QIZHONG YUNSHU JIXIE
HOISTING AND CONVEYING MACHINERY

2022 👅

2022年3月

中国机械工业联合会 主管

F系列起重机用减速器



FQ系列铸造起重机用减速器 (160吨铸造起重机主起升减速器)



FC系列轻型起重机用减速器 (700吨轻型起重机主起升减速器)



F系列减速器棘轮棘爪机构



FK减速器使用现场



FQ减速器加载实验



FC减速器安装现场

目前,F系列减速器已成功服务于鞍钢、本钢、上海临港重工等企业的1000余台



FY运行机构减速器

F系列减速器是郑州机械研究所有限公司根据国内外市场要求开发的起重机减速器,拥有自主知识产权。包括铸造起重机主起升机构使用的FQ、FK等系列减速器(含寿命大幅提高的棘轮棘爪机构),轻型起重机和桥式起重机使用的FC系列,小吨位起升及运行机构使用的FY系列等。

郑州机械研究所有限各司

ISSN 1001-0785

0 6>

起重机上。 地址:郑州市嵩山

地址:郑州市嵩山南路81号 联系人:杨立强

电话: 0371-67710572 13007528243

E-mail:13007528243@163.com

CONTENTS

目次

◆ 业内资讯 INFORMATION

P01 王毅国务委员向尼泊尔政府递交博克拉国际机场竣工金 钥匙

State Councilor Wang Yi hands over the golden key for completion of Pokhara International Airport to the Nepalese government

3月26日下午尼泊尔博克拉国际机场项目建安工程竣工典礼通过视频连线形式 顺利举行。正在尼泊尔进行访问的王毅国务委员与尼泊尔总理德乌帕、外长卡德 加、民航部长阿里、民航局长普拉迪普,中国驻尼泊尔大使侯艳琪、经济商务参 赞谢字,中工国际总经理李海欣分别在尼泊尔总理府和项目现场出席典礼活动。

On the afternoon of March 26, the Completion Ceremony of the Construction and Installation Works of the Nepal Pokhara International Airport Project was successfully held by means of video call. The ceremony was attended by State Councilor Wang Yi who was visting Nepal, Nepal's Prime Minister Deuba, Foreign Minister Khadga, Civil Aviation Minister Ali, Civil Aviation Director Pradip, Chinese Ambassador to Nepal Hou Yanqi, Economic and Commercial Counselor Xie Yu, and CAMCE General Manager Li Haixin at the Prime Minister's Office of Nepal and the project site, respectively.



国机工程集团首个资源共享平台——"融资服务平台" 正式启动

"Financing Service Platform" , the first resource sharing platform of SINOMACH, is officially launched

工信部辛国斌副部长主持召开重点行业协会座谈会 陈斌 执行副会长汇报机械工业情况

Xin Guobin, Deputy Minister of the Ministry of Industry and Information Technology, presides over a key industry association symposium, and Executive Vice President Chen Bin reports on the situations of machinery industry

P02 第五届进博会首批参展商名单正式公布

The list of the first exhibitors of the 5th CIIE is officially announced

2022年3月21日,第五届中国国际进口博览会首批参展商名单正式公布。本次公布的参展单位包括182家参展企业和8个国家(地区)展团,均为今年1月底前签约,且参展面积较大的展商。其中,近一半为连续第五年参展进博会的"老朋友"。

On March 21, 2022, the list of the first exhibitors of the 5th China International Import Expo was officially announced. The exhibitors announced this time include 182 exhibitors and 8 national (regional) exhibition groups, all of which signed contracts before the end of this January and have large exhibition areas. Among them, nearly half of them are "old friends" who have participated in the CIIE for the fifth consecutive year

完美吊装 徐工刷新孟加拉最大吨位履带起重机纪录

By relying on the perfect hoisting, XCMG sets the record for the largest tonnage crawler crane in Bangladesh

瓦伦西亚码头追订科尼 RTG,以增强其起重机车队装卸能力

Valencia Terminal consecutively orders Konecranes RTG to enhance its crane fleet handling capacity

西班牙瓦伦西亚集装箱码头有限公司 (简称瓦伦西亚码头) 再次向科尼集团订购了 2 台轮胎式集装箱门式起重机 (RTG),以增强其起重机车队的装卸能力。该码头是科尼集团的长期客户,已配备了 39 台科尼 RTG,同时享有瓦伦西亚科尼港口服务中心的支持服务。这份订单于 2021 年 10 月签订,预计在 2022 年第三季度交付。

Spain Valencia Container Terminal Co., Ltd. (hereinafter referred to as Valencia Terminal) has once again ordered 2 rubber-tyred container gantry cranes (RTGs) from Konecranes Group to enhance the handling capacity of its crane fleet. The terminal is a long-term customer of Konecranes Group and has been equipped with 39 Konecranes RTGs and received the support services from the Konecranes Port Service Center in Valencia. The order was signed in October 2021 and is expected to be delivered in the third quarter of 2022.

PO3 永恒力对可持续发展的承诺,到 2035 年达到碳中和目标

With its commitment to sustainable development, Jungheinrich will achieve the carbon neutrality goal by 2035

OTTO Motors 推出世界上最智能的自动叉车

OTTO Motors launches the world's smartest autonomous forklift

牧星智能率先进军北美物流机器人智能仓储市场

Mushiny takes the lead in entering the North America's market of logistics robot intelligent warehousing

◆ 专精特新 | SPECIALIZED REFINED SPECIAL AND INNOVATIVE

P04 微特技术有限公司起重机在线故障诊断多维度分析系统

Weite Technologies Co., Ltd. online fault diagnosis multi-dimensional analysis system for cranes

微特技术所研发起重机在线故障诊断多维度分析系统全面采集设备信息,对设备 实施有效的状态监测和故障诊断,精准分析提前预判,解决了企业对设备管理的 智能化需求,成为工业信息化,智能化管理的重要组成部分。

The online fault diagnosis multi-dimensional analysis system for cranes that is developed by Weite Technologies comprehensively collects equipment information, implements effective condition monitoring and fault diagnosis for equipment, and accurately analyzes and predicts in advance, and it has solved the enterprises' intelligent demands for equipment management and become an important part of industrial informatization and intelligent management.

