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A Study On The Implementation Of Total Productive Maintaince Towords Enhancing Efficiency And Productivity In VJ LOGITICS At Salem

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ABSTRACT
Abstract:
Logistics and supply chain management not only includes activities related to the physical movements of the goods/ items but also management of relationship with suppliers and customers. However Logistic means fulfil the needs of customers are satisfaction through interface and coordination of the supply chain. The main objective of the paper is to determine the automation technology used in logistics and supply chain management including new technology like automation with automatic identification of materials and items. The paper also discusses the impact of the automation technology and challenge to implementing automation technology on logistics and supply chain management. The author mainly focuses on the both primary and secondary data for collecting data relating to various advance technology like automation used in logistics and supply chain management. The author draws conclusion that technology play important roleto increased supply chain competitiveness and performance by effectiveness of logistics system.
Keywords:
Logistics, Supply Chain Management, Automation Technology, Automatic Identification,
Radio Frequency Identification
Logistics management not only includes activities related to the physical movements of the goods/ items but also management of relationship with suppliers and customers. However Logistic means fulfil the needs of customers are satisfaction through interface and coordination of the supply chain. The main objective of the paper is to determine the automation technology used in logistics and supply chain management including new technology like automation with automatic identification of materials and items. The paper also discusses the impact of the automation technology and challenge to implementing automation technology on logistics and supply chain management. The author mainly focuses on the both primary and secondary data for collecting data relating to various advance technology like automation used in logistics and supply chain management. The author draws conclusion that technology play important role to increased supply chain competitiveness and performance by effectiveness of logistics system.
Keywords: Logistics Management, Automation Technology, Automatic Identification

I. INTRODUCTION OF THESTUDY

Definition ofProductive

Productive is a measure of the efficiency of production. It is a ratio of actual output (production)towhatisrequiredtoproduceit(inputs).Productiveismeasuredasatotaloutput per one unit of a total input. Control managers in a given organization are concerned with maximizing productive through process-oriented observations andimprovements.

Meaning of Total productive maintenancesystem

The Total productive maintenance system is described as a method that integratesboth equipment maintenance and manufacturing process for overall improvement in the business process and increasing equipmentavailability.Total productive maintenance system is a proactive approach that deals in the comprehensive management of processes, people, environment and systems.

Total productive maintenance system: AnOverview

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Total productive maintenance system is the process of using machines, equipment, employees and supporting processes to maintain and improve the integrity of production and the quality of systems.

Advantages ofTPM

When everyone in a facility is thinking about and contributing to maintenance, many aspects of the facility will change for the better. Teams employing a TPM strategy often experience the following:

1. Reduction in the totalworkforce
2. Customer complaints are rectifiedquickly
3. A decrease in pollutionlevels
4. The favorable change in the operator'sattitude
5. Higher confidence level in theemployees

Roles andFunctions

Total productive maintenance introduces capable processes, helps to maintain their capability and renders them more capable by regularly implementing corrective maintenance.

TPM is a distributed activity, which attributes responsibility of maintenance to the operator of machine. He operates the process, supervises the process, manages the process, controls the process, and solves complex problems through his technical skills and expertise acquired over a period of time.

STATEMENT OF THEPROBLEM

The purpose of this research is to study the implementation of TPM at the aim to understand how its benefits are being achieved, how it could possibly be enhanced and how the gains made by the brewing company could be replicated in similar companies in the industry in order to reduce losses and improve productive.

The company needs to maintain its valuable assets. The maintenance body should find a way to adopt world best practices in maintenance in order to reach excellent level of maintenanceperformance.Inthefirstplaceitisessentialtoknowwhatthesebestpracticesare.

OBJECTIVESOF THESTUDY

The main objective of this research is to study and assess the method of implementing Total productive maintenance system (TPM) at logistics industries. The specific objectives include to:

1. To analyse the implementation stage of TPM and itimpact
2. To analyse the main TPM maintanceissues
3. To analyse the benefit or implementation of TPM
4. To suggestion the further operation to enhance ofTPM

SCOPE OF THESTUDY

- The scope of the study analyses to productive and maintenance of against the plan and keep the top management informed aboutit
- To assist, counsel and pressurize the operating management to plan and establish objectives
- To collect and summaries data in total organization terms and to ensure consistency with long- range objectives and other elements of the total businessplan;
- To provide the research necessary for effective manpower and organizationalplanning

LIMITATIONS OF THESTUDY

- The period of study is confined to a shorter period of time at the disposal of the researcher.
- The study is limited to the willingness of the logistics Materials only to answer the questionappropriately.
- The respondents are not bold enough to speak out their personal and business problem.
- The researcher faced with difficulties of gathering, information from the industries. Since some of them were ignored and could not explain about their business with sufficient knowledge.

