

STABILITY ANALYZE RETAINING WALL AT THE TUKUMAN DAM IN THE PLOSOWANGI VILLAGE CAWAS KLATEN

ABSTRACT

**Andri Darmawan
NIM : 08510131032**

State University of Yogyakarta

The analyze in this last project has a purpose to acknowledge about the quality of retaining wall at Tukuman Dam in the Plosowangi village Cawas Klaten district on E-E sectional imaging in Appendix 1 to the robust stability of the soil bearing capacity, sliding and rolling with the influence of the earthquake were included and excluded the influence of the earthquake.

To analyze the gravity type retaining wall on Tukuman Dam wall in the Plosowangi village Cawas Klaten district through several stages or steps that include data collection and calculation stabilities retaining wall. The Calculation was using the Rankine earth pressure. Soil bearing capacity analysis was using Terzaghi.

From the calculation if the effect of the earthquake were not involved at the time of the floods, so the stability of the soil support: $SF = 3,815 > 2,5$, at the saturated-empty, $SF = 4,346 > 2,5$ and, at a scoreless, $SF = 4,492 > 2,5$. To shear at the time of the floods, $SF = 12,132 > 1,5$, at the saturated-empty, $SF = 7,238 > 1,5$ and, at a scoreless, $SF = 8,991 > 1,5$. To roll at the time of the floods, $SF = 2,668 > 1,5$, at the saturated-empty, $SF = 2,034 > 1,5$ and, at a scoreless, $SF = 2,456 > 1,5$. If the effect of the earthquake were included at the time of floods, so the stability of soil bearing: $SF = 4,342 > 2,5$, at the saturated-empty, $SF = 4,141 > 2,5$ and when a scoreless, $SF = 4,286 > 2,5$. To shear at the time of the floods, $SF = 6,961 > 1,5$, at the saturated-empty, $SF = 4,28 > 1,5$ and, at a scoreless, $SF = 5,619 > 1,5$. To roll at the time of the floods, $SF = 2,021 > 1,5$, at the saturated-empty, $SF = 1,635 > 1,5$ and at a scoreless, $SF = 1,897 > 1,5$. Can be concluded that the strong support of land, sliding, rolling and safe against earthquake effects are not involved or engaged properly when the floods, saturated, empty and empty-empty.

Key words : retaining wall, the stability of the solid soil bearing, sliding and rolling.