擋土牆外移過程之土壓重新分布預測-飽和砂土之背填土

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摘要

The earth pressure acts on the retaining wall will redistributions while the wall moves outwards. Thus, when a retaining wall is designed for economical and safety reasons, it is necessary to accurately estimate the involved earth pressure distribution, earth thrust and the height of application of earth thrust. Therefore, 20 sets of triaxial tests for analyzing the lateral extension behaviors of saturated Ottawa sand are performed in this study. A formula is derived based on those relationships between the radial strain and the effective radial stress to predict the redistribution of earth pressure. That is to say, convert the measured outward movement of the top of the retaining wall in the field to through a geometric relationship. Apply into the formula to obtain the values of after changing for a specified depth. Connect values of different depths to obtain the shape of horizontal earth pressure redistribution. Finally, the earth thrust and the height of application of earth thrust can be calculated.

關鍵字：Retaining Wall, Lateral Extension Behavior, Redistribution of earth pressure.