

中国核心期刊（遴选）数据库 收录期刊

ISSN 1006-4311

CN13-1085/N

Value Engineering

JIAZHI GONGCHENG

2021 3

下旬刊（总第593期 / 第40卷）

价值工程

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

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

ISSN 1006-4311



9 771006 431068

万方数据

价值工程

2021年3月下旬刊(总第593期/第40卷)
1982年创刊 2021年3月28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
中国高等教育学会价值工程分会
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:师瑞

电话:0311-87024742

编辑部:马慧霞

刘英禄

电话:0311-83020178

0311-83036626

传真:0311-87024742

投稿邮箱: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:廊坊市长岭印刷厂

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 *

- 基于维修障碍的维修性定性要求评估方法 王寒冬等(1)
- 实验室安全管理体系的构建与实践 李阿路等(4)
- 灭火救援中火场排烟战术的运用分析 徐超(6)
- 沙集模式下农村电子商务发展新路径研究 许博生等(8)
- 李井滩灌区建设管理经验与优化分析 唐培新等(10)
- 基于CIPP模式装备保障集成训练的熵权-模糊AHP综合评估
..... 赵德勇等(12)
- 区块链技术对审计的影响及应对措施研究 王鑫(16)
- 农村建设用地拆旧复垦实施难点及解决对策研究 刘付伟明等(18)
- 项目前期工程咨询的重要性以及发展方向探讨 牛玉婷(20)
- 基于国际联运运费体系下中欧班列货物价值区间分析 葛蕾(22)
- 土木工程管理与工程造价的有效控制 曾瑞卿(25)
- 建设工程造价管理的关键环节及相关问题 黄恩(27)
- 基于EPC工程总承包模式下的海洋石油工程项目管理
..... 张园星等(29)
- 市政给排水规划中的问题及解决对策 邱利强(31)
- 国土空间规划背景下的村庄规划编制 曹艳(33)
- 地铁建设项目土建施工风险管理分析 马新宇(35)
- 华龙一号标准工程量清单的研究 葛元园等(37)
- 建筑工程项目成本管理研究 蒋岚(39)
- 需求侧视角下互联网金融理财产品风险分析及防范对策研究
..... 李雪(41)
- 大数据时代公共图书馆管理研究 韦秀琴等(44)
- TRIZ理论在项目组织管理的应用研究 王慧(46)
- 大型核燃料后处理项目土建投资估算方法探讨 杨欣鑫(48)
- 基于故障树分析法的建筑施工安全管理探析 刘永胜(51)
- 双向八车道水稳基层平整度控制技术要点 白志强等(53)
- 青岛工业遗产的保护和利用研究 吕绍勋(55)
- 高速公路收费站车道通行能力分析 袁小青等(58)
- 江苏农村居民移动广告使用行为影响因素研究 曹国等(60)
- 新时代背景下体育机构管理研究 高松等(63)
- 楚雄市城市区域环境噪声声源构成及其变化趋势 张美花等(65)
- 机场容量与跑道数量的关系分析 甘雨霖等(67)
- 基于逐步回归分析的铁路电子客票满意度调查分析 陈滢滢等(69)
- 智慧城市建设通过集聚效应促进经济增长 闵逸杰等(72)
- 安康市建筑业发展现状、问题与对策分析 刘慧等(74)
- 关于核电厂采用的两种安装定额的措施费分析研究 法丹等(78)
- 煤矿掘进机电设备故障诊断与维护管理 吴少光(80)
- 城市公共交通运营管理模式研究 王梦真等(82)
- 企业技术创新的财税激励方式及路径选择 陈文政等(84)

* 价值链·供应链 *

- 以智慧互联网为基石的共享物流发展研究
..... 水源宋(87)

基于三参数区间灰数的突发事件下的供应链弹性恢复策略遴选
..... 李强(89)

*** 功能载体创新 ***

宾汉姆水泥浆液流变参数与水灰比定量关系
..... 李少军 等(91)

大跨度下承式双线系杆简支拱桥施工技术 陈锋(94)

基于梁单元本构的钢管混凝土柱滞回性能分析
..... 龙宇航 等(97)

钢管贝雷梁支架在连续梁施工中的应用 刘雅男(102)

试论高速公路连续配筋混凝土路面施工技术
..... 赵利彬(105)

公路工程施工中软土地基的处理方法 张芳(107)

