

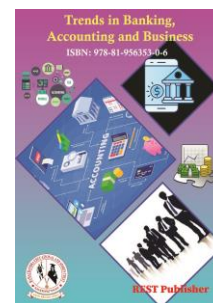


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A Study on Quality Control Management in Stanley Engineered Fastening with Reference at Chennai

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Abstract: *This these is present recommendation for quality control and quality assurance in building construction. Recognizing the established quality in the early stage of construction can set the standard of quality for the entire project. The factors impelling effective and continuous improvement of Indian engineering industries. To improve one must look upstream at the design state. Because, that is where the quality begins. Quality must be designed in. It cannot be inspecting later. In order to a have quality system planning, design and execution stage must be given more importance. In this thesis the actual requirement and model checklist for quality Control is incorporated. Further development and format governing all quality aspects. This thesis presents recommendation for quality control and quality assurance in the industry. Recognizing the established quality in the early stage of engineering industry can set the standard of quality for an entire project in order to a have quality system planning, design and execution stage must be given more importance. The actual requirements and model checklist for quality control is incorporated. Further development and format governing all quality will summarize in next phase.*

Keywords: *Quality control, Total quality management, Quality assurance, Continuous improvement, Quality management system.*

1. INTRODUCTION

The growing competition in the current global market is an issue translating into a vast need for the continuing evolution of the industry. Therefore, world business is continually in search for the competitive edge due to the growing demands of customer needs and expectations. Quality has an important role in the business process across the entire organization, to be more efficient and effective in the global market, thus improving productivity and customer loyalty as well as increase market share. It is not only necessary to reduce the wastage, but also to satisfy customer's expectations, continuous cost reductions and continuous improvements to survive in highly competitive environment. Quality improvement is a primary requirement in any production system that sends products or service as its outputs. Thus, it is a major goal in any manufacturing industry. Manufacturing industry spend a lot of efforts in maintaining and improving quality of their products using a variety of Control tools and techniques. Quality concerns affect the entire organization in every competitive environment. It is not only necessary to reduce the wastage, but also to satisfy customer's expectations, continuous cost reductions and continuous improvements to survive in highly competitive environment. Quality control tools can be applied in product development, production and marketing also. The quality control is aimed to satisfy the customers by delivery of defect free products. The research is aimed to investigate the successful Implementation of quality control tools and Techniques in Fastening Power Tools industry.

2. QUALITY CONTROL (QC)

Quality does not have a singular definition. Despite the relative meaning of -value, || quality control is the

process by which products/services are tested and measured to ensure they meet a standard. Through this process, a business can evaluate, maintain, and improve product quality. The primary objective of Quality Control is to identify and correct any deviations from the established quality standards. This process involves monitoring and inspecting products or services at various stages of production or delivery to ensure that they meet the desired level of quality. QC is also concerned with preventing defects or errors from occurring in the first place by implementing measures to control and improve the production or service delivery processes.

Ultimately, there are two crucial goals of quality control: to ensure that products are as uniform as possible and (2), to minimize errors and inconsistencies within them.

3. REVIEWS OF LITERATURE

Karim et al. (2018) quality control management processes achieve reduced cost, higher productivity and higher reputation in the global market. According to, quality strategy plays an important role in capturing customer satisfaction that can potentially lead to increased sales growth and market share. They also added that, a company which develops a strategy to achieve volume and mix flexibility while keeping low costs and high quality will be able to react faster to market demands and finally achieve higher performance. A recent study by revealed that product quality and reliability has become the main competitive factor in the global trend. According to, too much growth in demand also takes focus away from quality with results of defects in finished products.

