

吹填软土结构强度形成的灰色关联分析

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GREY CORRELATION ANALYSIS OF STRUCTURAL STRENGTH FORMATION OF SOFT DREDGER FILL

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全文: PDF (367 KB) HTML (KB) 输出: BibTeX | EndNote (RIS) 背景资料

摘要 本文以天津滨海新区吹填软土为研究对象,通过对试验土样施加不同的围压、偏压、排水条件,使吹填土样在不同因素综合作用下形成一定的结构强度,进而对结构强度的增长进行灰色关联分析。结果表明:吹填软土结构强度的增长是多因素综合作用的结果,排水条件是最关键的影响因素,对于初始结构强度较弱的吹填软土围压对其结构强度增长影响要大于偏压的影响,而对于初始结构强度较强的吹填软土偏压对其结构强度增长影响要大于围压的影响。

关键词: 吹填软土 结构强度 灰色关联 排水条件 时间效应

Abstract: Using soft dredger fill in Tianjin Binhai New Area as materials, grey correlation analysis of structural strength of soft dredger is carried out after structural strength formed under different confining pressure, deviator pressure, and drainage condition. The results show that many factors can cause the growth of structural strength of soft dredger. The drainage is the critical influence factor. For the soft dredger fill with weaker initial structural strength, the influence of the confining pressure on the growth of structural strength is greater than that of deviator pressure. For the soft dredger fill has stronger initial structural strength, the influence of the deviator pressure is greater than confining pressure.

Key words: Soft dredger fill Structural strength Grey correlation Drainage condition Time effect

收稿日期: 2012-05-25;

基金资助:

d:\PDF\天津市科技发展计划项目(06YFSZSF04000)

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引用本文:

. 吹填软土结构强度形成的灰色关联分析[J]. 工程地质学报, 2013, 21(2): 330-335.


. GREY CORRELATION ANALYSIS OF STRUCTURAL STRENGTH FORMATION OF SOFT DREDGER FILL[J]. Journal of Engineering Geology, 2013, 21(2): 330-3

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