

论文

基于可拓学的砂土液化等级评价研究

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摘要:

砂土液化等级的判别方法多种多样,考虑的因素有多有少,但不同判别方法中考虑的因素,由于评分标准的不同不可以任意相互选用,导致了传统砂土液化等级判别方法的局限性.可拓评判则从可拓集合理论出发,建立多指标性能参数的等级评定模型,通过定量的数值表示评价结果,这样可以使评价指标最优化地接近实际的土质情况,评价结果自然比传统评价方法更加准确.结合改进的层次分析法(The Analytic Hierach Process),应用可拓理论对砂土的液化等级进行评价,较好地解决了工程中的实际问题.

关键词: 砂土液化 层次分析法 可拓学 评价

Rank evaluation of sand liquefaction based on Extenics

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Abstract:

There are various methods having different factors for the evaluation of sand liquefaction. Those different factors of different methods can not be employed together due to the difference in the evaluation standard for different methods, which cause the limitation of the traditional evaluation methods. Based on extension, a quantitative evaluation model for sand liquefaction of multiple parameters was developed, of which the evaluation indexes can come optimally near to the actual situation, and the solution is more efficient than traditional evaluation. Based on the improved analytic hierarchy, the actual problem in the project was better solved by using Extenics to evaluate the ranks of sand liquefaction.

Keywords: sand liquefaction analytic hierarchy process Extenics evaluation

收稿日期 2007-11-01 修回日期 1900-01-01 网络版发布日期 2008-10-16

DOI:

基金项目:

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