

ABSTRAK

Konstruksi di atas *mudrock* sangat berkaitan dengan masalah durabilitas tanah. Tanah *siltstone* dan *clayshale* mempunyai durabilitas yang tinggi apabila tertimbun secara alami, dan akan mengalami penurunan durabilitas apabila kontak dengan air dan udara secara terus menerus. Penambahan semen sebagai bahan stabilisasi bertujuan untuk meningkatkan durabilitasnya. Sampel dibuat dari campuran semen *Portland* menggunakan metode *spray coating* dan *dry coating* yang diberikan kadar semen sebesar 10%. Sampel yang digunakan berupa fragmen asli hasil pecahan batu alami dengan berat masing-masing 40-60 g. Pengujian *slake durability* dilakukan menggunakan standar ASTM D4644. Hasil dari pengujian menunjukkan bahwa dengan penambahan semen meningkatkan durabilitas dan mengurangi tingkat pelapukan tanah. Metode pencampuran dengan *spray coating* memiliki tingkat degradasi yang rendah daripada *dry coating*.

Kata kunci: *Clayshale, Siltstone, Slake Durability, Dry Coating, Spray Coating.*

ABSTRACT

Construction on murdock subgrade related with soil durability problems. Siltstone and clayshale have high durability when buried naturally, and will experience a decrease in durability when contact with water and air continuously. The addition of cement as a stabilizer aims to increase mudrock durability. The specimens that used in this study was made from a soil-cement mixture using spray coating and dry coating methods which are given cement in an amount of 10% to soil dry weight. The specimen shapes that used were natural fragments from sediment lumps weighing 40-60 g each. Slake durability testing is carried out using the ASTM D4644 standard. The results of the tests show that the addition of cement increases durability and reduces the rate of soil weathering. The mixing method with spray coating has a low degradation rate compared to dry coating.

Key words : Clayshale, Siltstone, Slake Durability, Dry Coating, Spray Coating.