Divyashakthy

NANO CATALYTICAL INSTANT WATER CONVERTER (NCIWC)
An environmental friendly water treatment solutions

CONSTRUCTION SECTOR

Water plays a major role in the fields of bricks making & construction sector. As the water is the major ingredient in bonding of the bricks, concrete mixing & curing. Even Motors, pipe lines, taps, shower heads and other costly bathroom fitting are affected by UN potable water from the bore sources which we majorly depend upon.

Water for Brick Making, Construction & curing:

Water is one of the most important elements in brick making & construction but people still ignore quality aspect of this element. The water is required for preparation of bricks, mortar, mixing of cement concrete and for curing work etc during construction work. The quality and quantity of water has much effect on the strength of Bricks, mortar and cement concrete in construction work.

Quality of Water:

The water used for brick making, mixing and curing should be clean and free from injurious quantities of alkalis, acid, salt, sugar, organic materials, vegetable growth and other substances that may be deleterious to bricks, stone, concrete or steel. Potable water is generally considered satisfactory for mixing.

When the water is mixed in mortar, it reacts with cement and forms a binding paste which fills small voids in the sand. This creates a close cohesion of sand particles and cement. In case of cement concrete the voids formed between sand and coarse aggregate gets filled with the paste forming a cohesive substance/concrete. The required quality & quantity of water is used to prepare mortar or concrete, but in practice it is seen that because of bad water conditions more water is mixed to make the mix workable. This is a bad practice and additional & bad water weakens the strength of cement paste. Extra water also weakens adhesive quality.Hence strict control should be kept on water quality for preparing the mortar or concrete for qualitative finish/ strength.

Effects of Bad Quality Water on Cement Concrete & Bricks:

It has been observed that certain common impurities in water affect the quality of bricks, mortar or concrete. Many times in spite of using best material i.e. cement, coarse sand, coarse aggregate etc. in cement concrete, required results are not achieved. Most of the Engineers /Contractors think that there is something wrong in cement, but they do not consider quality of water being used.

Some bad effects of water containing impurities are following.

- Presence of salt in water such as Calcium Chloride, Iron Salts, inorganic salts and sodium etc. are so dangerous that they reduce initial strength of concrete and in some cases no strength can be achieved. There is rusting problem in steel provided in RCC.
- Presence of acid, alkali, salinity and water with sugar also reduce the strength of concrete. Presence of silt or suspended particle in water has adverse effect on strength of concrete.
- Presence of algae/vegetable growth in water used for mixing in cement concrete reduce of the strength of concrete considerably and also reduce the bond between cement paste and aggregate.

