



# 工程建设与设计

主办: 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 中国中元国际工程公司 CN 11-3914/TU 2013 年第05期 总第301期

## 热烈祝贺

## 中国联合工程公司成立

# 60周年



中国联合工程公司总部新大楼

ISSN 1007-9467



05 >

9 771007 946103



## 05 卷首

心中的“中国梦”

## 06 动态资讯

## 08 特别关注

招投标走进电子化时代之一：  
解读《电子招标投标办法》

## 16 律师说法

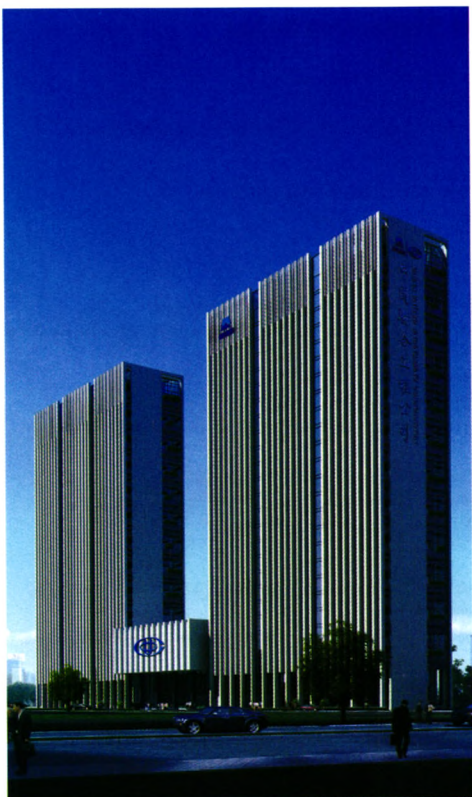
工程总承包合同风险分析与防范(九)  
——工程变更与工程索赔的风险分析与防范

## 18 走进中国中元

抓住机遇 走出国门  
——中国中元中亚市场拓展之路

## 22 论坛

思想政治工作在企业应对突发事件中的作用和路径选择探析



## 建筑与结构设计

- 25 国家建筑标准设计图集《柱间支撑》(05G336)编制介绍(赖海斌,刘蓉蓉,刘昌结,谭丰)
- 28 天津医科大学生态医院绿色建筑方案设计(朱冉)
- 32 某重型钢结构厂房结构设计(马付彪,郭冰冰)
- 35 某重型工业厂房结构选型分析和应用(龚政,李焘)
- 37 火力发电厂主厂房采用单跨框架结构抗震设计实例(谭丰,赖海斌,刘蓉蓉)
- 40 带滑动支座楼梯和普通楼梯对框架结构性能影响分析(刘东泽)
- 43 援巴基斯坦巴中友谊中心结构设计(王铁刚)
- 46 结构设计中框架梁端混凝土受压区高度限值的探讨(沙凌锋,王京)
- 49 轻钢加层结构弹性时程分析(阎攀科,吕宇莎)
- 52 重庆国金中心T2塔楼结构设计(张峰)
- 55 论小型火力发电厂单跨混凝土框架的合理性(计光)
- 57 建筑环保节能设计探讨(楼彬)
- 60 某工业厂区总平面布置(孟庆懿)
- 63 区域视角下我国西部地区小城镇发展模式与城市定位研究——以杭锦旗锡尼镇为例(邢涛,李慧)
- 67 探索新时代背景下村民还迁区的设计策略  
——天津市津南区双港镇河畔星城安置住宅区规划设计(张微)
- 70 基于AutodeskRevitStructure结构施工图平法表示(姬丽苗,张德海,管栎瑜,韩进宇)

## 基础工程设计

- 73 磷石膏尾矿坝渗流场与稳定性分析(郭茜,马忠武)
- 77 珠海市南区水厂中远期场地软基处理方案技术经济比较(贺亚)
- 80 阳逻港水下钻孔爆破地震波测试及小波包分析(杨磊,钟冬望,何理,司剑锋)
- 84 右玉紫玉苑小区酒店·办公楼地基基础设计小结(黄宝平)
- 87 杭州湾跨海大桥大直径超长桩基础桩底压浆的关键技术(马成军)

## 公用工程设计

- 90 上海新江湾地区浅层地温场初步分析(翟成松,曹袁,徐丹)
- 92 汽车发动机实验室暖通设计(李鹏)
- 95 汽车测功设备配电设计的优化(石华军,张志辉,李新江)
- 99 昆明新机场行李系统设计及实施(谷晓阳)
- 102 北京大兴北臧村保障房景观设计的可行性途径(殷丽燕)
- 106 给排水系统改造与BIM技术应用(吴先婷)
- 109 谈楼宇型燃气三联供系统设计思路(张伟,段晨亮,田国栋)
- 113 医院新风机组防冻浅析及经验总结(董淳)
- 115 核岛建筑防火封堵研究(黄本良)
- 118 废乳液真空低温蒸馏处理新工艺(阮小剑)
- 120 工业场地综合管沟浅析(马强,艾世勃)
- 122 谈援加纳体育场项目的雨水设计(李会涛)
- 126 小型气力垃圾输送系统的设计与应用研究(毛绘宇)

