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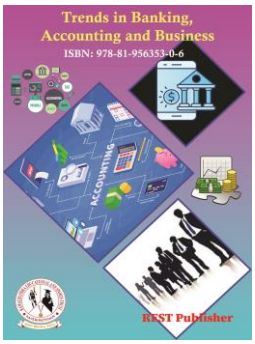

A Study on Operations Project on Raw Materials Assistance Scheme to Small Scale Industries Dynaspede Integrated Systems to Hosur

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Abstract. *Automobile industry consumes a huge amount of raw material for conversion of raw material to final products. The industry are using a large number of machines and processes. During conversion of raw material to end product; material moves from one department to other, one machine to other machine and from one floor to other. Day by day, production of each machine is going up. To achieve the target of production, the management is facing the challenge of safe, efficient and economical material handling. In this paper it is tried to provide the required knowledge of material handling in reference to Automobile industry's.*

Keywords: *Material handling, material transport, material handling equipment.*

1. INTRODUCTION

Materials handling is nothing but the management of planning, executing as well as controlling the field and office activities in construction. The main aim of the Materials Handling is that to ensure the construction materials are available at the right time in right quantity and quality when needed in the project. Good and effective Materials Handling should ensure that the materials of right quality and also right quantity are selected, procured, delivered and also handled at the site in the right time at reasonable rates. So, the Materials Handling is an important criterion in the project management. Poor Materials Handling will results in the early purchase of the materials which may lead to the damage of materials while stored in the inventory. The early purchase may hold up the capital costs. Materials handling is an important element in project planning and controlling of materials. Materials Handling is not only required for the monitoring stage but also management decisions are required at the time of planning and scheduling stages for make it effective. Materials ordering problems are reduced now a day by the usage of automated Materials Handling systems. In those systems, master production schedules, inventory records and order lists are combined to determine when the materials are ordered and how much ordered in each time period. Statement Of Problem: The present Study intends to look analytically into the scenario of Materials Handling in general and to automobile industry in particular. It is commonly observed that the practice of Materials Handling is not keeping pace with the conceptual development in that area and this state of affairs is prevailing because the major importance is being given to marketing and financial functions. Although it is observed that potential benefit of applying scientific Materials Handling will go a long way in sustained progression of the industry, somehow knee level interest on this function is evinced by the managers. Similarly, management thinkers have also neglected the importance of Materials Handling in running an enterprise, but focused their attention on human behaviour, motivation and technology. Even while searching for excellence, the recent management researches have failed to take cognizance of the pivotal role of managing materials in the right way.

2. OBJECTIVES OF THE STUDY

The major objective of the present Study is to look into the Materials Handling in Dynaspede Integrated Systems at Hosur. However the specific objectives are: To study the present practice of Materials Handling in Dynaspede Integrated Systems in the background of the concept of Materials Handling. To study the manufacturing process and division in storage level of the Dynaspede Integrated Systems. To Evaluate the importance of Materials Handling in improving the profitability of Firm. To make suggestions for improving thr Material Handling system and practices in Dynaspede Integrated Systems at Hosur in the light of the findings of the study scope of the study: The aim of the present Study is to develop a standard system of Materials Handling to alpha natural's natural plants & ponds in general and to Plant

industry in particular. The Researcher has selected automobile industry at Hosur which is the major manufacturer of automobile industry. The Materials Handling in Dynaspede Integrated Systems the presentday practices in automobile industries opinion of workers, supply chain, production and executives in the industry will provide comprehensive information which should become a torch bearing for solving the problems of automobile products in particular and automobile industry in general. Limitations Of The Study The Study is confined to Materials Handling in Automobiles industry alone. Though sufficient time and care has been taken to collect the most reliable data by the Researcher, the memory bias on the part of respondents is ruled out completely. Lack of information gathers from the automobile industry as well as due to production schedule The firm does not given do the few material handling information due to lack of my research Many a time, they think that they gain nothing by such a Study and hence they do not provide accurate information. Time and finance are the other constraints limiting the horizon of the Study and the focus of Study is exclusively confined to Automobiles limited.