◆ 会议报道 | CONFERENCE REPORT

P07 中国机械联专家委在京召开机械工业 2022 年一季度经济运行情况分析与经济运行预测会商会

The CMIF Expert Committee holds the Meeting of Economic Operation Analysis and Economic Operation Forecast and Business Meeting of the Machinery Industry for the First Quarter of 2022 in Beijing

◆ 人物专访 PROFILE

P08 智慧物流新趋势 智能信息新变革

New trends in smart logistics and new changes in smart information



随着中国信息技术的进步 发展,人工智能、物联网、 遥感技术等新型技术在物 流领域的广泛应用,使得 物流行业日益强大,智慧 物流被不断提及,各行各 业对智慧物流的发展抱有 极大的期待。本期《起重 运输机械》杂志采访到了 著名物流专家、中国仓储 与配送协会副会长王继样

先生,让我们随王会长一起了解中国智慧物流技术装备的现状和发展趋势。

With the progress and development of China's information technology, the wide application of new technologies, such as artificial intelligence, Internet of Things, remote sensing technology, etc., in the field of logistics has allowed the logistics industry to become increasingly powerful. The smart logistics has been constantly mentioned, and all walks of life have great expectations for the development of smart logistics. This issue of Hoisting and Conveying Machinery magazine interviewed Mr. Wang Jixiang, a well-known logistics expert and the Vice President of China Association of Warehousing and Distribution. Let us get an understanding of the current situations and development trends of China's smart logistics technology and equipment with President Wang.

◆ 专栏 | COLUMN

P10 机械行业标准《高位拣选车》(送审稿)讨论会成功召开 Discussion meeting on the draft for approval of the High-level Order Picking Truck

P11 国家标准《工业车辆 使用、操作与维护安全规范》(初稿) 讨论会在厦门成功召开召开

The discussion meeting on the national standard Specifications for Safety in Use, Operation and Maintenance of Industrial Vehicles (first draft) is successfully held in Xiamen

2022年3月第6期

◆ 新产品新技术 | NEW PRODUCT NEW TECHNOLOGY

- P13 电梯制动轮转角检测图像识别技术研究 / 冯双昌 刘曦晨 周奇才 Research on image recognition technology of angle detection of elevator brake wheel/Feng Shuangchang, Liu Xichen, Zhou Qicai
- **P19** 港口起重机 IP 电话系统及其配置方案 / 阎旭文 杨雷忠 IP telephone system of quay crane and its configuration plan/Yan Xuwen, Yang Leizhong

◆ 分析研究 | ANALYSIS RESEARCH

- P25 齿轮偏心下桥式起重机减速器异响现象分析及措施 / 张锡飞 任春吉 陆亚龙
 Abnormal noise analysis of reducer of overhead traveling crane in case of gear eccentricity and measures/Zhang Xifei, Ren Chunji, Lu Yalong
- P29 粉体料仓存在的问题及解决方法 / 李忠毅 李 勇 姜开忠 Problems and solutions of powder silo/Li Zhongyi, Li Yong, Jiang Kaizhong
- P36 基于多媒体技术的辅助运输设备演示系统设计与动画仿真 / 李尊忠 王 鹏
 Design and animation simulation of display system of supporting transportation equipment based on multimedia technology/Li Zunzhong, Wang Peng
- P39 岸边集装箱起重机整机海运柔性拉索寿命评估方法 / 刘 峻 贾攀攀 Method for evaluating the life of flexible cable of quay in sea transportation/Liu Jun, Jia Panpan
- P43 桥式起重机主梁的平行六面体可靠性分析*/邢瑾文 高东鸣 张海牛 王 维
 Parallelepiped reliability analysis of girder of bridge crane/Xing Jinwen, Gao Dongming, Zhang Hainiu, Wang Wei
- **P50** 永磁阻尼装置制动力矩研究*/刘孟飞 张亮有 程建博 王亚湖 琚 超 Study on braking torque of permanent magnet damping device/Liu Mengfei, Zhang Liangyou, Cheng Jianbo, Wang Yahu, Ju Chao
- P54 门式起重机偏斜运行机理研究及改进对策 / 郭洪锍 Research on skew operation of gantry crane and countermeasures/Guo Hongliu
- P60 潜油电泵叶轮压力脉动特性分析*/ 贾永刚 李延斌 郭玉枫
 Analysis of pressure pulsation characteristics of submersible pump impeller/Jia Yonggang, Li Yanbin, Guo Yufeng

◆ 信息技术 | INFORMATION TECHNOLOGY

P65 自动化集装箱码头远程驾驶控制系统设计*/张 凯 王学谦 张 煜 尹 星
Design of remote driving control system for automated container terminal/Zhang Kai, Wang Xueqian, Zhang Yu, Yin Xing

◆ 安装测试 INSTALLATION AND TESTING

P69 石化项目钢框架管廊受力性能与吊装施工技术 / 陈阳阳 Mechanical performance, hoisting and construction technology of steel frame pipe gallery in petrochemical project/Chen Yangyang