventory and c type product has 56% impact on inventory in the year 2019.
- A type units has 16% impact on inventory, b type product has 24% impact on inventory and c type product has 60% impact on inventory in the year 2018.
- A type units has 20% impact on inventory, b type product has 24% impact on inventory and c type product has 56% impact on inventory in the year 2017.
- The Above table shows the FSN Analysis for the year 2020– 2021. From that table the F category items are body ,bonnet, stem, stem nut, heavy hex nut, stud + 2 heavy hex nut, pin, grease nipple, hand wheel nut, gland bush, gland flange, ‘S’ items are gland packing set, flat gasket, bonnet bush, hand wheel, wedge, seat ring, gland bonnet, chemicals, iron and steel, oil and lubricants . And ‘N’ items are key, name plate, end cover, back seat.

- The above table shows the FSN Analysis for the year 2019 – 2020. The ‘F’ category items are body ,bonnet, stem, stem nut, heavy hex nut, stud + 2 heavy hex nut, pin, grease nipple, hand wheel nut, gland bush, gland flange, bonnet bush, ‘S’ items are gland packing set, flat gasket, hand wheel, wedge, seat ring, gland bonnet, chemicals, iron and steel, oil and lubricants . And ‘N’ items are key, name plate, end cover, back seat
- The above table shows the FSN Analysis for the year 2018 – 2019. The ‘F’ category items are body ,bonnet, stem, stem nut, heavy hex nut, stud + 2 heavy hex nut, pin, grease nipple, hand wheel nut, gland bush, gland flange, ‘S’ items are gland packing set, flat gasket, bonnet bush, handwheel, wedge, gland bonnet, chemicals, iron and steel, oil and lubricants . And ‘N’ items are key, name plate, end cover, seat ring, back seat.
- The above table shows the FSN Analysis for the year 2017 – 2018. The ‘F’ category items are body ,bonnet, stem, stem nut, heavy hex nut, stud + 2 heavy hex nut, pin, grease nipple, hand wheel nut, gland bush, gland flange, ‘S’ items are gland packing set,flat gasket,bonnet bush, hand wheel, wedge, seat ring, gland bonnet, chemicals, iron and steel, oil and lubricants . And ‘N’ items are key, name plate, end cover, back seat.
- The above table shows the FSN Analysis for the year 2016 – 2017. The ‘F’ category items are body ,bonnet, stem, stem nut, heavy hex nut, stud + 2 heavy hex nut, pin, grease nipple, hand wheel nut, gland bush, gland flange, ‘S’ items are gland packing set, flat gasket, bonnet bush, hand wheel, wedge, seat ring, gland bonnet, name plate, chemicals, iron and steel, oil and lubricants . And ‘N’ items are key, end cover, back seat.

5.2 SUGGESTIONS

The C types of inventories can be stored in higher quantities in future years during manufacturing seasons as they are highly used for the effective operation of the company. The A types of inventory can be stocked in lower quantities as they are not used at higher levels. The company has to implement new policies on inventories to reduce the inventory in future period of time. The company may improve the inventory turnover ratio by maintaining the sales level. A company must place inventory items according to risk and opportunity.

5.3 CONCLUSION

Inventory management is a science primarily about specifying the shape and percentage of stocked goods. It is required at different locations within a facility or within many locations of a supply network to precede the regular and planned course of production and stock of materials. The main problem of the study is to analyse the inventory management of the company. The main scope of the study is that it will be useful for the company to take decisions regarding inventory of the company which will get impact in net profit of the company. The need is that it will be helpful for the company in the decision making process which will help the company to regulate the inventory based on the research.

