

## Comparative Study of Stone Column with and without Encasement Using Waste Aggregate

**Authors :** V. K. Stalin, V. Paneerselvam, M. Bharath, M. Kirithika

**Abstract :** In developing countries like India due to the rapid urbanization, large amount of waste materials are produced every year. These waste materials can be utilized in the improvement of problematic soils. Stone column is one of the best methods to improve soft clay deposits. In this study, load tests were conducted to ensure the suitability of waste as column materials. The variable parameters studied are material, number of column and encasement. The materials used for the study are stone aggregate, copper slag, construction waste, for one, two and three number of columns with geotextile and geogrid encasement. It was found that the performance of waste as column material are comparable to that of conventional stone column with and without encasement. Hence, it is concluded that the copper slag and construction waste may be used as a column material in place of conventional stone aggregate to improve the soft clay advantage being utilization of waste.

**Keywords :** stone column, geocomposite, construction waste, copper slag

**Conference Title :** ICGGEE 2017 : International Conference on Geological, Geotechnical and Environmental Engineering

**Conference Location :** Melbourne, Australia

**Conference Dates :** February 02-03, 2017