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论文

土层锚杆抗滑桩嵌固深度的试验研究

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摘要:

相比普通抗滑桩,桩顶锚杆的存在可以极大减小桩身内力和嵌固深度,但其计算方法目前还不是很完善,且带有一定的工程经验,因而开展这方面的试验研究就显得十分必要。本文首先介绍了土层锚杆抗滑桩系统桩侧地层抗力分布规律的室内模型试验成果,试验分三组,其中两组在坡体后缘加载,一组用千斤顶直接在桩后加载,桩身上各贴有一定数量的土压力盒,用以测定作用于桩身上的地层抗力。从试验中,得出了土层锚杆抗滑桩桩身地层抗力主要分布在桩前滑面以下部分及最大值出现的部位,并给出了桩前滑面以下部分抗力值的大致范围。然后根据试验结果,应用滑移线解法,分别计算了抗力分布为三角形与梯形时土层锚杆抗滑桩嵌固深度,最后与实际结果进行了比较。

关键词: 锚杆抗滑桩 模型试验 嵌固深度 滑移线法

LABORATORY TEST STUDY OF ANCHORING DEPTH FOR ANTI SLIDE PILES WHOSE HEAD REINFORCED WITH ANCHOR BAR IN SOIL

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Abstract:

This paper deals with a special anti slid pile whose head is further reinforced and stabilized with bars

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abchored in soil. Due to the existence of anchor bars,the internal forces and the pile anchoring depth can be greatly reduced. However,the method of calculation is not yet perfect and need a certain amount of engineering experience. The experimental study is very necessary. This paper presents the model test results of earth force in the side of anti slide pile of anchor bars. There are three groups of the tests. The loads are on the back side of the slope in two groups. The other one has itsload just behind the pile by jack. In order to get the force of the soil,some earth pressure boxes are put to get the earth pressure on side of the piles. The part of the maximum pressure of the earth pressure is mainly focused under the slip line before the pile and is found by the test. The earth pressure before the pile is got by the test.

According with the result of the test,the anchoring depth of the triangle and echelon shapes of the anti pressure is computed and compared the result with what got from the test.

Keywords: Anti slide pile with anchor bar Model test Anchoring depth Slip line Landslide, Slope engineering

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