道路桥梁工程中沉降段路基路面施工技术探讨 李超(109)

APM 车辆冷却风机断路器跳开故障分析 周兆祥 等(111)

城市道路软土地基处理工程应用浅析 王玮(113)

强震下 RC 框架结构倒塌反应离散单元法仿真分析
..... 魏国华 等(115)

建筑工程质量控制中的工程检测技术要点 陈伟(120)

深基坑土方开挖及支护施工安全技术探讨 曹智(122)

松散破碎岩土体注浆结石体效果参数预测模型
..... 米亚鹏 等(124)

地铁站不同施工工法对工程造价的影响分析
..... 夏德旺(127)

浅谈沥青路面成套设备智能化施工技术 谢锐(129)

地铁工程中地下连续墙施工技术 王超博(131)

固化土在软土地基处理中的应用 李冰(134)

橡胶弹簧浮置板道床施工工艺研究 李兰文(137)

CRTS I 型双块式无砟轨道轨排框架法在隧道内的应用
..... 姜培(139)

复杂环境下渡槽桥的安全快速协同拆除研究
..... 蒙海霖 等(142)

自行式液压模板在箱梁预制施工中的应用 何晓辉(145)

冬季低温环境 PAC-13 施工质量控制 陈谋 等(148)

关于预拌泵送泡沫混凝土配制试验及施工技术的研究
..... 吕金滢 等(150)

正线 CRTS III 型板式无砟道床施工现场管理 文武德(153)

连续梁钢管柱、钢牛腿+贝雷梁高大支架应用技术
..... 李吉改(156)

公路工程沥青路面施工技术与质量控制 张进武(160)

探究水利工程施工中边坡开挖支护技术 李宾(162)

浅析无碱速凝剂在隧道工程中的应用 张国安 等(164)

钢筋预弯工具在钻孔桩施工中的应用 高飞(167)

库区非恒定水位桥梁施工材料运输方案研究
..... 师伟刚(169)

钢筋混凝土连续梁桥悬浇施工技术 彭江(171)

煤矿井下湿喷混凝土技术及应用效果 郑文伟(173)

房屋安全鉴定中的裂缝成因及处理对策探究 陈善(175)

CHE857 焊条在链轮轴花键修复中的应用研究 丁明(177)

低净空上跨电气化铁路大跨度空心板梁拆除方案探讨
..... 王灶华(179)

煤矿掘进机电气控制的发展趋势 韩丽兵(181)

水利水电建筑工程施工中混凝土裂缝的防治
..... 周柏凡(183)

铁路隧道常见质量问题与防治措施 彭隔年(185)

混凝土检测中的影响因素与质量控制分析
..... 亢丽竹(187)

交通工程施工过程中路面基层的施工处理研究
..... 沈佳(189)

W 气田消泡剂配伍性研究 梁平等(191)

大体积砼筏板基础温差裂缝控制技术 陈远(194)

复杂条件下高墩悬臂爬模施工技术及其几何状态控制
..... 王知霜(197)

*** 价值应用 ***

隧道施工瓦斯信息化检测研究 武涛(199)

考虑临时限制区域的航路网络优化方法
..... 彭国栋 等(202)

市政工程线缆型管廊施工要点 吕涛(207)

基于 GPS 技术在建筑工程测量中应用分析
..... 张洪语(209)

聚苯胺储钠在电极中的应用 邵一帆(211)

ArcGIS 在地图制图中的应用 李茂林(213)

域防——区域式疾病预防平台的设计与实现
..... 李希望 等(215)

基于意图的航迹预测仿真 何昕 等(217)

BIM 技术在高速公路工程施工管理中的应用
..... 谢波 等(219)

一种墙面清扫机器人设计研究 李书阁 等(221)

BIM 技术在铁路通信机房室内施工的研究与应用
..... 蒲劲松(223)

社保工作服务的积极作用分析 田均(225)

基于 BIM 的工程建设云服务平台应用研究
..... 熊强东(227)

基于 CFD 的配对进近尾流安全间隔数值模拟方法
..... 马义龙 等(230)

通用航空低空飞行限制要素分析 徐庆柳(233)

我国锚杆(索)技术研究状况与未来发展分析
..... 甘增伟 等(235)

*** 工业工程 ***

基于人因工程的高校图书馆环境优化 庄蕙宁 等(238)

