Slaking behaviour of mudrocks at Precinct 5, Putrajaya and its performance as subgrade material for road construction in Malaysia

ABSTRACT

One of the significant problems of clay-bearing rocks such as Mudrocks is their slaking behaviours when exposed to alternating cycles of drying and wetting when performing as geomaterial for a construction. Thus, it is important to study whether or not the slaked material can perform as subgrade material. This study investigates the durability of Putrajaya Mudrock through typical slaking test for clay-bearing rocks; jar slake test, slake durability test and slaking immersion test. Also in this study, the performance of Putrajaya Mudrocks as subgrade material for road construction in Malaysia is studied by conducting CBR test in reference to standard requirement for subgrade as stated by the Public Work Department (JKR) Malaysia. The results show that the Slaked Putrajaya Mudrock is suitable as subgrade for road construction, however, further study is required to investigate the settlement that it may cause due to change of moisture content.

Keyword: Slaking; Mudrock; Subgrade; Putrajaya; Moisture content; Malaysia; JKR