工程技术

有限元法在土坝浸润线计算中的应用

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摘要　　对病险土石坝进行病害诊断及治理,确定坝体浸润线位置是关键,常用的计算浸润线的方法有实测方法和水力学计算法,但这两种方法在实际工作中往往受到一定条件的制约。渗流有限元计算方法的出现,为土石坝浸润线的确定提供了理想的计算手段。以马房水库大坝为例,通过计算、比较,渗流有限元计算方法确定的浸润线成果可靠性较高,可以为大坝稳定性分析提供依据。

关键词　　浸润线　有限元　土坝

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The Application of Finite Element Method in Earth　rock Dam Seepage Line Calculation

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Abstract

The key to bring the earth-rock dam under control is to define the position of seepage line.Practice method and water power method are common calculate methods, however, this two methods are restricted by some factors in reality. Finite element method offers an ideal way for seepage line calculation. Take Mafang reservoir dam for example, after calculating and comparing, it shows seepage line results defined by finite element method have high reliability, therefore, it can supplies foundation for dam's stability analysis.

Key words　seepage line　finite element method　dam

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