基于风险的天然气净化厂危险气体探测器布局优化研究
..... 黄超 等(240)

*** 理论综述 ***

剑麻-耐碱玻璃混杂纤维混凝土力学性能及耐久性研究进展
..... 余美琳 等(242)

NiTi 基合金增强混凝土结构构件的研究与应用进展
..... 雷婧 等(246)

企业绿色创新能力提升路径研究 李天旭(249)

财政压力和转移支付对地方政府税收能力影响
..... 姚也(253)

Value Engineering

(VE)

Fortnightly Issue

Started in 1982

Vol.40 3.c

(Sum No.593)

Published in Mar. 28, 2021

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:

vezzsbjb@163.com

Printed by:

Changling Printing House, 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 Maintainability Qualitative Requirement Evaluation Method Based on Maintenance Trouble WANG Han-dong, *et al.*
- 4 Construction and Practice of Laboratory Safety Management System LI A-lu, *et al.*
- 6 Application of Smoke Exhaust Tactics in Fire Fighting and Rescue XU Chao
- 8 Research on the New Path of Rural E-commerce Development under Shaji Mode XU Bo-sheng, *et al.*
- 10 Construction Management Experience and Optimization Analysis of Luanjingtian Irrigation District TANG Pei-xin, *et al.*
- 12 Equipment Support Integrated Training Comprehensive Evaluation Method of Entropy and Fuzzy AHP Based on CIPP Mode ZHAO De-yong, *et al.*
- 16 Research on the Impact of Blockchain Technology on Auditing and Countermeasures WANG Xin
- 18 Study on the Difficulties and Countermeasures in the Implementation of Demolition and Reclamation of Rural Construction Land LIU Fuweiming, *et al.*
- 20 Discussion on the Importance and Development Direction of Engineering Consultation in the Early Stage of the Project NIU Yu-ting
- 22 Analysis on the Value Interval of China-Europe Express Cargo Based on the International Combined Transport Freight System GE Lei
- 25 Civil Engineering Management and Effective Control of Engineering Cost ZENG Rui-qing
- 27 Key Links and Related Issues of Construction Project Cost Management HUANG En
- 29 Offshore Petroleum Engineering Project Management Based on EPC Engineering General Contracting Mode ZHANG Yuan-xing, *et al.*
- 31 Problems and Solutions in Municipal Water Supply and Drainage Planning QIU Li-qiang
- 33 Village Planning under the Background of Territorial Spatial Planning CAO Yan
- 35 Analysis on Civil Construction Risk Management of Subway Construction Project MA Xin-yu
- 37 Research of Standard Engineering Quantity List of Hualong One GE Yuan-yuan, *et al.*
- 39 Research on Cost Management of Construction Engineering Project JIANG Lan
- 41 Risk Analysis and Countermeasures of Internet Financial Products from the Perspective of Demand Side LI Xue
- 44 Research on Public Library Management in the Big Data Era WEI Xiu-qin, *et al.*

46	Application Research of Project Organization and Management Based on TRIZ	WANG Hui
48	Discussion on the Estimation Method of Civil Engineering Investment of Large-scale Nuclear Fuel Reprocessing Project	YANG Xin-xin
51	Analysis of Construction Safety Management Based on Fault Tree Analysis	LIU Yong-sheng
53	Technical Points for Smoothness Control of Two-way Eight-lane Water Stabilized Base	BAI Zhi-qiang, <i>et al.</i>
55	Research on the Protection and Utilization of Qingdao's Industrial Heritage	LV Shao-xun
58	Analysis of Lane Capacity of Expressway Toll Station	YUAN Xiao-qing, <i>et al.</i>
60	Study on Influencing Factors of Mobile Advertisement Use Behavior of Rural Residents in Jiangsu Province	CAO Guo, <i>et al.</i>
63	Research on the Management of Sports Organizations under the Background of the New Era	GAO Song, <i>et al.</i>
65	Composition and Change Trend of Environmental Noise Sources in the Urban Area of Chuxiong City	ZHANG Mei-hua, <i>et al.</i>
67	Analysis of the Relationship between Airport Capacity and Quantity of Runways	GAN Yu-lin, <i>et al.</i>
69	Survey of Railway E-ticket Satisfaction Based on Stepwise Regression Analysis	CHEN Ying-ying, <i>et al.</i>
72	Smart City Construction Enhances Economic Growth by Agglomeration	MIN Yi-jie, <i>et al.</i>
74	Development Status, Problems and Countermeasures of Construction Industry in Ankang City	LIU Hui, <i>et al.</i>
78	Research of Measure Fee for the Two Installation Quotas Used in Nuclear Power Plant	FA Dan, <i>et al.</i>
80	Fault Diagnosis and Maintenance Management of Mechanical and Electrical Equipment in Coal Mine Tunneling	WU Shao-guang
82	Study on Operation and Management Mode of Urban Public Transport	WANG Meng-zhen
84	Fiscal and Tax Incentive Modes and Path Selection for Enterprise Technological Innovation	CHEN Wen-zheng, <i>et al.</i>

