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土木工程

含球形孔洞岩盐路基临界载荷

张敦福,牛海燕

山东大学土建与水利学院工程力学系, 山东 济南 250061

摘要:

根据三维无网格Galerkin方法研究了无限大立方体中球形孔洞应力集中问题. 分别采用最大拉应力准则、格里菲斯(Griffith)和摩尔-库伦准则作为稳定性判据,数值模拟了含球形孔洞岩盐路基稳定性问题,给出了不同孔洞埋深下岩盐路基的临界载荷.

关键词: 无网格方法;球形孔洞;岩盐路基;临界载荷

Critical load of rock salt roadbed with a spherical cavity

ZHANG Dui-Fu, NIU Hai-Yan

Department of Engineering Mechanics, School of Civil Engineering, Shandong University, Jinan 250061, China

Abstract:

The stress concentration of a spherical cavity in an infinite cube was studied by the three-dimensional element free Galerkin method. The maximal tensile stress criterion, Griffith criterion and Moore-coulomb criterion was respectively taken as the stability criterion. The stability of a rock salt roadbed with a spherical cavity was numerically simulated. The critical load of a rock salt roadbed with different cavity depth was given.

Keywords: element free galerkin method; spherical cavity; rock salt roadbed; critical load

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通讯作者:

作者简介: 张敦福(1963-),男,山东金乡人,副教授, 博士,主要从事计算力学、系统动力学分析,裂隙岩体破裂及应用研究.E-mail: zhangdf@sdu.edu.cn

作者Email:

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