

Contemplation on the utilization of seawater in concrete as a viable and environmentally friendly approach: A review

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Abstract: Cement is the one the most used man made material used in construction. The hydration of cement, which gives concrete its hardness, commences when water is added to a dry mix. The use of various materials as aggregates and/or binders (cement) has been the subject of numerous published studies. Within the scientific community, there is limited research on the use of water other than fresh or drinkable water for mixing concrete. The present study investigates the potential use of seawater for concrete mixing and curing. A sustainable answer to the growing freshwater shortage may be the use of seawater in concrete. The study under consideration examines the existing literature about the usage of seawater and its impact on concrete's workability, mechanical strength, durability, and setting time. The appropriateness of stainless steel and pozzolanic materials to lessen the impacts of seawater concrete is another area of focus in the paper. The study contrasts traditional concrete with seawater and offers sustainable alternatives based on existing research.

Keywords: concrete, sea water, durability, strength, pozzolanic material, sustainability