Preparation of residual soil samples by using modified method

Abstract

The purpose of this study was to establish an alternative method in preparing the residual soil samples for laboratory tests. The soil was compacted by using the modified method in order to get the desired values of dry unit weight that was equivalent to the values obtained from standard compaction method. The advantage of using this method was that, due to its larger size, more samples could be taken and tested under the same compaction condition and the mould could be directly mounted on the shaking table with the addition of the air bags to avoid the occurrence of boundary effects. The soil was compacted in a 300mm x 300mm x 300mm mould by using the vibrating hammer. The results of this study showed that the average dry unit weight value of 13.4 kN/m ^{3}, 13.6 kN/m^3 and 13.7 kN/m^3 obtained from 5 rounds/layer, 6 rounds/layer and 7 rounds/layer of compaction of modified method, was equivalent to about 92%, 93 % and 94% of maximum dry unit weight obtained from standard compaction method, respectively.