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**ANNEXURE
BALANCE SHEET**

	Mar '21	Mar '20	Mar '19	Mar '18	Mar '17
Income					
Sales Turnover	847.49	707.28	1,170.41	1,103.16	2,139.43
Excise Duty	10.98	0	0	0	0
Net Sales	836.51	707.28	1,170.41	1,103.16	2,139.43
Other Income	32.46	3.08	3.25	4.61	6.45
Stock Adjustments	-37.22	46.97	3.28	-13.76	-30.94
Total Income	831.75	757.33	1,176.94	1,094.01	2,114.94
Expenditure					
Raw Materials	480.33	600.49	931.49	807.62	1,657.77
Power & Fuel Cost	9.85	22.05	20.68	34.16	142.95
Employee Cost	61.88	59.49	60.27	55.39	63.47
Other Manufacturing Expenses	120.27	34.38	54.38	38.78	44.56
Selling and Admin Expenses	0	0	0	0	0
Miscellaneous Expenses	15.65	23.01	24.81	25.02	65.42
Preoperative Exp Capitalised	0	0	0	0	0
Total Expenses	687.98	739.42	1,091.63	960.97	1,974.17
Operating Profit	111.31	14.83	82.06	128.43	134.32
PBDIT	143.77	17.91	85.31	133.04	140.77
Interest	129.34	185.91	136.81	121.26	189.98
PBDT	14.43	-168	-51.5	11.78	-49.21
Depreciation	63.79	66.38	65.98	65.28	78.73
Other Written Off	0	0	0	0	0
Profit Before Tax	-49.36	-234.38	-117.48	-53.5	-127.94
Extra-ordinary items	0	0	0	0	0
PBT (Post Extra-ord Items)	-49.36	-234.38	-117.48	-53.5	-127.94
Tax	-14.61	-74.99	-30.05	-5.79	-28.08
Reported Net Profit	-34.77	-159.38	-87.42	-47.72	-99.86
Total Value Addition	207.66	138.93	160.15	153.35	316.41
Preference Dividend	0	0	0	0	0

Equity Dividend	0	0	0	0	0
Corporate Dividend Tax	0	0	0	0	0
Per share data (annualised)					
Shares in issue (lakhs)	962.13	962.13	368.07	368.07	368.07
Earning Per Share (Rs)	-3.61	-16.57	-23.75	-12.96	-27.13
Equity Dividend (%)	0	0	0	0	0
Book Value (Rs)	1.78	5.83	18.22	41.31	62.77

5.

6. PROFIT AND LOSS ACCOUNT

	Mar '21	Mar '20	Mar '19	Mar '18	Mar '17
Sources Of Funds					
Total Share Capital	96.21	96.21	36.81	36.81	36.81
Equity Share Capital	96.21	96.21	36.81	36.81	36.81
Share Application Money	0	0	0	0	0
Preference Share Capital	0	0	0	0	0
Reserves	-79.12	-40.12	30.27	115.23	194.21
Networth	17.09	56.09	67.08	152.04	231.02
Secured Loans	626.29	553.46	640.34	760.61	773.58
Unsecured Loans	178.23	158.02	342.7	276.05	103.75
Total Debt	804.52	711.48	983.04	1,036.66	877.33
Total Liabilities	821.61	767.57	1,050.12	1,188.70	1,108.35
Application Of Funds					
Gross Block	1,433.82	1,465.87	1,498.23	1,515.69	1,536.14
Less: Revaluation Reserves	375.39	397.59	420.78	444.03	469.6
Less: Accum. Depreciation	357.19	306.22	250.55	195	138.22
Net Block	701.24	762.06	826.9	876.66	928.32
Capital Work in Progress	149.45	148.93	148.75	132.98	132.38
Investments	163.09	163.09	163.11	163.05	164.84
Inventories	99.51	130.84	98.94	118.99	141.25

Sundry Debtors	131.36	45.71	110.74	102.99	127.37
Cash and Bank Balance	53.75	6.84	16.17	75.79	32.29
Total Current Assets	284.62	183.39	225.85	297.77	300.91
Loans and Advances	501.06	447.47	402.62	386.13	423.46
Fixed Deposits	0	0	0	0	0
Total CA, Loans & Advances	785.68	630.86	628.47	683.9	724.37
Deferred Credit	0	0	0	0	0
Current Liabilities	867.74	843.39	688.26	618.32	786.3
Provisions	110.09	93.99	28.85	49.55	55.27
Total CL & Provisions	977.83	937.38	717.11	667.87	841.57
Net Current Assets	-192.15	-306.52	-88.64	16.03	-117.2
Miscellaneous Expenses	0	0	0	0	0
Total Assets	821.63	767.56	1,050.12	1,188.72	1,108.34
Contingent Liabilities	203.46	1,070.20	1,026.92	1,056.34	908.23
Book Value (Rs)	1.78	5.83	18.22	41.31	62.77