**THE MARINE ENVIRONMENT AND ITS INFLUENCE ON THE DURABILITY OF THE CONCRETE OF THE EL HAMIZ DAM**

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| **ABSTRACT**The study presented deals with the mechanical consequences and the degradations caused by the external attack of sulphates from the marine environment on the prefabricated concretes of the spillway and the dyke of the El hamiz dam in Boumerdès (Algeria) ), concrete produced by solar curing and renewable energy all year round. Three different external sulphate attack protocols were applied for three types of concrete based on crushed aggregates (dry concrete at 45°C, ordinary concrete (28 days), water-hardened concrete at 28 days, the samples are immersed in a 6% H2SO4 solution. The results show that the impact of the age of the material on its degradation in contact with the sulfuric acid solution was highlighted, visual observations then a rapid and brutal degradation on the surface then in depth towards the core then a loss of mass and cracking and finally the ruin of the material. |

# Keywords: El-Hamiz dam, precast concrete, external sulphate attack, degradation.

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