Effect of the Accelerated Carbonation in Fibercement Composites Reinforced with Eucalyptus Pulp and Nanofibrillated Cellulose

Authors : Viviane da Costa Correia, Sergio Francisco Santos, Holmer Savastano Junior

Abstract : The main purpose of this work was verify the influence of the accelerated carbonation in the physical and mechanical properties of the hybrid composites, reinforced with micro and nanofibers and composites with microfibers. The composites were produced by the slurry vacuum dewatering method, followed by pressing. It was produced using two formulations: 8% of eucalyptus pulp + 1% of the nanofibrillated cellulose and 9% of eucalyptus pulp, both were subjected to accelerated carbonation. The results showed that the accelerated carbonation contributed to improve the physical and mechanical properties of the hybrid composites and of the composites reinforced with microfibers (eucalyptus pulp).

Keywords : carbonation, cement composites, nanofibrillated cellulose, eucalyptus pulp

Conference Title : ICCM 2015 : International Conference on Composite Materials

Conference Location : Paris, France

Conference Dates : January 23-24, 2015