عنوان مقاله:

Effects of Lime Cement Columns in Tropical Peat of East Coast of Peninsular Malaysia

محل انتشار:

هشتمین کنگره بین المللی مهندسی عمران (سال: 1388)

تعداد صفحات اصل مقاله: 7

نویسندگان:

Youventharan Duraisamy - *Lecturer, Universiti Malaysia Pahang, Malaysia*

Puspanathan Subramaniam - *Undergraduate Student, Universiti Malaysia Pahang, Malaysia*

خلاصه مقاله:

This paper presents the effects of lime cement columns in terms of compressibility and shear strength in tropical peat. This paper also discussed the engineering properties of unstabilized and stabilized tropical peat of East Coast of Peninsular Malaysia. Samples from three locations were collected to distinguish the variants of organic content and fiber content in this study. Tropical peat collected from this location is classified as fibrous peat using Von Post scale. The moisture content and organic content of this peat is ranging from 400 % to 900 % and 80 % to 90 % respectively. Author also found a good correlation between the engineering properties and the compressibility parameters. A dosage rate of 150 kg/m3 was used to mixed binders in the ratio of 80:20 (cement: lime).The compressibility and shear strength of unstabilized and stabilized peat was compared to determine the effectiveness of lime cement columns. The compressibility of peat was determined using conventional oedometer test and the undrained shear strength, Su of peat was determined using unconfined compressive strength test. Compressibility indices, Cc and Cα were identified as two crucial parameters to estimate settlements in peat soil. Based on the results obtained, the mixing of lime cement column in peat extensively increases the shear strength and significantly reduces the .compressibility of peat compared to the unstabilized peat

کلمات کلیدی:

Keywords Peat, Lime Cement Column, Compressibility, Shear Strength