

A STUDY ON WAREHOUSE MANAGEMENT IN VKS TRAVELS

Submitted in partial fulfilment of the requirements for the award of

MASTER OF BUSINESS ADMINISTRATION

by

ANTONY RAJKUMAR D

Register No: 41410028



SCHOOL OF MANAGEMENT STUDIES

SATHYABAMA

**INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)**

Accredited with Grade "A" by NAAC | 12B Status by UGC | Approved by AICTE

JEPPIAAR NAGAR, RAJIV GANDHI SALAI, CHENNAI - 600 119

APRIL 2023



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Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai – 600 119

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SCHOOL OF MANAGEMENT STUDIES

BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **ANTONY RAJKUMAR D (41410028)** who carried out the project entitled "**A STUDY ON WAREHOUSE MANAGEMENT IN VKS TRAVELS**" under my supervision from January 2023 to April 2023.

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Submitted for Viva voce Examination held on 05/05/2023

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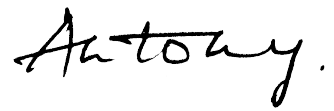
External Examiner

DECLARATION

I **ANTONY RAJKUMAR D (41410028)** hereby declare that the Project Report entitled "**A STUDY ON WAREHOUSE MANAGEMENT IN VKS TRAVELS**" done by me under the guidance of **DR. S. DHIVYA BHARATHI** is submitted in partial fulfilment of the requirements for the award of Master of Business Administration degree.

DATE: 05/05/2023

PLACE: Chennai

A handwritten signature in black ink, appearing to read 'Antony', with a small dot at the end.

ANTONY RAJKUMAR D

ACKNOWLEDGMENT

I am pleased to acknowledge my sincere thanks to Board of Management of **SATHYABAMA** for their kind encouragement in doing this project and for completing it successfully. I am grateful to them.

I convey my sincere thanks to **DR. G. Bhuvaneswari, Dean - School of Management Studies** and **DR. A. Palani, Head - School of Management Studies** for providing me necessary support and details at the right time during the progressive reviews.

I would like to express my sincere and deep sense of gratitude to my Project Guide **DR. S. DHIVYA BHARATHI** for her valuable guidance, suggestions and constant encouragement paved way for the successful completion of my project work.

I wish to express my thanks to all Teaching and Non-teaching staff members of the **School of Management Studies** who were helpful in many ways for the completion of the project.

ANTONY RAJKUMAR D



VKS TRAVELS & OVERSEAS CONSULANT

From

Date: 25th Jan 2023

VKS Travel Consultant
46 Pantheon Road, Egmore,
Chennai – 600 008.

To
Antony Rajkumar. D
Sathyabama Institute of Science and Technology,
Chennai – 119.

Sub: Regarding your **Logistics Internship** in our Company

Dear Antony Rajkumar D,

We are pleased to offer you a **Logistics internship** at our company. Your internship shall commence on 25th Jan 2023. The terms and conditions of your internship with the Company are set forth below:

1. Subject to your acceptance of the terms and conditions contained herein, your project and responsibilities during the term will be determined by the supervisor assigned to you for the duration of the internship.
2. Your timings will be from 10:00AM to 05:00PM, Monday to Friday. Please be sure to bring required documents with you on your first day to complete your profile.
3. You will sign a confidentiality agreement with the company before you commence your internship.
4. The internship cannot be construed as an employment or an offer of employment.

Please confirm your acceptance of the terms of this offer, we look forward to having you on our team.

Sincerely,



Venkata Krishnan K



ABSTRACT

Warehouse Management is about optimizing and controlling the processes of operations and storage of the products in the warehouse right from the moment the inventory enters the facility until it is sold, becomes obsolete, consumed, or moved to another place. On the other hand, a more discrete explanation of warehouse management present in a research paper on Organizing warehouse management available on research gate says, Analogous to production management, the objective of warehouse management is to efficiently and effectively coordinate all warehouse processes and activities. Warehouse management includes all planning and control procedures to operate the warehouse. Planning and control are concerned with managing the ongoing activities of the operations to satisfy customer demand. The main purpose of planning and control is to ensure that operations run effectively and produce products and services as they should. Warehousing is the process of storing inventory in a manner that products are easily traceable in a good condition before they are sent into an order fulfillment cycle or sold or distributed to smaller warehouses or retail brick and mortar stores. Small retailers or startups with fewer funds may have a room or a storeroom as a warehouse, however, large businesses rent big buildings that are designed to store products. The Sample Size selected to conduct this research is 150 employee respondents.

KEYWORDS:

Warehouse management, continuous review policy, periodic review policy, inventory management, square root law, linear regression.

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CHAPTER 1

CHAPTER 1

1.1 INTRODUCTION

Warehousing is the process of storing inventory in a manner that products are easily traceable in a good condition before they are sent into an order fulfillment cycle or sold or distributed to smaller warehouses or retail brick and mortar stores. Small retailers or startups with fewer funds may have a room or a storeroom as a warehouse, however, large businesses rent big buildings that are designed to store products. A warehouse is the backbone of any business because this is where a major amount of investments sit. In fact, the warehouse itself is an investment, and therefore one must know in and out of the warehouse and the products kept in the warehouse. Some of the definitions of warehouse

- “A warehouse is a commercial planned place generally used for storage and management of goods in a large proportion.”
- “A facility that provides space, robotic instruments for handling products, storage racks, and a human workforce to manage the incoming goods and outgoing goods. These all things together along with many other small additions make a warehouse that is up and running.”
- “A storage facility within a warehouse management system that is part of a supply chain. The warehouse is located in the most centrally located position to afford a shipping agent the ability to temporarily house shipments for distribution to other warehouse facilities or the final shipping destination.”

WAREHOUSE MANAGEMENT

Warehouse Management is about optimizing and controlling the processes of operations and storage of the products in the warehouse right from the moment the inventory enters the facility until it is sold, becomes obsolete, consumed, or moved to another place. On the other hand, a more discrete explanation of warehouse management present in a research paper on Organizing warehouse management available on research gate says, “Analogous to production management, the objective of warehouse management is to efficiently and effectively coordinate all warehouse processes and activities. Warehouse management includes all planning and control procedures to operate the warehouse.

Planning and control are concerned with managing the ongoing activities of the operations to satisfy customer demand. The main purpose of planning and control is to ensure that operations run effectively and produce products and services as they should.”

FIVE FUNDAMENTALS OF WAREHOUSE MANAGEMENT

Managing the warehouse isn't a simple task; it needs to be done with proper planning that rests on some solid fundamental points to be focused on. If you manage your warehouse by keeping these basics in mind, you are sure to reap some great results.

1. Customer-centric Warehouse Management

It's pretty much evident that not just your marketing strategies but also your warehouse strategies should be how customers want it. They won't tell you how you should manage your products. Still, their product preferences and purchase behavior will tell you about what type of inventory you should keep in your warehouse in a way that it's shipped instantly and doesn't get delayed due to operational errors whenever the order is placed. You have to hit the right balance between your productivity and the management of products according to the customers' choices.

For eg., if you have a combo pack that is being loved by the customers and you are receiving orders at a high rate. Then you will have to streamline warehouse operations in a way that the products in the combo are arranged efficiently and quickly from their warehouse locations to be shipped as soon as possible without any error. You can provide your customers with a better order fulfillment process if you spend your time shaping your warehousing process in a way that benefits them. Moreover, the customer-centric approach will provide a smooth hassle-free return or refund policy and a more transparent shipment tracking system for your customers.

2. Manage your warehouse with a solid workflow and control

Knowing what should be done is not as tricky as applying that known knowledge of what should be done. If you strategize a plan of action for some departments, you must ensure that the strategy is executed as perfectly as it can be. To ensure that you need to create proper workflows, processes, rules, and protocols that the warehouse workforce needs to follow so that everybody works in sync and achieves a common goal.

3. Create a system that is ready to adapt to the changing circumstances

Well, workflows, protocols, and rules are essential, but at the same time, being able to change the strategies instantly and work in the direction of the improved strategies is also very important. It might happen that suddenly your data shows that the trends are changing, and you need to alter your workflow or alter a portion of it. Then, in that case, the entire team, including the warehouse management system, should be able to switch to a different plan of action with as much as less friction as possible.

4. Data shows you the path

Don't make a decision and then see the data; instead, see the data and then make a decision. It is imperative to let your data show you the path, be it the data on customer behavior or the information on your inventory performance. Even after you have made your decision based on the data, you should always keep your eye on the information/data. Never think that everything will be or is going fine wholly because there will always be one or the other portion that will need improvement. That's why warehouse management is not a job in which you can relax and let everything run on its own.

5. Walk with time – Embrace Technology

It's crucial to keep up with the ever-evolving technology. You never know when the software or a piece of equipment with robotics can be helpful to streamline your warehouse operations or enable you to become an omnichannel e-commerce business. Companies like Nike pay millions

of dollars to predictive analytic firm Boston-based firm “Celect” to design software that can forecast demands.

Software like warehouse and inventory management software, Data accumulation tools, and other robotic instruments can be helpful. Therefore, it's very much imperative to side with technology for warehouse management. However, you need to be very sure of the technology you implement. It should be useful and be worthy of the money spent on it.

PRINCIPLES OF WAREHOUSE MANAGEMENT

Understanding the general principles of warehouse management can help you focus your efforts to optimize the way your warehouse operates. These principles include:

Know your purpose. A warehouse operation must first and foremost know its objectives. For example, do your customers have specific delivery requirements? Does your inventory need specialized storage? Additionally, all warehouse operations aim to use warehouse space, labor and equipment as efficiently as possible.

Comprehensive control. Warehouse management involves coordinating complex processes involving many moving parts: people, equipment, orders and inventory. Warehouse managers need to be able to track each process in order to ensure it's running smoothly and solve the problems that inevitably occur. Quality control is critical to ensure orders are fulfilled accurately.

Flexibility and resilience. Warehouse managers have to be able to change plans on the fly, whether it's because materials have arrived damaged or because inclement weather is delaying shipments. It's also important to be able to adjust workflows to maximize efficiency, whether that involves rearranging warehouse space or reimagining picking processes.

Customer focus. On-time delivery, with the correct product, is one of the most important metrics when it comes to customer service and satisfaction. To deliver on time, you need to be able to fulfill orders quickly and accurately.

Data-driven decision making. Even if every warehouse process appears to be running without a hitch, it doesn't mean processes are operating as efficiently as possible. A WMS can help you pinpoint and analyze areas that need improvement.

WAREHOUSE MANAGEMENT PROCESSES

Warehouse management includes six core processes. Each process influences the efficiency of the next, so every step must be optimized for the warehouse operation to run like a well-oiled machine:

- **Receiving.** Check in and log incoming items. Verify that you're receiving the right quantity, in the right condition, at the right time.
- **Put-away.** Move items from the receiving dock to their correct storage locations.
- **Storage.** Safely store and logically arrange inventory to enable fast and accurate picking.
- **Picking.** Collect the items needed to fulfill sales orders.
- **Packing.** Prepare the picked items for shipment. They must be safely packed into the correct packaging with an accurate packing slip.
- **Shipping.** Send out the finalized sales orders, ensuring that they are on the right vehicle, at the right time, with the correct documentation, so customers receive their orders on time.

Warehouse Optimization

Optimizing your warehouse operation involves fine-tuning each of these warehouse management processes. For example, when receiving goods, an organization can label items with mobile barcodes or attach RFID tags to make them easier to find when picking. During put-away, a well-managed warehouse operation stores items in the minimum amount of space to maximize the capacity of the warehouse. Other best practices for warehouse optimization include storing popular items in easily accessible areas and separating items that can easily be mistaken for one another.

WAREHOUSE MANAGEMENT FULFILLMENT STRATEGIES

Selecting fulfillment strategies that match the business's size and the volume and type of orders it receives can help the organization ship products faster, minimize waste and improve customer satisfaction. Applying picking strategies that match the type of orders that you receive can help maintain the most effective workflow. For example:

- Batch picking is a technique that can help you quickly fulfill multiple orders for the same product without wasting time by continually revisiting the same inventory location.
- Zone picking assigns pickers to different zones of SKUs. For each order, pickers are responsible for picking all SKUs from their designated zone.
- First expired, first out (FEFO) picking ensures perishable products and items make it to customers before specified expiration or sell-by dates. With FEFO, the products set to expire first are shipped first.
- First in, first out (FIFO) picking ensures the first products to come into the warehouse are the first to be distributed, which can help make sure older items are shipped before they can become obsolete.

Technology is also an important part of any warehouse management fulfillment strategy. Handheld mobile devices that display packing lists with item locations, serial numbers and lot numbers can help increase picking speed and accuracy. Software can recommend safe and cost-effective packing based on product dimensions to ensure each item gets shipped securely, with as little waste—and wasted space—as possible.

WAREHOUSE MONITORING & REPORTING

Measuring and tracking key performance indicators (KPIs)—operational statistics that indicate how well the warehouse is operating—can help pinpoint problems and highlight opportunities to improve efficiency and fulfill customer orders more quickly and accurately. For example, you can set a target for improved picking and packing accuracy, then make changes to your picking processes and measure whether those changes are effective in helping you achieve your goal.

Warehouse KPIs

Warehouse managers often track the following KPIs, among others:

- **Receiving efficiency or productivity:** The volume of goods received per warehouse operator, per hour. Higher scores indicate greater receiving efficiency, while lower scores indicate that there may be problems that should be investigated.

- **Picking accuracy:** The number of orders accurately picked divided by the total number of orders picked (including incorrect or short orders). The closer to 100% accuracy, the better.
- **Order lead time:** The average time it takes for an order to reach a customer once the order has been placed. For the highest customer satisfaction, the shorter the lead time, the better.
- **Rate of product return:** The rate at which sold goods are returned by customers, calculated by dividing the number of items returned by the number of items sold. To get a full picture of this KPI, it's important to consider why products are being returned—a customer accidentally ordering the wrong product might not signify warehouse operation issues, but there is room for improvement if customers often receive incorrect products or damaged goods.
- **Inventory turnover:** How much inventory is sold and replaced in a given period of time. It's calculated by dividing the total cost of goods sold during the period by the average cost of inventory during that period. This KPI reflects how efficiently a warehouse manages inventory to meet demand. In general, higher inventory turnover is better. If a warehouse overestimates demand, inventory turnover may be low. Too much slow-selling inventory can be costly—especially for businesses dealing with goods that have a predetermined shelf life

TYPES OF WAREHOUSES

Choosing the right warehouse to suit your business's needs is vital. The right warehouse will help you store inventory more effectively, improve business operations, and keep workers safe. Here's a quick overview of ten different types of warehouses, their uses, and the advantages each provides.

Public Warehouses

Unlike other warehouses, government agencies own public warehouses and rent them to private businesses to store goods in exchange for a monthly fee. Both corporate and personal use is permitted in public warehouses, and they are ideal for storing goods for a short period of time. Although not as technologically advanced as other warehouses, public warehouses are a cost-effective and accessible option, especially for startups and small businesses.

Private Warehouses

Private warehouses are privately owned by wholesalers, distributors, or manufacturers, as well as online marketplaces. Although private warehouses are generally more expensive than public warehouses, they are an excellent alternative for small businesses looking for a substantial, long-term strategic presence in a vital region.

Bonded Warehouses

Bonded warehouses allow businesses to store imported goods before paying customs duties. When corporations rent warehouse space from the government, they receive bonds to ensure that they will not lose money when their products are released. Bonded warehouses can store products for long periods of time and have a strong reputation for being secure and safe. Furthermore, corporations that store goods in bonded warehouses are exempt from paying customs until they discharge their goods.

Smart Warehouses

In smart warehouses, storage, fulfillment, and management processes are all automated. Automation can range from management software to A.I. that handles operations such as packing, weighing, transporting, and storing goods. A smart warehouse is a quality option for businesses looking for a warehouse to fulfill orders with little to no human error.

Consolidated Warehouses

Consolidated warehouses are a type of warehouse that collects small shipments from many suppliers and consolidates them into larger shipments before distributing them to customers. The only caveat is that all shipments must be sent to the same location. Consolidated warehouses are another excellent choice for startups and small businesses, as they only require a low initial capital investment and inventory volume.

Government Warehouses

Government warehouses are strategically located to provide storage for relief from natural disasters, such as earthquakes, floods, and droughts. Government warehouses are used to serve the government's storage needs, but they can also be rented out to the general public for a monthly rate.

Distribution Centers

A distribution center is a storage facility typically designed to meet a company's specific needs and allow for quicker shipment of large amounts of goods in a short amount of time. Distribution centers are only used for short-term needs and are typically located near transportation centers to move goods quickly and reliably.

Climate-Controlled Warehouses

Climate-controlled warehouses are designed to maintain airflow, temperature ranges, and humidity levels to preserve highly sensitive products. Climate-controlled warehouses are equipped with high-grade HVAC systems, dehumidifiers, programmable thermostats, and heavy-duty insulation to ensure optimum environmental quality. These warehouses are also used to protect valuable paintings and equipment from excessive heat, cold, and dampness.

Hazardous Material Warehouses

Hazardous material warehouses store dangerous and radioactive substances, such as explosives, gases, chemicals, and poisonous compounds. HAZMAT-certified staff wears personal protective equipment (PPE) to reduce exposure to these items. These warehouses are kept out of densely populated regions due to their endangerment to public safety, property, and the environment.

