

## 垃圾填埋场渗沥液水位壅高及工程控制

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## DEVELOPMENT AND CONTROL OF LEACHATE MOUND IN MSW LANDFILLS

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摘要

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摘要 我国垃圾填埋场渗沥液水位普遍壅高,严重影响安全运行。测试和总结垃圾的持水特性、饱和渗透系数以及渗沥液导排层渗透和淤堵特性。通过数值分析,揭示垃圾初始含水率、持水特性以及垃圾和导排层渗透系数对填埋场水位的影响规律。结果表明,垃圾饱和渗透系数随深度和龄期减小、导排层淤堵、垃圾初始含水率高导致水位明显壅高;而垃圾饱和渗透系数较小时,堆体内易形成局部滞水。结合实际工程,验证数值模拟结果,提出并实施水位壅高控制的工程措施,效果十分显著。

关键词: [渗流力学](#) [填埋场](#) [渗沥液水位壅高](#) [滞水](#) [初始含水率](#) [田间持水量](#) [渗透系数](#) [淤堵](#)

Abstract: High leachate mound is a common problem affecting safe operations in Chinese municipal solid waste (MSW) landfills. The water-retention characteristic, saturated hydraulic conductivity of MSWs and the clogging characteristics of leachate drainage layers are then summarized based on the data measured and from literatures. The influences of initial moisture content, water-retention characteristic and saturated hydraulic conductivities of MSWs and leachate drainage layers on water level of landfill are demonstrated by numerical analysis of moisture transport in landfills. The obtained results show that high leachate mound in the landfills is primarily caused by the decrease of permeability of MSWs with embedment depth and fill age, clogging of leachate collection layers and high initial moisture content of MSWs. Perched water in a landfill occurs in the case that MSWs have low permeability. The numerical analysis result is verified by the monitoring data in a landfill in southern China. The measures to control leachate mound of landfill are presented and put into practice.

Keywords: [seepage mechanics](#); [landfill](#); [leachate mound](#); [perched water](#); [initial moisture content](#) [field capacity](#) [hydraulic conductivity](#); [clogging](#)

Received 2012-11-25;

引用本文:

陈云敏<sup>1, 2</sup>, 兰吉武<sup>1, 2</sup>, 李育超<sup>1, 2</sup>, 詹良通<sup>1, 2</sup>, 柯瀚<sup>1, 2</sup>.垃圾填埋场渗沥液水位壅高及工程控制[J] 岩石力学与工程学报, 2014,V33(1): 154-163CHEN Yunmin<sup>1, 2</sup>, LAN Jiwu<sup>1, 2</sup>, LI Yuchao<sup>1, 2</sup>, ZHAN Liangtong<sup>1, 2</sup>, KE Han<sup>1, 2</sup>.DEVELOPMENT AND CONTROL OF LEACHATE MOUND IN MSW LANDFILLS[J] , 2014,V33(1): 154-163

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