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"Study of Quality Assurance and Quality Management System in Multistroyed RCC Building"

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Abstract- Quality is one of the important aspects for construction projects. The level of success of construction projects depends upon the quality performance. Quality management provides the environment within related tools, techniques, procedures that can be deployed effectively leading to success of construction project. Though quality management is important at every stage of the project but quality management at execution stage contribute significantly on final quality outcome of construction projects. The QMS (Quality Management System) in construction refers to quality planning, quality assurance and Quality control.

Keywords: Quality management

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I. INTRODUCTION

Construction Industry plays a major role in the economic growth of a nation and occupies a pivotal position in the nation's development plans. India's construction industry employs a work force of nearly 3.2crores. It is the second largest contributor to the GDP after the agricultural sector. Construction sector is seen as a service industry. It generates substantial employment and provides growth in other manufacturing sectors like cement, bitumen, iron and steel, chemicals, bricks, paints, tiles etc

Quality is one of the critical factors in the success of construction projects. Quality of construction projects, as well as project success, can be regarded as the fulfillment of expectations of the project participants. The construction industry in India has been struggling with quality issues for many years. A significant amount of the budget is spent each year on infrastructure and other development projects. Since the quality outcomes of the projects are not according to required standards, faulty construction takes place. Consequently additional investments are required for removal of defects and maintenance work. A construction project in its life span goes through different phases. The main phases of a project can be described as: conceptual planning, feasibility study, design, procurement, construction, acceptance, operation and maintenance

II. LITERATURE REVIEW

A. Lydia (2010)

The guidelines to ensure the quality in planning are: (i) Ensure that all relevant parties involved including consultants, subcontractors and suppliers are included in the task of quality planning for the project; (ii) Establish and define the purpose of the quality system; (iii) In the plan, minimize the effort required to amend copies of documents; (iv) Set up a quality system development team so that the team can produce an effective plan; (v) Ensure that throughout the quality planning task constantly focused on the customer requirements. Construction is a multifarious process involving many organizations on a single project; however, the contractor's, consultant's and client's roles are pivotal for the success of any project. Contractors work as the interface between the public and the industry and they demonstrate the real performance of the industry. They are the public face of the construction industry. Their performance, focuses, policies, processes and methods have a direct impact on all stakeholders in the industry.

B. Abdul Aziz et al. (1999)

Quality systems involve internal and external aspects. An internal quality system covers activities aimed at providing confidence to the management of an organization that the intended quality is being achieved. This is called a "quality management system". Successful implementation of quality management system can contribute to an increase in product quality, improvement in workmanship and efficiency, a decrease in wastage, and increase profit. Meanwhile, an external quality system covers activities aimed at inspiring confidence in the client that the supplier's quality system will provide a product or service that will satisfy the client's quality requirements.

C. Kam, C.W. and Tang (1997)

mentioned that quality management system implementation can improve the competitiveness of an organization by focusing on customer needs and providing quality training for all levels in an organization in order to meet the customer requirements. Hence, the implementation of QMS not only improving intra- project communication, it also increase client confident and help the construction company to be more focus on customer expectation.

III. PROBLEM STATEMENT AND OBJECTIVE

In other manufacturing industries are establishing the TQM (Total Quality Management) system but in construction industry we are not able to establish even QMS (Quality Management System). The reason behind this is quality which is ever changing factor i.e. quality changes time to

time, place to place. But many common activities in construction project like the concreting work, Brick work, plastering, waterproofing etc. Those common works are affected by some major factors like quality of material, quality of workmanship, construction detailing and drawing, concrete work, etc. Quality Management System is more helpful for creating cost oriented quality awareness in construction companies

A. Objectives

- Investigate the implementation of QMS in the construction industry.
- Determine the major factors that are mostly affect the quality of construction during the construction particularly during execution phase.
- To create the quality awareness in construction organisations or companies.
- To minimize the indirect cost of the project and also reduce the wastage of wastage of materials, time, money, manpower, etc.

B. Methodology

- Adopting mix of literature survey.
- Taking market studies from different types of companies.
- Discussion with different construction company's management and taking detailed questionnaire survey

IV. DATA COLLECTION AND ANALYSIS

A field survey was carried out on construction sites to identify and evaluate the current site quality management systems used for controlling the quality of site works of construction projects.

The various factors affecting quality of construction are limitation of finance, limitation of communication, limitation of wages and labour, limitation of weather, limitation of construction details, limitation of construction equipment and materials, limitation of time, limitation of methodology of execution of work, limitations of rules and regulations, various training policies, lack of coordination among different departments.

The various difficulties were observed in implementing quality management system as it increases paper work, lack of qualified workforce in implementation of quality management, high cost in developing and utilizing quality management system, there is continuous need of conducting training programs foe employees, lack of support and commitment from top management, difficulties in continuous monitoring and controlling construction processes,

V. CONCLUSION:

A field survey was carried on construction sites to identify current site quality management system and the review were as follows: there is absence of quality management in companies and there is lot of scope in applying quality management in works at design stages to reduce the faults during construction itself, large amount of rework is done due to faults in design and specification, many construction companies agreed about the benefits of QMS so as to improve performance due increase in competition among construction companies, the main reason for not implementing quality management on site is lack of knowledge about QMS and financial support

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