Cross-Dock Warehouses

Cross-dock warehouses are designed to assist with transporting goods from an inbound carrier to an outbound carrier. Instead of being stored, goods arrive at a cross-dock warehouse and travel straight through the sorting process with little to no storage time. Oversized deliveries are divided into groups based on their final destination and shipped using one vehicle.

1.2 COMPANY PROFILE

VKS travels and overseas is a Limited Liability Partnership firm incorporated on 10 May 2012. It is registered at Registrar of Companies, Chennai. Its total obligation of contribution is Rs. 500,000. It has been awarded in the category of “Excellence in the Tourism Industry” by WorldTourism Brand Academy.

The Noida based company, with a strong presence in inbound travel trade and corporate segment, today has excelled its branches over Delhi, Mumbai, Agra, Jaipur, Haridwar, Rishikesh & Badrinath. The company with its professionally managed travel engine specializes mainly in organizing Adventure, Cultural, Religious, and hill station & wildlife tours in India through a sprawling network. It offers 24 X 7 hours services that include travel planning, itinerary design, hotel bookings, ticket reservations and transport facilities. It also provides holiday packages, customized as per client's need and budget.

QUALITY ASSURANCE

With the introduction of the quality management system ISO 9001: 2015, the top management of VKS TRAVELS AND OVERSEA aims to achieve fast and quality service to its customers, using the advantages and opportunities of corporate culture. In order to preserve and strengthen the tourist interest, the Management of VKS TRAVELS AND OVERSEA is committed to focus its efforts on offering high quality tourist products that best meet customer requirements.

The management of VKS TRAVELS AND OVERSEA pursues a policy for providing quality tourist and tour operator services that meet and even exceed customer expectations. For the effective implementation of the QUALITY ASSURANCE POLICY, the Management defines the following main measurable quality objectives:

- Maintenance and efficient functioning of the developed process-oriented and certified QMS according to ISO 9001: 2015.
- Carrying out a market strategy, orientation to the client and his requirements, on the basis of continuous improvement of the quality of the tourist and tour operator services offered by VKS TRAVELS AND OVERSEA;
- Renovation of existing and implementation of new tourism products and technologies based on customer-oriented tourism marketing strategy;

- Determining and fulfilling the responsibilities of the staff in terms of quality in the process of continuous improvement of QMS compared to ISO 9001: 2015 and work in VKS TRAVELS AND OVERSEA
- Improving the qualification and training of the staff in order to increase the role of the human factor for quality tourist service, order, discipline and loyalty to the company;
- Maintaining equal mutually beneficial relationships with customers, tour operators, suppliers and partners.
- Creating new offers with unique identity, originality and style.

As a result of the successful implementation and certification of QMS according to ISO 9001:2015, the management achieves:

- Improving quality management that meets the requirements of our customers, suppliers and partners;
- Increasing the authority and image of VKS TRAVELS AND OVERSEA and its transformation into a respected and desired partner with proven high quality on the international tourist market;

The management of VKS TRAVELS AND OVERSEA confirms its desire and readiness to implement the policy and goals it has set. The company motivates the team for active work, empathy, correctness and creativity with comprehensive development, implementation, maintenance, improvement and implementation of QMS according to ISO 9001: 2015 and establishing VKS TRAVELS AND OVERSEA as a leading tour operator in the domestic and international tourism industry

PHILOSOPHY AND COMPANY VALUES

VKS Travels and Overseas Company is based in environmental protection and care, all made possible by highly qualified teamwork in the charge of our leaders who establish clear goals and expectations, in this way manifesting excursions for our visitors which are ethical and conscientious. We also consider the themes of the constant training courses in our company of vital importance, and they have already contributed to personal and professional growth of every collaborator. The proof of this is in the excellent experiences, testimonies, and recommendations of every traveller. We are committed to offering an excellent service which brings to fruition the expectations and unique experiences and our clients.

As the key to our success, we put into practice the following ethical values:

- Humility
- Integrity
- Commitment
- Improvement
- Honesty

COMPANY VISION

Consolidate ourselves in the region as the leading tourism company in quality service, creativity, and innovation, and competitiveness, social responsibility promoting an ambience of good relationships, and obtaining the best client satisfaction. Every year it is an honor for us to contribute to social projects for the good and growth of communities. In this way, we plan to expand more to make known our services in all destinations of the world.

COMPANY MISSION

Offer a personalized service of quality and reliability through careful attention to properly training our personnel, designing unique journeys at affordable prices, and exceeding the expectations of our clients. On the other hand, we have the mission to maintain principles of sustainability and responsible tourism in the destinations in which we operate, driving experiences to an elevated level of satisfaction for the travellers, which constantly propels us to achieve better efficiency in our services.

Warehouse management in VKS Travels and overseas consultant

Warehouse management encompasses the principles and processes involved in running the day-to-day operations of a warehouse. At a high level, this includes receiving and organizing warehouse space, scheduling labor, managing inventory and fulfilling orders. Zoom in closer and you'll see that effective warehouse management involves optimizing and integrating each of those processes to ensure all aspects of a warehouse operation work together to increase productivity and keep costs low.

Material Handling Process in VKS Travels and Overseas consultant

From bringing in the customer's package for delivery, to warehousing and distribution, the material handling process is what keeps parcels moving.

The material handling process specifically refers to how packages are stored, organized, treated, moved, and otherwise processed on a smaller scale, within a building or from a transport vehicle to a building and vice versa. It does not refer to what happens once a package is moved on to a new location or to a customer, making it highly focused on the inner workings of a business and its facilities and processes.

The material handling process may involve many different types of equipment and technologies, across various industries and applications from receiving parcels to aerospace to construction. Material handling equipment like conveyors, elevators, gates, and bag dump stations are commonplace, and in most situations, the material handling process involves valves of some sort, to control and divert the flow of materials.

Material Handling Process and Valves in VKS Travels and overseas consultant

With such a variety of materials going through the material handling process, valves play an important role — and the selection of those valves is key. Materials may be tough, corrosive, or otherwise challenging, and the materials, seals, and durability of valves needs to be considered when creating a process.

In the Company material handling process involves coarse materials, the valves are in the right clearance for that flow, or risk jams that shut the entire process down. Sticky materials, dusty materials, and other challenging substances all require a careful look at which valves does the job well

The service life of a valve involved in the material handling process is also important. If the valves are constantly jamming, breaking, sealing too loosely, or otherwise creating issues, the entire process become backlogged or worse, grind to a total halt. That puts every other part of the distribution process at risk, which in turn has a negative impact on profitability, and reputation.

Looking at the life cycle of material handling equipment is important in this regard — it may cost more to invest in better quality products for processing and handling materials, but if that investment leads to cost savings and/or higher profitability in the long term, it's likely worth spending more up front for better results in the end than it is to save a bit of money in the immediate present but have to keep spending that money on a regular basis as sub-par parts fail.

In a warehouse environment, material handling is commonly defined as the “movement, protection, storage and control of materials and products throughout warehousing, distribution, consumption and disposal.” The process incorporates a variety of manual, semi-automated and automated equipment and systems that allow the supply chain to work efficiently. When used properly, material handling can improve:

- Forecasting
- Resource allocation
- Flow and process management
- Inventory management
- Customer delivery
- Customer service and support

Warehouse material handler in VKS Travels and Overseas Consultant

Warehouse material handlers play an integral role in the operations of any warehouse because they find products or materials on shelves, pull them, pack them and put them on a delivery truck. They're also the workers who unload materials off trucks and store items in their proper locations within a warehouse. Without material handlers, a warehouse's production area would be poorly stocked and lack the products needed to fulfil orders quickly.

Types of automated storage and retrieval systems

During the course of the day, a material handler may rely on different types of automated storage and retrieval systems (AS/RS) to be as efficient and accurate as possible. Some of the types of AS/RS technology used in VKS Travels and overseas consultant are:

- Automatic identification and data collection
- Automatic guided vehicles
- Conveyors
- Vertical lift modules (VLMs)
- Hoisting equipment
- Lift trucks
- Integrated material handling systems
- Micro and mini loads

AS/RS technology is integrated with warehouse management system software (WMS).

How the company maximize warehouse capacity via material handlers

By training material handlers properly and providing them with the right equipment, they increase productivity, maximize available space and improve safety throughout the warehouse. To help the material handlers perform to their fullest potential, they first ensure that the aisles in the warehouse are wide enough for forklift trucks to manoeuvre safely. They also make sure all forklift trucks are equipped with working lights and horns. Finally, they use the right storage systems throughout the warehouse, including vertical storage solutions, to help increase capacity and lower carrying costs.

When material handlers change shifts, the arriving employees perform a pre-shift equipment check to ensure everything is operating as required. They also schedule recommended maintenance regularly for the AS/RS technology to avoid extended downtime from broken or failing equipment.

The material handlers and AS/RS technology they employ are essential to the success of the warehouse operations. They make it a priority to provide the material handlers with everything necessary to be as productive as possible. When it comes to maximizing warehouse space without losing operational efficiency, material handlers make the biggest impact.

Safety department in VKS Travels and overseas consultant company

Safety in material handling involves more than the purchase and correct use of good material handling devices. Factors that are considered thoroughly by the organisation.

1. Floors:

(a) Cleaning of Floors:

Clean floors are a necessity to any safety programme. If debris is left lying on floors, it may cause falls and unhygienic conditions. For this purpose, they use a mechanical sweeping device which is more efficient rather than using the conventional manual methods.

(b) Floor Repairs:

The tendency is to permit cracks and pot-holes in the floors to remain unrepaired until a wide area becomes bad enough to warrant complete resurfacing. But this company uses patching materials available which can be applied to a floor and run over almost immediately afterwards, with little interruption to normal traffic. However, patching should not be misunderstood as permanent repairing. It should be considered also only as a temporary measure.

(c) Floor Marking:

Lines marked on floors inside and outside the warehouse is more good, than almost another precautionary measure to organise loading and unloading activities in a warehouse so that they are efficient and safe. Lines ensure safety by specifying areas for aisles, storage, parking, etc. the company uses line marking devices which can cut short the time spent in marking the aiseways in the warehouse. They also use self-adhering plastic tapes which can be quickly and easily applied.

(d) Aisles are clearly marked. Corners are cut off on a diagonal. For vehicular traffic, the width of the aisle is at least twice the width of the circle with load plus 1 metre when the aisle is used by the pedestrians also.

The following colours are commonly used for marking:

i. Purple:

The basic colour for designating radiation hazards.

ii. Black and White:

Combinations of black and white or the two colours used individually are for the designation of traffic and housekeeping markings. These colours will help to identify dead ends or aisles or passageways, location and width of aiseways, stairways, and re-directional signs.

iii. Yellow and Black:

Combination of yellow and black strips are used to indicate dangers from obstructions, sudden change of levels, etc.

2. Lighting:

Poor lighting may not be the primary cause of an accident every time. But one can find that inadequate light was a factor behind many slips and falls and other injuries which occurs in the warehouse. There are various types of light fittings available and these should be selected and used for specific work or areas. The levels of illumination are maintained in the company according to the Indian Standard I.S. 3646.

(iii) Ramps:

Ramps gradient does not exceed 1 in 10.

(iv) Obstructions:

Pipes, granduits, drain valves, fire apparatus, etc. are necessary parts of any structure yet they often cause hazards. In planning the warehouse such parts are so placed that they will cause a minimum of interference with persons or materials.

(v) Ladders:

Do not climb on stockpiles, use ladders. Fixed ladders are preferable in the company. If the height exceeds 2 metres the company provides with a railing and handholds for the ladders.

(vi) Bridge Plates:

Bridge plates are of adequate strength and they are always properly anchored.

1.3 INDUSTRY PROFILE

COURIER INDUSTRY

The courier industry in India has come a long way from its origin in modern form in 1980s and thereafter. The industry has grown in size and reach. A significant number of players have scaled up their operations to match the contemporary, world-class professional environment. The industry has invested in information technology systems and set up good processes and proprietary systems capable for handling large volumes.

The Indian courier industry size is estimated at Rs. 14,000 crores in 2015-16. As a premium segment, the courier industry is a small but significant segment of the logistics industry. It is one of the fastest growing segments of the industry. The industry is expected to grow at 17% per annum to Rs. 20,000 crores in the next three years.

The economic growth in the country and the consequent trade growth will be primary growth driver for the courier industry. The growth in current customer industry segments and expansion into new industry segments will be demand drivers for the courier industry. In addition, increase in reach through expansion of network and new products like temperature- controlled logistics, services for importers and others will provide additional growth of the industry.

The courier industry serves as a key enabler for business by providing time-bound logistics services to customer industry segments. Besides providing critical services and aiding economic growth, the courier industry in India has significant contribution to the economy. As a labour intensive industry, the courier industry is estimated to presently employ about 11.9 lakhs persons, directly and indirectly. Based on the growth estimates for the industry, the employee base of the industry, direct and indirect, is expected to grow to 17.2 lakhs by 2015-

16. The courier industry also makes significant contribution to the national exchequer with total tax contributions expected to be over Rs 1100 crores in form of service tax and corporatetax.

Through this platform we wish to have a consistent dialogue with you. You too, share with us your views & concerns about courier & cargo consignments. So that we could slowly establish a lasting & mutually fulfilling professional relationship.

The global courier, express, and parcel (CEP) market is expected to witness a CAGR of 10% during the forecast period. The pandemic depressed manufacturing activity and goods demands as well as affected cargo capacity. As a result, industry-wide cargo ton-kilometres (CTKs) contracted by 27.7% Y-o-Y in April 2020. With the decline of passenger flights in most regions of the world, industry-wide available cargo ton-kilometres (ACTKs) dropped an even 42% year-on-year in April 2020. However, the COVID-19 pandemic also resulted in a surge in demand for e-commerce, driving the performance of several package delivery services providers such as FedEx Corp. FedEx recorded a 234.7% growth in its operating profit, which amounted to USD 1.59 billion in the fiscal year ending Q1 2021 (August 31, 2020) when compared with the USD 475 million in the previous quarter.

The rise in e-commerce had a significant impact on the massive parcel shipping volumes expected in 2020. The package volume in the United States increased by 37% year on year, hitting 20 billion in 2020, up from 15 billion in 2019. The CEP industry is posting impressive growth in the developing countries, driven by the growth in international trade, rising internet and smartphone penetration boosting e-commerce sales, growing middle-class population, disposable incomes, and improved standards of living. Besides e-commerce, the emerging trends of omnichannel retailing in certain countries and growth in trade driven by economic growth are also some of the drivers of the CEP industry. Major economies like India, China, the United States, and Germany, among others are expected to observe higher demand for CEP services with the COVID-19 pandemic changing consumer buying habits. Countries that are developing are also observing growth in the CEP industry as the internet penetration and smartphone penetration increase. Global supply chains have allowed developing countries to improve their cross-border trade and, with it, the increase in courier and express deliveries.

The market observed growing activity from new and emerging players. The number of startups that receive funding is increasing. Courier companies are being forced to rethink their traditional parcel delivery system, driven by the demands of the digitally-connected consumer who wants similar speeds and visibility for a lot less money, plus a healthy sprinkling of more convenience, more control, and a lot more choice. Technology plays an important role in the CEP industry with the growing e-commerce industry. Autonomous vehicles, Automated Parcel Lockers, and Drone Delivery have become major technologies emerging in the market.

Courier Express Parcel service

CEP stands as an abbreviation for courier express parcel services that offer logistic services in areas. The offer of the service providers differs in the speed, weight, and volume of the packages and the way of carrying out the shipment of the goods. Especially the regulations regarding weight and volume allow for strong standardization and great potential for automating the service. The courier, express, and parcel (CEP) market is segmented by business (B2B and B2C), destination (domestic and international), end user (services, wholesale and retail trade, manufacturing, construction and utilities, and primary industries), and geography (North America, Europe, Asia-Pacific, and Rest of the World). The report offers market size and forecasts for the courier, express, and parcel (CEP) market in value (USD billion).

Key Market Trends

- **Cross-border E-commerce is Stimulating the Growth of the international CEP Market**

The growing e-commerce sector, along with the growing cross-border trade, is one of the key factors driving the growth of the CEP market. The development of cross-border trade channels, especially in emerging nations, has enhanced the adoption of international trade and B2C shipments. Furthermore, the increasing consumer preference for shopping online through various e-commerce portals is also providing a boost to the market growth. E-commerce stores partner with courier service providers to deliver their products across domestic and international locations. Technological advancements, including the utilization of digital technologies with crowd-sourced delivery models, are also creating a positive outlook for the market. These technologies aid the service providers in increasing their overall operational efficiency and meeting the requirements of the customers effectively. Other factors, including rapid urbanization, rising consumer expenditure capacities, and significant growth in the manufacturing sector, are projected to drive the growth of the market during the forecast period.

Automated package and freight shipping solutions are available to improve efficiency for the entire shipping process of retail vendors. Moreover, with more regional and trade deals being negotiated between governments and trading blocs, it has become more attractive for SMEs to expand into new markets. The rapid growth of cross-border e-commerce is attributed to the rise

of a young, urban population that is heavily reliant on technology. According to industry forecasts, the value of cross-border e-commerce is expected to reach USD 627 billion by 2022, accounting for 20% of all e-commerce. One of the greatest cross-border e-commerce markets, India and Mexico were in the top five countries in the world. With 50 million e-buyers, India is in third place (the high-growth region of Southeast Asia has been triggered by increased logistics and broadband infrastructure), and Mexico is in fifth place with 40 million e-buyers.

