

MISTAKES & MISCONCEPTIONS IN
CONCRETE AND CONCRETE
CONSTRUCTION.

BY

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Concrete , concrete , concrete .

- Buildings and roads
- Bridges
- Dams
- Canals
- Power plants
- Infrastructure projects
- In the growing need of concrete, need for knowing the making of concrete, placement, compaction, curing etc.

Myth: Using more water in concrete mix produce good concrete.

- ❑ Water added than what is necessary reduces strength and durability of concrete.
- ❑ The mixer operator, the loader and mason who poke and trowel the concrete add water at free will to maintain an easy effort to finish the concrete.
- ❑ High water content results in bleeding and segregation.
- ❑ Use of admixtures / water reducing agents such as plasticisers in large constructions.

Concrete mixing. The operator adding water at his will.



Instructions for him to add correct quantity.



Concrete ready for placement.



Use of higher grade cement(53gr) produces stronger concrete.

- The strength of concrete increases with age. At 28 days the concrete with either 43grade or 53 grade will have same design strength of 20mpa.
- Only advantage high early strength gain facilitate early deshuttering .
- High cost run and intensive curing because of high heat of hydration

SPACER BAR to keep the top and bottom bars in their respective position.

Cover block is needed to provide cover for rebar's to take care of environmental effects.



Water for concrete should be of portable grade.

- Water should not contain chemicals which are harmful to the concrete.
- Ph value shall not be less than 6.
- Bore well water needs to be tested before using.
- Salt water / sea water not recommended for using for concrete in RCC.
- Sulphates and chlorides attack the rebar's, corrosion will start.

Form work shall be rigid.

Failure in form work is common which cost precious lives of people at site.

Bracing is essential in both the directions.



Transportation of concrete.



Placing concrete.



Over vibration and under vibration is harmful and should be avoided.
Over vibration causes separation of coarse aggregates towards the bottom of the form and cement slurry towards the top.
Inadequate compaction leads to honey- combing



Brick work in progress at Bhaskara.



A view of Bhaskara.





Concrete in the un ending service of nation building needs to be understood properly.

THANKING YOU