

中国核心期刊（遴选）数据库 收录期刊

ISSN 1006-4311

CN13-1085/N

Value Engineering

中国商界文联 会刊

中国技术经济研究会价值工程专业委员会 会刊
中国高等教育学会价值工程分会 会刊

中国期刊网 全文收录期刊
中国学术期刊（光盘版）

中国学术期刊综合评价数据库来源期刊

万方数据—数字化期刊群入网期刊

中文科技期刊数据库收录期刊

JIAZHI GONGCHENG

2023 ③

中旬刊（总第 664 期 / 第 42 卷）

价值工程

ISSN 1006-4311



9 771006 431068

价值工程

2023年3月中旬刊 (总第664期 / 第42卷)
1982年创刊 2023年3月18日出版

中国商界文联会刊

中国技术经济研究会价值工程专业委员会会刊
中国高等教育学会价值工程分会会刊

封面刊名题字：袁宝华

主管单位：

河北省科学技术协会

主办单位：

河北省技术经济管理现代化研究会

总顾问：管在源

总编：高志彪

总编室：朱敏行 马慧霞 师瑞

电 话：0311-87024742

编辑部：王志增 赵亚平 刘兴菊

电 话：0311-83020178

0311-83036626

传 真：0311-87024742

投稿信箱：vezzsbjb@163.com

网 址：www.vezzs.com

责任编辑：高生明

封面设计：王金军

版面设计：韩宇红

国际标准连续出版物号：ISSN 1006-4311

国内统一连续出版物号：CN 13-1085/N

国内邮发代号：18-2

国内订阅：全国各地邮局

国内发行：河北省报刊发行局

国外发行：中国国际图书贸易总公司

印 刷：廊坊市长岭印务有限公司

编辑出版单位：价值工程杂志社

社 址：石家庄槐安西路88号

邮 编：050091

国内定价：30.00元人民币

海外定价：30.00美元

目 录

* 价值管理 *

- 网络购物风险及应对策略分析 孙光金 等(1)
项目视角下虚拟组织连续合作模式研究 任家良 等(4)
区域市场化水平对制造业出口技术复杂度的影响 虞雪卿(8)
住宅项目施工质量控制研究 刘柳(11)
准IV出水标准下某污水处理厂二期扩建及一期提标改造工程实践 彭文龙 等(15)
电力系统安全评价管理指标及智能安全管控系统设计探究 雷晓斌 等(18)
重庆市食品冷链消费需求预测研究 尹佳雯 等(21)
基于大数据背景的建筑施工现场智慧管理策略 冯飞(25)
某城市旧改房屋安全性鉴定及信息化监测研究 宋娟 等(28)
云南省道路运输行业安全生产阶段性、区域性和制度性特征及战略对策研究 张艳(31)

- 医院项目及医院造价本体构建研究 阮丹宁(34)
高标准农田建设工程与水资源利用研究 刘社堂(38)
新型机械化隧道架子队模式的经济原理及效果探析 尹文超(41)
浅谈软弱围岩隧道爆破开挖关键技术及安全管控 张恩增 等(45)

* 价值链·供应链 *

- 战略合作模式下的建筑供应链金融融合谋风险研究 张驰 等(48)

* 功能载体创新 *

- 轻型三角形可折叠式钢撑轴心受压试验研究 张月楼 等(52)
浅谈轨道交通供电系统环网电缆孔洞封堵技术改造 马静(55)
既有铁路T梁更换道岔梁施工技术研究 彭望(58)
临近高铁侧墙式桩板结构的桩基分布合理性分析 冀少峰(61)
滨海互通墩柱施工关键技术 乔继保(64)
长江漫滩区深基坑开挖引起地层和支护结构变形分析 杨科学(67)
梁拱组合桥拱肋大节段不对称拼装施工关键技术 武秀军(70)
房屋大悬臂、高离地挑檐施工模架技术研究 谭佳佳(73)
大跨度转体连续梁施工技术研究及应用 周磊(76)
空间设计方案研究 郝建英(79)
哈尔滨三棵树跨铁路线桥工程钢箱梁顶推施工工艺 刘鹏(82)

145m 长小半径曲线钢箱梁顶推施工关键技术	邢东东(85)
微扰动注浆在既有运营线路结构突变条件下的应用	朱志豪(88)
煤与瓦斯突出隧道穿越采空区缓倾煤层揭煤防突关键技术研究	曾妙林(91)
承台大体积砼温差裂缝分析及控制技术研究	宁晓飞(94)
穿越煤系地层钻爆法安全开挖研究	卢冰涛(97)
钢筋砼圆形沉井的设计与施工技术	刘栋(100)
光面爆破技术探讨与实践	徐少东(103)
上跨既有高速钢混组合梁施工技术	赵子瑜(106)