- **Asia-Pacific is Driving the Growth in the Market**

Asia-Pacific is the largest regional market by value, accounting for around 41% of the global market. North America and Europe together represent a little over 50% of the market. The demand for CEP services in the Asia-Pacific region is expected to witness high growth during the forecast period, owing to high population growth, rising disposable incomes and standards of living, and growth in international trade.

As the governments are focusing on developing the manufacturing sectors in the countries and the global companies are setting up their manufacturing bases in the region, the countries' international trade is rising and is expected to rise further in the future. The retail sector in the region is also growing rapidly. The global courier service industry is projected to be driven by the revival of the manufacturing sector and expected economic expansion. Asian countries, such as China, Taiwan, South Korea, and Thailand, are witnessing increased penetration of electronic devices. This, coupled with the rise in availability of multiple online payment methods, the changing lifestyles due to urbanization, and the growth in electronic goods, automobiles, and food and beverage shipments, will benefit the courier, express, and parcel industry.

The Southeast Asian region is one of the emerging hotspots globally, attracting investments from across the world. E-commerce in the region is also expected to bolster in the next few years. The rise in contract manufacturing of FMCGs in emerging markets may significantly influence courier, express, and parcel service growth over the next few years.

Competitive Landscape

With a large number of national postal operators, global integrators, and other smaller, privately-owned CEP companies, the market is fragmented with intense competition. As the

demand for CEP services is growing rapidly in developing countries, the companies are becoming more competitive to capture the huge opportunity. International players are making strategic investments to establish a regional logistics network, such as opening new distribution centers and smart warehouses.

Local companies are facing high competition from multinational companies that have a comparatively well-developed infrastructure. As a number of start-ups are entering the market to leverage digital technologies, there is a trend of large companies acquiring these start-ups to gain a significant footprint in the market. DHL, FedEx, and UPS are continuing to expand their businesses across the world to capture the market in untapped areas.

Major Players

1. Deutsche Post DHL Group
2. United Parcel Service Inc.
3. FedEx Corporation
4. SF Express (Group) Co. Ltd
5. Poste Italiane SpA

Recent Developments

- FedEx Corp. announced it has received its first 150 electric delivery vehicles from Bright Drop, the technology start-up from General Motors (GM) decarbonizing last-mile delivery. This marks a critical milestone for FedEx as the company plans to transform its entire parcel pickup and delivery (PUD) fleet to all-electric, zero tailpipe emissions by 2040 and comes just months after Bright Drop's commercialization of the Zevo600 as the fastest vehicle to market in GM's history.
- DHL Parcel UK announced a new partnership with ZigZag, the technology platform specializing in e-commerce returns. ZigZag's network of over 100 retailers, including Selfridges, GAP and Superdry, will now have access to DHL's Just Right Returns service, a fast, convenient and high-quality returns solution.

INDIAN COURIER INDUSTRY

The market for Courier, Express, and Parcel (CEP) in India is estimated to grow at a CAGR of more than 10.5% driven by the growth in the e-commerce segment, higher internet penetration into the masses, and the latest technological innovations in the sector. India has been turning into a significant market for both domestic and international shipments with significant companies entering and expanding networks in the market. Innovation has become a key influencing factor for organizations to be seriously lined up with market trends and dynamics. India experienced high development in parcel volumes in 2018, up 21% year-over-year to 2.5 billion. Worldwide parcel volumes reached 87 billion in 2018, up from 74 billion in 2017.

The logistics organizations, particularly in the CEP business must be thoughtful in regard to the technological investments which otherwise can make the business disturbed. The presentation of Goods and Service Tax (GST) in the country has likewise emphatically influenced the online/e-commerce logistics market since all the indirect taxes have been compiled into one. It permits the logistics companies to smoothen the movement of products inside the nation.

Keeping up the consistency of quality for service and overseeing cost simultaneously is a test for all the market players. Given the constant development in online business and the way that building one's own system is over the top expensive, more associations are relied upon to occur in the market on the rear of weight on cost decrease. The developing significance and request in the course of the last-mile conveyance are compelling the market goliaths to drive their business all the more creatively.

The report offers a complete background analysis of the India courier, express, and parcel (CEP) market, including market overview, market size estimation for key segments and emerging trends by segments, and market dynamics. The report also offers the impact of COVID - 19 on the market.

Key Market Trends

Rise in E-Commerce Sector to Boost the CEP Market in India

E-commerce is one of the main factors driving the market growth. Rapid development in its online/ e-commerce market, more significant levels of extra cash, and increased internet

penetration have made India among the best three quickest developing markets for parcel shipment. E-commerce based business has changed the manner in which business is done in India. The Indian internet business advertise is relied upon to develop to USD 200 billion by 2026 from USD 38.5 billion starting in 2017. Increasing growth in the e-commerce industry is attributed to several reasons, the introduction of the government's Digital India initiative is of the main such factor.

The number of internet users had increased over the years in rural as well as urban regions. It appeared to be likely from past patterns that the dispatch of the Jio fixed-line broadband assistance, called Giga fiber may help in the already expanding e-commerce and internet penetration in the nation. As of Jan 2020, the countries' digital population is around 688 million which will undoubtedly observe an ascent. Inferable from the high internet penetration over the most recent 2 years, which is just expected to ascend during the conjecture time frame, the CEP market in India is expected to observe consistent development during the gauge time frame.

- **Domestic Segment Holds Largest Share in the Market**

The total CEP market in India is valued at USD 4.29 billion by the start of 2019 with the domestic market holding up the major share. The revenue generated by the domestic CEP market has amounted to USD 3.14 billion by the start of the year 2019, which is approximately 73% of the total revenue generated by the Indian CEP market.

The domestic CEP market is likely to witness the growth and hold the major share during the forecast period driven by the B2C e-commerce boom. Digitizing the economy and providing cheap internet to the people are a few of many reasons that boosted the growth of digital sales in India. In 2018, e-commerce sales across India were estimated to increase by 25 percent.

As B2C e-commerce demand continues to grow, the role of last-mile logistics has taken the spotlight with several investments and start-ups seen in India. Increasing demand for speed of delivery and expanding internet penetration leading to a greater number of regions active online has led to a significant rise in the last mile market in recent years.

Competitive Landscape

The report covers the major players operating in the India CEP Industry. The market is highly competitive with a few players occupying the major share in the international CEP market. The market is fragmented, and the market is expected to grow during the forecast. The major players Indian major market players such as Indian postal services FedEx Express, DHL Express, E- com Express, Ekart Logistics, Blue Dart, Delhivery, Amazon Transportation Services, and Aramex are contributing significantly into the growth of the market. The Indian post has shifted its focus from post and has identified more profit in delivering e-commerce parcel. Indian post has a vast reach and good connectivity in rural areas.

Major Players

1. Blue Dart Express
2. Instakart Services (ekart logistics)
3. Gati Ltd.
4. DHL
5. FedEx

1.4 OBJECTIVE OF THE STUDY

PRIMARY OBJECTIVE

To study about the warehouse management in VKS travels and overseas consultant

SECONDARY OBJECTIVES

- ☐ To analyze whether there is proper warehouse management of the goods in the company
- ☐ To find out the effectiveness of material handling process in the company
- ☐ To recommend the most suitable warehousing methods of the goods.
- ☐ To know the various modern trends in material handling and its impact on warehouse management.
- ☐ To analyze and give suggestion to the company regarding the effectiveness of material handling in warehouse management

1.5 SCOPE OF THE STUDY

- Distinguishes one company's goods from those of another local & other countries company.
- Check the quality for the material as well as the receiving and stuffing formats
- Protects both supplier and customers satisfaction
- Time should be maintained
- Check and balance are very important for every step-in warehouse

1.6 NEED FOR THE STUDY

- The project concentrated on the problem in the warehouse management like material receiving and dispatching of the goods and their effect in the working environment.
- Goods and materials might be stored or transported through logistics facilities. It is important that operatives can deal with these, know how to handle them, and know what to do in the case of emergencies.
- Equipment downtime is another factor which can be avoided through the appropriate use of safety procedure.
- This project will explore the area where the company should concentrate on the solution. So that the company can make the use of efficient manpower.
- The findings of this study is meant to be of much benefit to the academic community by adding to the growing levels of knowledge in this area and consequently enable them to identify gaps upon which to build cases for further research.

1.7 LIMITATION OF THE STUDY

- ☐ This study is limited to a sample of 100 respondents.
- ☐ As this study is based on collection of data (primary data) problems regarding non response and inconsistent response arises
- ☐ The present study contains only brief information, but not a full pledged and thorough analysis.
- ☐ The findings were based on the use of self-reported survey data, which may be affected by response biases
- ☐ All data collected are generally limited by the method adopted. In current research, the sole method of data collection being questionnaire, limits the data to the extent of data generation available through that method.

CHAPTER 2

CHAPTER 2

LITERATURE REVIEW

2.1 REVIEW OF LITERATURE

Rene de Koster January (2006) : Order picking has long been identified as the most labor-intensive and costly activity for almost every warehouse; the cost of order picking is estimated to be as much as 55% of the total warehouse operating expense. Any under performance in order picking can lead to unsatisfactory service and high operational cost for its warehouse, and consequently for the whole supply chain. In order to operate efficiently, the order picking process needs to be robustly designed and optimally controlled. This paper gives a literature overview on typical decision problems in design and control of manual order-picking processes. Here focus on optimal (internal) layout design, storage assignment methods, routing methods, order batching and zoning. The research in this area has grown rapidly recently. Still, combinations of the above areas have hardly been explored. Order-picking system developments in practice lead to promising new research directions.

Goetschalckx and Ashayeri (1989) : The most common objective of order-picking systems is to maximize the service level subject to resource constraints such as labour, machines, and capital (Goetschalckx and Ashayeri 1989). The service level is composed of a variety of factors such as average and variation of order delivery time, order integrity, and accuracy. A crucial link between order picking and service level is that the faster an order can be retrieved, the sooner it is available for shipping to the customer. If an order misses its shipping due time, it may have to wait until the next shipping period. Also, short retrieval time imply high flexibility in handling late changes in orders. Minimizing the order retrieval time (or picking time) is, therefore, a need for any order-picking system.

Carlos M. Taboada Rodriguez (2015) : As the supply chain get more complex, the variety of indicators and tools to measure warehouse performance has also increased. Furthermore, the metrics that are used for performance evaluation are assessed in different manners and hence there is not clear definition for some of these metrics. To address these issues, this literature review focuses on operational warehouse performance measurement, for which the warehouse managers need to carry out periodic analysis. Using the content analysis method, performance indicators are acquired from selected papers and are classified according to time, cost, and quality and productivity dimensions. The contributions of this literature review are as follows: we present a synthesis of the literature on operational warehouse performance, we provide the definitions for the performance indicator and a framework to demonstrate their boundaries and, finally, based on the literature analysis, we also provide some discussions on current trends in warehouses and propose future research directions on warehouse performance evaluation.

Ul-Ain et al. (2019): He proposed comprehensive knowledge about what has found in the domain of the B.I. system adoption, utilization and the Process of the success. A total of 111 peer-reviewed studies, covering mainly three categories which are adoption, utilization and success – published between 2000 and 2019, which were selected. The findings will present the research methods, underpinning theories and key factors employed to study B.I. system adoption, utilization and success. Besides, the review identified the key issues related to B.I. adoption, utilization and success and highlighted the areas that have attracted more or less attention. This study also suggests future directions for researchers and practitioners in terms of unexplored themes that may help organizations to obtain value from B.I. systems.

Shingo (1996): He contributed to the development of the Toyota Production System, he developed the Production Function Mechanism that proposes to explain how the production phenomenon happens. He indicated that, in the West, production was treated as a process of a sequence of operations. In the Production Function Mechanism, the concepts are directly related to a production analysis focus. A process analysis consists of an observation of the production flow that turn raw materials into final products. From this concept, the author highlights that the main analysis is the one associated with the process, because it follows the production object. The analysis of the operations comes later because it focuses on production subjects (operators and machines). When making this distinction, it is possible to perceive the relevance of materials handling.

Narimah kasim (2013): This paper an essential factor adversely affecting the performance of construction projects is the improper handling of materials during site activities. In addition, paper-based reports are mostly used to record and exchange information related to the material components within the supply chain, which is problematic and inefficient. Findings from a literature review and surveys showed that there is a lack of positive examples of such tools having been used effectively. Therefore, this research focused on the development of a materials tracking system that integrates RFID-based materials management with resources modelling to improve on-site materials tracking. Rapid prototyping was used to develop the system and testing of the system was carried out to examine the functionality and working appropriately. The proposed system is intended to promote the employment of RFID for automatic materials tracking with integration of resource modelling (Microsoft Office Project) in the project management system in order to establish which of the tagged components are required resources for certain project tasks. In conclusion, the system provides an automatic and easy tracking method for managing materials during materials delivery and inventory management processes in construction projects.

Madhavarao k. Mahindra (2005): In this report construction sector, material management plays major role for effective completion of the project. The cost of project increases when the planning, material identification system is poor. Shortage and deficiency in storage of material will cause losses in labor productivity. To maintain the effective management, to achieve the timely supply of materials and equipment and to reduce the cost of projects, a well-planned material management program is required. This improves planning, higher labor productivity, proper schedules and lower project costs. This paper explains about the techniques for material management for construction project by using S Curve, ABC Analysis for clear understanding the management of four important construction materials. By implementing these techniques, we have found an optimized way to reduce the cost of the project. Using S-curve technique, the variation in planned cost and actual cost is assessed. Quantity of materials procured for the project should be determined by the using A-B-C analysis.

Orji, Eric (2007) : This report is Construction material waste has both environmental and cost performance consequences. In this period of global economic recession and environmental awareness, it has become necessary to adopt effective waste reduction strategies in order to reduce the cost of construction projects as well as produce environment friendly projects. The aim of the study is to identify the effective waste reduction methods in building construction sites so that developers and construction professionals can key into the different methods in order to bring about qualitative project delivery and enhanced sustainable development. Reviewing some literatures related to the topic, the study identified the sources of construction wastes, the implications of wastes and ways of controlling them. The review equally revealed that consciousness of the implication of waste is very little appreciated considering the fact that the level of environmental awareness and willingness to pursue the goal of sustainability in the country is low. In view of this, the study concludes that efforts at adopting green practices may not advance so much, as such it recommends that the projects must include a waste management plan as part of the prerequisites for their approval.

Khyomesh v. Patel (2008) :

This paper is written to fill a void created by the absence of proper materials management on construction sites. To managing a productive and cost-efficient site efficient material management is very essential. Research has shown that construction materials and equipment may constitute more than 70% of the total cost for a typical construction project. Therefore, the proper management of this single largest component can improve the productivity and cost efficiency of a project and help ensure its timely completion. One of the major problems in delaying construction projects is poor materials and equipment management. This paper describes the main results of survey carried out in Ahmedabad that investigated the material management of 3 well known builders of Ahmedabad.

Taylor& Francis (2015):

According to them there are variety of tools and indicators to measure warehouse performance and also focuses on the performance indicators like time, cost and quality. The firm should manage the warehouse activities by planning and controlling by customers demand and high level service requirements and it should also adapt new approaches to reduce time in order to maintain warehouse performance.

V. Venkatraman (2015):

According to Venkatraman, the Indian logistics market has evolved from traditional to full- fledged logistics services provider. The change towards providing customized service or being outsourced emerged the concept of 3PL. 3PL can customized their operations based on market conditions and requirements of their clients.

Ruston et al (2000):

According to Rushton et al, the success of the warehouse or the position of the warehouse in supply chain depends upon the size, location, and capacity of the warehouse and the amount of inventory and inventory reduction are the key factors.

Tommy Blomqvist (2010):

According to Tommy Blomqvist, warehouse acts as a connection point or an end point in supply chain that links material flow between suppliers and the customers. In order to meet customer demands they have to customize their value proposition.

J. Gonda Tozay(2011):

According to Gonda Tozay, manufacturing firm must make a key decision on the location and design of warehouse and quantitative and qualitative factor. It also increase corporate profit and customer satisfaction based on the location of the warehouse.

Dr. Vipul Chalotra (2013):

According to Vipul Chalotra, warehouse provides a incessant supply of goods and services in bigger markets and also factors affecting the warehouse by poor warehouse layout, improper demand forecasting.

Bramel&Simchi-Levi, (1997):

Today's fierce competitive global markets, short product life cycles, and increased customer expectations have forced organizations to recognize the vital importance of investing and focusing on their logistics systems in terms of gaining competitive advantages.

Lowe (2002) defines logistics as planning, implementing, and controlling of transportation activities and storage of goods; including services with related information, from the point of origin to point of use to meet customer requirements.

Jonsson and Mattsson (2005) exemplify logistics as an open system which has exchanges with its surroundings, and in order to perform these exchanges a logistics system should manage three flows; material, information and monetary.

Harrison and Hoek (2011), material flow is the transportation of physical goods from initial source to customer, while information flow is generating data, so that material flow can be accurately controlled and planned. The definitions of logistics involve activities that ensure the necessary material is available at the right place and at the right time.