## 市政·交通·水利·工程设计

- 130 铁路棚洞落石冲击力分析(杨功勤)
- 134 大型高炉区铁路线路布置分析(范新库)
- 140 图解法绘制缩短连接曲线之设计实践(马业伟)
- 143 校准激光自动弯沉仪方法的探讨与分析(王德岭,陈雷,邵俊江)

## 制造工程设计

- 146 数字化制造技术在工厂中的应用(盛伟,商剑南,许伟民)
- 149 某大型变压器装配车间设计(王海滨,霍西平)

## 工程施工技术

- 151 花岗岩台阶返浆问题浅析(洪峰,袁圆)
- 155 铁路客运专线桥梁简支拱的施工技术(肖红平)
- 158 直埋无补偿敷设供热管道施工技术的应用(马善军,杨金泉)
- 161 高层建筑地下连续墙的施工技术(田军)
- 164 近景摄影测量在护坡施工中的应用(乔亚奇)
- 166 地下室外墙混凝土裂缝成因与修补方法(王亚)
- 168 高水位粉砂土地质条件下多孔框架桥下穿多股铁路的顶进施工技术(陈长青)
- 172 减轻隧道工程施工对周边建筑物影响的措施(许景源)
- 176 地下连续墙成槽施工泥浆使用技术研究(谢生勇,姚志安)
- 180 黄石某冲孔灌注桩基础施工事故处理与分析(曹举烽)

## 工程项目管理

- 184 山东广播电视台中心综合业务楼物业管理研究(王光金,殷鹏)
- 187 建筑工程项目中的合同管理(冯芳)
- 190 某工程国家固定资产投资项目节能评估报告给排水方案(李海欣,于凤俊)
- 196 对北京地区利用冷却塔进行冬季空调制冷的分析(李海欣)
- 199 处理工程款拖欠问题时建设单位所面临的问题(王万建)
- 201 议工程施工招标标段划分(武秀萍)
- 203 协同意义下的建筑工程变更问题分析(杨德荣)





## 05 FOREWORD

The Hearts of The "China Dream"

## 06 INFORMATION

## 08 SPECIAL FOCUS

Bidding Into The Electronic Age: An Interpretation of "Electronic Bidding"

## 16 LAWYERS ARGUMENT

Risk Analysis and Prevention on EPC(IX)

## 18 INTO THE IPPR

Grasp The Opportunity Go Out of The Country

## 22 FORUM

An Analysis of Ideological and Political Work in Enterprise Dealing with Emergencies in the Role and Path Selection

## Architectural and Structural Design

- 25 Introduction to The National Building Standard Design Drawing of column bracing(05G336 )(LAI Hai-bing,LIU Rong-rong,LIU Chang-xu,TAN Feng)
- 28 Tianjin Medical University Eco-city Hospital Green Building Design(ZHU Ran)
- 32 Design for a Heavy Steel Workshop Building (MA Fu-biao, GUO Bing-bing)
- 35 Structure Design Analsis and Application of a Typical Heavy Industrial Plant (GONG Zheng,LI Tao)
- 37 Fossil-fired Power Plant's Main Building Using Single Span Frame Structure Seismic Design (TAN Feng, LAI Hai-bin, LIU Rong-rong)
- 40 The Analysis of Influence between Slide Support Stairs and Ordinary Stairs on Frame Structural Properties (LIU Dong-ze)
- 43 Pakistan China Friendship Center (WANG Tie-gang)
- 46 Discussion on Structural Design of Depth of Compressive Zone of the Seismic Designed Frame Beams (SHA Ling-feng,WANG Jjing)
- 49 Elasto-plastic Time-history Analysis of Light-weiht Steel Storey-adding Structure(YAN Pan-ke,LV Yu-sha)
- 52 Steel Beam and Concrete Column Rigid Connection Design(ZHANG Feng)
- 55 Discussion on the Rationality of Single Span Frame in Small Thermal Power Plants (Ji Guang)
- 57 Building Energy Saving and Environmental Protection Design(LO Bin)
- 60 General Layout of a Industrial Plant (MENG Qing-yi)
- 63 Study on the Development Pattern and Urban Location of the Towns in Western Region of China in Regional Perspective  
—— Taking Xini Town of Hangjin Banner as an Example (XING Tao,LI Hui)
- 67 Exploring Design Strategy of Residential Area for Migrational Villagers Moving Back in New Age Background  
—— Planning Design of Residnetial Area "Star City Riverside"at Shuanggang Town, Jinnan District, Tianjin City(ZHANG Wei)
- 70 Structure Construction Drawing Flat Method Based on Autodesk RevitStructure (JI Li-miao ,ZHANG De-hai,GUAN Zhi-yu, HAN Jin-yu)

