



CONSTRUCTION  
DESIGN &  
FOR ENGINEERING

# 工程建设与设计

办: 国家机械工业局工程建设中心 中国机械工业勘察设计协会 中国中元国际工程有限公司 CN 11-3914/TU 2022 年第03月下 总第476期



QK2215321



包商银行商务大厦  
北京市建筑设计研究院有限公司

万方数据

ISSN 1007-9467



9 771007 946226 06



## 建筑与结构设计

- 01 探讨复杂环境下非典型地铁车站建筑设计  
(李卫超)
- 04 园林绿化设计中存在的问题及对策分析  
(王碧娟)
- 07 被动式超低能耗绿色建筑节能系统与技术应用探  
究(黄榕汀)
- 10 民用建筑设计中的被动防火系统设计要点  
(许捷)
- 13 城乡接合部的规划设计研究(苏卫尧)
- 16 地铁车站建筑防火及安全疏散设计方案  
(曾婷婷)

## 基础工程设计

- 19 兰州黄河北岸高阶地挖山场地坡洪积层工程力学  
性质的研究(韩海燕, 樊有龙)
- 22 建筑密集区半盖挖车站围护结构选型及分析  
(张刚)

- 25 地下工程坑中坑围护结构计算方法及影响  
(洪晓龙)
- 28 预应力高强混凝土管桩竖向抗压承载力取值的探  
讨(胡兴源)
- 31 对邻近文物保护单位的深基坑开挖有限元分析  
(齐成成, 王增吉)

## 公用工程设计

- 34 特大型屋面与地面雨水收集系统的应用分析  
(陈筛, 张楠祥, 马宇希, 吴洪波, 高超)
- 37 城乡一体化供水设计与思考  
(司徒菲, 胡新立, 童沙)
- 41 关于高海拔地区500 kV输电线路防雷保护的探讨  
(袁春成)
- 44 固定消防设施在灭火救援中的应用(高建光)
- 47 超高层建筑给排水与消防设计要点分析  
(蔡瑞环, 郭莉芳)
- 50 超高层建筑物供暖及空调余热利用理论探讨  
(赵中强)

## 市政·交通·水利工程设计

- 53 铁路地下段范围综合管廊关键节点设计方案探讨  
(张义龙, 卢迪)
- 56 山区高速公路服务区可持续性设计策略研究  
(王赠皓)
- 59 山区公路中小跨桥梁设计关键问题研究  
(何志伟)
- 62 隧道结构裂缝病害治理方法研究(田奎)
- 65 路桥过渡段结构设计与施工控制技术研究  
(彭周, 张晖)
- 69 连续梁桥的抗倾覆稳定性设计方法(刘书画)
- 72 京雄商铁路引入菏泽地区方案研究(黄路炜)
- 76 人口规模与城市轨道交通的治堵效应研究  
(孙传亮, 袁德浩)
- 79 强降雨对昔格达土公路边坡稳定性的影响  
(丁国盛)
- 82 城市道路设计常见问题探讨(吴平)
- 85 城市地下穿越工程顶管施工对邻近既有地下管线  
的保护措施研究(李志鹏)
- 88 城市路灯照明节能技术(王海波)

- 91 冲击碾压技术在路基施工中的应用 (王琪)  
 94 海水消防系统腐蚀问题的研究 (史天华)  
 97 市政工程中道路与桥梁连接处设计方案及施工工艺 (管文中)

## 智能与信息化

- 100 计算机网络技术在电子信息工程中的应用 (李靓熙)  
 103 动态监测技术在深基坑施工中的应用 (蔡元盛)  
 107 参数化在建筑方案和施工设计中的应用研究 (崔乃夫, 桑映辉)