Gourdin (2001) identifies some of these activities and states that a logistics system can consist of several different functional elements, such as storage and material handling, transportation, information processing, demand forecasting, production planning, and so forth.

Christopher (2005) introduces a total system viewpoint, which consists of different sub- systems that shares the same goal; satisfying the needs of the next customer in the supply chain. Each sub-system; material supply, production, and distribution monitor and control the material flow by various value-adding activities.

Goldsby and Martichenko (2005) shed light on the importance of eliminating waste regarding to accomplish this goal. Wastes can be found in every step of the logistics activities, since most of the organizations have a natural tendency to create them. By process mapping through the supply chain, it is possible to differentiate value adding and non-value adding activities and; thereby, reduce the variation while increasing speed and magnitude of the chain. They denote logistics wastes as following; inventory, transportation, space and facilities, time, packaging, administration, and knowledge.

Harrison and Hoek (2011) focused on logistics wastes from lean point of view such as overproduction, unnecessary motion, defects etc. Despite different definitions of wastes, logisticians can draw from these approaches to design their own, tailored solutions in terms of eliminating waste through the supply chain. The challenges in logistics share similar traits, notwithstanding the scale of the focus area, more explicitly company's internal logistics systems have alike characteristics; and therefore, alike challenges as its external logistics systems. The heart of logistics is managing inventory levels; in global supply chains the challenge is decreasing inventory levels at retailers and warehouses, while in company-scale it

is lowering buffer levels by decreasing variation in the system; in any term, from customer demand to supplier delivery, and attaining a smooth, just-in-time material flow.

Meyers (1993) emphasizes the importance of efficient Material Handling Systems (MHS) for companies. By assuring right product to the right place at the right time in the right quantity and condition, companies not only can decrease their operational costs, but also can eliminate/decrease unnecessary buffers within the shop floor. Nevertheless, material and information flow are highly intertwined in logistics, and for that reason information link is the keystone for efficient MHS.

Pyke & Cohen, (1990): Thereupon, organizations should be aware of importance of the local information, which has tremendous impact on the companies' business processes both inside as well as outside. On the other hand, the necessary parts will not be delivered as long as the request has not been sent; which increases the space efficiency. They state that it is difficult to imagine a pure pull-based material handling system

Bloss and Pillai (2001) state that rapid information sharing has a huge impact on both delivery performance and buffer levels. Moreover, in a pull-based material handling system local information provides ability to pull the necessary parts; and thereby, avoid the undesirable activities in the shop floor. They describe standardized work as a detailed, documented and visual system, which has been developed with contribution from involved employees. Furthermore, standardized work method has standard document, standard work sheet, time observation sheet, capacity sheet, and etc.

Ghrayeb et al., (2009): A hybrid pull/push system (Figure 5.4) will be more efficient and effective. Combining these two systems makes it possible that they cover each other's weaknesses and strengths, which will lead to a more beneficial system with higher performance. It is important to realize that to get the best result out of this system, JIT concept is vital. The combination of hybrid push/pull system and JIT concept will enable companies to keep the buffer levels low, while reacting fast to demand on the shop floor.

Soni, (1992), Just-in-time concept eliminates the variability in processes and ensures high quality and reliability in delivery performance. Moreover, JIT concept visualises the ineffectiveness and inefficiency within the processes and increases their quality by eliminating all kinds of wastes.

Whitemore, (2008), As Taiichi Ohno pointed out no improvement can be achieved without standard. If everyone would perform the job in his or her own way the outcome would be unpredictable and as a result the lean principles such as pull system would not be applicable. With standard methods the abnormality in the systems and processes becomes more visible, variation will be decreased and unnecessary

movement gets eliminated.

Hall et al., (2001), The last piece that would complete this system is the actual physical movement of these parts to related stations. At the present time, many companies are still using forklifts to supply parts from warehouses to production lines or between the lines, but it has been realised that this approach is neither safe nor beneficial any longer. The challenge is to make material handling system more flexible, efficient, effective, and safer in order to achieve higher delivery performance and lower buffer levels. To accomplish all the goals mentioned above, Automated Guided Vehicle (AGV) system was suggested. The author defines the AGV system as a main tool in point-of-use delivery and storage in manufacturing plants. He continues that the advantages with this system are flexibility, space utilization, safety, and overall operation cost.

Hassan, (2010), A well-structured material handling system would help manufacturing companies to increase their productivity, improve quality of the products, and above all reduce operation costs to be able to reduce operation costs in a MHS, it is vital to define the cost sources.

Beason (1999) categorizes them as damaged products, damaged trailers, high labour force, long travel distances, and multiple product handling. Furthermore, by using a predefined and well-equipped travelling path the total driving distance will be decreased, and many accidents and unnecessary activities can be avoided. Another option for reducing manual material handling is automatically loading and unloading parts or finished goods on the material carriers at the stations. In that case, both time and labour force could be used more effectively. In the final analysis, by implementing Milkrun and AGV system companies can increase safety, cleanliness, efficiency, eliminate product damage, and lower maintenance costs comparing to forklifts.

Castenholz (1949) points out that in many cases the actual cost of material handling is buried under labour costs. However, for cost reduction several factors such as product type, distance between stations, delivery frequency and quantity, and storage locations are prominent. These factors will not only result in elimination of direct labour, but also will increase the productive time for other employees.

Tompkins et al., (1996), The main purpose of material handling systems is to deliver the right material in the right quantity to the right location and at the right time, to fulfil this aim the system needs to be equipped with well-structured and well-defined processes and guidelines.

Attaran, (2003), the suggestion is to integrate information technology with production processes in order to facilitate communication between different sections and update operators with the latest changes about the schedule. Information technology provides data, information, and knowledge to organizations, individuals, and processes; and for that purpose it uses different tools such as computers, software applications, and telecommunications.

Michel, (2006), To facilitate the information sharing process various techniques and tools can be used. In this thesis project e-kanban, wireless scanner and RFID technologies, which could make the information sharing more efficient, were suggested. Besides the ability to eliminate massive paperwork on the shop floor, e-kanban has positive effect on inventory reduction, on-time delivery and visibility. But the most compelling evidence is that embedding e-kanban into ERP/SAP system in the company, information sharing capability might be enhanced revolutionary.

Labar, (1995), Employee injuries and product damages related to MHS in manufacturing plants are tremendous and bring huge compensation costs to companies. underlines that the improvements in MHSs are required to focus two main areas:

- Employee involvement in identifying and modifying the potential tasks with high safety risk; and
- Introducing new equipment and procedures that improves the safety and ergonomics on the shop floor.

Without their contribution the success of preventing the injury and product damages are near to zero

Nash, (2002), These issues arise basically from employee actions in different material handling operations and incompatible material handling equipment; notwithstanding, new computer-driven devices give a hope to resolve these problems and improve ergonomics in MHS.

Figura (1996) states that product damages and employee injuries could be easily controlled and even eliminated completely with very low prices comparing to how much companies are paying for these issues in compensation.

Mattsson (2012) defines in-plant MHS as a system that has material and immaterial exchanges inside a factory where different departments and features are involved and working together to create value for the end-users. He points out that despite suppliers and customers are not involved in an in-house MHS, they do belong to the system's environment and can have huge impacts on its effectiveness.

Stock & Lambert, (2001): In the light of definitions above, it can be stated that internal MHS is a physical process inside of a factory between different departments with material and non-material exchanges.

Groover (2001) highlights that despite its importance, materials handling is a topic that frequently is treated superficially by the companies. However, other authors have perceived its relevance.

Rumelt, (2002): Production efficiency to a large extent depends on the three factors of inputs; i.e., manpower, material and equipment. As such, customer demand can be met when the mentioned input factors are combined in a balanced way. With regards to material input factor, material handling can be described as that part of manufacturing dealing with the initial planning, procurement, handling, storing and distribution of material for manufacturing.

Lee and Dobler (2007), have defined material handling as all those functions and tasks that relate to the movement of material into the company and the administration of the same

up to the time of use in the manufacturing process. Materials handling includes all the activities with regards to acquisition, handling, control, and movement of material used in manufacturing.

Kaipia (2009) stated that physical material handling system improvement is not the ultimate solution to the problem, but that companies should also consider the application of information sharing system that improves the flow of material. This is because material flow that is flexible will require to be updated frequently by information systems that are accurate and reliable. Without such, accumulation of excess work in process will begin. As such, it safely to say that one of the conditions that is required to have an efficient material handling system is having a strong information link between areas of material supply and areas where material is used.

Fitzpatrick & Ali (2010) postulate that there is limited literature that focuses on models which looks into material handling system problems from a broader view with an aim of improving the delivery performance of the system.

Domingo et al., (2007), Despite of the significance of selecting a correct material handling system been made in literature, most of the frameworks of internal material handling system dwells on the processes of equipment selection and scheduling of the systems.

Sanchez and Perez, (2001), Transporting and collecting material is a major cause of waste formation in a production area. Improving internal material handling by using just in time (JIT) leads to removal or reduction of the work in process inventory levels.

Sahay, Ramneesh Mohan, An entire review on 3PL applicability in India and to set up the effect of use of outsider logistics benefits on business comes about. Starts by investigating plus examinations did on 3PL practices and working up an exploration system. The factors to the examination system portray the association particular highlights for instance, the level of usage of 3PL administration, the reasons behind outsourcing and the impact of utilization of 3PL administration. Yield limit of upcoming use.

Chittratanawat and Noble (1999), material handling systems are fundamental factors for any problem related to manufacturing such as inventory levels, scheduling and production planning, delivery performance. Hence, MHS should be the first place to investigate for reducing operational costs and improving production systems. Typical factors that can affect design of MHSs are cost, distance and material flow; however; distance and material flow are key elements for pre-design, while cost is taken into consideration during selecting between design options.

CHAPTER 3

CHAPTER 3

RESEARCH METHODOLOGY

3.1 METHODOLOGY

- Research methodology is the specific procedures or techniques used to identify, select, process, and analyze information about a topic. In a research paper, the methodology section allows the reader to critically evaluate a study's overall validity and reliability.

3.1 RESEARCH DESIGN:

- The research design is the basic framework or a plan for a study that guides the collection of data and analysis of data. In this survey and the design used is Descriptive Research Design.
- It includes surveys and fact-finding enquiries of different kinds.
- The major purpose of descriptive research is description of state of affairs, as it exists at present. The survey used members of the population as the main source of data which it used in determining the effect of the variables on the population.
- The descriptive survey is designed to obtain precise information concerning the status of phenomenon.

3.2 SOURCES OF DATA COLLECTION

Data collection method is the backbone of the research design. The source of data utilized for analysis and report preparation is both primary and secondary.

Primary data

Primary data was collected through the questionnaire was given only to the employees who were willing to share their views.

Secondary data: The main source of secondary data was internet.

3.3 SAMPLING TECHNIQUE:

The Convenience Sampling Method is used for the survey. Convenience sampling is the crudest type of non-random sampling. This involves selecting the most convenient group available. Due to the small number of the entire study population and its easy accessibility, the census method was employed. The census method is designed to collect information from each and every member of the population. It enables the researcher to gather sufficient information to assist in analysis and arriving at accurate results.

Sampling Unit:

The employees who are working in VKS Travels and overseas consultant were met and the survey was made based on their response.

Sampling Area:

The sampling area considered for the current research was warehouse of VKS Travels and overseas consultant in Chennai.

Sample Size:

135 employees were surveyed during the study period.

Questionnaire Design

Questionnaires were used as the main instruments of data collection in the study. The questionnaire was close-ended.

As multi- option is given to the employees for their convenience. 5-point rating scale is used in the study.

The use of the close ended question was aimed at controlling responses that gave rise for quantitative analysis.

There were two main sections of questions; General information and Job information.

3.4 STATISTICAL TOOLS:

The analytical tools used are spss for testing the hypothesis, chi square in spss tool and one-way annova in spss too.

PERCENTAGE ANALYSIS:

- Simple percentage analysis refers to a special kind of ratio in making comparison between two or more data and to describe relations between the data.
- Percentage can also be used to compare the relative terms, the distribution of two or more series of data
- $$\text{Simple percentage} = \frac{\text{No. Of respondents}}{\text{Total no. of respondent}} \times 100$$

CHI SQUARE ANALYSIS:

- A chi-squared test is a statistical hypothesis test used in the analysis of contingency tables when the sample sizes are large. In simpler terms, this test is primarily used to examine whether two categorical variables are independent in influencing the test statistic

ONE WAY ANNOVA ANALYSIS:

- One-way analysis of variance is a technique that can be used to compare whether two sample's means are significantly different or not.

CORRELATION ANALYSIS:

Correlation or dependence is any statistical relationship, whether causal or not, between two random variables or bivariate data.

CHAPTER 4

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

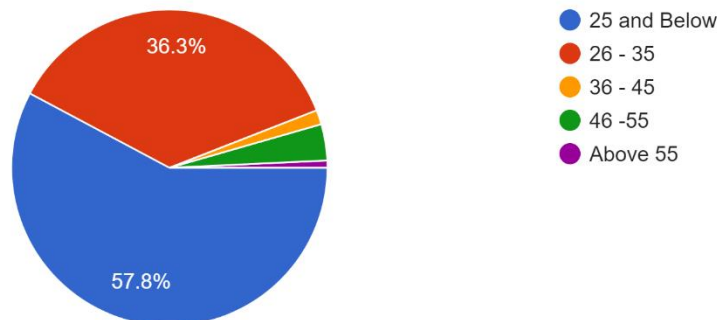
4.1 AGE OF THE RESPONDENTS

S. No.	Age Group	No. of Respondents	% Of Respondents
1	Under 25	78	57
2	26 - 35	49	36
3	36 - 45	2	1
4	45 - 55	5	4
5	Above 55	2	2
	Total	136	100

The following chart shows the data what has been obtained from the respondents in the pictorial format.

Age

135 responses



4.1: AGE OF THE RESPONDENTS

Interpretation

The above table shows the age group of the respondents. About 57 % of the respondents are below 25 years of age, about 49% of the respondent are between 26 to 35 years of age, 2% of the respondents are between 36 to 45 years of age, 2% of the respondents are between 46 to 55 years of age and about 2% of the respondent are above 55 years of age.

Inference

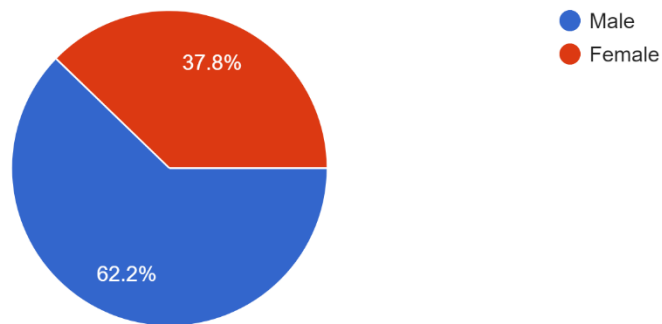
Majority (57%) of the respondents are age between under 25 years.

4.2 GENDER OF THE RESPONDENTS

S. No.	Gender	No. of Respondents	% Of Respondents
1	Male	84	62
2	Female	52	38
	Total	136	100

The following chart shows the data what has been obtained from the respondents in the pictorial format.

Gender
135 responses



4.2: GENDER OF THE RESPONDENTS

Interpretation

The above table shows the gender of the respondents. About 62% of the respondents are male and about 38% of the respondents are female.

Inference

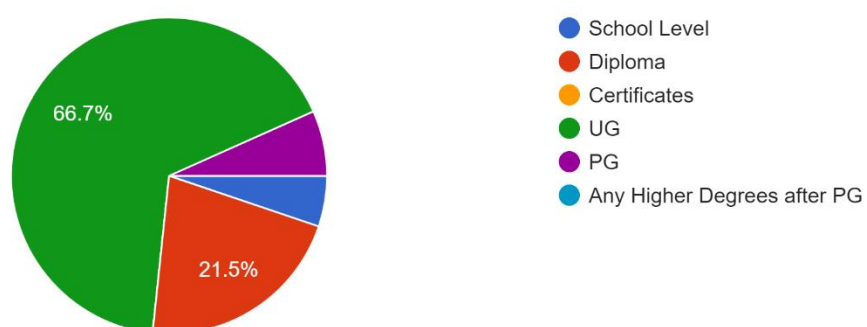
Majority (62 %) of the respondents are male .

4.3 EDUCATION QUALIFICATION OF THE RESPONDENTS

S. No.	Education qualification	No. of Respondents	% Of Respondents
1	UG	90	66
2	PG	9	6
3	Certificate	1	1
4	Diploma	29	21
5	School level	7	5
6	Any higher degree after PG	-	-
	Total	136	100

Here the respondents were asked to express their education level. The following chart shows the data what has been obtained from the respondents in the pictorial format.

Educational Qualification
135 responses



4.3: EDUCATION QUALIFICATION OF THE RESPONDENTS

Interpretation

The above table shows the education details of the respondents. About 66% of the respondents are UG graduates, about 9% of the respondents are PG graduates, about 29% of the respondents have completed diploma course, about 7% of the respondents have completed school level

Inference

Majority (66 %) of the respondents are UG Education Qualification.

