

CLASSIFICATION TESTS ON SAMANALAWEWA SOILS**T. Sivapatham***(Engineering Materials Laboratory, Irrigation Department)*

The tests for Gradation Curves and Atterberg Limits performed according to Standard test procedures on more than 60 disturbed soil samples from the proposed borrow areas and dam axis for the Samanalawawa Project indicate in general that the Plasticity Index is high whereas the clay content is low. It is also found that the classification of these materials using the normal methods is not realistic. The probable causes for this behaviour are discussed in relation to the type of soils present in this area.

The soils occurring in this area are residual soils and are called laterites which are formed by in situ tropical weathering of igneous and/or metamorphic rock. A characteristic of these soils is the aggregation of particles due to the presence of free iron oxide. It is concluded that the observation of high Plasticity Index and low clay content is due to the mechanical breakdown of the cementation bonds to varying degrees during the standard treatment in testing of samples. It is suggested that further study on these soils with regard to the types of clay minerals, the interaction between the clay particles, the pore water cation-exchange capacity etc. is required to understand this behaviour fully. Such a study will enable the use of these materials for civil engineering works with a clearer understanding.