## 工程施工技术

- 110 试论工程机械中机电设备安装及调试技术 (林克任)  
 113 新型波形腹板钢箱梁焊接质量控制措施分析 (袁文金)  
 116 既有地下空间暗挖加层关键技术轨道交通中的应用 (武天宇, 严若明)  
 119 隧道工程中穿越断层破碎带开挖施工技术的应用探究 (刘知仁)  
 122 超高空连廊桁架提升方案策划与选择研究 (阙荣, 苏铠, 黄云, 王永刚)  
 125 钢结构桥梁超重柔性钢梁大跨顶推施工技术应用研究 (康继平)  
 128 桥梁隧道工程施工难点和对策 (赵永平)  
 131 超厚覆盖层大直径嵌岩灌注桩施工技术研究 (王志权)  
 134 市政道路排水工程中的污水管顶管施工工序及技术 (王云天, 张金光)  
 137 冻区高速公路新旧路面基层接缝处理施工技术 (宋威)  
 140 TSP超前探测在巨跨地下隧洞中的应用探析 (李兆龙)  
 143 大面积异形混合节点钢网架安装技术研究 (胡铁厚, 李永明, 钱英育, 高领宽, 陈东旭)  
 146 车辆段基坑SMW工法桩加斜抛撑支护体系施工技术 (洪族智)  
 149 盖挖逆作法施工技术在地铁车站建设中的应用 (冯松涛)  
 152 珠光砂混凝土在空分设备基础隔冷层中的应用 (薛书敏)

- 155 大体积混凝土配合比设计及工程应用 (王瑞亮, 吴海丰, 周志刚)  
 158 五老山长大隧道通风竖井施工技术研究 (丁国斌)  
 162 水泥混凝土路面沥青加铺技术研究 (苏腾飞)  
 165 引江济淮工程沐集大桥老桥拆除技术的研究 (宋治明)  
 168 以预制格构装配式生态挡墙为例探析装配化施工价值 (邓镜辉)  
 171 桥梁混凝土桩基检测中超声波检测技术的应用 (罗宏)  
 174 高铁车站跨线天桥天窗点施工技术研究 (江东亚)  
 177 综合物探方法在常德沅江过江隧道工程勘察中的应用 (胡程亮)  
 180 浅埋小净距及大断面隧道施工技术 (杨银刚)  
 183 风积沙路基湿压法施工工艺与质量控制措施 (张丛明)  
 186 试验桩施工工艺及成孔质量检测研究——以北京城市副中心站综合交通枢纽工程为例 (施松华)  
 189 基坑工程地下连续墙成槽施工及检测技术研究 (王海滨)

## 工程项目管理

- 192 基于工程保险的土建工程施工安全风险管理模式分析 (于江, 孙颖瑜)  
 195 新形势下房屋检测鉴定行业管理的问题与优化建议 (鲍逸)  
 198 全域土地综合整治与生态修复实践探析 (焦玉屏)  
 201 建筑消防工程施工验收难点与解决对策分析 (王闯)  
 204 建筑工程施工现场安全管理探析 (艾华)  
 207 探讨我国当前市政工程中存在的问题及其对策 (陈杰)  
 210 综合群体建筑工程施工管理要点研究 (雷林)  
 213 BIM技术在公共建筑工程施工全周期控制中的应用 (吴小勇)  
 216 探究地铁机电安装工程中进度管理系统的应用 (罗小华)



### Architectural and Structural Design

- 01 Discussion on the Architectural Design of Atypical Subway Station in Complex Environment(LI Wei-chao)
- 04 Analysis of Problems and Countermeasures in Landscape Design(WANG Bi-juan)
- 07 Research on Passive Ultra-Low Energy Consumption Green Building Energy Saving System and Technology Application(HUANG Rong-ting)
- 10 Key Points of Passive Fire Protection System Design in Civil Building Design(XU Jie)
- 13 Research on Planning and Design of Urban-Rural Interface(SU Wei-yao)
- 16 Metro Station Building Fire Prevention and Safety Evacuation Design Scheme(ZENG Ting-ting)

### Engineering Design of the Ground

- 19 Study on Engineering Mechanical Properties of Slope Diluvium on Mountain Excavation Field of High Terraces on the North Bank of the Yellow River in Lanzhou(HAN Hai-yan, FAN You-long)
- 22 Selection and Analysis of Enclosure Structure of Half Cover Dig Station in Built-up Area(ZHANG Gang)
- 25 Calculation Method and Influence of Pit Retaining Structure in Underground Engineering Pits (HONG Xiao-long)