4.4 EXPERIENCE OF THE RESPONDENTS

S. No.	Experience	No. of Respondents	% Of Respondents
1	Below 1 year	11	8
2	1 – 7 years	119	88
3	8 – 14 years	3	22
4	15 – 20 years	3	8
5	More than 20 years	-	-
	Total	136	126

Here the respondents were asked to express the years of work experience of the respondents. The following chart shows the data what has been obtained from the respondents in the pictorial format.

Experience
135 responses

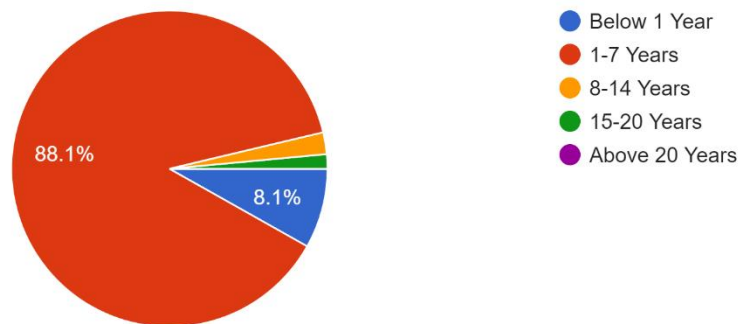


CHART 4.4: EXPERIENCE OF THE RESPONDENTS

Interpretation

The above table shows the years of work experience of the respondent. About 88 % of the respondents has a work experience of below 1 year, about 11% of the respondents has a work experience for 1 – 7 years, about 13% of the respondents has a work experience for 8 – 14years,about 2% of the respondents has a work experience for 15 - 20 years and 0% of the respondentshas a work experience for more than 20 years.

Inference

Majority (88%) of the respondents are 1-7 years' experience .

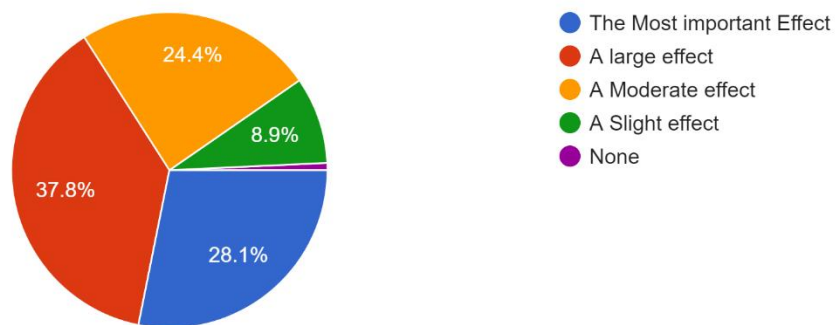
4.5 IMPACT OF STRATEGIC OBJECTIVES ON WAREHOUSING

S. No.	Impact of strategic objectives on warehousing	No. of Respondents	% Of Respondents
1	Most important effect	38	28
2	Large effect	51	37
3	Moderate effect	33	24
4	Slight effect	12	8
5	None	2	2
	Total	136	100

Here the respondents were asked to express the impact of strategic objectives on warehousing. The following chart shows the data what has been obtained from the respondents in the pictorial format.

Do Strategic objectives have impact on the warehousing ?

135 responses



4.5: IMPACT OF STRATEGIC OBJECTIVES ON WAREHOUSING

Interpretation

The above table shows the impact of strategic objectives on warehousing. About 38% of the respondents feel that the impact of strategic objectives have a more important effect on warehousing, about 51% of the respondents feel that the impact of strategic objectives have a large effect on warehousing, about 24% of the respondents feel that the impact of strategic objectives have a moderate effect on warehousing, about 8% of the respondents feel that the impact of strategic objectives have a slight effect on warehousing and about 22% of the respondents feel that the impact of strategic objectives have no effect on warehousing.

Inference

Majority (37%) of the respondents are slight effects.

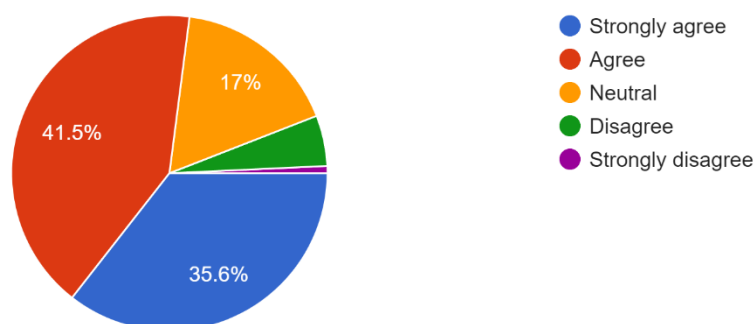
4.6 EMPLOYER CHECKS THE WAREHOUSE FUNCTION AND EFFECTIVENESS OF THE TECHNICAL PROTECTIVE MEASURES PERIODICALLY

S. No.	Employer checks the warehouse functions and the effectiveness of the technical protective measures periodically	No. of Respondents	% Of Respondents
1	Strongly agree	20	13
2	Agree	36	24
3	Neutral	49	33
4	Disagree	33	22
5	Strongly disagree	12	8
	Total	150	100

Here the respondents were asked to express their view regarding whether the employer checks the warehouse functions and the effectiveness of the technical protective measures periodically. The following chart shows the data what has been obtained from the respondents in the pictorial format.

The Employer checks the warehouse function and effectiveness of the technical protective measures periodically

135 responses



4.6: EMPLOYER CHECKS THE WAREHOUSE FUNCTIONS AND THE EFFECTIVENESS OF THE TECHNICAL PROTECTIVE MEASURES PERIODICALLY

Interpretation

The above table shows the respondent's view regarding whether the employer checks the warehouse functions and the effectiveness of the technical protective measures periodically. About 35% of the respondents strongly agreed that the employer checks the warehouse functions and the effectiveness of the technical protective measures periodically, about 41% of the respondents agreed that the employer checks the warehouse functions and the effectiveness of the technical protective measures periodically, about 17% of the respondents are in neutral that the employer checks the warehouse functions and the effectiveness of the technical protective measures periodically, about 5% of the respondents disagreed that the employer checks the warehouse functions and the effectiveness of the technical protective measures periodically and 1% of the respondents strongly disagree that the employer checks the warehouse functions and the effectiveness of the technical protective measures periodically.

Inference

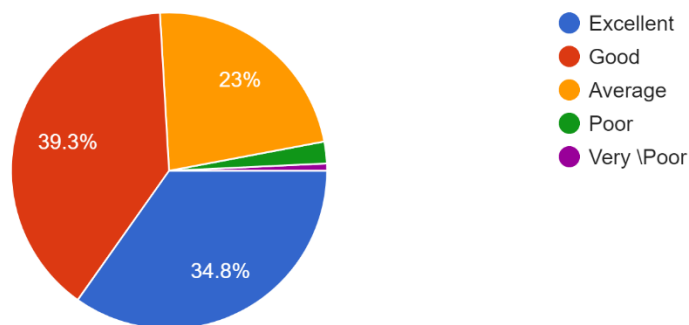
Majority (41 %) of the respondents are agree.

4.7 CUSTOMERS SATISFACTION WITH WAREHOUSING PRACTICES OF VKS TRAVELS OFFERING

S. No.	Customers satisfaction with warehousing practices of VKStravels offerings	No. of Respondents	% Of Respondents
1	Excellent	47	34
2	Good	53	39
3	Average	31	23
4	Poor	3	2
5	Very poor	1	1
	Total	135	100

Here the respondents were asked to express their view regarding the satisfaction level of the customers regarding the warehouse practices of VKS travels offerings. The following chart shows the data what has been obtained from the respondents in the pictorial format.

Customers satisfaction with warehousing practices of VKS travels offering
135 responses



4.7: CUSTOMERS SATISFACTION WITH WAREHOUSING PRACTICES OF VKS TRAVELS OFFERINGS

Interpretation

The above table shows the respondent's view regarding the satisfaction level of the customers regarding the warehouse practices of VKS travels offerings. About 34% of the respondents stated that the warehouse practices of VKS travels offerings are excellent, about 39% of the respondents have stated that the warehouse practices of VKS travels offerings are good, about 31% of the respondents have stated that the warehouse practices of VKS travels offerings are average, about 3% of the respondents have stated that the warehouse practices of VKS travels offerings are poor and none of the respondents have stated that the warehouse practices of VKS travels offerings are very poor.

Inference

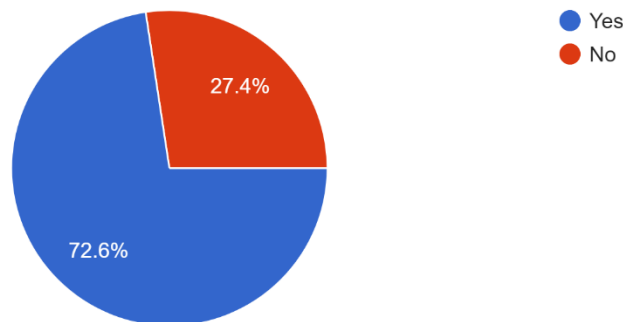
Majority (39 %) of the respondents are good .

4.8 COMPANY PURSUES BEST WAREHOUSE MANAGEMENT PRACTICES

S. No.	Company pursues best warehouse management practices	No. of Respondents	% Of Respondents
1	Yes	98	72
2	No	38	28
	Total	136	100

Here the respondents were asked to express their view regarding whether the VKS travels pursues the best warehouse management practices. The following chart shows the data what has been obtained from the respondents in the pictorial format.

Is Company pursuing best warehouse management practices
135 responses



4.8: COMPANY PURSUES BEST WAREHOUSE MANAGEMENT PRACTICES

Interpretation

The above table shows the respondent's view regarding whether the VKS travels pursues the best warehouse management practices. About 92% of the respondents believe that the VKS travels pursues the best warehouse management practices and about 38% of the respondents believe that the VKS travels doesn't pursues the best warehouse management practices.

Inference

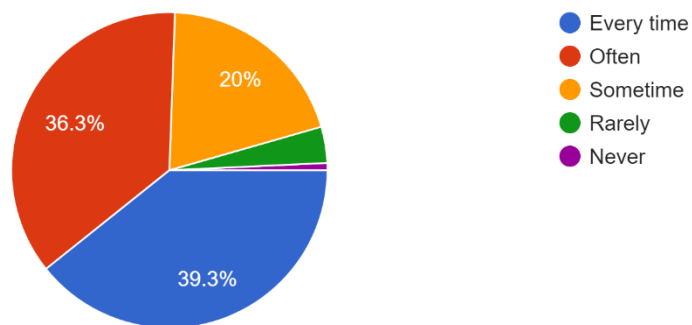
Majority (72 %) of the respondents are age between under 25 years.

4.9 UNDER ENVIRONMENTAL UNCERTAINTIES WILL COMPANY'S ENVIRONMENT FACTOR AFFECT WAREHOUSE MANAGEMENT PRACTICES

S. No.	Under environmental uncertainties will company's environment factor affect warehouse management practices	No. of Respondents	% Of Respondents
1	Every time	53	39
2	Often	49	36
3	Sometime	27	20
4	Rarely	5	3
5	Never	2	2
	Total	136	100

Here the respondents were asked to express their view regarding whether the company's environment factor affect warehouse management practices under environmental uncertainties. The following chart shows the data what has been obtained from the respondents in the pictorial format.

Under environmental uncertainties will company's environment factor affect warehouse management practices
135 responses



4.9: UNDER ENVIRONMENTAL UNCERTAINTIES WILL COMPANY'S ENVIRONMENT FACTOR AFFECT WAREHOUSE MANAGEMENT PRACTICES

Interpretation

The above table shows the respondent's view regarding whether the company's environment factor affect warehouse management practices under environmental uncertainties. About 53% of the respondents have stated that the company's environment factor affect warehouse management practices every time under environmental uncertainties, about 49% of the respondents have stated that the company's environment factor affect warehouse management practices often under environmental uncertainties, about 20% of the respondents have stated that the company's environment factor affect warehouse management practices sometime under environmental uncertainties, about 5% of the respondents have stated that the company's environment factor affect warehouse management practices rarely under environmental uncertainties and about 2% of the respondents have stated that the company's environment factor never affect the warehouse management practices under environmental uncertainties.

Inference

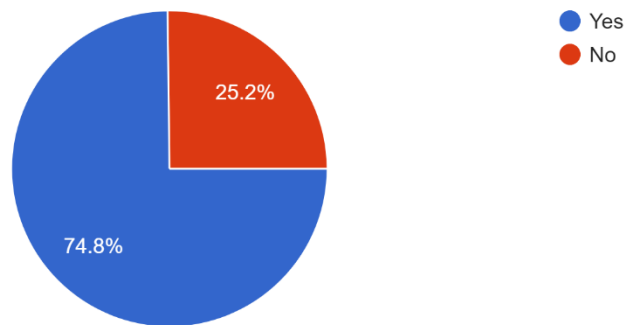
Majority (39%) of the respondents are everytime.

4.10 COMPANY ENSURE THE EFFICIENT SHIPMENT OF THE PRODUCT/GOODS

S. No.	Company ensure the efficient shipment of the product / goods	No. of Respondents	% Of Respondents
1	Yes	101	74
2	No	35	26
	Total	136	100

Here the respondents were asked to express their view regarding whether the company ensure efficient shipment of the product/ goods. The following chart shows the data what has been obtained from the respondents in the pictorial format.

Is company pursuing best warehouse management practices
135 responses



4.10: COMPANY ENSURE THE EFFICIENT SHIPMENT OF THE PRODUCT / GOODS

Interpretation

The above table shows the respondent's view regarding whether the company ensure efficient shipment of the product/ goods. About 74% of the respondents stated that the company ensure efficient shipment of the product/ goods, about 25% of the respondents stated that the company doesn't ensure efficient shipment of the product.

Inference

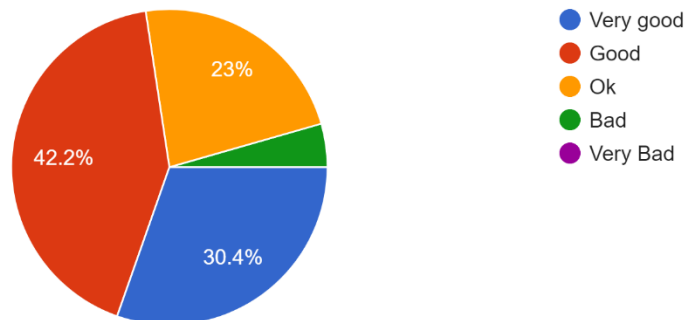
Majority (74%) of the respondents are yes.

4.11 COMPANY'S WAREHOUSE MAINTAIN THE QUALITY OF THE GOODS

S. No.	Company's warehouse maintains the quality of the goods	No. of Respondents	% Of Respondents
1	Very good	41	30
2	Good	57	42
3	Ok	31	23
4	Bad	6	4
5	Very bad	1	1
	Total	136	100

Here the respondents were asked to express their view regarding whether the company maintains the quality of the goods kept in the warehouse. The following chart shows the data what has been obtained from the respondents in the pictorial format.

How does the company's warehouse maintain the quality of the goods
135 responses



4.11: COMPANY'S WAREHOUSE MAINTAIN THE QUALITY OF THE GOODS

Interpretation

The above table shows the respondent's view regarding whether the company maintains the quality of the goods kept in the warehouse. About 30% of the respondents stated that the company warehouse maintains a very good quality of the goods, about 42% of the respondents stated that the company warehouse maintains a good quality of the goods, about 23% of the respondents stated that the company warehouse maintains a moderate quality of the goods, about 4% of the respondents stated that the company warehouse maintains a bad quality of the goods and about 1% of the respondents stated that the company warehouse maintains a very bad quality of the goods.

Inference

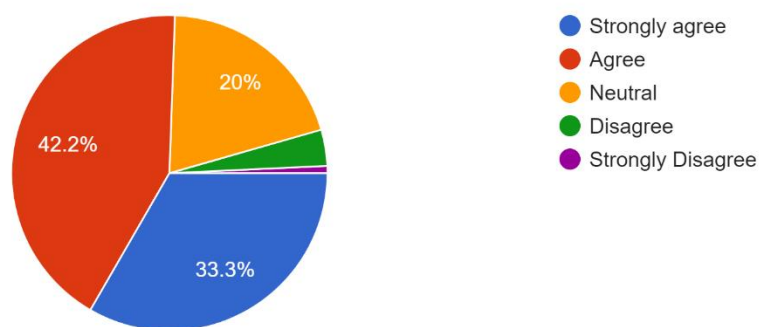
Majority (42%) of the respondents are good.

4.12 COMPANY'S WAREHOUSING FACILITIES ARE CAPABLE OF KEEPING THE GOODS/ PRODUCTS LONG ENOUGH

S. No.	Company's warehousing facilities are capable of keeping the goods/products long enough	No. of Respondents	% Of Respondents
1	Strongly agree	45	33
2	Agree	57	42
3	Neutral	27	20
4	Disagree	5	3
5	Strongly disagree	2	2
	Total	136	100

Here the respondents were asked to express their view regarding whether the company's warehousing facilities are capable of keeping the goods/products long enough. The following chart shows the data what has been obtained from the respondents in the pictorial format.

