Contents

Survey

Electronic and Communicational Technology

Application and Development of Radio Frequency Identification Technology for Internet of Things

····· QI Jun-peng, TIAN Meng-fan, MA Rui(10)

Papers

Mathematics

Mechanics

Analysis of the Influence of Matrix Materials on the Anti-explosion Impact Performance of Honeycomb Structure

Astronomy and Geosciences

LIANG Hong, DENG Shao-qiang,

XU Bao-liang, LIU Peng, JIANG Na(32)

Size Effect of Uniaxial Compressive Strength of Granite Based on Particle Flow Coole · · · · · · GUO Guo-xiao , CHEN Shi-jiang(38) Clay Mineral Characteristics and Sensitivity Evaluation of Coal Reservoirs in Duijiangnan Mine Field , Guizhou province

..... GONG Ze-wen(45)

The Application of Volume Integral Method in Petroleum Reservoir Evaluation: Taking Halfayah Oilfield of Iraq as Example

...... BIAN Hai-guang, LI Fu-heng, WU Yi-ping, MENG Qing-kuan(51)

Intelligent Management of Construction Quality of High Slope Excavation

...... HUA Kai-cheng, ZHAI Wan-chao, SU Yi-kun(59) Effects of Earthquake on the Stability of 3D Rock Slopes with Hoek-Brown Failure Criterion WU Di, QIU Yue,

ZHANG Juan, WANG Yu-ke, SONG Wen-zhi(66)

Medicine

Effect of Compatible Extract of Astragalus and Salvia Miltiorrhiza on the Energy Metabolism of Damaged Cardiomyocytes

...... ZHANG Li-fang, WANG Qian,

YANG Lei, LIU Nuan, MAO Bing-yu(72)

Prognosis Analysis of Preoperative Lactate-dehydrogenase/Albumin Ratio in Advanced Gastric Cancer

...... DONG Xin, WANG Hai-yan(76)

General Industrial Technology

Calculation Method of Reliability Design Index of Civil Aeroengine ZHANG Hong, JI Bing-han, CUI Dong-ze(82)

Volume 19 Number 29 (Sum 498)

Petroleum and Natural Gas Industry

The Sedimentary Filling Characteristics of Clastic Rocks and Their Responses to Tectonic Activities in Dongpu Depression

...... JIN Ya-qin,

YANG Dong-dong, JIANG Fei-hu, JIN Kun-kun(89) Evaluation Method for HTHP Plugging Property of Drilling Fluid Plugging Agent LIAO Feng-wu, LI Kun-yu,

HU Jing, WANG Wen-jing, HU Youlin(95)

Single Well Capacity Prediction Based on Multiple Linear Regression and Back Propagation Neural Network

ance of Reversible Invert Emulsion
...... LIU Fei, WANG Yan-ling, DAI Xiao-dong,
WANG Xue-wu, YUAN Zhen-he, WANG Shuo(117)

Influence Factors of Imbibition Oil Displacement in Fractured

QU Ya-guang, SHEN Chang, LIU De-hua (123)

Energy and Power Engineering

Electrical Technology

Research and Application of Synchronized Frequency and Phase AC Voltage Withstand Test for 363 kV GIS Equipment

TANG Chang-ying, TIAN Lu, WU Hong, LI Qi-chao,

LIU Wei-feng, NI Hui, NIU Bo, FANG Zi-yi(136) Short-term Wind Speed Prediction Based on Complementary Set

An Incremental Method of Abnormal Electricity Consumption Based on Logistic Regression

......... ZHANG Xiao-qiu, ZHOU Chao, XU Qing(149) Transient Circuit Model of 220 kV Column Voltage Transformer Considering Parasitic Parameters

...... LI Xuan, WU Shi-pu, LIU Xi-chao, LI Yu-kun, WANG Yan, GENG Jiang-hai, DAI Shuang-yin(154)

Electronic and Communicational Technology

Joint Simulation of Coil Angle Deviation in Magnetic Coupled Resonant Radio Energy Transmission System

...... ZHANG Xiao-bin, LI Deng-feng, ZHOU Xi-wei, HAO Hui-dong, GUO Yong(159)

JIANG Tong-tong, ZHANG Chen, DUAN Qiang(165)

A Novel 5G Waveform Filtered Orthogonal Frequency Division Multiplexing Technique Based on Index Modulation

Automation and Computational Technology

....... ZHANG Qian, YANG Yu-cheng,
YUE Shi-qin, SHAO Ding-qin, WANG Lin(183)
Pathological Diagnostic Method of Thyroid Lymph Node Metastases Based on Deep Learning PENG Ya-qin,
CHENG Xiao-gang, HUANG Wen-bin(187)

