

本期目录 | 下期目录 | 过刊浏览 | 高级检索

[打印本

页] [关闭]

### 岩土工程地质

## 高压环境条件下注浆模型试验系统设计

郭密文<sup>①②</sup>, 隋旺华<sup>①</sup>

①中国矿业大学资源与地球科学学院 徐州 221008;

②北京航天勘察设计研究院 北京 100071

摘要:

注浆工程常常在高地层压力、高水压力的地质环境条件下进行(如煤矿堵水或注浆加固工程)。为了研究高压环境条件下注浆浆液的渗流扩散特征,作者研制了可形成5MPa以上高压环境的注浆试验系统。该试验系统由四个功能模块组成,并可分为四个设备子系统。该试验系统的核心设备高压注浆模型试验装置中应用压力传导管解决了高压罐体内部监测设计所遇到的尺寸效应、传感器防腐、高压密封等难题。

关键词: 试验模型设计 高压环境下注浆 压力监测 压力传导管

### DESIGN OF MODEL TEST SYSTEM FOR GROUTING UNDER HIGH PRESSURE CONDITIONS

GUO Miwen<sup>①②</sup>, SUI Wanghua<sup>①</sup>

①School of Resources and Geosciences,China University of Mining and Technology,Xuzhou 221008;

②The Geotechnical Institute of Beijing Aerospace,Beijing 100071

Abstract:

Grouting works are often executed under the geological environment of high formation pressure and high water pressure(such as warer shutoff or rock reinforcement in coal-mine).In order to study the flow characteristics of grouting slurry spreading

#### 扩展功能

##### 本文信息

Supporting info

PDF(509KB)

[HTML全文]

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

试验模型设计

高压环境下注浆

压力监测

压力传导管

##### 本文作者相关文章

郭密文

隋旺华

##### PubMed

Article by Guo, M. W.

under high pressure conditions, the author developed a grouting test system which can create a high-pressure environment of over 5MPa. The test system consists of four functional modules, and can be divided into four equipment subsystems. The core equipment of the test system is the patent product "Test Set-up for Simulating High Pressure Grouting", in which pressure transmission pipes are used as the solution to problems such as size effect, sensor corrosion-preventing and high-pressure sealing, which are encountered in designing the monitor program inside the high-pressure tank.

Keywords: Design of model test system Grouting under high pressure conditions Pressure monitoring Pressure transmission pipe

收稿日期 2010-07-09 修回日期 2010-07-20 网络版发布日期

DOI:

基金项目:

国家自然科学基金(40772192)

通讯作者:

作者简介: 郭密文, 主要从事岩土工程设计施工与研究工  
作. Email: guomiwen@sohu.com

作者Email:

---

## 参考文献:

[1] 杨米加. 随机裂隙岩体注浆渗流机理及其加固后稳定性分析. 徐州: 中国矿业大学博士学位论文, 1999.

Yang Mijia. Mechanism of Grout Penetrating in Stochastic Fractured Rockmass and Its Stability Analysis after Reinforcement. Xuzhou: Doctoral thesis of China University of Mining and Technology. 1999.

[2] 阮文军. 注浆扩散与浆液若干基本性能研究 [J]. 岩土工程学报, 2005, 27 (1): 69~73.

Ruan Wenjun. Research on diffusion of grouting and

basic properties of grouts. Chinese Journal of Geotechnical Engineering, 2005, 27 (1): 69~73.

[3] 杨坪, 唐益群等. 砂卵(砾)石层中注浆模拟试验研究 [J]. 岩土工程学报, 2006, 28 (12): 2134~2138.

Yang Ping, Tang Yiqun, etc. Study on grouting simulating experiment in sandy gravels. Chinese Journal of Geotechnical Engineering, 2006, 28 (12): 2134~2138.

[4] 王档良, 隋旺华, 等. 岩体中灌浆压力变化规律试验研究