Company's warehousing facilities are capable of keeping the goods/ products long enough
135 responses



4.12: COMPANY'S WAREHOUSING FACILITIES ARE CAPABLE OF KEEPING THE GOODS/PRODUCTS LONG ENOUGH

Interpretation

The above table shows the respondent's view regarding whether the company's warehousing facilities are capable of keeping the goods/products long enough. About 33% of the respondents have strongly agreed that the company's warehousing facilities are capable of keeping the goods/products long enough, about 42% of the respondents have agreed that the company's warehousing facilities are capable of keeping the goods/products long enough, about 20% of the respondents are in neutral that the company's warehousing facilities are capable of keeping the goods/products long enough, about 5% of the respondents have disagreed that the company's warehousing facilities are capable of keeping the goods/products long enough and about 2% of the respondents have strongly disagreed that the company's warehousing facilities are capable of keeping the goods/products long enough.

Inference

Majority (42%) of the respondents are agree.

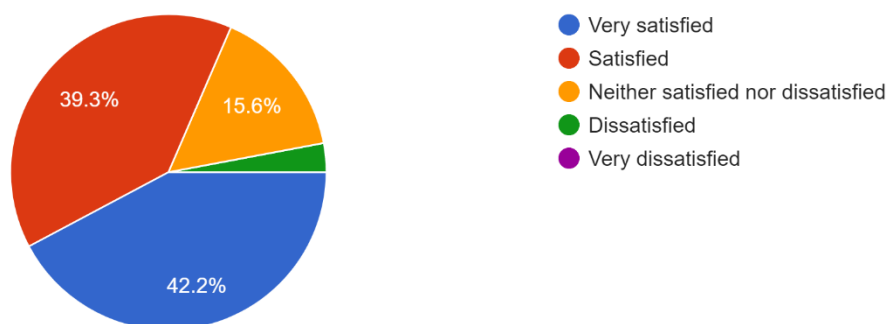
4.13 SATISFACTION LEVEL WITH THE COMPANY KEEPING UP-TO- DATE INVENTORY CONTROL AND TRACKING SYSTEM TO LOCATE CONTAINERS/CARGO

S. No.	Satisfaction level with the company keeping up-to-date inventory control and tracking system to locate containers/cargo	No. of Respondents	% Of Respondents
1	Very satisfied	57	42
2	Satisfied	53	39
3	Neither satisfied not dissatisfied	21	15
4	Dissatisfied	4	3
5	Very dissatisfied	1	1
	Total	136	100

Here the respondents were asked to express their view regarding the satisfaction level with the company keeping up-to-date inventory control and tracking system to locate containers/cargo. The following chart shows the data what has been obtained from the respondents in the pictorial format.

How satisfied are you with the company keeping up-to-date inventory control and tracking system to locate containers/cargo

135 responses



4.13: SATISFACTION LEVEL WITH THE COMPANY KEEPING UP-TO-DATE INVENTORY CONTROL AND TRACKING SYSTEM TO LOCATE CONTAINERS/CARGO

Interpretation

The above table shows the respondent's view regarding the satisfaction level with the company keeping up-to-date inventory control and tracking system to locate containers/cargo. About 42% of the respondents are very satisfied with the company keeping up-to-date inventory control and tracking system to locate containers/cargo, about 39% of the respondents are satisfied with the company keeping up-to-date inventory control and tracking system to locate containers/cargo, about 21% of the respondents are neither satisfied nor dissatisfied with the company keeping up-to-date inventory control and tracking system to locate containers/cargo, about 4% of the respondents are dissatisfied with the company keeping up-to-date inventory control and tracking system to locate containers/cargo and about 0% of the respondents are very dissatisfied with the company keeping up-to-date inventory control and tracking system to locate containers/cargo.

Inference

Majority (42%) of the respondents are Very satisfied.

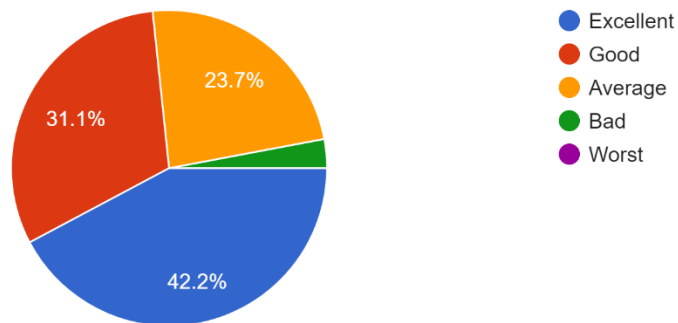
4.14 RATE THE COMPANY USE OF CONVEYOR SYSTEM IN MATERIAL HANDLING

S. No.	Rate the company use of conveyor system in material handling	No. of Respondents	% Of Respondents
1	Excellent	57	42
2	Good	42	31
3	Average	32	23
4	Bad	4	3
5	Worst	1	1
	Total	136	100

Here the respondents were asked to express their view regarding the rating given by the respondents on how the company use its conveyor system in material handling. The following chart shows the data what has been obtained from the respondents in the pictorial format

How do you rate the Company uses of conveyor system in material handling

135 responses



4.14: RATE THE COMPANY USE OF CONVEYOR SYSTEM IN MATERIAL HANDLING

Interpretation

The above table shows the respondent's view regarding the rating given by the respondents on how the company use its conveyor system in material handling. About 42% of the respondents have rated excellent for the company's use of its conveyor system in material handling, about 31% of the respondents have rated good for the company's use of its conveyor system in material handling, about 23% of the respondents have rated average for the company's use of its conveyor system in material handling, about 4% of the respondents have rated bad for the company's use of its conveyor system in material handling and about 1% of the respondents have rated worst for the company's use of its conveyor system in material handling.

Inference

Majority (42%) of the respondents are excellent.

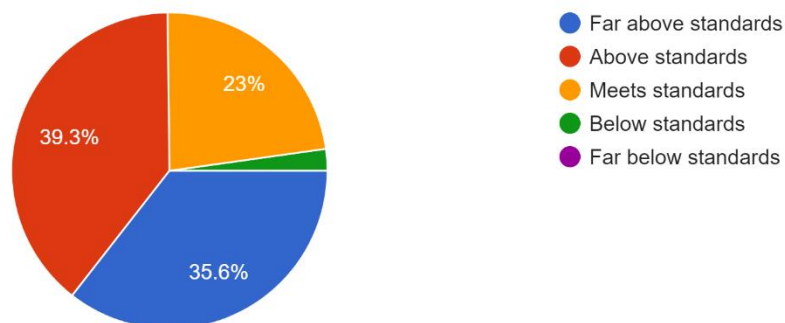
4.15 TRAINING IS PROVIDED TO THE EMPLOYEES IN MATERIALHANDLING

S. No.	Training is provided to theemployees in material handling	No. of Respondents	% Of Respondents
1	Far above standards	48	35
2	Above standards	53	39
3	Meets standards	31	23
4	Below standards	3	2
5	Far below standards	1	1
	Total	136	100

Here the respondents were asked to express their view regarding whether training is provided to the employees of the company in material handling. The following chart shows the data whathas been obtained from the respondents in the pictorial format.

How training is provided to the employees in material handling

135 responses



4.15: TRAINING IS PROVIDED TO THE EMPLOYEES IN MATERIAL HANDLING

Interpretation

The above table shows the respondent's view regarding whether training is provided to the employees of the company in material handling. About 35% of the respondents report that the training provided by the company in material handling is far above standards, about 39% of the respondents report that the training provided by the company in material handling is above standards, about 23% of the respondents report that the training provided by the company in material handling meets standards, about 3% of the respondents report that the training provided by the company in material handling is below standards and about 0% of the respondents report that the training provided by the company in material handling is far below standards.

Inference

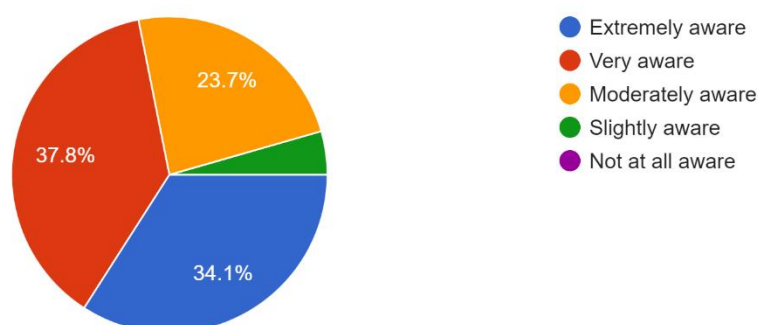
Majority (39%) of the respondents are Above Students.

4.16 AWARENESS OF THE FIRST-AID MEASURES INSIDE WAREHOUSE

S. No.	Awareness of the first-aid measures inside warehouse	No. of Respondents	% Of Respondents
1	Extremely aware	46	34
2	Very aware	51	37
3	Moderately aware	32	23
4	Slightly aware	6	6
5	Not at all aware	1	1
	Total	136	100

Here the respondents were asked to express their view regarding whether the employees are aware of the first-aid measures inside the warehouse. The following chart shows the data whathas been obtained from the respondents in the pictorial format.

Are you aware of the first-aid measures inside warehouse
135 responses



4.16: AWARENESS OF THE FIRST-AID MEASURES INSIDE WAREHOUSE

Interpretation

The above table shows the respondent's view regarding whether the employees are aware of the first-aid measures inside the warehouse. About 34% of the respondents feel that they are extremely aware of the first-aid measures inside the warehouse, about 37% of the respondents feel that they are very aware of the first-aid measures inside the warehouse, about 23% of the respondents feel that they are moderately aware of the first-aid measures inside the warehouse, about 6% of the respondents feel that they are slightly aware of the first-aid measures inside the warehouse and about 0% of the respondents feel that they are not at all aware of the first-aid measures inside the warehouse.

Inference

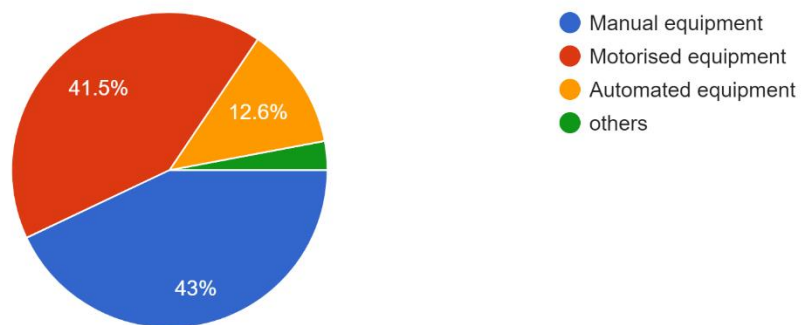
Majority (37%) of the respondents are very aware.

4.17 EQUIPMENT USED FOR MATERIAL HANDLING

S. No.	Equipment used for material handling	No. of Respondents	% Of Respondents
1	Manual equipment	58	43
2	Motorized equipment	56	41
3	Automated equipment	17	12
4	Others	4	4
	Total	135	100

Here the respondents were asked to express their view regarding what equipment are used by the company for material handling. The following chart shows the data what has been obtained from the respondents in the pictorial format.

Equipment used for material handling
135 responses



4.17: EQUIPMENT USED FOR MATERIAL HANDLING

Interpretation

The above table shows the respondent's view regarding what equipment are used by the company for material handling. About 43% of the respondents have reported that the company uses manual equipment for material handling, about 41% of the respondents have reported that the company uses motorized equipment for material handling, about 12% of the respondents have reported that the company uses automated equipment for material handling and about 4% of the respondents have reported that the company uses other equipment for material handling.

Inference

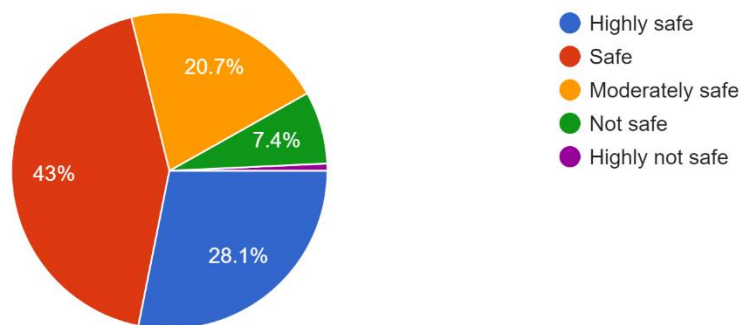
Majority (43%) of the respondents are manual equipment.

4.18 SAFETY IN MATERIAL HANDLING

S. No.	Safety in material handling	No. of Respondents	% Of Respondents
1	Highly safe	38	28
2	Safe	58	43
3	Moderately safe	28	20
4	Not safe	10	7
5	Highly not safe	2	1
	Total	135	100

Here the respondents were asked to express their view regarding whether safety is provided for the employees in material handling. The following chart shows the data what has been obtained from the respondents in the pictorial format.

Safety in material handling
135 responses



4.18: SAFETY IN MATERIAL HANDLING

Interpretation

The above table shows the respondent's view regarding whether safety is provided for the employees in material handling. About 28% of the respondents feel that there is high safety for them in material handling, about 43% of the respondents feel that there is safety for them in material handling, about 20% of the respondents feel that there is moderate safety for them in material handling, about 7% of the respondents feel that there is no safety for them in material handling and about 2% of the respondents feel that there is highly no safety for them in material handling.

Inference

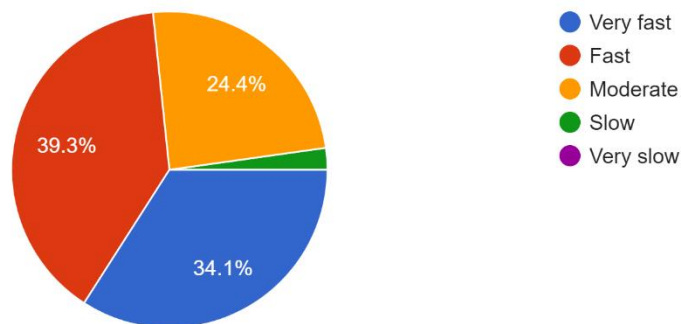
Majority (43%) of the respondents are safe.

4.19 MATERIAL HANDLING QUICKNESS

S. No.	Material handling quickness	No. of Respondents	% Of Respondents
1	Very fast	46	34
2	Fast	53	39
3	Moderate	33	24
4	Slow	3	3
5	Very slow	1	1
	Total	150	100

Here the respondents were asked to express their view regarding whether there is quickness in material handling. The following chart shows the data what has been obtained from the respondents in the pictorial format.

Material handling quickness
135 responses



4.19: MATERIAL HANDLING QUICKNESS

Interpretation

The above table shows the respondent's view regarding whether there is quickness in material handling. About 34% of the respondents feel that they are very fast in material handling, about 39% of the respondents feel that they are fast in material handling, about 24% of the respondents feel that they are moderate in quickness in material handling, about 3% of the respondents feel that they are slow in material handling and about 0% of the respondents feel that they are very slow in material handling.

Inference

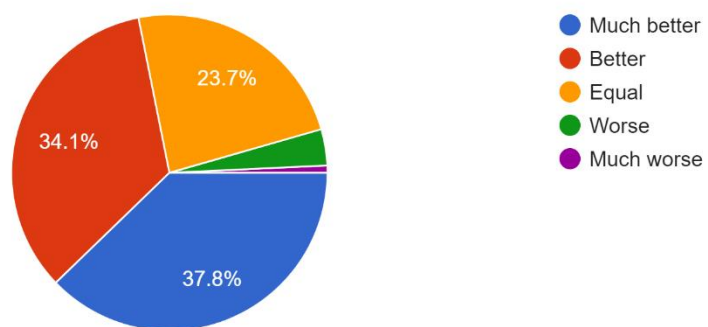
Majority (34%) of the respondents are very fast.

4.20 ASSESSMENT OF ROUTE EFFICIENCY

S. No.	Assessment of route efficiency	No. of Respondents	% Of Respondents
1	Much better	51	37
2	Better	46	34
3	Equal	32	23
4	Worse	5	3
5	Much worse	2	1
	Total	135	100

Here the respondents were asked to express their view regarding the assessment of the efficiency of the route. The following chart shows the data what has been obtained from the respondents in the pictorial format.

Route efficiency
135 responses



4.20: ASSESSMENT OF ROUTE EFFICIENCY

Interpretation

The above table shows the respondent's view regarding the assessment of the efficiency of the route. About 37% of the respondents feel that the efficiency of the route is much better, about 34% of the respondents feel that the efficiency of the route is better, about 23% of the respondents feel that the efficiency of the route is not better nor worse, about 5% of the respondents feel that the efficiency of the route is worse and about 1% of the respondents feel that the efficiency of the route is much worse.

Inference

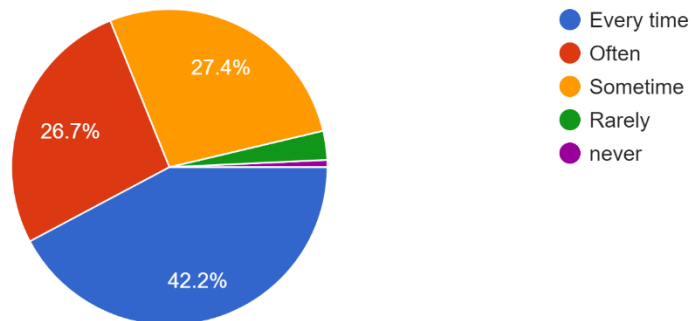
Majority (37.8) of the respondents are much better

4.21 OCCURRENCE OF MECHANICAL SHUTDOWNS

S. No.	Occurrence of mechanical shutdowns	No. of Respondents	% Of Respondents
1	Every time	57	42
2	Often	36	26
3	Sometime	37	27
4	Rarely	4	4
5	Never	1	1
	Total	135	100

Here the respondents were asked to express their view regarding the frequency of the occurrence of mechanical shutdowns. The following chart shows the data what has been obtained from the respondents in the pictorial format.

