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Adjuvant Effect and Mineral Addition in Aggressive Environments on the Sustainability of Using Local Materials Concretes

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Abstract : The durability of concrete is not one of its features, but its response to service loads and environmental conditions. Thus, the durability of concrete depends on a variety of material characteristics, but also the aggressiveness of the environment. Much durability problems encountered in tropical regions (region M'sila) due to the presence of chlorides and sulfates (in the ground or in the aggregate) with the additional aggravation of the effect of hot weather and arid. This lack of sustainability has a direct influence on the structure of the building and can lead to the complete deterioration of many buildings. The characteristics of the nature of fillers are evaluated based on the degree of aggressiveness of the environment considering as a means of characterization: mechanical strength, porosity. Specimens will be exposed to different storage media chemically aggressive drinking water, salts and sulfates (sodium chloride, MgSO4), solutions are not renewed or PH control solutions. The parameters taken into account are: age, the nature and degree of aggressiveness of the environment conservation, the incorporation of adjuvant type superplasticizer dosage and mineral additives.

Keywords : ordinary concretes, marble powder fillers, adjuvant, strength
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