



GEARING INTERDEPENDENCE MOVING FUTURE

— Since 1966 —



企业文化

Enterprise Concept

中国船舶集团有限公司企业文化

China State Shipbuilding Corporation (CSSC) Enterprise Culture

- 企业使命：引领行业发展 支撑国防建设 服务国家战略
- 企业愿景：构建产业合理、质量效益领先、军工核心突出、军民深度融合、国际竞争力强的世界一流船舶集团
- 核心价值观：兼容并蓄 逐梦深蓝
- 企业精神：忠诚 担当 创新 包容

Enterprise Mission: Lead industry development, Support national defense development, Serve national strategies.

Enterprise Vision: Establish a world-class shipping group characterized by rational industrial structure, leading quality and efficiency, prominent military-industrial core, deep military-civilian integration, and strong international competitiveness.

Core Values: Compatibility and Inclusiveness, Pursuing the Deep Blue Dream.

Enterprise Spirit: Loyalty, Responsibility, Innovation, Inclusiveness.

重庆齿轮箱有限责任公司企业文化

Chongqing Gearbox Co., Ltd. Enterprise Culture

- 企业战略定位(企业愿景)：建成全球最具竞争力的传动产业集团
- 企业使命：兴装报国 传递共同成长动力
- 企业核心价值观：军工为魂 合规为基 员工为本 客户为上 创新为翼 奉献为荣
- 企业战略目标：把重齿公司建设成为全球领先的齿轮传动研制和服务基地，使重齿品牌成为世界齿轮传动领域驰名品牌
- 企业主题广告语：齿齿相依 带动未来

Enterprise Strategic Positioning (Enterprise Vision): To build the world's most competitive transmission industry group.

Enterprise Mission: Empowering the nation through innovation and delivering shared momentum for growth.

Core Enterprise Values: Military spirit as the soul, Compliance as the foundation, Employees as the priority, Clients as the focus, Innovation as the driver

Strategic Goals: To establish Chongchi Gearbox Co., Ltd. as a globally leading gear transmission develop and service base, making the CQ GEARBOX brand a world-renowned name in the gear transmission industry.

Enterprise Tagline: Gearing interdependence, Moving future.



目 录

Contents

• 企业文化	Enterprise Concept	p2
• 公司简介	Brief Introduction	p6
• 历史沿革	History and Development	p8
• 人才队伍	Talent Team	p10
• 技术体系	Technology System	p11
• 质量管理	Quality Management	p12

• 应用领域	Application Field	p14
1/ 国防	National defense Field	p16
A. 船用齿轮箱	Marine gearbox	p16
B. 联轴节&减振器	Coupling & shock absorber	p19
2/ 能源	Energy Field	p20
A. 风电	Wind power	p20
B. 火电	Thermal power	p25
C. 核电	Nuclear power	p26
D. 潮流能发电	Tidal stream power gen generation	p27
E. 低水头发电	Low head power generation	p28
F. 光热	Solar photovoltaic power generation	p29
3/ 建 材	Building Material Field	p30
4/ 交通民生	Transportation and people's livelihood	p35
A. 水利升船	Ship - lifting in water conservancy Aviation	p35
B. 航空	Gearbox for hydro power	p36
C. 轨道交通	Rail transit	p37
D. 机车重型车辆	Products applied to locomotive and heavy vehicle	p39
E. 电扶梯	Gears for escalator	p40
F. 水利工程	Water conservancy project	p41
5/ 石 化	Petrochemical Industry	p42
A. 页岩气开采	Shale gas industry	p42
B. 石油钻采	Oil drilling and production	p43
C. 化工	Chemical industry	p44
D. 橡塑	Rubber and plastic	p45

6/ 冶 金	Products Applied to Metallurgical	p46
7/ 工程机械	Construction Machinery	p49
8/ 环 保	Environmental Protection	p51
A. 冶矿破碎行业	Products applied to metallurgical mine crushing	p51
B. 环保固废处置行业	Environmental solid waste disposal industry	p52
C. 制浆系统	Pulp making system	p53
D. 餐厨垃圾处理	Kitchen waste treatment	p54
E. 风电叶片处理	Wind turbine blade processing	p55
9/ 矿 业	Mining Industry	p56
A. 煤矿机械	Coal mining machinery industry	p56
B. 矿山机械	Mining machinery	p57
C. 深海采矿	Deep-sea mining	p58
10/ 海 洋	Marine Industry	p59
• 其它产品	Others products	p60
高速齿轮传动装置	High speed gearbox	p60
半直驱系统	Semi direct drive system	p62
工业通用齿轮箱	Gearboxes for general-purpose	p63
• 设备介绍	Equipments	p64
• 公司荣誉	Honors	p70
• 服务保障	After-sale service	p72
• 交 通	Transportation	p73
• 注册商标	Registered trademark	p74