- 28 Discussion on the Value of Vertical Compressive Bearing Capacity of Prestressed High-Strength Concrete Pipe Pile(HU Xing-yuan)
- 31 Finite Element Analysis of Deep Foundation Pit Excavation Adjacent to Cultural Relics Protection Units(QI Cheng-cheng, WANG Zeng-ji)

### Public Utilities Design

- 34 Application Analysis of Super Large Roof and Ground Rainwater Collection System(CHEN Shai, ZHANG Nan-xiang, MA Yu-xi, WU Hong-bo, GAO Chao)
- 37 Design and Thinking of Urban-Rural Integrated Water Supply(SITU Fei, HU Xin-li, TONG Sha)
- 41 Discussion on Lightning Protection of 500 kV Transmission Line in High Altitude Area(YUAN Chun-cheng)
- 44 Application of Fixed Fire Fighting Facilities in Fire Fighting and Rescue(GAO Jian-guang)
- 47 Analysis on Key Points of Water Supply and Drainage and Fire Control Design for Super High-Rise Buildings(CAI Rui-huan, GUO Li-fang)
- 50 Discussion on the Theory of Waste Heat Utilization of Heating and Air Conditioning in Super High-Rise Buildings(ZHAO Zhong-qiang)

### Municipal·Traffic·Water Resources Engineering Design

- 53 Discussion on Key Nodes Design Scheme of Comprehensive Pipe Gallery in the Underground Section Scope of Railway(ZHANG Yi-long, LU Di)
- 56 Study on Sustainable Design Strategy of Expressway Service Area in Mountainous Area(WANG Zeng-hao)
- 59 Study on Key Problems in the Design of Small and Medium Span Bridge of Mountain Highway(HE Zhi-wei)
- 62 Study on Treatment Method of Tunnel Structure Crack Disease(TIAN Kui)
- 65 Research on Structural Design and Construction Control Technology of Road and Bridge Transition Section(PENG Zhou, ZHANG Hui)
- 69 Design Method for Anti-Overturning Stability of Continuous Girder Bridges(LIU Shu-hua)
- 72 Study on Program of Introducing Beijing-Xiong'an-Shangqiu Railway into Heze Railway Area(HUANG Lu-wei)
- 76 Study on Population Size and Congestion Control Effect of Urban Rail Transit(SUN Chuan-liang, YUAN De-hao)
- 79 Effect of Heavy Rainfall on the Stability of Road Slope with Xigeda Soil(DING Guo-sheng)
- 82 Discussion on Common Problems in Urban Road Design(WU Ping)
- 85 Research on Protection Measures for Adjacent Existing Underground Pipelines During Pipe Jacking Construction of Urban Underground Crossing Project(LI Zhi-peng)
- 88 Energy-Saving Technology of City Street Lamp(WANG Hai-bo)
- 91 Application of Impact Rolling Technology in Subgrade Construction(WANG Qi)
- 94 Study on Corrosion of Seawater Fire Protection System(SHI Tian-hua)

- 97 Design Scheme and Construction Technology of the Junction Between Road and Bridge in Municipal Engineering(GUAN Wen-zhong)

### Intelligentize and Informatization

- 100 Application of Computer Network Technology in Electronic Information Engineering(LI Liang-xi)
- 103 Application of Dynamic Monitoring Technology in Deep Foundation Pit Construction(CAI Yuan-sheng)
- 107 Application of Parameterization in Architectural Scheme and Construction Design(CUI Nai-fu, SANG Ying-hui)

