SANDIP FOUNDATION'S
Sandip Institute of Engineering and Management, Nashik
Department of Civil Engineering
Academic Year 2017-18
Report on Educational Visit

1. **Event Title:** Educational Visit of SE Civil Students at RMC Plant of subject Concrete Technology
2. **Event Date:** 23/03/18
3. **Event Conduction Duration:** One day
4. **Event Venue:** BRANDMARK CONSTRUCTION, RMC Plant ,Vilholi,Nashik.
5. **Name of Event Co- ordinator:** Prof. H. S. Patil
6. **Event Details:**

Subject:- Concrete Technology **Day & Date of Visit:** Friday 23/03/201

Class:SE Civil Students all Division **Topic Covered:** Ready mix concrete, concrete mix design, Fly ash bricks.

Objectives:

1. Its main objective is to guide students on the RMC (Ready Mix Concrete) technology.
2. To get the Knowledge of concrete mix design for different structures
3. To study Materials required for Ready mix Concrete Work
4. To get the knowledge of admixtures and filler materials used as per requirement

Event Summary:

Ready mix concrete (RMC) is a readytouse material, with predetermined mixture of cement, sand, aggregates and water. RMC is a type of concrete manufactured in a factory according to a set recipe or as per specifications of the customer, at a centrally located batching plant. It is delivered to a worksite, often in truck mixers capable of mixing the ingredients of the concrete en route or just before delivery of the batch. This results in a precise mixture, allowing specialty concrete mixtures to be developed and implemented on construction sites. The second option available is to mix the concrete at the batching plant and deliver the mixed concrete to the site in an agitator truck, which keeps the mixed concrete in correct form. In the case of the centrally mixed type, the drum carrying the concrete revolves slowly so as to prevent the mixed concretefrom "segregation" and prevent its stiffening due to initial set.

RMC is preferred to onsite concrete mixing because of the precision of the mixture and reduced worksite confusion. It facilitates speedy construction through programmed delivery at site and mechanized operation with consequent economy. It also decreases labour, site supervising cost and project time, resulting in savings. Proper control and economyin use of raw material results in saving of natural resources. It assuresconsistent quality through accurate computerized control of aggregates and water as per mix designs. It minimizes cement wastage due to bulk handling and there is no dust problem and therefore, pollution free

By using R.M.C we can save the time and money required for the labours. In following places ready mix concrete can be used:

1.Major concerting projects like dams, roads, bridges, tunnels, canals etc.
2.For concreting in congested areas where storage of materials is not possible.
3.Sites where intensity of traffic makes problems.
4.When supervisor and labour staff is less.

5.To reduce the time required for construction etc.
6. Huge industrial and residential projects.

Materials required for RMC

ADMIXTURES : A substance added to the basic concrete mixture to alter one or more properties of the concrete ie. Fibrous materials for reinforcing water repellent treatments and colouring compounds.

AGGREGATE : Inert particles (i.e. Gravel, sand, and stone) added to cement and water to form concrete.

CEMENT : Dry powder that reacts chemically with water to bind the particles of aggregate, forming concrete. Portland cement is typically used in concrete production.

FLY ASH : Fly ash is a by\product from coal-fired electricity generating power plants

MERITS OF RMC

1.Better quality concrete is produced.
2.Elimination of storage space for basic materials at site.
3.Elimination of Procurement / Hiring of plant and machinery
4.Wastage of basic materials is avoided.
5.Labour associated with production of concrete is eliminated
6.Time required is greatly reduced
7.Noise and dust pollution at site is reduced.
8.Organization at site is more streamlined.
9.Durable & Affordable
10.No storage space required either for raw materials or for the mix
11.Lower labour and supervisory cost
12.No wastage at site
13.Environment friendly
14.Availability of concrete of any grade

DEMERITS OF RMC

1.Need huge initial investment.
2.Not affordable for small projects (small quantity of concrete)
3.Needs effective transportation system from R.M.C to site.
4.Traffic jam or failure of vehicle creates problem if properdose of retarder is not given.
5.Labours should be ready on site to cast the concrete in position to vibrate it and compact it.

Towards the end of plant visit, there was a technical interaction to impart the knowledge on concerned topic with Mr. Pawar Sir (Owener of plant) .

The visit was very fruitful as it improved the students knowledge about the production of concrete and the uses of RMC plant.

Outcome:

After completion of visit students came to know following details:

1. Introduce students with the concept RMC (Ready MixConcrete) technology.
2.Demonstrate students about RMC preparation. .
3.Give them information about benefits and application of RMC in construction industry
4. Introduction of MIVAN Formwork

Event photos:


Concrete Mix
Plant Clg Visit