Occurrence of mechanical shutdowns
135 responses



4.21: OCCURRENCE OF MECHANICAL SHUTDOWNS

Interpretation

The above table shows the respondent's view regarding the frequency of the occurrence of mechanical shutdowns. About 21% of the respondents report that every time there is a mechanical shutdown, about 14% of the respondents report that often there is a mechanical shutdown, about 22% of the respondents report that sometime there is a mechanical shutdown, about 23% of the respondents report that rarely there is a mechanical shutdown and about 20% of the respondents report that there was never a mechanical shutdown.

Inference

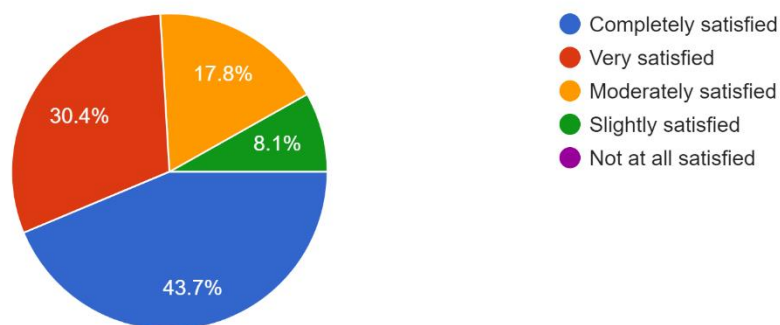
Majority (42%) of the respondents are every time.

4.22 ASSESSMENT OF OPERATOR'S AUTONOMY

S. No.	Assessment of Operator's autonomy	No. of Respondents	% Of Respondents
1	Much better	59	43
2	Better	41	30
3	Equal	24	17
4	Worse	4	8
5	Much worse	4	3
	Total	150	100

Here the respondents were asked to express their view regarding the assessment of operator's autonomy. The following chart shows the data what has been obtained from the respondents in the pictorial format.

Operator's autonomy
135 responses



4.22: ASSESSMENT OF OPERATOR'S AUTONOMY

Interpretation

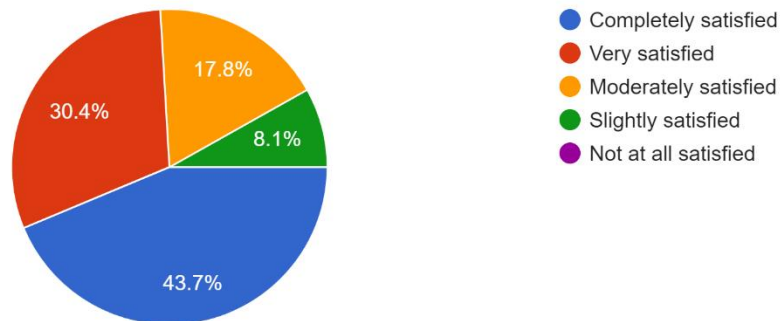
The above table shows the respondent's view regarding the assessment of operator's autonomy. About 35% of the respondents feel that the operator's autonomy is much better, about 42% of the respondents feel that the operator's autonomy is better, about 17% of the respondents feel that the operator's autonomy is not better nor worse, about 3% of the respondents feel that the operator's autonomy is worse and about 3% of the respondents feel that the operator's autonomy is much worse.

4.23 OPERATOR'S PERFORMANCE AND AVAILABILITY

S. No.	Operator's performance and availability	No. of Respondents	% Of Respondents
1	Completely satisfied	42	28
2	Very satisfied	47	31
3	Moderately satisfied	33	22
4	Slightly satisfied	27	18
5	Not at all satisfied	1	1
	Total	150	100

Here the respondents were asked to express their view regarding the operator's performance and availability. The following chart shows the data what has been obtained from the respondents in the pictorial format.

Operator's autonomy
135 responses



4.23: OPERATOR'S PERFORMANCE AND AVAILABILITY

Interpretation

The above table shows the respondent's view regarding the operator's performance and availability. About 28% of the respondents are completely satisfied with the operator's performance and availability, about 31% of the respondents are very satisfied with the operator's performance and availability, about 22% of the respondents are moderately satisfied with the operator's performance and availability, about 18% of the respondents are slightly satisfied with the operator's performance and availability and 1% of the respondents are not at all satisfied with the operator's performance and availability.

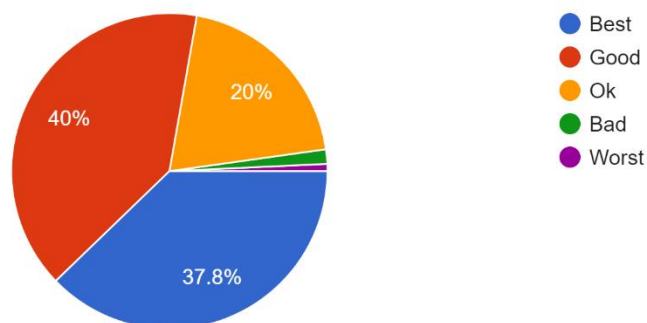
4.24 ASSESSMENT ON AGILITY OF OPERATIONS

S. No.	Assessment on agility of operations	No. of Respondents	% Of Respondents
1	Best	51	37
2	Good	54	40
3	Ok	27	20
4	Bad	2	1
5	Worst	1	1
	Total	135	100

Here the respondents were asked to express their view regarding the assessment on agility of operations in VKS travels. The following chart shows the data what has been obtained from the respondents in the pictorial format.

Agility of operations

135 responses



4.24: ASSESSMENT ON AGILITY OF OPERATIONS

Interpretation

The above table shows the respondent's view regarding the assessment on agility of operations in VKS travels. About 37% of the respondents feel that the agility of operations in VKS travels is at its best, about 40% of the respondents feel that the agility of operations in VKS travels is good, about 20% of the respondents feel that the agility of operations in VKS travels is average, about 2% of the respondents feel that the agility of operations in VKS travels is bad and 1% of the respondents feel that the agility of operations in VKS travels is at its worst.

Inference

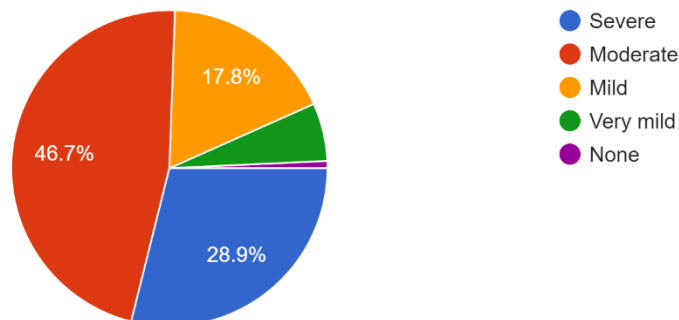
Majority (40%) of the respondents are good.

4.25 EVALUATION OF THE COST OF OPERATIONS

S. No.	Evaluation of the cost of operations	No. of Respondents	% Of Respondents
1	Severe	39	28
2	Moderate	63	47
3	Mild	24	18
4	Very mild	8	5
5	None	1	1
	Total	135	100

The following chart shows the data what has been obtained from the respondents in the pictorial format.

Evaluation of the cost of operations
135 responses



4 .25: EVALUATION OF THE COST OF OPERATIONS

Interpretation

The above table shows the respondent's view regarding the cost of operations. About 28% of the respondents feel that the cost of operations is severe, about 46% of the respondents feel that the cost of operations is moderate, about 17% of the respondents feel that the cost of operations is mild, about 8% of the respondents feel that the cost of operations is very mild and about 1% of the respondents feel that the cost of operations is null.

Inference

Majority (46%) of the respondents are moderate.

4.26 ASSOCIATION BETWEEN GENDER AND PERCEPTION THAT THE COMPANY PURSUING BEST WAREHOUSE MANAGEMENT PRACTICES

To assess the association between gender and their perception that the company pursuing best warehouse management practices. Chi-square test is performed to identify the association between gender and perception that the company pursuing best warehouse management practices. The cross tabulation between gender and perception that the company pursuing best warehouse management practices is presented in the table 26.

Null hypothesis H₀: There is no significant association between gender and perception that the company pursuing best warehouse management practices.

Gender * Is Company pursuing best warehouse management practices Crosstabulation

		Is Company pursuing best warehouse management practices		Total
		No	Yes	
Gender	1	20	64	84
	2	17	34	51
Total		37	98	135

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.447 ^a	1	.229		
Continuity Correction ^b	1.008	1	.315		
Likelihood Ratio	1.427	1	.232		
Fisher's Exact Test				.240	.158
N of Valid Cases	135				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 13.98.

b. Computed only for a 2x2 table

Symmetric Measures		Value	Approximate Significance
Nominal by Nominal	Phi	-.104	.229
	Cramer's V	.104	.229
N of Valid Cases		135	

From the table 26- it is observed that there is no significant association between gender and the perception that the company pursuing best warehouse management practices. Chi-square value(.229) shows that the null hypothesis is rejected at 5% level. Hence it is concluded from the analysis that gender and the opinion that the company pursuing best warehouse management practices are not associated.

4.28 ASSOCIATION BETWEEN AGE AND SATISFACTORY LEVEL WITH COMPANY'S INVENTORY CONTROL AND TRACKING SYSTEM

In this section the association between age and Satisfaction level of respondents is identified, One-way ANOVA is applied to identify the association between age and Satisfaction level of respondents with company's inventory control and tracking system. Table 27- presents the results of association between age and Satisfaction level of respondents with company's inventory control and tracking system.

Null hypothesis H₀: There is no significant association between age and Satisfaction level of respondents with company's inventory control and tracking system.

Table 27

Association between of age on Satisfaction level of respondents with company's inventory control and tracking system

Bayesian Estimates of Coefficients^{a,b,c}

Parameter	Mode	Posterior		95% Credible Interval	
		Mean	Variance	Lower Bound	Upper Bound
How 2 are you with the company keeping up-to-date inventory control and tracking system to locate containers/cargo = 1	1.000	1.000	.234	.051	1.949
How 2 are you with the company keeping up-to-date inventory control and tracking system to locate containers/cargo = 2	1.283	1.283	.004	1.153	1.413
How 2 are you with the company keeping up-to-date inventory control and tracking system to locate containers/cargo = 3	1.476	1.476	.011	1.269	1.683

How 2 are you with the company keeping up-to-date inventory control and tracking system to locate containers/cargo = 4	1.464	1.464	.004	1.337	1.591
How 2 are you with the company keeping up-to-date inventory control and tracking system to locate containers/cargo = 5	1.000	1.000	.058	.525	1.475

a. Dependent Variable: Gender

b. Model: How 2 are you with the company keeping up-to-date inventory control and tracking system to locate containers/cargo

c. Assume standard reference priors.

Bayesian Estimates of Error Variance^a

Parameter	Mode	Posterior		95% Credible Interval	
		Mean	Variance	Lower Bound	Upper Bound
Error variance	.227	.234	.001	.183	.298

a. Assume standard reference priors.

It is noted that the F-value 4.286 ($p=.042$) is significant at 5% level, in this case the null hypothesis H_0 is rejected. It is observed that the respondents with age of 36-55 years have scored highest mean score of 4.02 and the lowest mean score was scored by the respondents with age of below 25 years (3.43). So it is concluded that the employees with age 36-40 years are having better satisfaction level whereas the respondents with age less than 25 years are less satisfied in the organisation's inventory control and tracking system.

CHAPTER 5

CHAPTER 5

FINDINGS AND CONCLUSION

5.1 FINDINGS OF THE STUDY

- About 57 % of the respondents are below 25 years of age, about 36% of the respondent are between 26 to 35 years of age, 1% of the respondents are between 36 to 45 years of age, 4% of the respondents are between 46 to 55 years of age and about 2% of the respondent are above 55 years of age.
- About 62% of the respondents are male and about 38% of the respondents are female.
- About 66% of the respondent are UG graduates, about 6% of the respondents are PG graduates, about 1% of the respondent are certificate holders, about 21% of the respondents have completed diploma course, about 5% of the respondent have completed school level and about % of the respondents have studied higher degree after PG.
- About 8 % of the respondents has a work experience of below 1 year, about 88% of the respondents has a work experience for 1 – 7 years, about 22% of the respondents has a work experience for 8 – 14years, about 8% of the respondents has a work experience for 15 - 20 years and % of the respondents has a work experience for morethan 20 years.
- About 28% of the respondents feel that the impact of strategic objectives have a more important effect on warehousing, about 37% of the respondents feel that the impact ofstrategic objectives have a large effect on warehousing, about 24% of the respondents feel that the impact of strategic objectives have a moderate effect on warehousing, about 8% of the respondents feel that the impact of strategic objectives have a slight effect on warehousing and about 2% of the respondents feel that the impact of strategic objectives have no effect on warehousing.
- About 13% of the respondents strongly agreed that the employer checks the warehousefunctions and the effectiveness of the technical protective measures periodically, about24% of the respondents agreed that the employer checks the warehouse functions and the effectiveness of the technical protective measures periodically, about 33% of the respondents are in neutral that the employer checks the warehouse functions and the effectiveness of the technical protective measures periodically, about 22% of the respondents disagreed that the employer checks the warehouse functions and the

effectiveness of the technical protective measures periodically and 8% of the respondents strongly disagree that the employer checks the warehouse functions and the effectiveness of the technical protective measures periodically.

- About 34% of the respondents stated that the warehouse practices of VKS travels offerings are excellent, about 39% of the respondents have stated that the warehouse practices of VKS travels offerings are good, about 23% of the respondents have stated that the warehouse practices of VKS travels offerings are average, about 2% of the respondents have stated that the warehouse practices of VKS travels offerings are poor and 1% of the respondents have stated that the warehouse practices of VKS travels offerings are very poor.
- About 72% of the respondents believe that the VKS travels pursues the best warehouse management practices and about 28% of the respondents believe that the VKS travels doesn't pursue the best warehouse management practices.
- About 39% of the respondents have stated that the company's environment factor affects warehouse management practices every time under environmental uncertainties, about 36% of the respondents have stated that the company's environment factor affects warehouse management practices often under environmental uncertainties, about 20% of the respondents have stated that the company's environment factor affects warehouse management practices sometime under environmental uncertainties, about 3% of the respondents have stated that the company's environment factor affects warehouse management practices rarely under environmental uncertainties and about 2% of the respondents have stated that the company's environment factor never affects the warehouse management practices under environmental uncertainties.
- About 74 of the respondents stated that the company ensures efficient shipment of the product/ goods, about 26% of the respondents stated that the company doesn't ensure efficient shipment of the product/ goods and about % of the respondents stated that they don't have opinion on whether the company ensures efficient shipment of the product/ goods.

About 30% of the respondents stated that the company warehouse maintains a very good quality of the goods, about 42% of the respondents stated that the company warehouse maintains a good quality of the goods, about 23% of the respondents stated that the company warehouse maintains a moderate quality of the goods, about 4% of the respondents stated that the company warehouse maintains a bad quality of the goods and about 1% of the respondents stated that the company warehouse maintains a very bad quality of the goods.

- About 33% of the respondents have strongly agreed that the company's warehousing facilities are capable of keeping the goods/products long enough, about 42% of the respondent have agreed that the company's warehousing facilities are capable of keeping the goods/products long enough, about 20% of the respondents are in neutral that the company's warehousing facilities are

capable of keeping the goods/products long enough, about 3% of the respondents have disagreed that the company's warehousing facilities are capable of keeping the goods/products long enough and about 2% of the respondents have strongly disagreed that the company's warehousing facilities are capable of keeping the goods/products long enough.

About 42% of the respondents are very satisfied with the company keeping up-to-date inventory control and tracking system to locate containers/cargo, about 39% of the respondents are satisfied with the company keeping up-to-date inventory control and tracking system to locate containers/cargo, about 15% of the respondents are neither satisfied nor dissatisfied with the company keeping up-to-date inventory control and tracking system to locate containers/cargo, about 3% of the respondents are dissatisfied with the company keeping up-to-date inventory control and tracking system to locate containers/cargo and about 1% of the respondents are very dissatisfied with the company keeping up-to-date inventory control and tracking system to locate containers/cargo.

About 42% of the respondents have rated excellent for the company's use of its conveyor system in material handling, about 31% of the respondents have rated good for the company's use of its conveyor system in material handling, about 23% of the respondents have rated average for the company's use of its conveyor system in material handling, about 3% of the respondents have rated bad for the company's use of its conveyor system in material handling and about 1% of the respondents have rated worst for the company's use of its conveyor system in material handling.

About 35% of the respondents report that the training provided by the company in material handling is far above standards, about 39% of the respondents report that the training provided by the company in material handling is above standards, about 23% of the respondents report that the training provided by the company in material handling meets standards, about 2% of the respondents report that the training provided by the company in material handling is below standards and about 1% of the respondents report that the training provided by the company in material handling is far below standards.