* 价值应用 *

大型正断层下盘厚煤层开采断层渗透性演变规律与煤柱优化研究	罗鹏 等(110)
构建空地联动森林防火体系浅析	李鹏飞 等(113)
水玻璃喷洒强化对再生粗骨料性能的影响	夏季 等(116)
基于改进 SSD 的液晶玻璃基板缺陷检测	陈城 等(119)
常州市区污水管道渗漏的试验	张冬冬(122)
高墩柱悬臂盖梁预应力与上部荷载施加顺序研究	朱加名 等(125)
γ 射线扫差在减压塔填料腐蚀评估中的应用	金波(128)
海绵城市理念下的道路设计	黄闪(131)
探究 T 型地铁换乘车站建筑设计及创新	刘英男(134)
基于手势识别技术的智能控制系统设计与实现	唐亮 等(137)
30m 先简支后连续箱梁预制施工技术	范永春(140)
基于优化时序控制的 STC 联合摊铺系统施工技术研究	张华(143)
一种检测设备自动计量检定系统的设计及应用	孙合勇(146)
基于无人机倾斜摄影测绘技术的农村不动产权籍测量	杨学武(149)
悬臂现浇梁菱形挂篮施工技术	刘志光(152)

* 理论综述 *

海河平原地下水超采情势及应对策略探究	孙自森 等(155)
矿产资源开发利用的研究现状与热点分析	孙桐 等(158)
全球新能源汽车贸易网络及中国地位变迁研究	周海燕(161)

郑重声明

1、本刊所刊载内容未经书面许可，任何部分不得以任何形式翻印、转载、复制，及存储于检索系统，提供给公众或私人使用。

2、来稿在 15 个工作日内给予回复录用与否，若未收到回复信息，请来信来电咨询稿件进展。来稿正常刊登周期为 3 个月内，未录用者可自行处理。请勿一稿多投，不涉及保密、署名无争议，请作者自留底稿，恕不退稿。

3、编辑部对来稿文章标题、内容、参考文献等保留删修权，不同意删修的稿件请在来稿中声明。

4、本刊已许可相关期刊网站以数字化方式复制、汇编、发行、信息网络传播本刊全文。本刊支付的稿酬(或稿酬与作品审稿费、与作品样刊费相抵)已包含相关期刊网站著作权使用费，所有署名作者向本刊提交文章发表之行为视为同意上述声明。如有异议，请在投稿时说明，本刊将按作者说明处理。

Value Engineering
(VE)
 Fortnightly Issue
 Started in 1982
 Vol.42 3.b
 (Sum No.664)
 Published in Mar. 18, 2023

Inscribed: Yuan Baohua
General Counsel: Guan Zaiyuan
Executive Editor-in-chief:
 Gao Zhibiao
Manager:
 Hebei Association for
 Science and Technology
Sponsor:
 Hebei Institute of Technology
 Economy and Modern Management

Chief Editor's Department:
 Shi Rui
Editor: Editorial Team of VE
Publisher:
 Magazine Publishing House of VE
Address:
 No.88 Huai'an Road, Shijiazhuang
Tel: (0311) 87024742
E-mail: vezzshjb@163.com

Printed by:
 Changling Printing Co., Ltd. Langfang
Distributor: Shijiazhuang Post Office
Subscriptions:
 Chinese Local Post Office
Domestic Issue Code: 18-2
Domestic Single Price: ¥30.00
Overseas Single Price: 30.00
Open Publishing
ISSN 1006-4311
CN 13-1085/N

CONTENTS

VALUE MANAGEMENT

- | | |
|---|------------------------------|
| 1 Analysis on Risks and Countermeasures of Online Shopping | SUN Guang-jin, <i>et al.</i> |
| 4 Research on the Continuous Cooperation Model in the Virtual Organization from the Perspective of Projects | REN Jia-liang, <i>et al.</i> |
| 8 Effect of Regional Marketization Level on the Technical Complexity of Manufacturing Exports | YU Xue-qing |
| 11 Research on Construction Quality Control of Residential Projects | LIU Liu |
| 15 Practice of Phase II Expansion and Phase I Upgrading of a Sewage Treatment Plant under Quasi-IV Effluent Standard | PENG Wen-long, <i>et al.</i> |
| 18 Research on Power System Security Evaluation Management Index and Intelligent Security Management and Control System Design | LEI Xiao-bin, <i>et al.</i> |
| 21 Research on Forecast of Food Cold Chain Consumption Demand in Chongqing | YIN Jia-wen, <i>et al.</i> |
| 25 Intelligent Management Strategy of Construction Site Based on Big Data Background | FENG Fei |
| 28 Study on Safety Appraisal and Information Monitoring of a City's Old and Reformed Houses | SONG Juan, <i>et al.</i> |
| 31 Periodic, Regional, Institutional Characteristics and Countermeasures of Safety Production in Road Transportation Industry of Yunnan | ZHANG Yan |
| 34 Research on the Construction of Hospital Project and Hospital Cost Ontology | RUAN Dan-ning |
| 38 Study on High-standard Farmland Construction Project and Water Resources Utilization | LIU She-tang |
| 41 Economic Principle and Effect Analysis of the New Mechanized Tunnel Scaffold Team Model | YIN Wen-chao |
| 45 Discussion on Key Technology and Safety Control of Tunnel Blasting Excavation in Soft Surrounding Rock | ZHANG En-zeng, <i>et al.</i> |