3. REVIEW OF LITERATURE

Saxena A.K, Kumar Gyanendra and Singh S.L (2020) presented automobile on 'Process Computers for Automobile Industry' in S.T.A.I annual conference. In this automobile, author highlighted a need of Microcomputer based distributed digital control system in spite of conventional instrumentation. Authors further explained features of computer based control systems and criteria for selection of process for implementation of computer controlled system. The different areas identified by authors to implement computer controlled process are Boiler house, evaporation station, Pan Stored PH control etc. In Concluding part of the automobile, authors summarized resulting advantages of computer based distributed digital control systems implemented in private Automobile factories in Tamilnadu. Shri P.N. Gavade and Dr. J.F. Patil (2020) highlighted problems and prospects and situation of movement in Automobile industry of the post-independence era and performance of Automobile industry in terms of crushing and production. Further, author also emphasized role of Automobile co-operatives in rural development of Maharashtra. In this, Automobile factories are not only income generating organizations but these organizations work as an agent of socio-economic transformation of rural Maharashtra. At the end part of this article, authors emphasized prospects of co-op Automobile industry in India and gave guide lines for bright future of industry. For the survival in the 21st century, authors gave advice of computerization. The Automobile industries should introduce computerisation and adopt the technological changes to modernize their working. Computer application should be used to cane cultivation, production, harvesting and payment of bills. Love D.J (2021) emphasized advances in technology and computer based automation for the Automobile industry in the automobile 'Automobile Factory Automation' presented in XII Automobile industry congress (1995) in Colombia and a automobile is published in Journal Indian Automobile in 1997. Author discussed basic requirement of automatic control system and computer based automation system for increasing throughputs, improve efficiency, reduction of losses and cost. Further, author identified areas of automation and design of computer aided manufacturing system. The different areas for automation suggested by author are juice weighing, boiler Automation, PH Control systems, Pan Atomization, Centrifugal Atomization and Automobile Weighing System. Acharya G.N and Balwe T.K (2022) identified different areas of computerization in the automobile presented in the second state level Automobile conference at Malegaon Tal Baramati Dist Pune. In the automobile authors suggested phased program for computerization and infrastructure for computerization. Further author discussed about the various software modules developed by VSI and observations and result of maturity wise harvesting module implemented in Dnyaneshwar Sahakari Sakhar Karkhana Ltd. Dnyaneshwarnagr Dist Ahmednagar. In concluding part of the automobile, author emphasized necessity of boosting up of the pace of work in the modernization of Automobile factories and reaps the full benefits of rapidly expanding technology of computer applications and arrangement of periodic training programs including one hand experience with computer.

4. RESEARCH METHODLOGY

Research Methodology is a systematic way to solve a research problem; It includes various steps that are generally adopted by a researcher in studying the problem along with the logic behind them. The present study on material management towards Dynaspede Integrated Systems at Hosur

5. RESEARCH DESIGN

"A Research Design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with the economy in procedure". The research design adopted for the studies is descriptive design. The researcher has to describe the present situation in order to know the behaviors of the consumers. Hence descriptive research study is used. Descriptive research can only report what has happened and what is happening. Data source: it has two types, Primary data, Secondary data. Primary data: primary data means data which

is fresh collected data. Primary data mainly been collected through personal interviews, surveys etc. Secondary data: secondary data means the data that are already available. Generally speaking, secondary data is collected by some organizations or agencies which have already been processed when the researcher utilizes secondary data; the process of secondary data collection and analysis is called desk research. Geographical area: Sampling unit is in Hosur. Sample size the study based only on the employee engage. Total number of samples taken for the study is 120 respondents. Sample design: convenience sampling techniques were used for the study. Statistical tools used: the commonly used statistical tools for analysis of collected data are: Simple percentage analysis. Chi-square analysis. Correlation: Simple percentage analysis this method is used to compare two or more series of data, to describe the relationship or the distribution of two or more series of data. Percentage analysis test is done to find out the percentage of the response of the response of the respondent. In this tool various percentage are identified in the analysis and they are presented by the way of bar diagrams in order to have better understanding of the analysis.