Brierley et al. (2018) This kind of manufacturing involves a very high investment cost and must be justified by the high volume demand. According to, capital investments and automation are often the most expensive compared to those of other processes. This is because the processes are designed to run continuously with minimum shutdowns because of the high costs of starting up and closing down. In continuous processing, as materials flow from one stage to another, it is important to monitor and adjust the flow to ensure the quality and safety of the product

Cárdenas-Barrón, 2019 Quantity production is one category of high volume manufacturing, which concentrates on the mass production of a single product by using single standard equipment, for instance, products that come out from stamping press which is a repetitive process especially for the blank shapes. The process is a continuous operation whereby material is fed to the machine either manually or automatically. The machine will then turn the material into the final product and the same process continues until the desired quantity is achieved.

(Shaik et al., 2019) Consumers always get quality products of standard specifications to their utmost satisfaction. It is a well-known fact that some variations are bound to exist in the nature of production in spite of careful planning. The magnitude of variations depends upon the production process, namely, machines, materials, operations, etc. The techniques of quality control help in the study of these variations in quality of the product and serves as a useful tool for the solution of many manufacturing problems which cannot be solved so well by any other method. Thus, quality control is an important technique in the hands of management to maintain the quality of the product.

Mason, B. & Antony, J. (2020) quality control in manufacturing in order to avoid a misuse of the term which is in some cases found to be falsely confused with quality assurance and/or quality inspection. In manufacturing, quality typically refers to how well the production process meets design specifications, related to the different features and properties of a product. Under this scope, quality control can be considered as a reactive part of the quality management focusing on the activities or procedures which is carried out in order to ensure that produced items are fulfilling the highest possible quality

Antony, J., M. Kaye, & Frangou, A. (2020) Manufacturing became automated, production rates increased and quality control became even more important in order to avoid non- standard products entering the market. Under the field of electric manufacturing, quality control may also be considered as value-added since it affects the quality of the product through either direct or indirect methods. There are a variety of quality control approaches and technologies in the literature which have already been applied in in different areas of manufacturing. The results of the Scopus search showed that the research community is highly interested in the aspect of quality

control in manufacturing

Teena Joy (2021) Quality can be defined as fulfilling specification or customer requirement, without any defect. A product is said to be high in quality if it is functioning as expected and reliable. Quality control refers to activities to ensure that produced items are fulfilling the highest possible quality. Most of tools and techniques to control quality are statistical techniques. Quality control techniques can be classified into basic, intermediate, and advance level, but there is no consensus among researchers in the classification.

Raji Al-Ani and Firas I. Al-Adhmawi (2022) In this, quality control is important in the industry and should be a fundamental in every company, by increasing productivity and recording the factors that are causing deficiencies or declines in the production or quality of the process, it is in this way that this process is defined as a series of stages or mechanisms in which the current performance of the process is evaluated, a comparison with the standard criterion and the real one is estimated, thus acting in function of the performance improvement , all this is achieved by means of the implementation of quality control tools that allow the detection of the causes of the problem and estimates the variations that it could have with respect to the sample that is being analyzed.

4. OBJECTIVES OF THE STUDY

Quality control managements is aimed to satisfy the customers by delivery of defect free products in this firm. To ensures that products and services in higher satisfaction levels and increased customer loyalty. The company providing employees with the necessary skills and knowledge to maintain quality standards effectively. Quality Control management reduces cost and maximizes profit in this firm. To Quality Control management reducing product variability and improves production efficiency.