公司简介



Brief Introductions

重庆齿轮箱有限责任公司（简称重齿公司）是一家以研发和生产高、低速重载齿轮箱为主的大型国有军工企业。公司隶属于中国船舶集团有限公司（简称中国船舶集团），位于重庆市江津区，占地面积65万平方米，员工总数2600余人，资产总额超过80亿元。公司原名为国营永进机械厂，始建于1966年，1982年更名为四川齿轮箱厂，1997年改制为重庆齿轮箱有

限责任公司。公司以硬齿面齿轮传动装置为核心业务，是船舶系统内唯一生产舰船齿轮箱、联轴节、减振器的重点军工企业，也是我国海军舰船后传动装备研制基地；公司通过共享军工技术和生产资源，促进民品的创新和发展，产品广泛应用于船舶、海工、风力发电、水泥建材、金属冶炼、传统能源、分布式清洁能源、轨道交通、工程机械、油气开采、固体废物处理等行业，是国内最大的硬齿面齿轮传动装置研发制造基地之一。

公司立足于机械传动领域，积极向机、电、液系统集成领域拓展。公司坚持高质量发展战略，全面深入践行“三赢”理念，全面推进军民融合、业财融合，以“科学决策”为前提，以“技术引领、精益管理、两化融合”为支撑，不断提升企业核心竞争力，不断增强企业综合能力和持续发展水平，努力将公司建设成为“全球最具竞争力的传动产业集团”。

Chongqing Gearbox Co., Ltd. (abbreviated as Chongchi) is a large state-owned military-industrial enterprise primarily engaged in the research and development, as well as the production of high- and low-speed heavy-duty gearboxes. Affiliated with the China State Shipbuilding Corporation Limited (CSSC), the company is located in Jiangjin District, Chongqing, covering an area of 650,000 square meters with over 2,600 employees and total assets exceeding RMB 8 billion. Originally established in 1966 as the State-Owned Yongjin Machinery Factory, it was renamed Sichuan Gearbox Factory in 1982 and restructured into Chongqing Gearbox Co., Ltd. in 1997. With hardened gear transmission devices as its core business, Chongchi is the only key military enterprise within China's shipbuilding system dedicated to producing marine gearboxes, couplings, and vibration dampers. It serves as a critical research and development base for naval ship transmission systems. By leveraging shared military-industrial technologies and production resources, the company drives innovation and development in civilian applications. Its products are widely used in industries such as shipbuilding, offshore engineering, wind power, cement and building materials, metal smelting, traditional energy, distributed clean energy, rail transit, construction machinery, oil and gas extraction, and solid waste treatment, making it one of China's largest research and manufacturing bases for hardened gear transmission systems.

Rooted in the field of mechanical transmission, Chongchi is actively expanding into the integration of mechanical, electrical, and hydraulic systems. Committed to a high-quality development strategy, the company thoroughly implements its "Triple-Win" philosophy and promotes the integration of military and civilian sectors as well as business and finance. Guided by scientific decision-making and supported by technological leadership, lean management, and the integration of industrialization and informatization, Chongchi continuously enhances its core competitiveness, comprehensive capabilities, and sustainable development capacity. The company strives to become the "world's most competitive transmission industry group."

历史沿革

History and Development



1966年9月27日，
国务院三线办批准同意建立三线军工企业
“国营永进机械厂”，
在重庆市原武隆县白云乡建厂，
隶属第六机械工业部
On September 27, 1966,
“State - owned Yongjin Machinery Factory”.



1968年，
因国际形势变化及交通等问题，
搬迁至重庆市江津区
In 1968,
it was relocated to Jiangjin District,
Chongqing



1982年12月，
“国营永进机械厂”更名为“
四川齿轮箱厂”
隶属中国船舶工业总公司
In December 1982,
was renamed “Sichuan Gearbox Plant”



1997年10月8日，
“四川齿轮箱厂”改制为
“重庆齿轮箱有限责任公司”
On October 6, 1997, restructured as
Chongqing Gearbox Co., Ltd.