Primary Side Optimization Control of Heating Substations Based on Deep Deterministic Policy Gradient

...... LI Qi, HAN Bing-cheng (200) Path Planning of Unmanned Surface Vehicle Based on A * Algorithm Optimization

Architectural Science

Constitutive Model of Ultra-high Performance Concrete Confined by Stirrups QI Ting, MA Kai-ze, LIU Fang-tian(218) Analysis of Failure Process of Reinforced Concrete Columns under Cyclic Loading Based on Fiber Beam-column Element

...... GAO Ying, LIU Lan, WANG Wan-yue (226) Numerical Simulation Study on Progressive Collapse of Beam-Column Structures with Reduced Beam Section Welded Connection

··· LI Feng-de, ZHU Li-ling, WU Wei-feng, LI Zhi(234) Numerical Simulation of Mesoscopic Seepage Field of Soil-rock Mixture Based on Lattice Boltzmann Method

...... LI Jing-jing, JIN Lei, CHENG Tao (241) A Constitutive Model for Over-consolidated Clays Based on Generalized Thermodynamics Improvement

··· ZHOU Ji-bing, WANG Qiu-sheng, BO Xin-xin(246) Ground Treatment Scope of Intercity Rail in Collapsible Loess Area Based on Seepage Analysis

ZHAO Peng, WU Chao, LIU Guang-hua(265) Field Tests on Stress Measurement of Open-ended Concrete Pipe

Piles Based on Fiber Bragg Grating Sensing Technology

WANG Yong-hong, ZHANG Ming-yi,

CHAN Lin ping, LHL lun pusi, PAL Vice pur (271)

GUAN Jin-ping, LIU Jun-wei, BAI Xiao-yu(271) Experimental Study on Material Water-resistance of the Cave Mural in Jiazhaerjia Mountain, Sichuan Province

······ ZHAO Fan, XIE Zhen-bin, WANG Chong(277)

Traffics and Transportations

Effect of Void Characteristics on Pavement Performance of Opengraded Friction Course

High Temperature Slip Characteristics for Interlayer of Thin Layer Rubber Asphalt Composite Pavement

SONG Shuai, WANG Shuai, XU Bai-shun, MAO De-jun, WU Gang(306)

Optimization of Excavation Method of Small Spacing Tunnel Based on the Influence of Surrounding Rock Stress

....... DAI Jun, TIAN Guo-bin, XIONG Xian-yu(311) Deformation and Mechanical Characteristics of Sericite Schist Tunnel Based on Field Measurement

...... ZHU Meng-long, ZHANG Qing-wen, XU Guo-lin, JIANG Rui, LIU Huan(318)

Design of Active Seat Suspension Sliding Mode Controller Based on Multi-objective Particle Swarm Optimization

GUO Zong-he, MA Chi-cheng, QIN Zhi-chang (326)
Analysis on Spatial-temporal Characteristics and Severity of Motor Vehicle-bicycle Accidents in Guangdong Province

MEN Yu-bao, XUE Xiang-bei, SHEN Zhao-qing(338) Risk Management of Mountain Highway Based on CIRITIC-fuzzy Comprehensive Analysis Method

... DENG Wen-zhou, LIU Tang-zhi, PU Wen-pei(343)
Driving Behavior Characteristics of S-curve Section in Foggy Environment CHEN Xiu-feng, WU Shuai,
SONG Zhu-he, CHEN Wei, GAO Yan-yan(348)

Aeronautics and Astronautics

The Influence of Impact or Scratch Flaw on the Fatigue Performance of TB6 Used in Helicopter LIU Xiao-feng,

TIAN Ya-xin, ZOU Jing, ZHANG Jian-bo(355) pid Design for Large Civil Airplane's Landing Gear Shock Ab-

Rapid Design for Large Civil Airplane's Landing Gear Shock Absorber Based on Digital Engineering

....... LIU Xiang-yao, ZENG Chao, LIU Mei-ling(362)
Airworthiness Compliance Validation Safety Assessment Method
of Aero-engine Control System Based on Fault Tree-Monte
Carlo Simulation

····· YAN Feng, SHANG Yong-feng, FU Ji-long(370)

Environmental and Safe Science

Evaluation of Biodiversity Maintenance Function in Karst Area of Guangxi Based on Net Primary Productivity

······ MO Jian-fei, MO Wei-hua, CHEN Yan-li(377)