About 20% of the respondents feel that they are extremely aware of the first-aid measures inside the warehouse, about 45% of the respondents feel that they are very aware of the first-aid measures inside the warehouse, about 10% of the respondents feel that they are moderately aware of the first-aid measures inside the warehouse, about 16% of the respondents feel that they are slightly aware of the first-aid measures inside the warehouse and about 9% of the respondents feel that they are not at all aware of the first-aid measures inside the warehouse.

About 43% of the respondents have reported that the company uses manual equipment for material handling, about 41% of the respondents have reported that the company uses motorized equipment for material handling, about 12% of the respondents have reported that the company uses automated equipment for material handling and about 4% of the respondents have reported that the company uses other equipment for material handling.

About 28% of the respondents feel that there is high safety for them in material handling, about 43% of the respondents feel that there is safety for them in material handling, about 20% of the respondents feel that there is moderate safety for them in material handling, about 7% of the respondents feel that there is no safety for them in material handling and about 1% of the respondents feel that there is highly no safety for them in material handling,

About 34% of the respondents feel that they are very fast in material handling, about 39% of the respondents feel that they are fast in material handling, about 24% of the respondents feel that they are moderate in quickness in material handling, about 3% of the respondents feel that they are slow in material handling and about 1% of the respondents feel that they are very slow in material handling.

About 37% of the respondents feel that the efficiency of the route is much better, about 34% of the respondents feel that the efficiency of the route is better, about 23% of the respondents feel that the efficiency of the route is not better nor worse, about 3% of the respondents feel that the efficiency of the route is worse and about 1% of the respondents feel that the efficiency of the route is company in material handling is below standards and about 3% of the respondents report that the training provided by the company in material handling is far below standards.

About 20% of the respondents feel that they are extremely aware of the first-aid measures inside the warehouse, about 45% of the respondents feel that they are very aware of the first-aid measures inside the warehouse, about 10% of the respondents feel that they are moderately aware of the first-aid measures inside the warehouse, about 16% of the respondents feel that they are slightly aware of the first-aid measures inside the warehouse and about 9% of the respondents feel that they are not at all aware of the first-aid measures inside the warehouse. About 38% of the respondents have reported that the company uses manual equipment for material handling, about 24% of the respondents have reported that the company uses motorized equipment for material handling, about 33% of the respondents have reported that the company uses automated equipment for material handling and about 5% of the respondents have reported that the company uses other equipment for material handling.

About 21% of the respondents feel that there is high safety for them in material handling, about 44% of the respondents feel that there is safety for them in material handling, about 22% of the respondents feel that there is moderate safety for them in material handling, about 8% of the respondents feel that there is no safety for them in material handling and about 5% of the respondents feel that there is highly no safety for them in material handling,

- About 10% of the respondents feel that they are very fast in material handling, about 12% of the respondents feel that they are fast in material handling, about 19% of the respondents feel that they are moderate in quickness in material handling, about 37% of the respondents feel that they are slow in material handling and about 22% of the respondents feel that they are very slow in material handling.
- About 43% of the respondents feel that the operator's autonomy is much better, about 30% of the respondents feel that the operator's autonomy is better, about 17% of the respondents feel that the operator's autonomy is not better nor worse, about 8% of the respondents feel that the operator's autonomy is worse and about 3% of the respondents feel that the operator's autonomy is much worse.
- About 28% of the respondents are completely satisfied with the operator's performance and availability, about 31% of the respondents are very satisfied with the operator's performance and availability, about 22% of the respondents are moderately satisfied with the operator's performance and availability, about 18% of the respondents are slightly satisfied with the operator's performance and availability and 1% of the respondents are not at all satisfied with the operator's performance and availability.
- About 37% of the respondents feel that the agility of operations in VKS travels is at its best, about 40 % of the respondents feel that the agility of operations in VKS travels is good, about 20% of the respondents feel that the agility of operations in VKS travels is average, about 1% of the respondents feel that the agility of operations in VKS travels is bad and 1% of the respondents feel that the agility of operations in VKS travels is at its worst.
- About 42% of the respondents feel that the cost of operations is severe, about 32% of the respondents feel that the cost of operations is moderate, about 18% of the respondents feel that the cost of operations is mild, about 7% of the respondents feel that the cost of operations is very mild and about 1% of the respondents feel that the cost of operations is null.
- It is observed that there is no significant association between gender and the perception that the company pursuing best warehouse management practices.
- The employees with age under 25 years are having better satisfaction level whereas the respondents with age less than 26-35 years are less satisfied in the organization's inventory control and tracking system

5.2 SUGGESTION

VKS travels and overseas consultant is doing a great business. There are certain downfall in their warehouse management process which has to be looked upon at the earliest in order for smooth running of the business.

- ☐ Majority of the employees feel that the strategic objectives doesn't have effect on the warehousing, this mindset should be changed through proper training programmers.
- ☐ Company's environment should be healthy as most of the employees reported that the company's environment affects the warehousing management practices.
- ☐ Goods / products stored in the warehouse should be maintained in good quality and the company should see to it that they get shipped at the earliest.
- ☐ The conveyor system in material handling should be serviced and maintained periodically as most of the employees are not satisfied with its operations.
- ☐ Most of the equipment used in VKS travels are manual and automated equipment. Therefore, the employees should be trained on how to use it and their respective safety measures.
- ☐ Efficiency of the employees need to be improved through proper training and appraisal systems as there is no quickness in material handling
- ☐ Mechanical shutdowns have to be reduced in order for smooth running of the business. This can be avoided by periodical inspection and maintenance.
- ☐ The cost of the operation is considered to be high. This can be rectified by optimum utilization of human resource and through proper periodical maintenance of the equipment.

5.3 CONCLUSION

Warehouses are an intricate ecosystem with several different processes working in tandem to serve customers effectively. Recent events have warranted warehouses to change their business dynamics and stay profitable while fulfilling customer orders as well. The best way of ensuring sustainability and longevity for your warehouse is to overcome some of the common warehouse management challenges. Managing laborers efficiently, making the most use of available warehouse space, and adapting to seasonal demands and other issues require warehouse managers to stay on top of their game at all times.

This research aims to study the warehouse management in VKS travels and overseas consultant, Chennai. Primary data is collected in the form of structured questionnaire. 150 being the sample size. The collected data was analysed using charts, tables and percentage analysis.

The results show that the VKS travels overall performance is good, but there are certain unsolved issues which hinder the profitability of the business. The company's use of human resources should be optimized through proper training programmes and through reward system. The equipment should be handled with safety and regular maintenance of these equipment is required. The goods/products in the warehouse should be maintained in good quality and their shipment should be at the earliest. Therefore, improvements in these areas help the company to reduce its cost of operation in turn it increases their profitability and at the same time improves the efficiency of the employees.

5.4 BIBLIOGRAPHY

- **Attaran, M. (2003).** Information technology and business-process redesign. Businessprocess management journal.
- **B S Sahay** - Supply chain management
- **Beason, M. (1999).** Here is a new material handling solution. Textile Word.
- **Bloss, D. & Pillai, D. (2001).** E-manufacturing opportunities in semiconductorprocessing. Semiconductor International.
- **Bramel J. & Simchi-Levi D. (1997)** The logic of logistics. New York: Springer.
- **Carlos M. Taboada Rodriguez, 2015.** "Warehouse performance measurement: a literature review," International Journal of Production Research, Taylor & Francis Journals, vol. 53(18), pages 5524-5544, September.
- **Castenholz, W. B. Jr. (1949).** Reduction of material handling costs. National Association of Cost Accountants.
- **Chittratanawat, S., & Noble, J. S. (1999).** An integrated approach for facility layout,P/D location and material handling system design. International Journal of ProductionResearch.
- **Christopher, M. (2005).** Logistics and Supply Chain Management. 3rd ed. Great Britain: Prentice Hall.
- **Domingo, R., Alvarez, R., Melodía, M. & Calvo, R. (2007)** Materials flow improvement in a lean assembly line: a case study, Assembly Automation.
- **Dr. Vipul Chalotra (2013)** – Journal of effective warehousing
- **Figura, S. Z. (1996).** Reducing the risk of material handling. Occupational Hazards.
- **Fitzpatrick, B. D. & Ali, S. I. (2010).** Integration Of Information Technology And Simulation For Managing Manufacturing-Logistics Network. The Review of BusinessInformation Systems.
- **Ghrayeb, O., Phojanamongkolkij, N. & Tan, B. A. (2009).** A hybrid push/pull systemin assemble-to-order manufacturing environment. Journal of intelligent manufacturing.
- **GOETSCHALCKX, M. and ASHAYERI, J. (1989),** "CLASSIFICATION AND DESIGN OF ORDER PICKING", Logistics World, Vol. 2 No. 2, pp. 99-106. <https://doi.org/10.1108/eb007469>
- **Goldsby, T. & Matrichenko, R. (2005).** Lean Six Sigma Logistics. Florida: J. Ross Publishing
- **Gonda Torzay. J (2011)** – Journal on planning and controlling
- **Gourdin, K. N. (2001).** Global logistics management. Oxford, UK: Blackwell Publishers Inc.
- **Groover, M. P (2001).** Automation, Production Systems, and Computer-Integrated Manufacturing, New Jersey: Prentice-Hall, 2001
- **Hall, N.; Chelliah S. & Tharmarajah G. (2001).** Operation Decisions in AGV-servedflow shop loops: Scheduling. Annals of Operations Research. 107 (1), 189-217.

- **Harrison, A. & Hoek, R.(2011)**, Logistics Management and Strategy, 4th ed., F.T. PrenticeHall, Harlow.
- **Hassan, M.D.D. (2010)**. A framework for selection of material handling equipment in manufacturing and logistics facilities. Journal of Manufacturing Technology Management. 21 (2), 246-268.
- **Jonsson, P. & Mattsson, S. A. (2005)**. Logistik, Läran om effektiva material flöden . Lund: Studentlitteratur AB.
- **Kaipia, R. (2009)**, Coordinating material and information flows with supply chain planning. The International Journal of Logistics Management, 20 (1), 144-162.
- **Khyomesh v. Patel and chetna m. Vyas**, ‘Construction materials management on project sites’, national conference on recent trends in engineering & technology, page no. 1-5, may 2011.
- **Labar, G. (1995)**. Ergonomic help for material handling . Occupational Hazards. 57 (1), 137- 138.
- **Lee L, Dobler D (1997)**, Purchasing and Materials. TMH Publishers Inc. Pp. 138. London. Rumelt, R. (2002), The Electronic Reorganization of Industry, London: ICK Publishers.
- **London. Rumelt, R. (2002)**, The Electronic Reorganization of Industry, London: ICKPublishers.
- **Lowe, D., (2002)**, The Dictionary of Transport and Logistics, The Institute of Logisticsand Transport, London, UK.
- **Mattsson, S. A. (2012)**. Logistik i försörjningskedjor. Lund: Studentlitteratur AB
- **Meyers, F. (1993)**. Plant Layout and Material Handling. New Jersey: Prentice Hall.
- **Michel, R. (2006)**. Adaptive manufacturing moves in. Modern Materials Handling. 61(9), 29- 31.
- **Narimah kasim**, ‘ICT implementation for materials management in construction projects: case studies’, journal of construction engineering and project management, 2011, ISSN 2233-9582, page no. 31-36.
- **Nash, J. L. (2002)**. Can computer improve material handling safety? Occupational Hazards. 64 (7), 35-38.
- **Orji, Eric Agu, Cletus Owoh**, Reducing Material Wastes in Building Construction Sites: An Action for Sustainable Development, Civil and Environmental Research, ISSN 2224-5790 (Paper) ISSN 2225-0514 (Online), Vol.8, No.12, 2016
- **Pyke, D. F. & Cohen, M. A. (1990)**. Push and Pull in Manufacturing and Distributionsystems. Journal of operations management. 9 (1), 24-43.
- **René de Koster**, Design and control of warehouse order picking: A literature review, European Journal of Operational Research, Volume 182, Issue 2, 16 October 2007, Pages 481-501
- **Rushton Et Al (2000)** – Journal on key challenges of warehouse
- **Sanchez, A. & Perez, M. (2001)**, Lean indicators and manufacturing strategies,International Journal of Operations & Production Management, 21 (11) 1433 – 1452.

- **Shingo, S.** O sistema Toyota de produção: do ponto de vista da engenharia de produção. Porto Alegre: Bookman, 1996.
- **Soni, A. (1992).** Eight steps to a just in time focused factory. Manufacturing systems. 10 (2), 46-51.
- **Stock, J. R. & Lambert, D. M (2001).** Strategic Logistics Management. 4th ed. Singapor: McGraw-Hill.
- **Taylor & Francis (2015)** – Journal on effective decision Vol.3
- **Tommy Blomqvist (2010)** – Journal on warehouse design for industry
- **Tompkins, J. A, White, J. A, Bozer, Y. A, Frazella, E.H, Tanchoco, J. M. A. & Trevino, J (1996).** Facilities Planning. 2nd ed. USA: John Wiley & Sons, Inc.
- **Ul-Ain, N., Giovanni, V., DeLone, W. H., & Waheed, M. (2019).** Two decades of research on business intelligence system adoption, utilization and success – A systematic literature review. Decision Support Systems.
- **V. Venkatraman (2015)** – Journal on production technology and management Vol.6
- **Whitemore, T. (2008).** Standardized Work. Manufacturing Engineering. 140 (5), 171-178.

QUESTIONNAIRE

DEMOGRAPHIC PROFILE

1. Age

☐ 25 and below

☐ 26-35

☐ 36-45

☐ 46-55

☐ Above 55

2. Gender

☐ Male

☐ Female

3. Educational
Qualification ☐
School level

☐ Diploma

☐ Certificates

☐ UG

☐ PG

☐ Any higher degrees after PG

4. Experience

☐ Below 1 year

☐ 1 - 7 years

☐ 8-14 years

☐ 15-20 years

☐ Above 20 years

5. Do strategic objectives have impact on the warehousing?

☐ The most important effect

☐ A large effect

☐ A moderate effect

☐ A slight effect

☐ None

6. The employer checks the warehouse function and effectiveness of the technicalprotective measures periodically
 - ƚ Strongly agree
 - ƚ Agree
 - ƚ Neutral
 - ƚ Disagree
 - ƚ Strongly disagree
7. Customers satisfaction with warehousing practices of VKS travels offering
 - ƚ Excellent
 - ƚ Good
 - ƚ Average
 - ƚ Poor
 - ƚ Very poor
8. Is company pursuing best warehouse management practices
 - ƚ Yes
 - ƚ No
9. Under environmental uncertainties will company's environment factor affectwarehouse management practices
 - ƚ Every time
 - ƚ Often
 - ƚ Sometime
 - ƚ rarely
 - ƚ never
10. Does company ensure the efficient shipment of the product/goods
 - ƚ Yes
 - ƚ No
 - ƚ No opinion
11. How does the company's warehouse maintain the quality of the goods
 - ƚ Very good
 - ƚ Good
 - ƚ Ok
 - ƚ Bad
 - ƚ Very bad

12. Company's warehousing facilities are capable of keeping the goods/ products long enough
- ☐ Strongly agree
 - ☐ Agree
 - ☐ Neutral
 - ☐ Disagree
 - ☐ Strongly disagree
13. How satisfied are you with the company keeping up-to-date inventory control and tracking system to locate containers/cargo
- ☐ Very satisfied
 - ☐ Satisfied
 - ☐ Neither satisfied nor dissatisfied
 - ☐ Dissatisfied
 - ☐ Very dissatisfied
14. How do you rate the Company uses of conveyor system in material handling
- ☐ Excellent
 - ☐ Good
 - ☐ Average
 - ☐ Bad
 - ☐ Worst
15. How training is provided to the employees in material handling
- ☐ Far above standards
 - ☐ Above standards
 - ☐ Meets standards
 - ☐ Below standards
 - ☐ Far below standards
16. Are you aware of the first-aid measures inside warehouse
- ☐ Extremely aware
 - ☐ Very aware
 - ☐ Moderately aware
 - ☐ Slightly aware
 - ☐ Not at all aware

17. Equipment used for material handling

- ☐ Manual equipment
- ☐ Motorized equipment
- ☐ Automated equipment
- ☐ others

18. Safety in material handling

- ☐ Highly safe
- ☐ Safe
- ☐ Moderately safe
- ☐ Not safe
- ☐ Highly not safe

19. Material handling quickness

- ☐ Very fast
- ☐ Fast
- ☐ Moderate
- ☐ Slow
- ☐ Very slow

20. Route efficiency

- ☐ Much better
- ☐ Better
- ☐ Equal
- ☐ Worse
- ☐ Much worse

21. Occurrence of mechanical shutdowns

- ☐ Every time
- ☐ Often
- ☐ Sometime
- ☐ Rarely
- ☐ Never

22. Operator's autonomy

- ┐ Much better
- ┐ Better
- ┐ Equal
- ┐ Worse
- ┐ Much worse

23. Operator's performance and availability

- ┐ Completely satisfied
- ┐ Very satisfied
- ┐ Moderately satisfied
- ┐ Slightly satisfied
- ┐ Not at all satisfied

24. Agility of operations

- ┐ Best
- ┐ Good
- ┐ Ok
- ┐ Bad
- ┐ Worst

25. Evaluation of the cost of operations

- ┐ Severe
- ┐ Moderate
- ┐ Mild
- ┐ Very mild
- ┐ None