## Engineering Design of the Ground

- 73 Analysis of Seepage Field and Stability of Phosphogypsum Tailings Dam(GUO Qian,MA Zhong-wu)
- 77 Technical and Economic Comparison of Long-term Field Soft Foundation Treatment Program in the South Water Plant in Zhuohai(HE Ya)
- 80 Seismic Wave test of Wuhan Yangluo Port Underwater Drilling Blasting and Wavelet Packet Analysis  
(YANG Lei,ZHONG Dong-wang,HE Li,SI Jian-feng)
- 87 Hangzhou Bay Sea-crossing Bridge Super Long Large Diameter Pile Foundation Pile Bottom Grouting Technology(MA Cheng -jun)

## Public Utilities Design

- 90 Preliminary Analysis of the Shallow Ge othermal Field at the Xinjiangwan Area in Shanghai(QU Cheng-song, CAO Yuan , XU Dan)
- 92 Heating and Ventilation Design of Automobile Engine Laboratory(LI Peng)
- 95 Automobile Engine Dynamometer Power Distribution Design Optimization (SHI Hua-jun,ZHANG Zhi-hui,LI Xin-jiang)
- 99 The Design and Implementation of Kunming Changshui International Airport Baggage Handling System (GU Xiao-yang)
- 102 Feasibility Way of Beijing Daxing District Beizang Village Low-income Housing Landscape Design (YIN Li-yan)
- 106 Water Supply and Drainage System Renovation and BIM Technology Application (WU Xian-ting)
- 109 Discussion on Building Gas CCHP System Design (ZHANG Wei,DUAN Chen-liang,TIAN Guo-dong)
- 113 The Hospital Fresh Air Unit Antifreeze Analysis and Lessons Learned (DONG Chun)
- 115 Research on the Nuclear Island Building Firepro of Plugging (HUANG Ben-liang)
- 118 New Process of Waste Emulsion Vacuum Cryogenic Distillation(RUAN Xiao-jian)
- 120 Analysis of Industrial Sit es Trench(MA Qiang, AI Shi-bo)
- 122 Ghana China Stadium Project Rain Water Design (LI Hui- tao)
- 126 Study on Design and Application of Small Pneumatic Refuse Transportation System (MAO Hui-yu)

## Municipal · Traffic · Water Resources · Engineering Design

- 130 Rockfall Impact Force Analysis of Railway Shed Hole(YANG Gong-qin)
- 133 Analysis of Arrangement of Railway Line for Large Blast Furnace Area( FAN Xin-ku)
- 140 Design Practices of Shortening Connecting Curve with Graphic Method(MA Ye-wei)
- 143 Discussion and Analysis of Calibration of the Laser Autodeflectometer Method (WANG De-ling,CHEN Lei,SHAO Jun-jiang)

## Manufacture Engineering Design

- 146 Digitized Manufacturing Technology in Modern Factory (SHENG Wei, SHANG Jian-nan, XU Wei-min)
- 149 A Large Transformer Assembly Shop Plant Design (WANG Hai-bin,ZHAI Xip-ing)

## Construction Technology

- 151 A Brief Analysis of Accumulation of Salt in the Granite Surface(HONG Feng,YUAN Yuan)
- 155 Railway Passenger Dedicated Line Bridge Simply Supported Arch Construction Technology (XIAO Hong-ping)
- 158 Direct Burial without Compensation Laying Heating Pipeline Construction Technology Research and Application (MA Shan-junI,YANG Jin-quan)
- 160 High-rise Building Underground Continuous Wall Construction Technology (TIAN Jun)
- 164 Close Range Photogramm Etry Application in Slope Protection Construction(QIAO Ya-qi)
- 166 The Causes and Repair methods of the Concrete Crack in Basement Exterior Wall (WANG Ya)
- 168 Construction Technology of Jacking Frame Bridge Beneath Multi Railway Lines at the Silty Soil Area with High Ground Water Level  
(CHEN Chang-qing)
- 172 Measures of How to Reduces the Influence on Surrounding Building in Tunnel Engineering(XU Jing-yuan)
- 176 Study on Using Technology of Cement Slurry in the Trenching Construction of Diaphragm Walls(XIE Sheng-yong , YAO Zhi-an)
- 180 Processing and Analysis of the Accident About Filling Pile Foundation in Huangshi (CAO Ju-feng)

## Project Management

- 184 The Reseach on Property Management of Shandong Broadcasting Center Integrated Services Building(WANG Guang-jin,YIN Peng)
- 187 Construction Contract Management of Engineering Projects( FENG Fang)
- 190 Water Supply and Drainage Design Proposal in Energy Efficiency Evaluation Report for a State Fixed Assets Investment Project Located in Beijing  
(LI Hai-xinI,YU Feng-jun )
- 196 Analysis of Winter Air-Conditioning Refrigeration Using Cooling Tower in Beijing Area(LI Hai-xin)
- 199 Problems that Construction Units Face in the Processing of Arrears(WANG Wan-jian)
- 201 Discussion on the Project Construction Bidding Section Division(WU Xiu-ping)
- 203 The Analysis of Construction Project Change in the Sense of Cooperation(YANG De-rong)