### Construction Technology

- 110 Discussion on the Installation and Debugging Technology of Mechanical and Electrical Equipment in Construction Machinery(LIN Ke-ren)
- 113 Analysis on Welding Quality Control Measures of New Corrugated Web Plate Steel Box Girder(YUAN Wen-jin)
- 116 Application of Key Technology of Adding Layer to Existing Underground Space in Rail Transit(WU Tian-yu, YAN Ruo-ming)
- 119 Research on the Application of Excavation Technology in Tunnel Engineering Through Fault Fracture Zone(LIU Zhi-ren)
- 122 Research on the Lifting Scheme Planning and Selection of High-Altitude Corridor Truss(QUE Rong, SU Kai, HUANG Yun, WANG Yong-gang)
- 125 Application Research on the Incremental Launching Construction Technology for Large-Span Overweight Flexible Steel Beam of Steel Structure Bridge(KANG Ji-ping)
- 128 Construction Difficulties and Countermeasures of Bridge and Tunnel Engineering(ZHAO Yong-ping)
- 131 Research on Construction Technology of Large Diameter Rock-Socketed Pile with Super Thick Overburden(WANG Zhi-quan)
- 134 Jacking Construction Process and Technology of Sewage Pipe in Municipal Road Drainage Engineering(WANG Yun-tian, ZHANG Jin-guang)
- 137 Construction Technology of Joint Treatment of New and Old Pavement Base of Highway in Frozen Area(SONG Wei)
- 140 Application Analysis on TSP Detection in Huge-Span Subterranean Tunnels(LI Zhao-long)
- 143 Installation Technology of Large Area Profiled Mixed Joint Steel Grid(HU Tie-hou, LI Yong-ming, QIAN Ying-yu, GAO Ling-kuan, CHEN Dong-xu)
- 146 Construction Technology of SMW Pile and Inclined Cast Support System for Foundation Pit in Metro Depot(HONG Zu-zhi)
- 149 Application of Cut and Cover Reverse Method Construction Technique in Subway Station Construction(FENG Song-tao)
- 152 Application of Pearlescent Concrete in the Base Insulation Layer of Air Separation Equipment(XUE Shu-min)
- 155 Design of Bulk Concrete Mix Ratio and Engineering Application(WANG Rui-liang, WU Hai-feng, ZHOU Zhi-gang)

- 158 Study on Construction Technology of Ventilation Shaft of Wulaoshan Long Tunnel(DING Guo-bin)
- 162 Research on Asphalt Overlay Technology for Cement Concrete Pavement(SU Teng-fei)
- 165 Research on the Demolition Technology of Muji Bridge of Leading Water from Yangtze River to Huaihe River Project(SONG Zhi-ming)
- 168 Taking the Prefabricated Lattice Structure Prefabricated Ecological Retaining Wall as an Example to Analyze the Value of Assembly Construction(DENG Jing-hui)
- 171 Application of Ultrasonic Testing Technology in Pile Foundation Testing of Concrete Bridge(LUO Hong)
- 174 Research on Construction Technology During Construction Time of Overpass Bridge in High-Speed Railway Station(JIANG Dong-ya)
- 177 Application of Comprehensive Geophysical Method in Engineering Investigation of Yuanjiang River Crossing Tunnel in Changde(HU Cheng-liang)
- 180 Construction Technology of Shallow Buried Tunnel with Small Spacing and Large Section(YANG Yin-gang)
- 183 Construction Technology and Quality Control Measures of Wet Pressure Method for Aeolian Sand Roadbed(ZHANG Cong-ming)
- 186 Study on Construction Technology of Test Pile and Hole Forming Quality Inspection——Taking the Comprehensive Transportation Hub Project of Beijing Sub Center Station as an Example(SHI Song-hua)
- 189 Study on Grooving Construction and Detection Technology of Diaphragm Wall in Foundation Pit Engineering(WANG Hai-bin)

