

Improving the Properties of Concrete using Seawater with High Reactive Metakaoline and Sodium Mono Florophosphate

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Improving the Properties of concrete using seawater with high reactive metakaoline and sodium mono florophosphate. issue : Processing of concrete consumes lot of desalinated water, which is not available, especially in Qatari environment. Also concrete exposed to corrosion factors such as soil salts and CO₂ in atmosphere, causing damage to buildings in Qatar. Hypothesis: (1) We will use the seawater in the processing of concrete with higher resistance to pressure. (2) There is a positive impact to use seawater and metakaoline to resistance of concrete to humidity (decreasing permeability). (3) There is a positive impact to use seawater and metakaoline in formation of concrete crystals. (4) There is a positive impact to use seawater and metakaoline to resistance. Substances: Portland cement - Fresh Water - Seawater. High reactive metakaoline - Sulfuric acid of concentration 4%- Nitric acid of concentration 4%. Used curriculum: Experimental curriculum. As well as we are studying physical and chemical properties for different samples by measuring equipment and chemicals. Variables: - Independent variable: seawater, fresh water and metakaoline. - Dependent variable: concrete properties (resisting pressure- crystals formation-permeability -resistance of acid impact). - Rogue variables: Temperature-type of cement-degree of salinity of the water-impurities in the seawater. The experiments were done as follows: 5 times and excluding the greatest and lowest results to ensure the greatest accuracy. (Note that in the permeability experiment, a sample was ruled out due to the lack of quality test). Data analysis of compression test: Using the seawater with high reactive metakaoline increases the strength of the sample holed pressure compared to rest samples. The repor

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