



基于单桩Q-S曲线实测数据的群桩沉降分析

Settlement Behavior of Pile Group Based on single pile

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中文摘要

群桩沉降预测一直是桩基设计中的难点,在国家地基规范、桩基规范和一些地方地基规范中均引入了沉降地区经验系数来加以基础沉降与桩基实际特性、施工方法和实际土层状况等密切相关,而单桩试桩曲线包含了丰富的桩土相互作用信息,在一定程度上直接信息,但目前单桩试验曲线一般只应用于验证单桩承载力设计值,很少直接用于群桩沉降计算中。本文基于此提出了利用单桩Q-S曲线对作用系数夸大了群桩间的相互作用,因此本文收集了77组单群桩沉降实测资料,其中71组用于统计分析得出群桩沉降比公式,最后通比较,其计算值与实测值比值的均值为1.46,计算值与实测值符合程度较好,表明该法具有较强的适用性。

英文摘要

In the geotechnical engineering design, it was difficult yet to estimate the settlement of pile group. Empiric settlement in national and regional codes, such as Code for design of building foundation and Technical code for bui paid to the relationship between pile settlement and pile engineering practice, because pile and soil medium charact displacement and construction influence are all embodied in pile static load test. So it' s more reasonable that sta curve, should be combined with the analysis of pile group settlement. Then calculation method of pile group settleme proposed . many researches show pile group interaction theory overestimates interaction effect in pile group, this p including single pile settlement and pile group settlement, there are 7lexamples are used in calculating settlement pile group settlement method applied with Q-S curve. Analysis results show the method is reasonable, more accurate a