

## Soil-Cement Floor Produced with Alum Water Treatment Residues

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

**Abstract :** From a concern regarding the environmental impacts caused by the disposal of residues generated in Water Treatment Plants (WTPs), alternatives ways have been studied to use these residues as raw material for manufacture of building materials, avoiding their discharge on water streams, disposal on sanitary landfills or incineration. This paper aims to present the results of a research work, which is using WTR for replacing the soil content in the manufacturing of soil-cement floor with proportions of 0, 5, 10 and 15%. The samples tests showed a reduction mechanical strength in so far as has increased the amount of waste. The water absorption was below the maximum of 6% required by the standard. The application of WTR contributes to the reduction of the environmental damage in the water treatment industry.

**Keywords :** residue, soil-cement floor, sustainable, WTP

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

**Conference Location :** Miami, United States

**Conference Dates :** March 09-10, 2015