

## 电渗法处理过湿土填料中有关参数设计的探讨

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## Parameter design of over-wet soil fill treated by electro-osmosis

摘要

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**摘要** 介绍了应用电渗脱水原理降低路基过湿填料含水率的方法及要点; 将电渗理论、电学原理和现有电渗实践成功经验结合起来, 提出了电渗法处理过湿土的设计、计算步骤以及相关参数的估算方法, 给出了具体计算公式, 通过实际工程对该方法进行了检验, 并提出了相应的设计建议和注意事项。电渗参数估算时采取了从宏观上计算需从过湿土中排出的水量, 在计算电渗区土体总电阻时引入了界面电阻并考虑相邻电极影响, 结果表明与实际情况基本相符。

**关键词:** 电渗 含水率 脱水 过湿土 界面电阻 设计

**Abstract:** The method and essentials of decreasing water content of over-wet subgrade fill are introduced by use of the principle of dewatering by electro-osmosis. Combining the electro-osmosis theory and electricity principle with successful experience of electro-osmosis practice, the design, calculation steps and estimating method of relevant parameters of the over-wet soil treated by electro-osmosis are presented, the specific calculation formula is shown, the method by some project practices is validated, and some design advices and points for attention are put forward. The method of calculating water quantity drain from over-wet subgrade fill from a macro-view is adopted for estimating parameters. The interface electric resistance is introduced and the influence from adjacent electrode is considered when calculating overall resistance of soil in electro-osmosis area. The experimental results show that the conclusions are reasonable.

**Keywords:** electro-osmosis water content dewatering over-wet soil interface electric resistance design

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