1999年7月，
隶属中国船舶重工集团有限公司
In July 1999, it came under
the jurisdiction of China Shipbuilding
Industry Corporation



2004年，
公司收购中船重工旗下另一家
成员单位“469厂”
In 2004, the company acquired another
member unit under China Shipbuilding
Industry Corporation



2019年10月，
隶属中国船舶集团有限公司
In October 2019, it came under
the jurisdiction of China State
Shipbuilding Corporation



1966 • 國營永進機械廠

/ 建厂为“国营永进机械厂”
The factory was established as the “State -
owned Yongjin Machinery Factory”.

1982 • 四川齒輪箱廠
SICHUAN GEARBOX PLANT

/ 更名为“四川齿轮箱厂”
It was renamed “Sichuan Gearbox Plant”.

1997 • 重慶齒輪箱有限公司
CHONGQING GEARBOX CO., LTD.

/ 改制为“重庆齿轮箱有限责任公司”
It was restructured as “Chongqing Gearbox
Co., Ltd.”.

2001 • 重慶齒輪箱有限公司
CHONGQING GEARBOX CO., LTD.

/ 公司全面导入CIS系统
The company fully implemented the CIS
system.

2006 • CSIC
重慶齒輪箱有限公司
CHONGQING GEARBOX CO., LTD.

/ 集团公司与公司的标识组合统一
The logo combination of the group company
and the company was unified.

2017 • CSIC
重慶齒輪箱有限公司
CHONGQING GEARBOX CO., LTD.

/ 集团公司标识优化升级
The group company's logo was optimizes
and upgraded.

2020 • CSIC
重慶齒輪箱有限公司
CHONGQING GEARBOX CO., LTD.

/ 中国船舶集团有限公司启用新标识
China State Shipbuilding Corporation
launched a new logo.

Talent Team

公司拥有技术研发人员470余人，高级技能人才600余人，其中博士研究生5人，硕士研究生160余人，技师、高级技师240余人，公司拥有国务院特殊津贴专家3人、全国五一劳动奖章1人、重庆市劳模1人、重庆市级专家人才4人、中国船舶集团专家人才4人，江津区高层次人才26人。

The company employs over 470 technical research and development personnel and more than 600 senior skilled professionals, including 5 PhD holders, over 160 Master's degree holders, and more than 240 technicians and senior technicians. Among its workforce are 3 Experts receiving State Council Special Allowances, 1 recipient of the National May 1st Labor Medal, 1 Chongqing Municipal Labor Model, 4 Chongqing municipal-level experts, 4 CSSC (China State Shipbuilding Corporation) experts, and 26 high-level talents recognized by Jiangjin District.



Technology System

公司是高新技术企业、国家技术创新示范企业、国家知识产权示范企业，拥有“国家企业技术中心”、“国家博士后科研工作站”、国家“大型高精齿轮检测实验室”、重庆市级“重型齿轮工程技术中心”、“重庆市工业设计中心”、机械工业“船海装备齿轮传动数智技术重点实验室”、“船海装备齿轮传动数智技术重庆市工业和信息化重点实验室”等多个创新平台；具有年自主设计开发新产品100余项的能力，拥有有效专利400余项，其中发明专利117项，高价值专利39项，主持起草国家和行业标准30余项，荣获国家和省部级以上科技进步奖60余项。历年来承担或参与了国家科技部重点研发计划、科技支撑计划，国防科工局MPRD专项计划，国家工信部科技专项计划和集团、地方等省部级项目40余项。

公司建有完善的技术体系，技术中心统筹公司技术体系建设与技术管理，同时以国家级技术中心平台为基础，以应用基础技术研究、产业化和市场化三大主攻方向，形成研发中心、技术产业部门、科技公司三位一体的新型科技创新体系。

公司建有数字化齿轮箱样机研制平台，可运用CAD/CAE、Masta、KissSoft、Romax、Ansys等现代设计分析工具，采用ISO、DIN、AGMA等国际标准，执行CCS、ABS、BV、DNV、GL、LR等规范，不断开发新技术新产品，并形成了自己独特的设计制造技术，在高精度硬齿面齿轮设计制造、高低速重载齿轮传动装置设计制造等方面始终保持国内领先，并达到国际先进水平。

