A STUDY ON THE PRODUCTION PROCESS AND QUALITY ASSURANCE IN RADIANT INDUSTRY

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ABSTRACT

To sustain in the automotive industry by supporting the OEMs (original equipment manufacturers) A few decades ago people were not aware about quality, but nowadays we can see the changes in product quality and control. District brands induce in manufacture process; it is how the qualities are assured in the continuous part of manufacture. This reflects the series of disputes surrounding issues and powers. A major pointing in the literature review was the human resources, quality, maintenance and manufactures are very important in assembly quality assurance not just the quality system. In the radiant industrial production process, there will be a check points are used to determine the possibility of reducing the errors. India is turning out to be an attractive destination as a global outsourcing hub and manufacturing base for the Original Equipment Manufacturers (OEMs), over the decade, there is a great deal of research to set apart for a deity to study the quality and the production process, in this article we develop a model which is based on the hypothesis. Based on our model the system can adjust to improvement in quality. In this production process system are some essential activities like process monitoring, quality control and maintenance. This paper interrelates and synthesis the production process.

KEYWORDS: *Quality Control, Assurance, Total Quality Management, Original Equipment Manufacturers & Total Productive Maintenance*

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INTRODUCTION

- Work has been carried out as per the regulation of radiant industry. A well organised manufacture radiant industry has wide scope and individuals are absolutely changed with one another. It directly encourages the engineering sector to move forward. But, the present situation is facing vulnerable challenges because of price in engineering product. Direct and indirect requirement of quality in product.

Mysore is the largest second city in Karnataka due to climate and less traffic. People start to move Mysore for their employment. Those factors are a significance of massive growth of manufacturing industry in Mysore.

In every organisation there is a process of utility of product quality control and quality assurance in the evaluation of material components. The role of quality assurance as an aspect of covering the design and documentation of systems, the quality standards and regulations ensure that the quality policy understands the compliance of external factors. When the documentation implemented by an organisation is a basic element of product quality in an organisation, production process is included with the transforming the inputs into these outputs which is required by the market. Production process which combines with production chains production benefits' for control is easy. Its active involvement in trade promotion, technology up-gradation, quality

enhancement and collection and dissemination of information has made it a vital catalyst for this industry's development. Its other activities include participation in the international trade fairs, sending trade delegation overseas and bringing out publication on various subject related to the automotive industry production consist of efficiency, expansion, location, innovations, planning. The radiant industry supply the products to all over the world and even many multinational companies. The products which are produced in the radiant industry have good qualities in engineering the product mainly it concentrate on heavy duty vehicles like break pad, oil cap, rings etc. This articles is aimed at understanding the goodness of the product

- One of the world largest three and two-wheeler market
- The world's second largest 4th largest passenger vehicles market

LITERATURE REVIEWS

- Peter Lesson (2016) (volume 2) has conducted a study on "Quality, Quality Engineering (QE) and Quality Assurance (QA)", producing quality means analysis and controlling. When we are going to manufacture a quality product first make sure its expectations. Quality engineering is this we have to take considerations profitability, flexibility, maintainability etc. and other products embedded into the requirements and expectations. Quality assurance the role of quality assurance is to assure to doing correctly to produce the level of quality in addition to engineering practices it involves the experience emotions ethics language etc. This focusing on understanding the minimum technical aspects of the product.
- Maria Lvettegomes, Universidade de Lisboa, Deio and Ceaul(2011) have written on statistical quality control and quality maintenance is to be activated of engineers and employees. The main objectives of statistical measure is to reach quality in production process and organisation service and to use adequate statistical techniques. The implementation of quality and control leads to manufacture cost which leads to cause and effect of control charts.
- Gerald m, weinbegr1993 volume 2 as conducted based on "quality software management #2" in this case fitting own needs and people involved the contextual business. Actually mangers understand the concepts of good software engineering. The main objectives based high quality software and high quality mangers. Which puts practice and little bit easier.
- Isin Akyar 2012 research in quality control quality c control is the process that assure a certain level of quality. It aims to improve the knowledge, latest research into quality control it collects the information of quality in various fields. It includes the business characteristics of a product, should be performed in all techniques.
- Mehmet Savsar march 23rd2012, studied on quality assurance is a way of preventing defects in production This consists of important contribution towards the way of production in industry by using suitable raw materials like steel rod components, it creates the interest in among suitable areas, it helps in various fields like industry, education, healthcare, medicine software areas and technical area. It related different area, according to the topics.
- Amitava Mitra volume3 (2012) based on "fundamentals of quality control and improvement "it presents quantitative approach to managements, it shows the gap between statistical quality control and management and further it includes quality development ;failure mode and effects ;six sigma quality. the main objectives is process control and identification of remedial actions.