II. REVIEW OFLITERATURE

Willmott et. al, (2021) TPM or being known as Total Productive Maintenance has been originated in Japan in 1971. It is being design as a method to improve the availability of machines through the utilization of maintenance. Some people might think that TPM is "deterioration prevention", which means is what happens naturally to anything that is not "takencareof".ForthisreasonmanypeoplerefertoTPMas"totalproductivemanufacturing" or "total process management". TPM is a proactive approach that essentially aims to identify issuesassoonaspossibleandplantopreventanyissuesbeforeoccurrence.Onemottois"zero error, zero work-related accident and zeroloss"

Nakajima,(2022) In the other hand, TPM also need to make sure that the setting and maintenance of the machine are being frequently done by the machine operator that has be well-trainedtohandlethatmachines.Inthissettingtheoperat

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orsareenabledtounderstandthe machinery and identify potential problems, righting them before they can impact production and by so doing, decrease downtime and reduce costs of production. TPM is a critical adjunct to lean manufacturing. If machine uptime is not predictable and if process capability is not sustained,theprocessmustkeepextrastockstobuffera gainstthisuncertaintyandflowthrough theprocesswillbeinterrupted.Unreliableuptimeiscau sedbybreakdownsorbadlyperformed maintenance.Correctmaintenancewillallowuptimet oimproveandspeedproductionthrough a given area allowing a machine to run at its designed capacity ofproduction.

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RESEARCHDESIGN

"AResearchDesignisthearrangementofconditionsfo rcollectionandanalysisofdata 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 descriptivedesign.

METHOD OFCOLLECTION

It has two types, Primarydataand secondarydata

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 processedwhentheresearcherutilizessecondarydata;t heprocessofsecondarydatacollection and analysis is called deskresearch.

STATISTICAL TOOLSUSED

The commonly used statistical tools for analysis of collected data are:

1. Simple Percentageanalysis, 2. Chi-squareAnalysis, 3. Correlation, 4. Anova

CHI-SQUARE ANALYSIS

NULL HYPOTHESIS

Ho: There is no significance relationship between the focused on formulated TPM policies and goal and step to improve the effectiveness

ALTERNATIVE HYPOTHESIS

H1: There is significance between the focused on formulating TPM policies and goal and step to improve the effectiveness

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.150E2[a]	9	.000
Likelihood Ratio	271.590	9	.000
Linear-by-Linear Association	121.492	1	.000
N of Valid Cases	130		

a. 6 cells (37.5%) have expected count less than 5. The minimum expected count is 2.78.

RESULT

Since the calculated value is greater than the table value. So we reject the null hypothesis. There is significance between the focused on formulating TPM policies and goal and step to improve the effectiveness

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ANOVA

NULL HYPOTHESIS

Ho: There is no significant relationship between education qualification of the respondents in years and TPM contributes to an increase in productive.

ALTERNATIVE HYPOTHESIS

H1: There is a significant relationship between education qualification of the respondents in years and TPM contributes to an increase in productive.

ANOVA

EDUCATIONAL QUALIFICATION OF THE RESPONDENTS		Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)	135.123	4	33.781	106.508	.000
	Linear Term Unweighted	103.365	1	103.365	325.902	.000
	Weighted Deviation	126.559	1	126.559	399.030	.000
Within Groups		8.565	3	2.855	9.001	.000
Total		39.646	125	.317		
		174.769	129			

III. RESULT

From the above analysis, we find that calculated value of the F-value is a positive 106.508value, so H_1 accept. Since the P value 0.000 is less than < 0.05 regarding there is a significant relationship between education qualification of the respondents in years and TPM contributes to an increase in productive. The results are significant at 4% level.

IV. SUGGESTIONS

- The TPM team has been perceived as unable to formulate actions that can effectively help to reduce costs.
- TPM strategy which focuses on overall equipment effectiveness (OEE) tries to demonstrate that using all related information and the production line status, operators and maintenance staff can work closely to ensure more improvement suggestions and to ensure well-functioning equipment, performance efficiency and availability of equipment.
- The results indicated that TPM strategy and planned maintenance found to be related to cost. Future research can be expanded further by analyzing other factorscontributed to manufacturingperformance.
- For instance, product characteristics, vertical integration, model mix, automation level and market requirements might possibly affect manufacturingperformance

V. CONCLUSION

TPMtriestoensureequipmentrelatedlossesa reminimizedandmoreeffortismadeto reduce equipment-related losses or defects. TPM could essentially help to minimize the deterioration of equipment, hence improving performance as highlighted by various researchers, for instance. This relationship may not be strong enough to have held up in the multivariate analysis. As noted by based on their case study, work habits and communication especially for production lines and different shifts could affect the morale of TPM team development.Thepossibleassumptionstobedrawnfro mthisstudyarethatthecommunication and leadership of TPM team are not clearly perceived by those at operator level and other departments.

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