$$\text{Simple percentage} = \frac{\text{no. Of respondents}}{\text{total no. Of respondents}} \times 100$$

Chi- square analysis: chi-square was done to find out one way analysis between socio demographic variable and various dimensions of the program**.**

$$\chi^2 = \frac{(o - e)^2}{e}$$

Where o – observed value, e – expected value. in general, the expected frequency for any call can be calculated from the following equation.

$$e = rt \times ct / n$$

the calculated value of chi-square is compared with the table value of χ^2 given degrees of freedom of a certain specified level of significance. It at the stated level of the calculated value of χ^2 the difference between theory and observation is considered to be significant. Otherwise, it is in significant. Correlation: correlation is computed into what is known as the correlation efficient, which ranges between -1 to +1. Perfect positive correlation (a correlation co-efficient of +1) implies that as one security moves, either up or down, the other security will move in lockstep, in the same direction.

$$r = \frac{\sum xy}{\sqrt{(\sum X^2)(\sum Y^2)}}$$

6. DATA ANALYSIS AND INTERPRETATION

TABLE 1. Age group of the respondents

S. No	Age	No. Of respondents	Percentage (%)
1	Below 20 years	25	21%
2	Between 20 – 40 years	37	31%
3	Between 40 – 50 years	44	37%
4	More than 50 years	14	11%
	Total	**120**	**100%**

(Source: primary data)

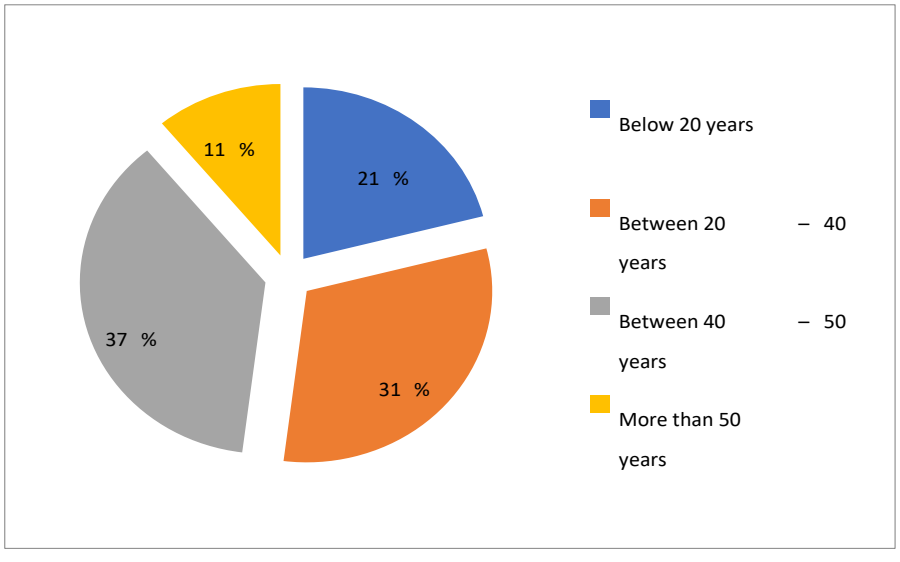

FIGURE 1. Age group of the respondents

Interpretation: The above table shows that, 21% of the respondents are below 20 years old, 31% of the respondents are between 20 – 40 years old, 37% of the respondents are between 40 – 50 years old, and 11% of the respondents are above 40 years old. The maximum (37%) of the respondent's age group is between 40 – 50 years.