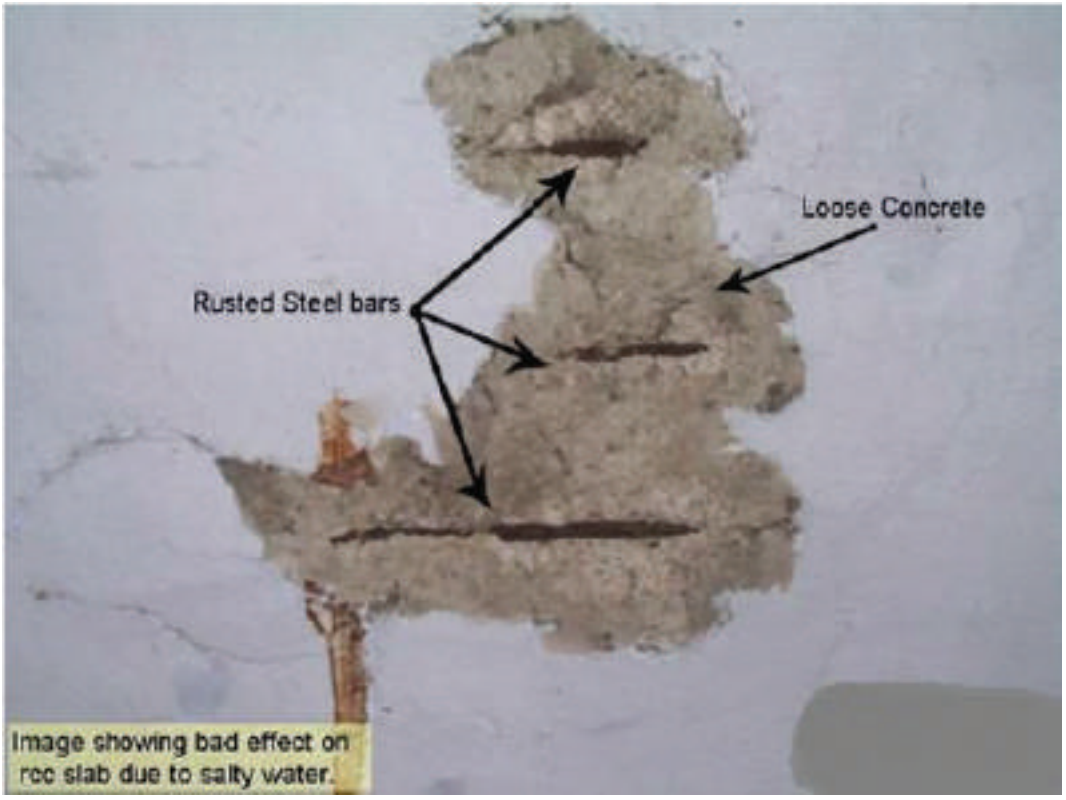

Image showing bad effect on rcc slab due to salty water.

Don't let this happen in your home. Use quality water for construction.

Caution: It has been observed at various places that cement concrete start falling down in pieces after rusting mild steel from RCC slab, which is due to use of bad quality/salty water in RCC slabs. All this is due to negligence or ignorance which creates great problems and also bears a heavy loss. It is advisable that the water must be potent enough before using in construction work.

It is a common thinking in construction work that the water from the bore wells & other sources are generally acceptable for mixing mortar or concrete, curing work & bricks making. However, the water must be ensured to be good at using in construction work. When you are making huge expenditure on construction work, a negligible amount spent on water treating should not be saved. Treated water should be used as this will increase the strength of cement concrete and enhance the life of building and your pipe lines & valuable fittings.

Effects of bad quality of water on your motors, pipe lines, shower heads & bathroom fittings:

- Scale formation on the motor pump impellers leading to more current usage & excess load on the motor.
- Clogged pipe lines due to heavy scale formations, thus leading to breakage & internal Seeping in the interiors of the building.
- More time taken to pump water to overhead tanks because of scale formations & gel leading to current wastage and excess load on motor.
- Frequent blockages of your shower heads & taps.
- Algae formations at the leakages & patches on the structures
- White spotting of salts & scales on the taps, wash basins, bath tubs and other costly fittings.

Effects of bad quality of water on your Bricks, Concrete mixtures & Curing:

- There won't be proper bondage of the bricks when made leading to falling off the material & no strength in the bricks.
- Bad water can affect the quality of the concrete mixtures leading to lesser strength in the construction & early deteriorations of the buildings & air cracks.
- RCC slabs gets fallen like patches with loose concrete due to bad quality of water used in concrete mixing.
- Rusting of the steel bars which are considered the major strength to the structure.
- Bad water adversely affects the curing procedures in constructions which is plays a major role in the strength of the structures.
- Bad water can lead to air cracks & patch like loose concrete falling off the structures.

Advantages with our water converter (NCIWC):

- It will reduce the risk of compromising the strength of the structure because of water.
- It can improve mixture of cement concrete for workability
- Compression strength improves by more than 15 %.
- It increases workability, density and strength without increasing the quantity of cement.
- No air cracks in the structures.
- Solid & strong bricks.
- Strong concrete mixtures with quality water
- Strong and long lasting RCC slabs with best water curing practice.
- No scale formations & no internal seepages.
- No more scaling in the pipe lines & motors.
- Clean shower heads & taps
- No more White spotting of salts & scales on the taps, wash basins, bath tubs and other costly fittings.
- No more algae formations thus clean tanks & sumps.

Hence in the area where there is bad water using our converter can increases the strength of the bricks cement concrete & clean pipes taps, shower heads & other costly fittings .