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

Use of Residues from Water Treatment and Porcelain Coatings Industry for Producing Eco-Bricks

Authors: Flavio Araujo, Fabiolla Lima, Julio Lima, Paulo Scalize, Antonio Albuquerque, Heitor Reis

Abstract : One of the great environmental problems in the management of water treatment (WTP) is on the disposal of waste generated during the treatment process. The same occurs with the waste generated during rectification of porcelain tiles. Despite environmental laws in Brazil the residues does not have an ecologically balanced destination. Thus, with the purpose to identify an environmentally sustainable disposal, residues were used to replace part of the soil, for production soil-cement bricks. It was used the residues from WTP and coatings industry Cecrisa (Brazil). Consequently, a greater amount of fine aggregate in the two samples of residues was found. The residue affects the quality of bricks produced, compared to the sample without residues. However, the results of compression and water absorption tests were obtained values that meet the standards, respectively 2.0 MPa and 20% absorption.

Keywords: water treatment residue, porcelain tile residue, WTP, brick

Conference Title: ICEEESD 2015: International Conference on Energy, Ecology, Environment and Sustainable Development

Conference Location : Miami, United States **Conference Dates :** March 09-10, 2015