VALUE CHAIN·SUPPLY CHAIN

- | | |
|---|--------------------------|
| 48 Research on Financial Collusion Risk of Construction Supply Chain under Strategic Cooperation Mode | ZHANG Chi, <i>et al.</i> |
|---|--------------------------|

FUNCTION CARRIER INNOVATION

- | | |
|---|------------------------------|
| 52 Experimental Study on Light Triangular Foldable Steel Brace under Axial Compression | ZHANG Yue-lou, <i>et al.</i> |
| 55 Discussion on the Hole Plugging Technology Reformation of Ring Network Cable in Rail Transit Power Supply System | MA Jing |
| 58 Research on Construction Technology of Replacing Switch Beam with Existing Railway T Beam | PENG Wang |
| 61 Rational Analysis of Pile Foundation Distribution of Side Wall Pile Plate Structure Near High-speed Railway | JI Shao-feng |
| 64 Key Technologies for Construction of Coastal Intercommunication Piers | QIAO Ji-bao |

67 Analysis of Deformation of Stratum and Support Structure Caused By Deep Foundation Excavation in Yangtze River Diffuse Zone	..... YANG Ke-xue
70 Construction Technology and Simulation Analysis of Asymmetric Assembly of Large Segments of Arch Rib of Continuous Beam Arch Composite Bridge	..... WU Xiu-jun
73 Research on Construction Formwork Technology of Large Cantilever and High Overhanging Eaves of Buildings	..... TAN Jia-jia
76 Research and Application of Construction Technology for Large-span Swivel Continuous Beam	..... ZHOU Lei
79 Research on Space Design Scheme	..... HAO Jian-ying
82 Jacking Construction Technology of Steel Box Girder for Harbin Sankeshu Railway Bridge Project	..... LIU Peng
85 Key Technology of Launching Construction of 145m Long Small Radius Curved Steel Box Girder	..... XING Dong-dong
88 Application of Micro-disturbance Grouting under the Condition of Sudden Change of Existing Operation Line Structure	..... ZHU Zhi-hao
91 Research on Key Techniques for Uncovering Coal and Preventing Outburst for Gently Inclined Coal Seams in Coal and Gas Outburst Tunnel Crossing Goaf	..... ZENG Miao-lin
94 Analysis and Control Technology of Temperature Difference Cracks in Mass Concrete of Cushion Cap	..... NING Xiao-fei
97 Study on Safe Excavation Through Coal Measures Strata by Drilling and Blasting	..... LU Bing-tao
100 Design and Construction Technology of Circular Reinforced Concrete Caisson	..... LIU Dong
103 Discussion and Practice of Smooth Blasting Technology	..... XU Shao-dong
106 Construction Technology of Existing High-speed Steel-concrete Composite Beam	..... ZHAO Zi-yu

VALUE APPLICATION

110 Study on Evolution Law of Fault Permeability and Optimization of Coal Pillar in Thick Coal Seam Mining under Large Normal Fault	..... LUO Peng, <i>et al.</i>
113 Analysis on the Construction of Air-ground Linkage Forest Fire Prevention System	..... LI Peng-fei, <i>et al.</i>
116 Effect of Water Glass Spraying Strengthening on Properties of Recycled Coarse Aggregate	..... XIA Ji, <i>et al.</i>
119 Liquid Crystal Glass Defect Detection Based on Improved SSD	..... CHEN Cheng, <i>et al.</i>
122 Test on Leakage of Sewage Pipes in Changzhou Urban Area	..... ZHANG Dong-dong
125 Study on the Sequence of Prestress and Upper Load of Cantilever Cap Beam of High Pier Column	..... ZHU Jia-ming, <i>et al.</i>
128 Application of γ -ray Scanning Difference in Corrosion Evaluation of Vacuum Tower Packing	..... JIN Bo
131 Road Design under the Concept of Sponge City	..... HUANG Shan
134 On the Architectural Design of T-type Subway Transfer Station	..... LIU Ying-nan
137 Design and Implementation of Intelligent Control System Based on Gesture Recognition Technology	..... TANG Liang, <i>et al.</i>
140 30m Precast Construction Technology of Simply Supported and Continuous Box Girder	..... FAN Yong-chun
143 Research on Construction Technology of STC Combined Paving System Based on Optimal Timing Control	..... ZHANG Hua
146 Design and Application of an Automatic Measurement and Verification System for Testing Equipment	..... SUN He-yong
149 Rural Real Estate Registration Survey Based on UAV Tilt Photogrammetry Technology	..... YANG Xue-wu
152 Construction Technology of Rhombic Hanging Basket for Cantilever Cast-in-place Beam	..... LIU Zhi-guang

THEORETICAL REVIEW

155 Situation of Groundwater Overexploitation and Its Countermeasures in Haihe River Plain	..... SUN Zi-sen, <i>et al.</i>
158 Research Status and Hotspot Analysis of Mineral Resources Development and Utilization	..... SUN Tong, <i>et al.</i>
161 Research on the Global New Energy Vehicle Trade Network and Transition of China's Status	..... ZHOU Hai-yan