

论文

深井巷道涌水探查方法及工程治理研究

刘人太 李术才 潘光明 张庆松 武文东 李海燕 林明远

刘人太 李术才 潘光明 张庆松 李海燕 : 山东大学岩土与结构工程研究中心, 山东 济南 250012;

武文东 林明远 : 地测部新汶矿业集团新巨龙有限公司, 山东 菏泽 274000

摘要:

在岩溶水治理中,岩溶裂隙的空间发育和水力连通规律是决定工程治理成败的关键因素.为了在工程治理中做到有的放矢,将物探方法应用到岩溶水治理工程可以实现以下目标:通过物探方法获取工程目标岩体的裂隙发育位置、规模和空间展布规律;并通过对钻探划定重点含水构造区域,掌握含水构造的地层信息和含导水特点;在综合物探和钻探信息的基础上,可以分析得出岩体内部裂隙空间发育规律,从而为注浆钻孔合理位置的选定和注浆浆液扩散路径提供参考.通过水力连通实验和等水位线的绘制,可以分析得到浆液扩散规律,从而为注浆治理中选用注浆材料和注浆工艺提供依据,达到减少工程投入,增加工程效益的目的.

关键词: 物探方法 裂隙空间发育规律 等水位线 浆液扩散分析 注浆治理

The detection of gushing water in deep wells and the research of engineering government

LIU Ren-Tai, LI Shu-Cai, PAN Guang-Ming, ZHANG Qing-Song, LI Hai-Yan: Geotechnical and Structural Engineering Research Center, Shandong University, Jinan 250061, China; WU Wen-Dong LIN Ming-Yuan: Office of Geology and Survey, Xingjulong limited company, Xinwen Mining Industry Company Group, Jinan 250061, China

Abstract:

In the government of karst water, the law of fissure development and water-power cross-connection are key to engineering management. For identifying the engineering management, the geophysical prospecting method was adopted into the engineering. The position, scale and space law of the fissure was obtained through the geophysical prospecting method. The information of the water-bearing formation and the character of the containing water were obtained by a boring test. On the base of composite geophysical prospecting and boring test, the space law of the fissure and water-power cross connection inside the karst was concluded, and the proper position for grouting and drilling were chosen. This research can provide a reference for slurry diffusion. The law of slurry diffusion was obtained by hydraulic connectivity experiment and water-power isobar drawing. This research can direct the choosing of the grouting materials and grouting technology. The engineering efficiency can be increased and the cost can be reduced with the help of this method to choose the grouting materials and grouting technology.

Keywords: geophysical prospecting method the law of the fissure development the water-power isobar the analysis of the slurry diffusion grouting management

收稿日期 2009-05-20 修回日期 网络版发布日期 2009-08-24

DOI:

基金项目:

国家自然科学基金资助项目(50874068);山东省自然科学基金资助项目(Y2008F22)

通讯作者:

作者简介: 刘人太(1984-),男,山东威海人,硕士研究生,研究方向为地下工程灾害治理.E-mail:lrt@mail.sdu.edu.cn

作者Email:

PDF Preview

扩展功能

本文信息

- ▶ Supporting info
- ▶ PDF(1247KB)
- ▶ 参考文献[PDF]
- ▶ 参考文献

服务与反馈

- ▶ 把本文推荐给朋友
- ▶ 加入我的书架
- ▶ 加入引用管理器
- ▶ 引用本文
- ▶ Email Alert
- ▶ 文章反馈
- ▶ 浏览反馈信息

本文关键词相关文章

- ▶ 物探方法
- ▶ 裂隙空间发育规律
- ▶ 等水位线
- ▶ 浆液扩散分析
- ▶ 注浆治理

本文作者相关文章

- ▶ 刘人太
- ▶ 李术才
- ▶ 潘光明
- ▶ 张庆松
- ▶ 武文东
- ▶ 李海燕
- ▶ 林明远

PubMed

- ▶ Article by Liu, R. T.
- ▶ Article by Li, S. C.
- ▶ Article by Bo, G. M.
- ▶ Article by Zhang, Q. S.
- ▶ Article by Wu, W. D.
- ▶ Article by Li, H. Y.
- ▶ Article by Lin, M. Y.

---

参考文献:

本刊中的类似文章

---

Copyright by 山东大学学报(工学版)