

## Abstract

The high performance concretes reinforced with metallic fiber are used more and more in the construction. Under the current policy of sustainable development, these are the materials that procure gains of consequent mass, which can increase the durability of structures, which contributes to the reduction of the impact of cementitious materials the greenhouse effect. This study investigated the ripening of hybrid steel fiber reinforced high performance concrete, with 15% substitution of cement by blast furnace slag, in water sulphated and Rance-France sea- water. This experimental study analysed the effect of 6 months of ripening of the simple, in chemically aggressive water, on the compactness and the microstructure of the cement matrix and the possible alteration of the metal fibers. The gotten results show no significant alteration or the cement matrix or fibers by water sulphated and seawater