

# 目次

## Contents

### 专题综述

- 轻量化桥式起重机起升机构动力学研究\* ..... 张东海 曹旭阳 汤秀丽 罗晓芳 (1)  
Kinetic study on lifting mechanism of lightweight bridge crane  
..... Zhang Donghai, Cao Xuyang, Tang Xiuli, Luo Xiaofang
- 叉车装设按钮点火开关启动的合理性剖析 ..... 胡浩亮 俞冬强 陈峰 吕冰 王云哲 沈碧君 (6)  
Analysis on reasonability of starting of forklift with ignition switch button  
..... Hu Haoliang, Yu Dongqiang, Chen Feng, Lü Bing, Wang Yunzhe, Shen Bijun

### 设计·计算

- 基于粉料流动理论的料仓侧形设计及受力分析 ..... 艾宇 陈尚伦 (11)  
Stock bin lateral design and force analysis based on powder flow theory ..... Ai Yu, Chen Shanglun
- 叉车门架倾斜自动控制设计 ..... 傅敏 (17)  
Automatic control design for inclining of forklift gantry ..... Fu Min
- 输电线路组塔专用流动式起重机参数设计研究 ..... 秦剑 冯亮 万建成 夏拥军 巴依尔塔 (21)  
Study on parameter design of mobile crane for transmission line erection tower  
..... Qin Jian, Feng Liang, Wan Jiancheng, Xia Yongjun, Ba yi' erta
- 复杂地质条件下洞内压力钢管的吊装设计及运用 ..... 杨联东 (26)  
Hoisting design and application of penstock in the culvert under complicated geological conditions  
..... Yang Liandong
- 新型全回转浮式起重机的人字架放倒设计 ..... 张炳发 季圣国 李朝阳 (32)  
Design of lowering of propeller strut of new-type full-circle swinging crane  
..... Zhang Bingfa, Ji Shengguo, Li Chaoyang

### 分析·研究

- 基于 FEM 和 GB 3811 的卸船机前大梁疲劳分析 ..... 曾来军 陈振 (35)  
Fatigue analysis for boom of ship unloader based on FEM and GB 3811 ..... Zeng Laijun, Chen Zhen
- 基于有限元法的折臂抓管机械臂应力分析及评定 ..... 高世卿 李庆杰 谢冰 皮景峰 胡帅 (39)  
Finite element method-based stress analysis and evaluation for mechanical arm of folding-arm grasping tube  
machine ..... Gao Shiqing, Li Qingjie, Xie Bing, Pi Jingfeng, Hu Shuai
- 软起动径向槽摩擦片润滑油流场分析 ..... 周满山 刘传峰 张媛 (43)  
Analysis for flow field of lubricating oil of friction plate of soft-start radial slot  
..... Zhou Manshan, Liu Chuanfeng, Zhang Yuan
- 三维桥式起重机分层滑模轨迹跟踪防摆控制\* ..... 李志勇 曹旭阳 戴恒震 戴智弘 (46)  
Anti-sway control of layering slip form trajectory tracking for 3D bridge crane  
..... Li Zhiyong, Cao Xuyang, Dai Hengzhen, Dai Zhihong
- 平头塔式起重机起重臂新型接头结构分析 ..... 胡婷 李太周 (53)  
Analysis for new-type joint structure of cargo boom of flat-top tower crane ..... Hu Ting, Li Taizhou
- 基于 Ansys 的滚筒有限元分析 ..... 张荣 顾正欢 (56)  
Ansys-based finite element analysis for rollers ..... Zhang Rong, Gu Zhenghuan

### 新产品·新技术

- 垂直提升带式输送机选型研究 ..... 钱锡铭 (59)  
Study on selection of vertical hoisting belt conveyor ..... Qian Ximing
- 起重机系列化设计电气新产品的调研\* ..... 潘彦宏 袁哲 袁楷 (62)  
Study on serial design of electrical products for crane ..... Pan Yanhong, Yuan Zhe, Yuan Kai
- 用于铝电解生产的新型阳极测高系统 ..... 杨峰 (66)  
New-type anode height measurement system for aluminium electrolysis production ..... Yang Feng

