

1961年7月创刊  
全国中文核心期刊  
全国科技论文统计和分析用刊  
中国学术期刊综合评价数据库  
统计源期刊  
中国学术期刊全文数据库收录  
期刊

主编 叶阳升 副主编 王红

主 管：中华人民共和国铁道部  
主 办：中国铁道科学研究院  
地 址：北京市海淀区大柳树路2号  
邮政编码：100081  
编辑电话：(010)51849235 51893552(市电)  
(021)49235 93552(路电)  
广告电话：(010)51893587(市电)  
(021)93587(路电)  
电子信箱：[tdjz@rails.com.cn](mailto:tdjz@rails.com.cn)  
[tdzbjh@126.com](mailto:tdzbjh@126.com)  
排 版：清华同方光盘股份有限公司  
数据加工中心  
印 刷：北京昌平百善印刷厂  
总发行处：北京报刊发行局  
订 购 处：全国各邮电局  
邮发代号：2-405  
国内统一刊号：CN 11-2027/U  
国际标准刊号：ISSN 1003-1995  
广告经营许可证：京海工商广字第8046号

每期订价：10元 全年订价：120元

## 目 次

### 桥 梁

- 混凝土宽箱梁桥上运梁过程仿真分析 ..... 马耕(1)  
单索面低塔斜拉板桁组合公铁两用桥地震响应分析 ..... 李杰 李娜(4)  
大跨度单线铁路连续梁拱桥施工仿真及稳定分析 ..... 石岩 秦洪果 刘永前(8)  
连续梁桥悬臂施工挂篮局部受力状态分析 ..... 李建安 梁涛 杨洋(12)  
轨道交通“桥—建”合一高架车站动力特性分析 ..... 胡京涛 毛学锋(15)  
预应力连续梁桥跨电气化铁路干线悬臂施工 ..... 赵田 石杰荣 毛久海(18)  
安全防护技术

### 隧道与地下工程

- 大坡度隧道斜井施工力学的数值模拟研究 ..... 王玉锁 唐建辉(20)  
新建包西铁路东山二号隧道塌方工程地质特征分析 ..... 杨杰(24)  
盾构机到达富水砂层时的技术措施 ..... 包世波 刘宝许 王建军(27)  
简谐环形荷载作用下饱和土体中圆形衬砌 ..... 黄晓吉 扶明福 徐斌等(29)  
隧洞的动力响应研究 ..... 李青燕 曾召田 张锦锦(33)  
地质雷达在广西铁路隧道衬砌质量检测中的应用 ..... 周禾 张庆贺 徐飞(36)  
盾构通过矿山法隧道段数值模拟研究 ..... 余建民 冯翠红 李远(41)  
多支盘加筋水泥土桩抗拔机理研究 ..... 张娟(43)  
端墙分析方法在深基坑工程风险评估中的应用研究 ..... 张效(43)  
复杂地质条件下超浅埋高大断面过街暗挖风道 ..... 王炳华(46)  
沉降分析及施工技术 ..... 高龙(50)  
软弱地质浅埋大断面隧道地表塌陷处理研究 ..... 韩文起(53)  
特长高污染隧洞施工通风技术研究 ..... 罗汝洲(56)  
特长隧洞施工高强度运输尾气排放通风仿真分析 ..... 成都砂卵地层大型地铁基坑施工稳定性监测 ..... 徐少平(58)  
砂卵地层大型地铁基坑施工技术 ..... 郭建强(60)  
大口径圆管长距离穿越既有线关键技术探讨 ..... 洪汉麟(63)



## 封面简介

三一汽车起重机械有限公司系三一集团核心企业,主要从事高端和中大吨位轮式起重机系列产品的研发、制造和销售。目前拥有汽车起重机、全路面起重机、越野起重机和特种起重机四大类产品,产品谱系覆盖16 t至1 200 t共80多种规格和型号。近4年来,三一起重机保持了年销售增长100%以上,已经进入世界轮式移动起重机十强企业的行列。

# 目 次

## 路基与基础

- 带帽控沉疏桩复合地基优化设计及其工程应用 ..... 雷金波 陈超群(66)  
基于BP人工神经网络的基坑围护结构变形预测方法研究 ..... 曾晖 胡俊 鲍俊安(70)  
靠近既有线处PHC管桩的施工技术 ..... 蒋雪芹(74)  
强夯置换法处理软土地基的模型试验研究 ..... 徐玉胜 赵有明 高明显(77)  
多种基桩检测方法在上海世博轴地下综合体工程中的应用 ..... 余伟 郑明燕 孙洋波(81)  
水泥搅拌桩加固珠江三角洲地区软土地基适用性探讨 ..... 唐红(84)  
洛秦高速公路堂洼大桥旋挖钻孔灌注桩基础的施工技术 ..... 吕大为 刘东霞(86)  
岩体结构控制下的边坡稳定性多因素敏感性分析 ..... 李扬 杨继红 刘汉东(88)  
挤密碎石桩在软基处理中的应用 ..... 高福英(91)

## 线路与维修

- 桥上无砟轨道无缝道岔挠曲力模型试验研究 ..... 刘泳钢 张丽平 杨荣山(93)  
桥上CRTS II型板式无砟轨道计算软件开发及应用 ..... 包进荣 陈小平 王平(97)  
百米钢轨焊接输送线监控系统的改进 ..... 冯文杰 张曦 骆德阳等(100)  
客运专线桥上无缝道岔模型试验设计 ..... 张国栋 宋杨 赵信洋等(103)  
钢弹簧浮置板轨道支点力动力特性分析 ..... 李俊岭 徐鹏 翟婉明等(106)  
地铁隧道不同轨道结构形式对建筑物减振的仿真分析 ..... 马莉 宣言 马筠等(110)  
乌精二线无缝线路应力放散施工技术 ..... 闫瑞(113)