TABLE 2. Marital status of the respondents

S. No	Marital status	No. Of respondents	Percentage (%)
1	Married	76	63%
2	Unmarried	44	37%
	Total	**120**	**100%**

(source: primary data)

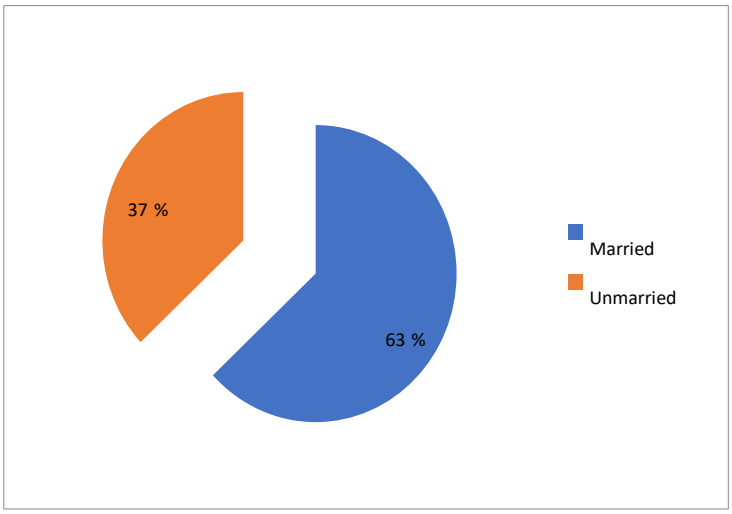

FIGURE 2. Marital status of the respondents

Interpretation: The above table shows that, 63% of the respondents are married and 37% of the respondents are unmarried. The maximum (63%) of the respondents is married Correlation: The table shows the relationship between experience in years of the respondents and employees feel about material handling cost.

TABLE 1. Correlation

X	Y	X2	Y2	Xy
14	47	196	2209	658
23	41	529	1681	943
31	25	961	625	775
52	7	2704	49	364
$\sum x = 120$	$\sum y = 120$	$\sum x^2 = 4390$	$\sum y^2 = 4564$	$\sum xy = 2740$

$$r = \frac{\sum xy}{\sqrt{(\sum X^2)\,(\sum Y^2)}} \quad r = \frac{2740}{\sqrt{(4390)\,(4564)}}$$

$$r = \frac{2740}{(4476.1)}$$

$$= 0.612$$

Result: This is positive correlation. There is relationship between respondent's experience in years of the respondents and employees feel about material handling cost. Suggestions: The firm have more adequate for storage capacity handling in the automobile mill. The firm have good infrastructure with the safety measures in the materials. The firm should be handling without any damages for the materials and maintain the stock. The firm maintain record about inventory also material handling. The company has organized Seniority about the arrangement of goods in warehouse. The study also revealed that Materials Handling tool ensures that the right items are bought and made available to the manufacturing operations at the right time. materials procurement process ensures that raw materials are availed at the right place and sourced at the lowest possible cost. Reducing plant schedule through integration with design and cost

systems. Improving risk management through better overall project performance, project cash flow management, and true management by exception. That manufacturing organisations make raw material plans and schedules such that arrival of raw material and other inventories is programmed to ensure that there is no delay between requisition time and the time of supply.

7. CONCLUSION

The study concludes that implementation of materials procurement tool positively influenced the performance of automobile board limited at Hosur. Manufacturing industries had implemented Material Management tool to a great extent. Material Management tool helped to optimize performance through customer service and that the firm had achieved significant cost saving, improvement in production efficiency and that Materials Handling tool ensured that the right items are bought and made available to the manufacturing operations at the right time. The study concluded that implementation of inventory control positively influenced performance of automobile manufacturing industry in Hosur, further investments in inventory control tools would promote efficiencies in manufacturing industries and that inventory control tool ensured smooth production operations are achieved though maintenance of reasonable stocks of materials.

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