

目次

研究与探讨

大断面隧道深浅埋划分方法研究	吴铭芳	章慧健	仇文革	1		
基于动力松弛原理的地下隧道工程初始应力场计算方法研究	章泳健	金先龙	王建炜	曹源	张春燕	6
考虑流固耦合效应的水下隧道岸坡深基坑开挖数值模拟	郭磊	傅鹤林	欧阳刚杰	谭鑫	12	
偏压及非均质地层对小净距隧道安全稳定性的影响	谭坤	杨其新	杨龙伟	20		

探测技术

隧道楔形掏槽爆破试验研究	褚怀保	梁为民	杨小林	余永强	27
复杂地质条件下铁路隧道勘探钻孔问题及其处理	张昊	31			
地铁隧道底部探测技术及应用	傅志峰	张磊	唐检军	蒋楠	35
高压、富水岩溶隧道施工地质预报探讨	王公忠	41			
红外探水技术在岩溶隧道施工中的应用	吕乔森	陈建平	45		

监测技术

基于虚拟现实的隧道施工监测系统研究	彭曙光	50		
基于 FBG 表面应变仪的隧道监测系统	胡玉瑞	张奕欧	54	
基于小波分析的隧道监测数据处理	周大华	彭增湘	陈建平	58

施工技术

新加坡地铁环线 C824 标段失事后的修复重建(一)——修复方案的比选与确定	肖晓春	袁金荣	朱雁飞	62	
城市地铁站端头竖井盖挖与暗挖施工对比分析	苗春刚	68			
富水软弱地层盾构隧道始发洞口土体加固技术	陈学军	邹宝平	易觉	邝光霖	73
地铁盾构区间隧道的矿山法施工	毛红梅	80			
盾构下穿建(构)筑物控制沉降注浆技术研究与应用	钱新	黄雪梅	85		
承压水地层盾构隧道外包式工作井接头设计改进	潘朋	赵东平	李伟	90	
地铁车站 PBA 工法导洞近接施工影响与分析	张志勇	94			
富水流砂地层中下穿立交桥及燃气管线隧道围岩变形控制技术	邓稀肥	陈寿根	张恒	王靖华	101

主 管 中国铁路工程总公司
主 办 中铁西南科学研究院有限公司
中国土木工程学会隧道及地下工程分会
编 辑 《现代隧道技术》编辑部
(四川省成都市西月城街 118 号 邮编 610031)
电 话: (028) 86649140 (编辑)
(028) 86649132 (广告)
传 真: (028) 86643703
E-mail: sdzx@mail.sc.cninfo.net
主 编 梅志荣
副主编 陈韶章 蒋树屏 朱合华 刘维宁 李 林
严金秀 王 彬(常务)

出 版 《现代隧道技术》编辑部
印 刷 四川煤田地质制图印刷厂
发 行 范围 公开发行
发 行 四川省成都市邮局
订 阅 全国各地邮局
刊 号 ISSN 1009-6582
CN51-1600/U
国内代号 62-197
本期责任编辑 李静华
定 价 全年 120 元 每期 20 元
广告经营许可证 5100004000028

Contents

Study on How to Distinguish between Deep and Shallow Tunnels with Large Profile	Wu Mingfang Zhang Huijian Qiu Wenge	1
Research on the Initial Stress Field around a Tunnel based on the Principle of Dynamic Relaxation	Zhang Yongjian Jin Xianlong Wang Jianwei Cao Yuan Zhang Chunyan	6
Numerical Simulation of Pit Excavation of a Subaqueous Tunnel Considering Fluid-solid Coupling Effect	Guo Lei Fu Helin Ouyang Gangjie Tan Xin	12
Effect of Uneven Pressure and Heterogeneous Ground on the Safety and Stability of Twin Tunnels with Small Spacing	Tan Kun Yang Qixin Yang Longwei	20
Experimental Study on Tunnel Wedge Cut Blasting	Chu Huaibao Liang Weimin Yang Xiaolin Yu Yongqiang	27
Questions and Solutions for the Exploration Drilling of Railway Tunnels under Complex Geological Conditions - - -	Zhang Hao	31
Exploration Techniques for the Bottom of Subway Tunnels and their Application	Fu Zhifeng Zhang Lei Tang Jianjun Jiang Nan	35
Study on Geological Prediction for a High Pressure Water-soaked Karst Tunnel	Wang Gongzhong	41
Infrared Acquisition Technology Applied to Karst Tunnels	Lü Qiaosen Chen Jianping	45
Study on Tunnel Construction Monitoring System based on Virtual Reality	Peng Shuguang	50
Fiber Bragg Grating Strain Sensors Applied to Tunnel Monitoring	Hu Yurui Zhang Huanou	54
Tunnel Monitoring Data Processing Based on Wavelet Analysis	Zhou Dahua Rong Zengxiang Chen Jianping	58
Recovery Work of Singapore MRT Circle Line C824 Nicoll Highway Collapse (Part I)—Comparison and Assessment of Recovery Options	Xiao Xiaochun Yuan Jinrong Zhu Yanfei	62
Comparative Analysis between Covered Excavation and Mining Excavation for a Subway Station End Shaft	Miao Chungang	68
Soil Reinforcement Technology for Water-soaked Soft Stratum at Shield Tunnel Launching Portal	Chen Xuejun Zou Baoping Yi Jue Kuang Guanglin	73
Mining Excavation on the Transit Section of a Subway Shield Tunnel	Mao Hongmei	80
Study and Application of Grouting Technology to Control Ground Settlements Caused by Shield Under-passing Buildings and Structures	Qian Xin Huang Xuemei	85
Improved Design of Joints of Outer-packing Shaft with a Shield Tunnel in Soils with Confined Water	Pan Peng Zhao Dongping Li Wei	90
Analysis of Impact on Existing Tunnel during Construction of Pilot Tunnel in Metro Station with PBA Method	Zhang Zhiyong	94
Deformation Control Techniques for Surrounding Soils of a Subway Tunnel Under-passing Flyover Bridges and Gas-pipe Lines in Water-soaked Quick Sand Stratum	Deng Xifei Chen Shougen Zhang Heng Wang Jinghua	101

Competent Authority: China Railway Engineering Corporation

Sponsor: China Railway Southwest Research Institute Co.,Ltd.

Chinese Society for Tunnelling and Underground Works,CCES

Edited by: Editorial Office of "Modern Tunnelling Technology"

(No.118 Xiyuecheng Street,Chengdu,Sichuan Province,P.R.China,Zip code :610031)

Tel: (028)86649140, 86649132

Fax: (028)86643703

Email:sdzx@mail.sc.cninfo.net

Chief Editor: Mei Zhirong

Deputy Editor: Chen Shaozhang Jiang Shuping Zhu Hehua Liu Weining Li Lin Yan Jinxiu Wang Bin

Publisher: Editorial Office of "Modern Tunnelling Technology"

Printer: Printing House of Sichuan Coal Geology Bureau