

Implementation of Quality Control System in Construction Industry (A Review)

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Abstract – Quality management practises and managers' perceptions of criteria necessary for a successful adoption of TQM were examined in a study of 300 enterprises registered with the Palestinian Contracting Union (PCU). For many years, India's building sector has been plagued by quality difficulties. A remarkable amount of the budget is spent each year on infrastructure and other development projects. Within the standard business for the attainment of construction contract, contractors who are keen to win offer, can attain contracts by submitting them at low prices, but at the danger of not being able to produce construction work which meets the standards and specification. Likewise, consultants may be under oppression to reduce the initial cost of construction and construction supervision so that contractors are not able to produce the required quality. Absence of quality in construction is exhibited in poor or non-sustainable workmanship, and risky structures. Since the quality outgrowth of the projects is not as stated by to required standards, defective construction takes place.

Keywords – Construction Quality, total Quality, defects

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INTRODUCTION

Like other industries are establishing the TQM (Total Quality Management) system but in the construction industry we cannot establish even QMS (Quality Management System). The cause behind is every construction project is unique and quality is ever changing factor i.e. quality change time to time, place to place. But many common activities in construction project like the concrete work, block work, plastering, etc.

In those common works are affected by some major factors like quality of material, quality of manpower, construction detailing, concrete work, etc. in this thesis is very much helpful to find out the major factors and give result with cost of poor quality. This theory is more helpful for creating cost oriented quality awareness to low level construction companies.

LITERATURE REVIEW

The study of literature has taken into view the various causes of quality defects in construction management. The aim is to define the functions and importance of Construction Quality assurance and control, to identify various defects in Quality management and to find most suitable solution to the overcome Quality management in construction industry.

P. P. Mane, J. R. Patil: Construction Project 2015 Quality Assurance System In order for a construction project to succeed, it must meet all three of these criteria: quality, time, and money. In order for a construction project to achieve operational success, quality management must provide an atmosphere in which all relevant tools, methods, and processes may be used to their full potential. All of the operational and managerial procedures of a building project are entwined with the role of quality management.

Planning, assurance, and monitoring of quality are all part of a QMS in the construction business. Based on interviews with project participants and an analysis of data gathered from those interviews, the authors came up with their study approach. According to Abdul Aziz et al. (1999), quality systems involve internal and external aspects. An internal quality system is a collection of procedures designed to reassure an organization's top brass that the desired level of quality is being reached. This is called a "quality management system".

Behnam Neyestani: QMS 2015 At least the last two decades, quality management systems (QMS) have been providing generic guidance and requirements for the establishment of an appropriate quality management procedure in order to reduce costs, improve productivity and customer satisfaction, and increase market share in the organisations that use them. It might assist construction companies in

achieving their objectives and ensuring that all phases of a building project are always in line with the demands of customers (need). Specifically, the authors of this article sought to determine the impact of QMS implementation on the most important aspects of construction projects in the Metro Manila region of the Philippines. Qualitative studies on how the quality management system effects construction projects were undertaken by conducting a comprehensive literature study from diverse sources. Afterwards, a questionnaire based on previous research was developed and randomly delivered to the 37 managers. Describing and interpreting the data was accomplished through descriptive statistics. A Quality Management System (QMS) has had a considerable influence on customer satisfaction, cost, and schedule in Metro Manila building projects but has had minimal impact on scope (quality).

AnupW S1, Arun Kumar H2, SNA Saqhi: The 2017 Quality Management System Study Quality management systems (QMS) are becoming increasingly important to the construction industry. A primary goal of this research was to get an understanding of how construction projects apply quality practises such as quality tools, procedures, and management's commitment to quality implementation. Quality Management Systems (QMS) implementation challenges are also addressed. The data is gathered by a qualitative questionnaire. Content analysis is used to construct a case study to support the questionnaire. The analysis and case study data are used to develop conclusions. The experts were consulted in an unstructured interview to come up with appropriate solutions to the challenges of implementing QMS.

Mo Lianguang : Study on Project Information Management Based on Building Information Modeling ; 2016 International Conference on Smart City and Systems Engineering

Quality, schedule, cost, as three main goals of engineering project management, have a relation of unity of opposites. Efficiency of traditional project management pattern is generally not high in the aspect of cost control, process control and quality control. Based on this, Building Information Modeling (BIM) is adopted for project information management. It can build 3D modeling for engineering construction, which can improve the calculation precision of the project cost, realize dynamic whole process management. Building Information Modeling (BIM) technology dramatically enhances project management informationization by making it more complete, intuitive, and efficient.