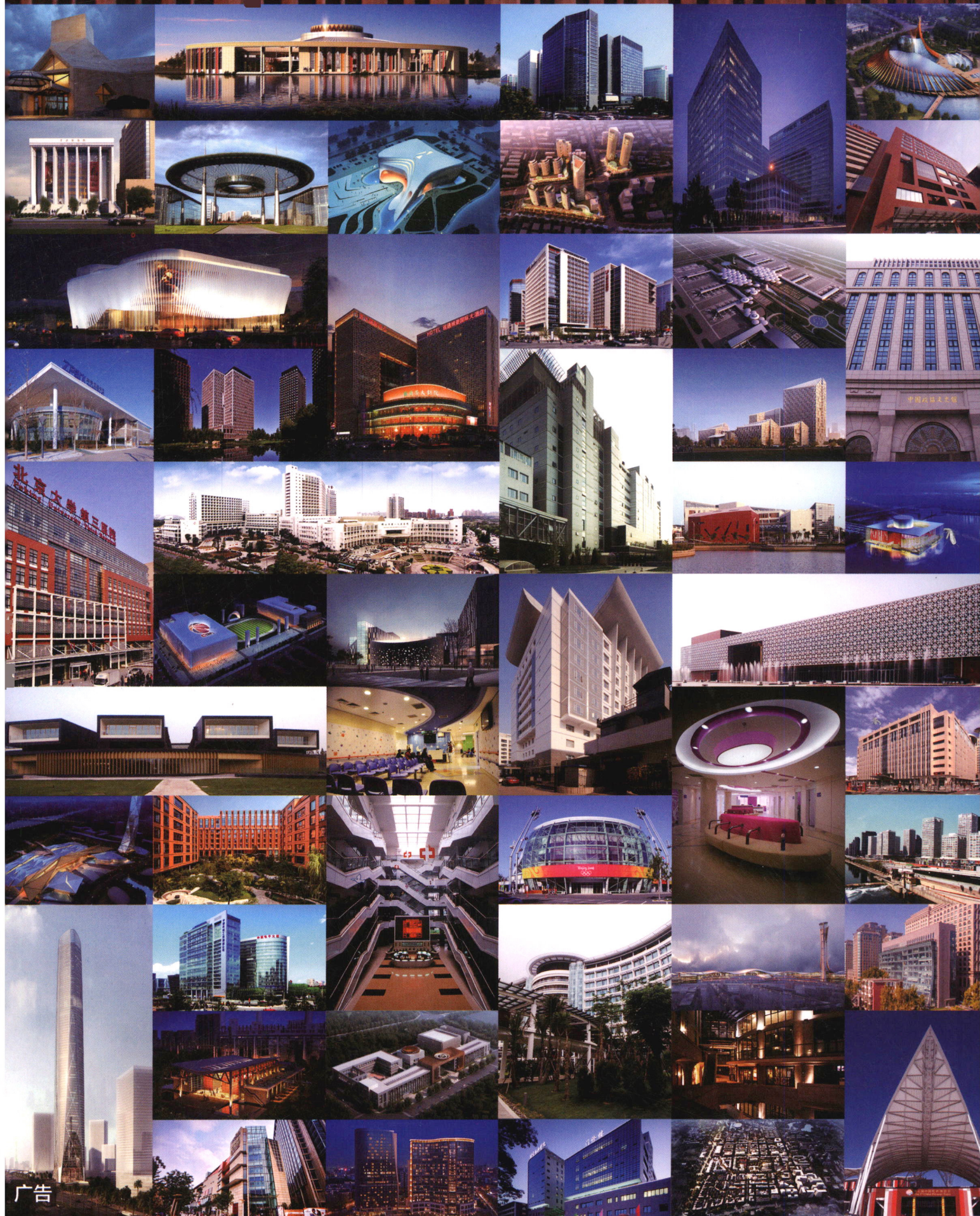
### Project Management

- 192 Analysis of Safety Risk Management Mode of Civil Engineering Construction Based on Engineering Insurance(YU Jiang, SUN Hao-yu)
- 195 Problems and Optimization Suggestions of Housing Inspection and Appraisal Industry Management Under the New Situation(BAO Yi)
- 198 Study on the Practice of Comprehensive Land Consolidation and Ecological Restoration(JIAO Yu-ping)
- 201 Analysis on Difficulties and Countermeasures of Construction Acceptance of Building Fire-Fighting Engineering(WANG Chuang)
- 204 Analysis of Safety Management for Construction Site of Architectural Engineering(AI Hua)
- 207 Discussion on the Problems in Municipal Engineering Management and Its Countermeasures(CHEN Jie)
- 210 Research on Key Points of Construction Management of Comprehensive Community Building Project(LEI Lin)
- 213 Application of BIM Technology in the Full Cycle Control of Public Building Engineering Construction(WU Xiao-yong)
- 216 Application of Progress Management System in Metro Electromechanical Installation Engineering(LUO Xiao-hua)



# 中国中元国际工程有限公司

CHINA IPPR INTERNATIONAL ENGINEERING CO., LTD.



广告

地址：北京市西三环北路5号 邮编：100089 电话：(010) 68458355 传真：(010) 68732688 网址：<http://www.ippr.com.cn> 邮箱：[office@ippr.net](mailto:office@ippr.net)