

IMPROVEMENT OF PROBLEMATIC CLAY USING CONCRETE WASTE MATERIALS

KE. A. PALANIAPPAN AND V. K. STALIN

Abstract

Concrete wastes arising from demolition of old concrete buildings and renovation of existing buildings cause environmental problems especially in urban areas. In this paper an attempt is made to study the performance of concrete waste as column material in the place of stone aggregate for the improvement of soft clay deposits. Consolidation and load tests were conducted with and without different number of stone and concrete waste columns for L/d ratio of 6.4. From test results it is found that the ratio of C_{vr}/C_v values, load carrying capacity and time required for 75% consolidation in the case of clay + single and multiple concrete waste columns are almost same as that of the clay + single and multiple conventional stone aggregate columns. It is concluded that the concrete waste column can be used in the place of stone aggregate for the improvement of soft clay deposits.

Keywords: Concrete wastes, Soft clay deposits, consolidation test, load test, concrete waste columns, improvement of soft clay