BIM is a kind of new technology, also a kind of management concept. Promoting the effective development of BIM needs powerful support from government departments, the owner, design unit; moreover, the development of research institutions is essential. Strengthening research on theory of BIM

related data standard and development of information sharing and data transformation and other kinds of key technology is conducive to play a greater potential of BIM technology.

Ahmad Rashed, Mohammad Othman; Implementing Quality Management The goal of this research is to examine the adoption of quality management in West Bank building projects. In light of the rapid growth of the construction industry throughout the world and in the West Bank in particular, the sector is seen as critical to the modern economy. Quality management practises and managers' perceptions of criteria necessary for a successful adoption of TQM were examined in a study of 300 enterprises registered with the Palestinian Contracting Union (PCU). The building sector has long struggled to meet accepted standards of quality.

Inefficient or non-existent quality management methods, particularly in building projects, waste enormous amounts of time, money, and resources (both human and material). Construction management quality concerns are not a simple work, since this industry has several challenges due to its sophisticated operation, major and small activities, and this industry is composed of multiple vocations, professions, and organisations. When the political climate is secure in Palestine, construction projects may serve as a strong foundation for reinvigorating the economy while also creating a stable and self-sufficient economy. Palestinians' well-being and the environment have suffered since 1993 as a result of the aforementioned systems, services, and institutions being neglected.

Tan Chin-Keng, Abdul-Rahman, Hamzah; Study of Quality Management 2011 The concept of quality management is to ensure efforts to achieve the required level of quality for the product which are well planned and organized. Customers' happiness with the finished product ensures a business's long-term competitiveness and viability, which is why quality control in construction projects is critical from the standpoint of construction businesses. In today's extremely competitive and tough construction industry, a construction company's quality management system is crucial to its survival. Selection of sample was based on convenience sampling approach where the authors obtained the sampling units that were convenience available

Hesham Abdel Khalek, Remon F. Aziz, Esraa A. Sharabash; Applications and Assessment of Quality Management. While looking at the tools and techniques used to evaluate Quality Management Practices in Construction Projects, this paper seeks to determine how serious companies are about implementing Quality Management in Construction Projects. It also seeks out the most effective solutions to the problems that companies have encountered in the industry, and it makes a number

of suggestions and recommendations aimed at helping this industry progress. The methodology of this paper is listed as follows: A thorough literature review was done and also opinions from industry experts were taken, through which a number of quality theories and concepts were discussed and therefore they were used in the survey questionnaire. The questionnaire contained 29 questions needed to be answered to measure how companies implement quality management in their companies through this questionnaire

Dr. Om Prakash Bawane; Construction Quality Management: Issues and Challenges 2017

Quality has evolved as a critical factor in determining the success or failure of a business in today's global economy. Although quality is a difficult concept to grasp, it has always been a significant consideration in the building industry. It's a crucial idea that gives one company an advantage over the others. As a result of post-industrialization, a new quality movement has arisen to meet the pressing need to improve industrial product quality. Because of its particular character, the construction business frequently resists the quality-control rules that apply in the manufacturing industry. There must be a quality assurance strategy for the construction sector because of the complexity and heterogeneity of the process. Multinational construction firms are a serious threat to developing countries' construction industries in the present climate of globalisation.

Mohd Zaid Malik., Rajiv Banerjee and Syed Aqeel Ahmad: This year's report on the implementation of TQM The underlying belief system As a whole, TQM stands for Total Quality Management. A product or service's level of perfection is measured by its quality, while management is the act of handling, controlling, and guiding, etc. This approach to quality improvement, known as TQM, is widely used in manufacturing and a variety of other sectors. TQM places a high value on including all relevant parties in the process. Customer satisfaction goes up, the bottom line goes up, and employee morale goes up because of it. Adaptation of new ideas, tools, and processes in the building business reveals that it may be used there as well. This study's objective is to evaluate the most recent studies on quality improvement in the construction industry through the use of TQM and its suitable applications in the various stages of construction. For a developing country, the building industry is a major source of revenue. The construction industry in India is second only to the agricultural sector in terms of employment. The construction industry is dealing with a wide range of management and quality issues. The TQM method is a cutting-edge approach to quality control and quality execution on building sites. Juan, Deming, and Crosby methodologies, as well as the ISO standard, are part of total quality management. Use the IJL, Lucknow, science direct online library database to find legitimate journals and

conferences to do a literature study on the application of TQM. many sources, such as the use of Total Quality Management,

CONCLUDING REMARK

The Voice of the Board helps an organization's Quality Management System (QMS) constantly satisfy the demands and wishes of its customers by managing product and process quality. There is a lot of evidence in the literature that implementing a Quality Management System (QMS) may help projects accomplish their goals successfully by focusing on improving project performance and fixing problems. All of the items in the questionnaire were created in accordance with this study's goal of determining the faults in quality management and the factors that influence it.

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