World Academy of Science, Engineering and Technology
International Journal of Environmental and Ecological Engineering
Vol:9, No:03, 2015

Recovery of Waste: Feasibility and Sustainable Application of Residues from Drinking Water Treatment in Building Materials

Authors : Flavio Araujo, Julio Lima, Paulo Scalize, Antonio Albuquerque, Isabela Santos

Abstract : The aim of this study was to perform the physicochemical characterizations of the residue generated in the Meia-Ponte Water Treatment Plant, seeking to obtain normative parameters and consider sustainable alternatives for reincorporation of the residues in the productive chain for manufacturing various materials construction. In order to reduce the environmental liabilities generated by sanitation companies and discontinue unsustainable forms of disposal as the launching of the residue in the rivers, disposal in landfills or burning it, because such ways pollute watercourses, ground and air. The analyzes performed: Granulometry, identification of clay minerals, Scanning Electron Microscopy, and X-Ray Diffraction demonstrated the potential application of residues to replace the soil and sand, because it has characteristics compatible with small aggregate and can be used as feedstock for the manufacture of materials as ceramic and soil-cement bricks, mortars, interlocking floors and concrete artifacts.

Keywords : recovery of waste, residue, sustainable, water treatment plant, WTR
Conference Title : ICEEESD 2015 : International Conference on Energy, Ecology, Environment and Sustainable Development
Conference Location : Miami, United States
Conference Dates : March 09-10, 2015