The company is recognized as a National High-Tech Enterprise, a National Technology Innovation Demonstration Enterprise, and a National Intellectual Property Demonstration Enterprise. It operates multiple innovation platforms, including the "National Enterprise Technology Center", "National Postdoctoral Research Workstation", "National Large-Scale High-Precision Gear Testing Laboratory", the Chongqing Municipal "Heavy-Duty Gear Engineering Technology Center", "Chongqing Industrial Design Center", the Machinery Industry's "Key Laboratory of Digital-Intelligent Technology for Marine Gear Transmission", and the Chongqing Municipal "Key Laboratory of Digital-Intelligent Technology for Marine Gear Transmission in Industry and Information Technology". The company boasts an annual capacity to independently design and develop over 100 new products, holds more than 400 valid patents (including 117 invention patents and 39 high-value patents), has led the drafting of over 30 national and industry standards, and has received over 60 national and provincial-level scientific and technological progress awards. Over the years, the company has undertaken or participated in more than 40 national and provincial-level projects, including the National Key Research and Development Program and Technology Support Program under the Ministry of Science and Technology, the Defense Industry Bureau's MPRD Special Program, the Ministry of Industry and Information Technology's Science and Technology Special Projects, as well as initiatives under corporate and local government frameworks.

The company has established a robust technological system. Its Technology Center oversees the development and management of the company's technical framework. Building on the National Technology Center platform, the company focuses on three strategic priorities: applied foundational research, industrialization, and commercialization, forming a tripartite scientific innovation system that integrates research and development centers, technology-industrial departments, and technology-focused subsidiaries.

The company has developed a digital gearbox prototype development platform, utilizing modern design and analysis tools such as CAD/CAE, Masta, KissSoft, Romax, and Ansys. It adheres to international standards like ISO, DIN, and AGMA, complies with specifications from classification societies including CCS, ABS, BV, DNV, GL, and LR, and continuously innovates new technologies and products. The company has cultivated unique design and manufacturing expertise, maintaining domestic leadership and achieving international advanced levels in high-precision hardened gear design/manufacturing and high/low-speed heavy-duty gear transmission systems.

质量管理

Quality Management



公司于1996年建立质量管理体系，多年来始终致力于通过持续改进，提升体系运行有效性。目前，有效保持着GB/T19001:2016、GJB9001C-2017质量管理体系认证资质及军队专用装备承制单位资格。

公司基于质量体系风险强化供应链管理，从供应商的开发准入、绩效考评、索赔退出环节开展全过程穿透式管理。设立专门的SQE与监造岗位，对供应商过程能力实施帮扶指导与过程监督，打造出一支可靠的供应商队伍，为公司产品质量的稳定性提供强力支撑。

The company established its quality management system in 1996 and has consistently dedicated itself to enhancing the system's operational effectiveness through continuous improvement. Currently, it maintains valid certifications for the GB/T 19001:2016 and GJB 9001C-2017 quality management systems, as well as the qualification as a military-specific equipment manufacturing unit.

To reinforce supply chain management based on quality system risks, the company implements end-to-end, penetration-style management across the entire supplier lifecycle, including development and qualification, performance evaluation, and compensation claims/exit procedures. Specialized Supplier Quality Engineers (SQE) and quality supervision roles have been established to provide guidance, support, and process monitoring for supplier capabilities. This approach has fostered a reliable supplier network, offering robust support for the stability of the company's product quality.

质量检测能力

QUALITY INSPECTION CAPABILITY

公司建有1.5MW~22.5MW系列电回馈节能型负载运行齿轮箱综合性能测试台，配置了高精度应变测试数据采集系统等先进仪器，可对齿轮箱整机及其组成部件进行测试验证，确保出厂产品的卓越品质和可靠价值。

公司计量机构属于国防军工三级计量技术机构，建立了长、热、力、电四大专业21项国防计量标准，并开展本单位量值传递工作；同时建有完备的理化分析试验及无损检测、磨削烧伤检测能力。

公司大型高精齿轮检测实验室2010年12月首次通过了中国合格评定国家认可委员会组织的CNAS认证评审，已多次接受定期监督评审和复评审，持续保持了实验能力。

公司持续向军方、国内外用户交付优质产品，具备向中国(CCS)、英国劳氏(LR)、法国(BV)、德国劳氏(GL)、挪威(DNV)、美国(ABS)、意大利(RINA)、日本(NK)、俄罗斯(RS)等多家船级社的交验能力。

公司船用齿轮箱、联轴节系列产品通过了中国(CCS)产品型式认可，通过了法国(BV)工厂认可和挪威(DNV)、美国(ABS)热处理工厂认可；风电齿轮箱系列产品通过了德国劳氏(GL)A类认证，风力发电机组用偏航变桨齿轮箱系列产品通过了中国(CCS)产品认证。