## 其 它

- CA砂浆干粉料生产工艺及其设备的研究 ..... 叶昌林(116)  
紧邻既有线新建铁路施工组织相关问题探讨 ..... 黄建陵 陈诚(120)

## 信息窗

- 日本700系高速列车(123)

# CONTENTS

## Bridge

Simulation analysis of transporting process of concrete wide box-girder on bridge .....	MA Geng(1)
Seismic response analysis of both railway and highway cable-stayed bridge with single cable plane and low pylon and slab-truss composite structure .....	LI Jie, et al(4)
Construction simulation and stability analysis of large-span single-track railway continuous girder arch bridge .....	SHI Yan, et al(8)
Force-bearing condition analysis of basket acted by local load in free cantilever construction for building continuous girder bridge .....	LI Jianan, et al(12)
Dynamic performance analysis of viaduct station combined bridge with station structure used in urban transit system .....	HU Jingtao, et al(15)
Safety technology of free cantilever construction for building prestressed continuous girder bridge across electrified trunk railway .....	ZHAO Tian, et al(18)

## Tunnel and Underground Works

Mechanical numerical simulation study on construction of inclined shaft(inclined tunnel) with steep grade .....	WANG Yusuo, et al(20)
Engineering geological feature analysis of collapse in Dongshan No.2 tunnel on newly constructed Baotou-Xi'an railway .....	YANG Jie(24)
Technical measures applied during approaching of shield to water-rich sand stratum .....	BAO Shibo, et al(27)
Study on dynamic response of circle-shaped tunnel liner buried in saturated soil under acting of harmonic annular loading .....	HUANG Xiaoji, et al(29)
Application of geological-radar to quality-inspection in Guangxi railway tunnelling .....	LI Qingyan, et al(33)
Numerical simulation study on shield passing through tunnel section driven by mining method .....	ZHOU He, et al(36)
Uplift mechanism study on reinforced-cement-soil-pile with multiple-squeezed branch .....	YU Jianmin, et al(41)
Study on application of entropy-weigh analysis method in risk-assessment for deep-foundation-pit engineering .....	ZHANG Jiao(43)
Surface settlement analysis and construction technology for super-shallow buried ventilation tunnel with large cross section under complex geological condition .....	WANG Binghua(46)
Study on treatment of surface cave-in above shallow-buried tunnel with large cross section in soft-weak geological condition .....	GAO Long(50)
Ventilation technology study for super-long tunnel with high-pollution .....	HAN Wenqi(53)
Ventilation simulation analysis on eliminating of emissions of gases from high-density transport vehicles during super-long tunnel construction .....	LUO Ruzhou(56)
Stability monitoring of construction of metro's huge foundation pit in Chengdu sand-gravel stratum .....	XU Shaoping(58)
Construction technology of metro's huge foundation pit in sand-gravel stratum .....	GUO Jianqiang(60)
Discussion on key technologies of large-diameter round pipe for long distance passing under existing railway .....	HONG Hanlin(63)

## CONTENTS

### Subgrade • Foundation

- Optimum design and engineering application of composite foundation including capped piles featuring capable of controlling subsidence and sparse arrangement ..... LEI Jinbo, et al(66)
- Study on prediction method of deformation of foundation pit enclosure-structure based on BP (Error Back-Propagation) artificial nerve network ..... ZENG Hui, et al(70)
- Construction technology of PHC( Prestressed High-strength Concrete ) pipe adjacent to existing railway ..... JIANG Xueqin(74)
- Model test study on treatment of soft-subsoil by dynamic compaction and cushion method ..... XU Yusheng, et al(77)
- Application of various foundation pile test methods in underground complex engineering in Expo Axis for Expo 2010 Shanghai ..... YU Wei, et al(81)
- Exploring on suitability of cement mixing pile to reinforcing soft-subsoil in Zhujiang River Delta region ..... TANG Hong(84)
- Construction technology of bored cast-in-place pile by churn drill method used for Tangwa bridge foundation of Luoyang-Luanchuan expressway ..... LU Dawei, et al(86)
- Multiple-factors sensibility analysis of slope stability under control of rock-mass structure ..... LI Yang, et al(88)
- Application of compaction by stone pile in treatment of soft-subsoil ..... GAO Fuying(91)

### Track and Its Maintenance

- Model test study on flexural force in continuous turnout at ballastless track on bridge ..... LIU Yonggang, et al(93)
- Development and use of computer software on calculation of CRTS-II type slab ballastless track on bridge ..... BAO Jinrong, et al(97)
- Improving of monitoring system used for transporting line delivering 100-m welded rail ..... FENG Wenjie, et al(100)
- Design on model test for continuous turnout on bridge of passenger-dedicated railway ..... ZHANG Guodong, et al(103)
- Dynamic performance analysis of track's fulcrum pressures transferring to steel spring floating slab ..... LI Junling, et al(106)
- Simulation analysis on influence of different track types in metro tunnel on vibration-reducing of structure ..... MA Li, et al(110)
- Construction technology of destressing in CWR(Continuous Welded Rail) used in Urumqi-Jinghe second railway line ..... YAN Rui(113)

### Other

- Study on production procedure of dry powder of CA (Cement Emulsified Asphalt ) mortar and its equipments ..... YE Changlin(116)
- Discussion on issues related to building new railway adjacent to existing railway ..... HUANG Jianling, et al(120)