

A Review on Feasibility of Ready Mix Concrete (RMC) Plant For A Construction Project

Ajit Ingle¹, Ashotosh Mali², Vidya Raut³, Radhika Waghmare⁴, Ghanasham Sarode⁵

^{1, 2, 3, 4}Dept of Civil Engineering

⁵Assistant Professor, Dept of Civil Engineering

^{1, 2, 3, 4, 5}Dr. D.Y. Patil Institute of Technology, Pimpri Pune -18

Abstract- In construction of the multi-storey building, the requirement of bulk material is more. It consist of the mixture like sand, cement, various admixtures, aggregate, water etc. And material management is an essential factor of construction industry. Large amount of concrete which is prepared or transported on site is wasted due to the improper management and mishandling so that's why contractors preferred use RMC. RMC plays important role in construction process. The quality of structure depends on the material used during the construction.

This paper presents the techniques by which we can identify and asses the problem related to the management of material in construction industry. The main aim of the project is analyze the technique that is A-B-C technique and EOQ i.e. which method is better and convenient to use in construction sector. By adopting technique in material management system of RMC and construction site, it can directly affect cost, quality and workability and make RMC plant more feasible.

Keywords- RMC, Feasibility parameters, ABC & EOQ Analysis, S – curve.

I. INTRODUCTION

Concrete that has been prefabricated in a batch facility to meet the precise needs of each task and then delivered "ready to use" to the job site is known as ready-mix concrete (RMC). There are two different kinds, the first of which is a barrel truck or an in-transit mixer. This kind of truck transports concrete to the job site in a plastic state. The second is a mixture for volumetric concrete. It does this by delivering the ready mix in a dry form and mixing the concrete on location. Other sources categories the information into the following three groups: Concreting made with Transit Mix, Central Mix, or Shrink Mix.

In construction industry material management plays an important role. It includes all the essential factors by which quality of the material can be maintained. Material management requires the proper mixing of technical and commercial expertise. The method which is to be implemented

should satisfy the sufficient parameters in which there should be reduction in cost and quality of the material should be maintained. Hence material management adversely affects the construction process. It increases the scope to reduce overall cost and increases the workability and quality of the construction project.

II. STUDY AREA

The study area consists of the site visit at SK ready mix plant at Shikrapur, Pune. The outcomes of the site visit are given below : -

1. Details of site: -

| | |
|---------------|----------------------|
| Site name | : SK Ready Mix Plant |
| Site Engineer | : Prakash Sir |
| Plant Owner | : Mohan Patil sir |
| Location | : Shikrapur ,Pune |

2. Key points:-

Feasibility Parameters :

- Distance of ready mix concrete plant
- Quantity of concrete
- Transportation cost
- Material management
- Duration of project
- Quality of concrete



Fig 1: Study Area 1

III. METHODOLOGY

The entire project work is divided into step-by-step process and this deals with the procedure that we followed during the project work.



IV. EXPECTED OUTCOME

1. Avoid the wastage and delay of the concrete and maintain the quality, workability, strength of the concrete.
2. To improve the material management during construction work.
3. To check the feasibility of RMC plant.

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