

MIXING

Thorough mixing of materials is essential for the production of uniform concrete

The mixing should ensure that the mass becomes homogeneous uniform in color and consistency.

- Types of mixing

Hand mixing

Machine mixing

Hand mixing

It is practiced for small scale un important concrete works

Hand mixing should be done over a impervious concrete or brick floor sufficiently large size take one bag of cement .

Spread out and measure d out fine aggregates and course aggregate in alternative layers.

Pour he cement on the top of it and mix them dry by showel, turning the mixture over and over again until the uniformity of color is achieved.

The uniform mixture is spread out in the thickness of about 20 cm

The water is taken and sprinkled over the mixture and simultaneously turned over

The operation is continued till such time a good uniform homogeneous concrete is obtained

Machine mixing

Mixing of concrete almost invariably carried ot by machine ,for reinforced concrete work medium or large scale concrete works .

Machine mixing is not only efficient it is also economical when quantity of concrete to be produced is large

Type of mixer for mixing concrete

- Batch mixer
- Continuous mixer

Batch mixer

Batch mixer produce concrete batch by batch with time interval

This is used in normal concrete work

Batch mixers are two types

- Pan type
- Drum type

Drum types are further classified into tilting ,non tilting and forced action type

The capacity of batch mixer depends on the proportion of the mix

For 1:2:4 ideal mixer 200 liters

For 1:3:6 ideal mixer 280 liters

Mixing time

Concrete mixers are generally designed to run at a speed of 15 to 20 revolutions per minute

For proper mixing it is seen that about 25to 30 revolutions are required in a well designed mixer

It is important that a mixer should not stop in between concreting operations for this requirement concrete mixer must be kept maintained

Source : <http://www.nprcet.org/e%20content/Misc/e-Learning/CIVIL/VI%20SEMESTER/10111CE601%20-%20CONSTRUCTION%20TECHNIQUES%20EQUIPMENTS%20AND%20PRACTICE.pdf>