- Dr. Kiran volume 1 (November 2016) page no 580, a concept based on “total quality management” quality is the key elements in very stages in the production of finished goods. TQM is based on the principle of staff must be committed. It approaches the long term success through customer stratifications.
- Epsilon Pi Tau vol.15, no.1 1989 pp 6-10 study on “quality and innovation” it refers to operating characteristics of a product. In manufacture it’s put into equal emphasis in all six quality characteristics performance, features, reliability, durability, availability, reputation. Today we hear a lot about quality control quality circles and quality functions.
- T. Ravichandran and Arun Rai vol.24 no. 3 2000 pp381-415 conduct on “quality management in systems development” quality improvement in system development, in this system we can find 3 aspects quality assurance, quality control and quality improvements. Its internals need to desired customer standard industry standards or certifications.
- S j Morrison vol.36, n05 1987 pp.439-464 based on “industry, quality and statistics” quality assurance is the discipline which quality management and quality statistics is dealt in history
- Ismail Sila and Maling Embrahimpour (2000) an investigation of total quality management. His study focus on factors of total quality management and he also says that TQM factors are classified into 25 categories, tam is an important factor to be considered in a manufacturing process and managing helps in the better development of quality.
- Mohamed Ismail Mohideen Bawa (Jan 2011) “quality control in small and medium brick industry”, in his study, he has identified the causes of the quality defects and has suggested about the quality improvements.
- Fabrizio Trifiro (Jan 2018) volume 24 as conducted a study on inter agency cooperation in the quality assurance. Based on the response to a survey and it helps to improvement approach to evaluate change moreover it helps to promote.

OBJECTIVES

- To study the quality conscious in the process of manufacturing raw material components
- To evaluate the customer satisfaction in co-ordination with production process

METHODOLOGY

The present study is conducted with primary data. A questionnaire is used to collect the data and chi-square is for the analysis. To get reasonable inputs which are learnt from the support and existing literatures and the sample size is forty samples of industry employees has been selected from the Mysore city. The study has been conducted during March 2018 to July 2018

HYPOTHESIS

H0 -90% of components do not match the quality requirement as OEM (original equipment manufacturer)

H1-90% of components do (not) match the quality requirement as (OEM)

The variables of the components are independent, rarely the quality of the components such as the bolt, plug,

valve, rings, connecting rod, crankshaft, filter hole, dip stick, breaks, oilcap, oil filter, pulley, fan belt is intended to test the likely goodness of fit with the distributed valves as against the expected valve. Since the components have two independent relationship between categorical valves.

Table 1: Case Processing Summary

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
observed value * expected values	13	100.0%	0	0.0%	13	100.0%

Table 2

observed value * expected values Crosstabulation											
Count		expected values									Total
		-6.00	-5.00	-4.00	-3.00	-1.00	1.00	6.00	7.00	9.00	
observed value	17.00	1	0	0	0	0	0	0	0	0	1
	18.00	0	2	0	0	0	0	0	0	0	2
	19.00	0	0	2	0	0	0	0	0	0	2
	20.00	0	0	0	2	0	0	0	0	0	2
	22.00	0	0	0	0	1	0	0	0	0	1
	24.00	0	0	0	0	0	1	0	0	0	1
	29.00	0	0	0	0	0	0	1	0	0	1
	30.00	0	0	0	0	0	0	0	2	0	2
	32.00	0	0	0	0	0	0	0	0	1	1
Total		1	2	2	2	1	1	1	2	1	13

Table 3: Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	104.000 ^a	64	.001
Likelihood Ratio	55.598	64	.764
Linear-by-Linear Association	12.000	1	.001
N of Valid Cases	13		

a. 81 cells (100.0%) have expected count less than 5. The minimum expected count is .08.

As shown in the tables the Pearson chi-square has a true value at 0.001, there is a true correlation between the two independent variables even though it is not significant. The likely hand ratio is at 0.76, it means that the two variables in this factory is definitely significant.

Linear by linear has the symmetry of 0.01, it mean that the quality of the each components have maintained the standards that is required and therefore it linearly remain to the quality significant

CONCLUSIONS

The components of radiant industry in compare are good to other factory, parts which manufacture like oil cap, ring plug, plug, valve, rings, connecting rod, and crankshaft, filter hole, dip stick, breaks, oilcap, oil filter, pulley, fan etc.

It's based on the total quality manufacture elements, it present strength and weakness with regards to the components. The radiant industry approaches the organisation and employees, total quality manufacture firms' implementation of survey, structure, interview, documentation and observations. It suggestion co-ordinates plays role in the scheme with the connection between quality and control. Total quality management is a procedure through which the continuous improvements in the manufacture of components. All this quality developed and demonstrated successfully by the efforts and work of important quality. Actually we understood the quality in radiant process. Therefore quality can measure as a proactive process, which can be noted as reactive process. Quality is one of the important factors in product, service and constantly look for quality service. Quality is one of the important factors in manufacture unit, so that the form we can check the strength and weakness of a particular product of the radiant industry. Above statement says that the goodness of the product and it helps the improvement of standard and quality in a product and more over it takes great place in the international marketing as well local marketing and product is mainly used in the heavy vehicle and more over radiant supply product to Tata motors etc., suppose the quality has not maintained, it affects the overall system in manufacture industry. Hence, for above the statement clearly says the product positives and goodness.

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