

ABSTRAK

Dinding penahan tanah merupakan struktur buatan manusia untuk menahan gaya dorong tanah lateral yang terjadi akibat perbedaan elevasi permukaan tanah dan juga beban luar. Pembangunan dinding penahan tanah yang tergolong sederhana perlu mempertimbangkan model, analisis material dan perhitungan longsoran yang akan jatuh pada dinding penahan tanah. Penelitian ini menggunakan metode pemodelan dinding penahan tanah dengan tipe Kantilever dengan masing – masing tinggi 7 dan 5 meter, lebar atas 0,4 meter, dengan lebar bawah 5,4 dan 3,6 meter. Penelitian dinding penahan tanah ini dilaksanakan pada pembangunan Jembatan KA-BH 39 lintas Tebing – Siantar. Analisis yang dilaksanakan pada penelitian ini menggunakan metode Terzaghi yang memperhitungkan stabilitas dinding penahan tanah terhadap faktor keamanan guling, geser dan daya dukung tanah. Berdasarkan hasil penelitian menunjukkan bahwa dinding penahan tanah tipe Kantilever tinggi 5 meter aman terhadap bahaya guling, geser, dan daya dukung tanah. Masing – masing angka keamannya yaitu : $SF_{gl} = 9,25 > 1,5$, $SF_{gs} = 5,62 > 1,5$, dan $SF_{ijin} = 4,59 > 3$. Sedangkan untuk tinggi 7 meter sama halnya dengan yang 5 meter, aman terhadap bahaya guling, geser, dan daya dukung tanah. Masing – masing angka keamannya yaitu : $SF_{gl} = 2,93 > 1,5$, $SF_{gs} = 5,47 > 1,5$, dan $SF_{ijin} = 3,12 > 3$.

Kata kunci : *Dinding Penahan Tanah, Metode Terzaghi.*

ABSTRACT

The retaining wall is a man-made structure to resist lateral thrust due to differences in surface elevation and also external loads. The construction of a retaining wall that is classified as simple is necessary to consider the model, analysis of the material, and the calculation of the avalanche that will fall on the retaining wall. The study used a method of modeling ground retaining walls with Cantilever type with heights of 7 and 5 meters, upper width of 0.4 meters, with a width of under 5.4 and 3.6 meters. This land retaining wall research was carried out on the construction of KA-BH 39 bridge across Tebing – Siantar. The analysis conducted on this study used Terzaghi's method which takes into account the stability of the ground retaining wall against the safety factors of the roll, shear and carrying capacity of the soil. Based on the results of the study showed that the retaining wall of cantilever type soil is 5 meters high safe against the dangers of roll, shear, and soil carrying capacity. Each of the security numbers is: $SF_{gl} = 9.25 > 1.5$, $SF_{gs} = 5.62 > 1.5$, and $SF_{ijin} = 4.59 > 3$. As for the height of 7 meters as well as the 5 meters, safe against the danger of rolling, sliding, and ground carrying capacity. Each of the security numbers is: $SF_{gl} = 2.93 > 1.5$, $SF_{gs} = 5.47 > 1.5$, and $SF_{ijin} = 3.12 > 3$.

Keywords: *Soil Retaining Wall, Terzaghi Method.*