### 试验·研究

- 一种模拟起重机回转机构运行的试验装置 ..... 李虎 (69)  
Test device simulating operation of crane slewing mechanism ..... Li Hu
- 机械式变速器温升性能试验台架研究\* ..... 田韶鹏 王晨辰 (71)  
Study on test bed of temperature-rise performance of mechanical transmission  
..... Tian Shaopeng, Wang Chenchen

**设备·技术**

- 管状带式输送机过渡段设计 ..... 马小云 邱桃 苏琪 (75)  
 Design of transition section of tubular belt conveyer ..... Ma Xiaoyun, Qiu Tao, Su Qi  
 臂式斗轮堆取料机回转半径与堆高对应关系分析及合理选取 ..... 刘亚鹏 徐万鑫 贾延逊 黄有义 (78)  
 Analysis of correspondence between turning radius and stacking height of boom-type bucket wheel stacker and  
 reclaimer and reasonable selection ..... Liu Yapeng, Xu Wanxin, Jia Yanxun, Huang Youyi  
 蔗渣输送系统设计的若干问题探讨 ..... 曹新平 谭晓 (82)  
 Discussion of several problems in bagasse conveying system ..... Cao Xiping, Tan Xiao

**节能·环保**

- 大型散货码头防风抑尘墙建设 ..... 林显才 (84)  
 Construction of wind-proof dust-suppressing wall at bulk cargo terminal ..... Lin Xiancai  
 电梯改造的节能研究 ..... 王葵 梁土荣 (90)  
 Study on energy-saving improvement of elevator ..... Wang Kui, Liang Turong

**设备·控制**

- 桥式起重机无源滑模防摆控制方法研究\* ..... 陈志梅 高武龙 孟文俊 张井岗 (94)  
 Study on anti-sway control method for passive slip form of bridge crane  
 ..... Chen Zhimei, Gao Wulong, Meng Wenjun, Zhang Jinggang

**测试·试验**

- 起重机抗风防滑装置防风性能测试系统的研制 ..... 苏文胜 梁有明 百坚毅 (98)  
 Study on windproof performance test system of crane wind-resistant antiskid device  
 ..... Su Wensheng, Liang Youming, Bai Jianyi  
 防爆场车运行温升试验及测试技术\* ..... 朱林 王新华 郑培奖 封昌盛 (102)  
 Temperature-rise test and testing technology of operation of explosion-proof field vehicle  
 ..... Zhu Lin, Wang Xinhua, Zheng Peijiang, Feng Changsheng

**技术改造**

- 日立斗轮堆取料机斗轮体改造 ..... 葛小波 (105)  
 Reconstruction of bucket wheel body of Hitachi bucket wheel stacker/reclaimer ..... Ge Xiaobo  
 波状挡边输送带的改进 ..... 黄蕾 孟文俊 (107)  
 Improvement of undulating flange conveying belt ..... Huang Lei, Meng Wenjun

**安全技术**

- 轮胎式集装箱门式起重机半自动化改造安全性评价与研究 ..... 程红星 易炳刚 刘兴锋 王保卫 (109)  
 Safety evaluation and study on semi-automatic improvement of rubber-tyred container gantry crane  
 ..... Cheng Hongxing, Yi Binggang, Liu Xingfeng, Wang Baowei

**安全·检测**

- 基于最小二乘法的起重机环形轨道圆度测定 ..... 李玮 (113)  
 Measurement of roundness of crane circular orbit based on least square method ..... Li Wei

**故障分析**

- 125 t 铸造起重机主升降传动系统故障分析与解决方法 ..... 苟春生 罗帧利 (116)  
 Fault analysis and solution for main lifting drive system of 125 t ladle crane ..... Gou Chunsheng, Luo Zhenli

**质量管理**

- 常规岛起吊设备制造的质量监督控制 ..... 郭红芳 姜志远 刘立 (119)  
 Quality supervision and control of manufacturing of hoisting equipment of conventional island  
 ..... Guo Hongfang, Jiang Zhiyuan, Liu Li

**行业信息**

- 发改委 10 月批复多个铁路城轨项目 总投资额超 2 000 亿元 ..... (25)  
 敬告读者 ..... (42)  
 4 层楼高盾构机郑州亮相 地下掘进速度达 3.6 m/h ..... (45)  
 “PPP” 将成中国交通基础设施建设投融资主导模式 ..... (89)