

目 次

土 木 工 程

长细比对内置工字形 CFRP 型材的圆钢管混凝土构件力学性能影响 ..... 李帼昌,王友东(769)

冻融循环下沥青混合料损伤特性研究 ..... 谭忆秋,徐慧宁,赵春丽,等(778)

自复位梁-柱节点的耗能复位能力协调关系研究 ..... 阎石,杜若鸣,赵子豪(789)

车流密集程度对重载随机车流与桥梁耦合振动影响分析 ..... 桂水荣,何锐,曾宏伟(797)

配筋空心圆钢管高强混凝土轴压短柱工作机理分析 ..... 杨志坚,刘雪,李帼昌(807)

粉煤灰泡沫混凝土墙体面外偏压承载力数值模拟及简化计算 ..... 郝负洪,刘永超,秦立达,等(818)

内置 CFRP 管的钢管再生混凝土短柱轴压性能研究 ..... 许伟,李亚静,张海霞(830)

装配整体式梁柱节点的抗震性能对比研究 ..... 刘卫东,许攀熊,张学伟,等(839)

基于等效钢筋连接的连梁和剪力墙节点抗震性能研究 ..... 李明,张嘉男,李晨浩,等(848)

方钢管砖混再生骨料混凝土短柱轴压性能有限元研究 ..... 刘晓,申桑,侯东序,等(857)

基于机器学习的 CFST 柱高温剩余强度系数预测方法 ..... 宋岩升,肖广,王浩然,等(867)

基于机器学习的圆钢管再生混凝土长柱偏压承载力计算方法 ..... 路林翰,李俊鹏,刘进隆,等(876)

偏心作用下预制拼装桥墩-盖梁体系抗震性能研究 ..... 张 海,王威赫,赵子豪(885)

关于采空区地表变形对桥梁影响的研究 ..... 于 玲,丁冬玲,许晨阳,等(894)

预留核心土法隧道爆破围岩损伤与振动特性研究..... 孙雅珍,王龙岩,王金昌,等(904)

**建 筑 技 术**

基于建筑立面铺设的多面体结构光伏系统产能模拟分析 ..... 冯国会,赵天宇,黄凯良,等(913)

四面受火状态下木-H型钢-混凝土方截面组合柱温度场数值模拟 ..... 刘永军,张浚哲(921)

沙漠沙地聚合物纤维混凝土参数优化及抗压试验研究 ..... 张天贺,任庆新,王庆贺,等(930)

脱硫石膏基自流平砂浆的制备与性能研究 ..... 戴 民,丁笠轩,赵明宇(938)

**环 境 工 程**

干旱地区河槽暗蓄雨洪资源化利用模拟..... 潘 俊,滕炳麓(945)

酚酞基聚醚醚酮/聚乙烯亚胺复合超滤膜的制备与性能研究..... 于云武,吴 岩,谢春阳,等(952)

# JOURNAL OF SHENYANG JIANZHU UNIVERSITY( NATURAL SCIENCE)

Volume 40 Number 5( Sum 212)

Sep. 2024

## CONTENTS

### Civil Engineering

- The Analysis of Slenderness Effect on Mechanical Performance of Concrete-Filled Circle Steel Tube Column with Inner I-Shaped CFRP Profile ..... *LI Guochang, WANG Youdong*(769)
- Research on Asphalt Damage Characteristics under Freeze-thaw Cycling .....  
..... *TAN Yiqiu, XU Huining, ZHAO Chunli, et al*(778)
- Research on Coordination Relationship Between Energy Dissipation and Recentering Capacities of Self-centering Beam-Column Joints ..... *YAN Shi, DU Ruoming, ZHAO Zihao*(789)
- Analysis of the Impact of Traffic Density on Coupled Vibration of Overloaded Random Traffic Flow and Bridge .....  
..... *GUI Shuirong, HE Rui, ZENG Hongwei*(797)
- Mechanical Behavior Analysis of Reinforced Hollow High Strength Concrete Filled Circular Steel Tubular Short Columns under Axial Loads ..... *YANG Zhijian, LIU Xue, LI Guochang*(807)
- Numerical Simulation and Simplified Calculation of Bearing Capacity for Solid Fly Ash Foam Concrete Wall under Out-of-plane Eccentric Compression ..... *HAO Yunhong, LIU Yongchao, QIN Lida, et al*(818)
- Experimental Study on Axial Compression Behavior of Recycled Concrete Filled Steel Tubular Short Columns with CFRP Tubes ..... *XU Wei, LI Yajing, ZHANG Haixia*(830)
- Comparative Study on Seismic Performance of Highly Efficient Assembled Beam-Column Joints .....  
..... *LIU Weidong, XU Panxiong, ZHANG Xuwei, et al*(839)
- Research on Seismic Performance of Coupling Beam and Shear Wall Nodes Based on Equivalent Reinforcement Connections ..... *LI Ming, ZHANG Jia'nan, LI Chenhao, et al*(848)

Finite Element Study on Axial Compression Behavior of Recycled Brick-Concrete Aggregate Concrete-filled Square Steel Tubular Short Column ..... *LIU Xiao, SHEN Shen, HOU Dongxu, et al*(857)

Research on Prediction Method of Residual Strength Index of CFST Columns at High Temperature Based on Machine Learning ..... *SONG Yansheng, XIAO Guang, WANG Haoran, et al*(867)

Calculating Method of Eccentric Bearing Capacity of Recycled Aggregate Concrete Filled Steel Tubular Slender Columns Based on Machine Learning ..... *LU Linhan, LI Junpeng, LIU Jinlong, et al*(876)

Study on Seismic Performance of Precast Bridge Capping Beam-pier System under Eccentric Action .....  
..... *ZHANG Hai, WANG Weihe, ZHAO Zihao*(885)

Study on the Impact of Surface Deformation on Bridges in the Mining Area Based on Numerical Simulation Method ..... *YU Ling, DING Dongling, XU Chenyang, et al*(894)

Study on Damage and Vibration Characteristics of Surrounding Rock under Tunnel Blasting by Reserved Core Soil Method ..... *SUN Yazhen, WANG Longyan, WANG Jinchang, et al*(904)

**Building Technology**

Simulation and Analysis of Production Capacity of Polyhedral Photovoltaic System Based on Building Facade ...  
..... *FENG Guohui, ZHAO Tianyu, HUANG Kailiang, et al*(913)

Numerical Simulation of Temperature Field in Wood-H Shaped Steel-Concrete Composite Column with Square Cross Section after Exposure to Four-Side Fire ..... *LIU Yongjun, ZHANG Junzhe*(921)

Parameter Optimization and Compressive Test Study of Dune Sand Engineered Geopolymer Composite .....  
..... *ZHANG Tianhe, REN Qingxin, WANG Qinghe, et al*(930)

Preparation and Performance Study of Self-leveling Mortar for Desulfurization Gypsum .....  
..... *DAI Min, DING Lixuan, ZHAO Mingyu*(938)

**Environmental Engineering**

Simulation of Stormwater Reclamation in Underground Water Storage Space of River Channel in Arid Area .....  
..... *PAN Jun, TENG Binglu*(945)

Preparation and Properties of Phenolphthalein Based Polyetheretherketone/Polyethylenimine Composite Ultrafiltration Membrane ..... *YU Yunwu, WU Yan, XIE Chunyang, et al*(952)