VALUE CHAIN·SUPPLY CHAIN

87	Research on the Development of Shared Logistics Based on Smart Internet	SHUI Yuan-song
89	Selection of Supply Chain Elastic Recovery Strategies Based on Three-parameter Interval Grey Numbers in Emergencies	LI Qiang

FUNCTION CARRIER INNOVATION

91	Quantitative Relationship between Rheological Parameters and Water Cement Ratio of Bingham Cement Grout	LI Shao-jun, <i>et al.</i>
94	Construction Technology of Long-span Low-bearing Double-line Tie-bar Simply Supported Arch Bridge	CHEN Feng
97	Analysis of Hysteretic Performance of Concrete-Filled Steel Tubular Column Based on Beam Element Constitutive Structure	LONG Yu-hang, <i>et al.</i>
102	Application of Steel Pipe Bailey Beam Support in Continuous Beam Construction	LIU Ya-nan
105	Discussion on Construction Technology of Continuous Reinforced Concrete Pavement of Expressway	ZHAO Li-bin
107	Treatment Method of Soft Soil Foundation in Highway Engineering Construction	ZHANG Fang
109	Discussion on Construction Technology of Subgrade and Pavement in Settlement Section of Road and Bridge Engineering	LI Chao
111	Analysis of Tripping Failure of APM Vehicle Cooling Fan Circuit Breaker	ZHOU Zhao-xiang, <i>et al.</i>
113	Application of Soft Soil Foundation Treatment Engineering of Urban Road	WANG Wei
115	DEM Simulation Analysis of the Collapse Response of RC Frame Structure under Strong Earthquake	WEI Guo-hua, <i>et al.</i>

120	Key Points of Engineering Inspection Technology in Quality Control of Construction Engineering	CHEN Wei
122	Discussion on Safety Technology of Earth Excavation and Support Construction of Deep Foundation Pit	CAO Zhi
124	Prediction Model of Stone Body Effect Parameters of Grouting in Loose and Broken Rock and Soil	MI Ya-peng, <i>et al.</i>
127	Analysis on the Influence of Different Construction Methods of Subway Station on Project Cost	XIA De-wang
129	Research on Intelligent Construction Technology of Asphalt Pavement Complete Equipment	XIE Rui
131	Construction Technology of Underground Diaphragm Wall in Subway Engineering	WANG Chao-bo
134	Application of Solidified Soil in Soft Soil Foundation Treatment	LI Bing
137	Research on Construction Technology of Rubber Spring Floating Slab Track Bed	LI Lan-wen
139	Application of CRTS I Type Double-block Ballastless Track Rail-row Frame Method in Tunnel	JIANG Pei
142	Research on Safe and Rapid Cooperative demolition of Aqueduct Bridge in Complex Environment	MENG Hai-lin, <i>et al.</i>
145	Application of Self-propelled Hydraulic Formwork in Precast Construction of Box Girder	HE Xiao-hui
148	Construction Quality Control of PAC-13 in Low Temperature Environment in Winter	CHEN Mou, <i>et al.</i>
150	Research on Preparation Test and Construction Technology of Ready-mixed Pumping Foamed Concrete	LV Jin-ying, <i>et al.</i>
153	Construction Site Management of CRTSⅢ Slab Ballastless Bed on the Main Line	WEN Wu-de
156	Application Technology of Continuous Beam Steel Tube Column, Steel Corbel+Bailey Beam High Support	LI Ji-gai
160	Construction Technology and Quality Control of Asphalt Pavement in Highway Engineering	ZHANG Jin-wu
162	Slope Excavation and Support Technology in the Construction of Water Conservancy Projects	LI Bin
164	Analysis on the Application of Alkali-free Quick-setting Admixture in Tunnel Engineering	ZHANG Guo-an, <i>et al.</i>
167	Application of Rebar Pre-bending Tool in Construction of Bored Pile	GAO Fei
169	Study on the Transportation Plan of Construction Materials for Bridges with Unsteady Water Level in the Reservoir Area	SHI Wei-gang
171	Cantilever Construction Technology of Reinforced Concrete Continuous Beam Bridge	PENG Jiang
173	Coal Mine Underground Wet Shotcrete Technology and Application Effect	ZHENG Wen-wei
175	Research on the Causes of Cracks in Building Safety Appraisal and Treatment Countermeasures	CHEN Shan
177	Research on Application of CHE857 Welding Rod in Repair of Sprocket Shaft Spline	DING Ming
179	Discussion on Removal of Large Span Hollow Slab Girder on Low Headroom Upper Span Electrified Railway	WANG Zao-hua
181	Development Trend of Electrical Control of Coal Mine Roadheader	HAN Li-bing
183	Prevention and Treatment of Concrete Cracks in Construction of Water Conservancy and Hydropower Construction Projects	ZHOU Bai-fan
185	Common Quality Problems and Preventive Measures in Railway Tunnels	PENG Ge-nian
187	Analysis of Influencing Factors in Concrete Testing and Quality Control Measures	KANG Li-zhu
189	Research on Construction Treatment of Pavement Base Course in the Process of Traffic Engineering Construction	SHEN Jia
191	Study on Compatibility of Defoamer in W Gas Field	LIANG Ping, <i>et al.</i>
194	Control Technology of Temperature Difference Cracks in Mass Concrete Raft Foundation	CHEN Yuan
197	Cantilever Climbing Form Construction Technology and Geometric State Control of High Piers under Complex Conditions	WANG Zhi-shuang