5. SCOPE OF THE STUDY

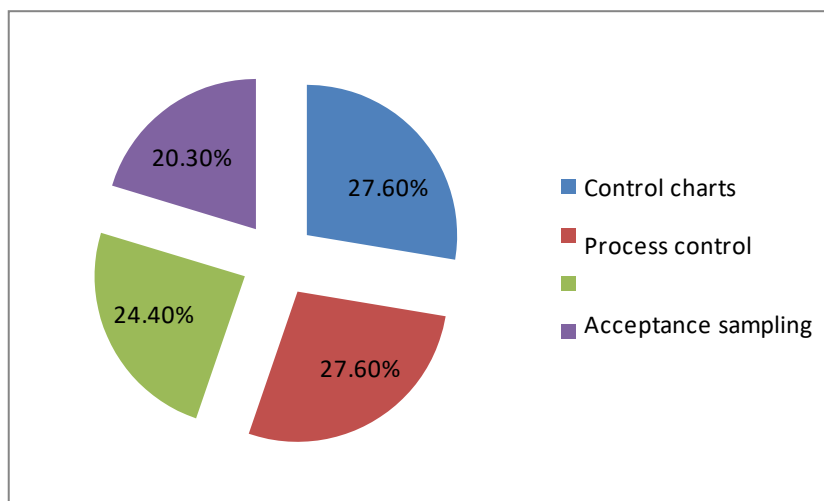
Quality control is not the responsibility of any one person or functional area. It is everyone’s Job. It includes the assembly worker, the typist, the purchasing person & CEO of the company. The responsibility for quality start when marketing Determines the customers Quality, requirements & continues until the product is received by a satisfied customer Quality is critical to satisfying your customers and retaining their loyalty so they continue to buy from you in the future. Quality products make an important contribution to long-term revenue and profitability.

6. RESEARCH METHODOLOGY

Research methodology is a way to systematically solve research problem. Research methodology is understood as a source of the study how to research is done scientifically. The various steps adopted by a researcher in studying the research problem along with the logic. The project work entitled A Study on Quality Control Management in Stanley Engineered Fastening at Chennai.

Quality control methods utilize features in our production department

Methods	No. Of respondents	Percentage
Control charts	34	27.6%
Process control	34	27.6%
Acceptance sampling	30	24.4%
Process protocol	25	20.3%
TOTAL	123	100.0%



CHI SQUARE TEST

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18.740 ^a	16	.282
Likelihood Ratio	19.737	16	.232
Linear-by-Linear Association	.041	1	.840
N of Valid Cases	123		

a. 16 cells (64.0%) have expected count less than 5. The minimum expected count is 1.14.

7. FINDINGS

1. Majority 56.1% of the respondents are male.
2. Majority 26.7% of the respondents age group between 25 – 30 years.
3. Majority 66.7% of the respondents are married category.
4. Majority 30.9% of the respondents are qualified in graduation.
5. Majority 39% of the respondents are of below rs.15000.
6. Majority, 22.8% of the respondent are between 2-4 years' experience.
7. Majority, 27.6% of the respondent are utilize features is control charts and processcontrol.

8. SUGGESTIONS

Quality Control (QC) is an indispensable component in product and service delivery, playing a critical role in ensuring customer satisfaction, maintaining brand reputation, and enhancing overall business performance. The commitment to maintaining high-quality standards is essential in today's competitive market, where customer expectations and industry regulations constantly evolve. Understanding and implementing effective QC practices can significantly improve operational efficiency, cost reduction, and risk mitigation. If you want to deepen your understanding or implement quality control in your business operations, consider taking quality management courses or exploring our additional resources for more insights and guidance.

9. CONCLUSION

Quality control plays a crucial role in ensuring that businesses deliver high-quality products and services, meeting customer expectations and regulatory requirements. Companies can develop and implement effective QC systems that contribute to long-term success by understanding its importance, benefits, and key strategies. All the employees incorporate the concepts for implementation of quality control in a laboratory or organization. That will give massive benefits for the improvement of quality control. Though the program of quality assurance is still independent to monitor the process of quality control. Implementation of QC may require a change during the setup of quality management system. The encouraging features for the companies to concern quality control arise inside from the organization, parental company and/or externally from the customer. They fulfill the criteria for the laboratories requirement such as health regulation, consistency in performance, laboratory functions and safety. Three aspects influence the quality control procedure in the firms, such as the capability to quantify product specification contentment; simplicity in the use of the technique; and capability to progress acute characteristic and yield difficulty. Hence QC technique will combine all these environmental concerns like its significant elements and ease and quickness for use would be the probability for QC techniques of the future.

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