VALUE APPLICATION

- 199 Research on Information Detection of Gas in Tunnel Construction WU Tao
- 202 Optimization Method of Air Route Network Considering Temporary Restricted Area PENG Guo-dong,*et al.*
- 207 Essentials of Construction of Cable-type Pipe Gallery in Municipal Engineering LV Tao
- 209 Analysis of Application of GPS Technology in Construction Engineering Survey ZHANG Hong-yu
- 211 Application of Polyaniline Sodium Storage in Electrodes GAO Yi-fan
- 213 Application of ArcGIS in Cartography LI Mao-lin
- 215 Domain Defense: Design and Implementation of a Regional Disease Prevention Platform LI Xi-wang,*et al.*
- 217 Intent Based Simulation of Flight Path Prediction HE Xin,*et al.*
- 219 Application of BIM Technology in Construction Management of Expressway Engineering XIE Bo,*et al.*
- 221 Design and Research of a Wall-cleaning Robot LI Shu-ge,*et al.*
- 223 Research and Application of BIM Technology in the Indoor Construction of Railway Communication Equipment Room
..... PU Jin-song
- 225 Analysis on the Positive Role of Social Security Service TIAN Jun
- 227 Research on the Application of BIM-based Engineering Construction Cloud Service Platform
..... XIONG Qiang-dong
- 230 CFD-based Numerical Simulation Method for Wake Safety Interval of Paired Approach MA Yi-long,*et al.*
- 233 Analysis of General Aviation Low-altitude Flight Restriction Element XU Qing-liu
- 235 Analysis of Research Status and Future Development of Anchor Rod (Cable) Technology in China
..... GAN Zeng-wei,*et al.*

IE

- 238 Environment Optimization of University Library Based on Human Factor Engineering ZHUANG Hui-ning,*et al.*
- 240 Research on Layout Optimization of Hazardous Gas Detectors in Natural Gas Purification Plant Based on Risk
..... HUANG Chao,*et al.*

THEORETICAL REVIEW

- 242 Research Progress on Mechanical Properties and Durability of Sisal-alkali Resistant Glass Hybrid Fiber Concrete
..... YU Mei-lin,*et al.*
- 246 Research and Application Progress of NiTi-based Alloy Reinforced Concrete Structural Members
..... LEI Jing,*et al.*
- 249 Research on Promoting Green Innovation Capability of Enterprises LI Tian-xu
- 253 Impact of Fiscal Pressure and Transfer Payment on Local Government Tax Capacity YAO Ye

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。