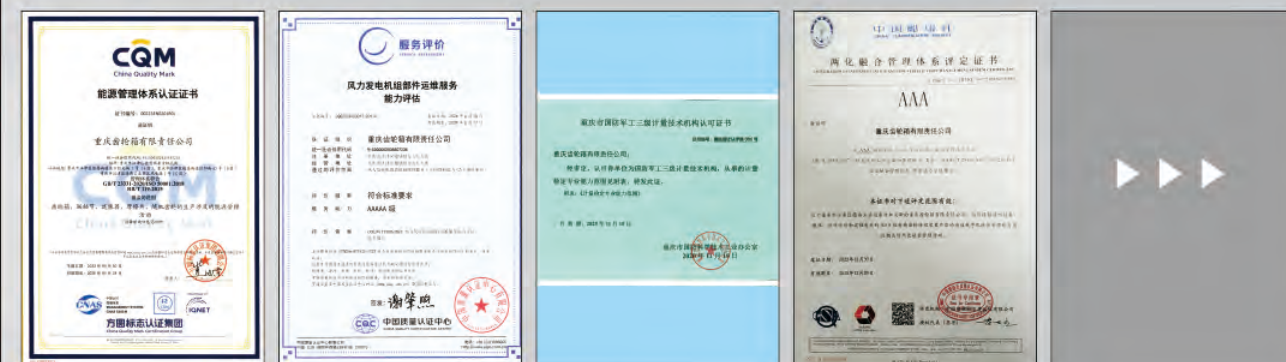
The company has established a comprehensive performance testing platform for regenerative energy-efficient load-operating gearboxes, covering a power capacity range from 1.5MW to 22.5MW. Equipped with advanced instruments such as a high-precision strain-testing data acquisition system, the platform enables thorough testing and validation of complete gearboxes and their components, ensuring the superior quality and reliable value of products before delivery.

The company's metrology department is recognized as a third-level metrological technical institution under the national defense industry. It has established 21 defense metrology standards across four major disciplines: length, thermal, mechanical, and electrical measurements, and conducts in-house measurement traceability. Additionally, it possesses comprehensive capabilities in material analysis testing, non-destructive testing, and grinding burn detection.

The company's Large-Scale High-Precision Gear Testing Laboratory first obtained CNAS (China National Accreditation Service for Conformity Assessment) certification in December 2010. It has since undergone multiple periodic surveillance reviews and re-evaluations, consistently maintaining its testing competencies.

The company continues to deliver high-quality products to military and global customers, with acceptance and inspection capabilities recognized by multiple classification societies, including China (CCS), Lloyd's Register (LR, UK), Bureau Veritas (BV, France), Germanischer Lloyd (GL, Germany), DNV (Norway), American Bureau of Shipping (ABS, USA), RINA (Italy), Nippon Kaiji Kyokai (NK, Japan), and Russian Maritime Register of Shipping (RS).

The company's marine gearboxes and coupling series have obtained type approval from China (CCS), factory certification from France (BV), and heat treatment facility certification from Norway (DNV) and USA (ABS). Its wind turbine gearbox series has achieved GL (Germany) Class A certification, while the yaw and pitch gearbox series for wind turbines has received product certification from China (CCS).



应用领域

Application Field

10
十大领域

Ten Major Fields

- 1 国防领域
National defense Field
- 2 能源领域
Energy Field

- 3 建材领域
Building Material Field
- 4 交通民生领域
Transportation and people's livelihood

- 5 石化领域
Petrochemical Industry
- 6 冶金领域
Products Applied to Metallurgical

- 7 工程机械领域
Construction Machinery
- 8 环保领域
Environmental Protection

- 9 矿业领域
Mining Industry
- 10 海洋领域
Marine Industry

1

NATIONAL
DEFENSE
FIELD

国防 应用领域



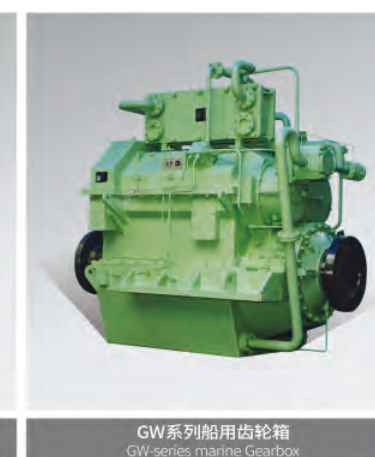
GVA系列船用齿轮箱
GVA-series marine Gearbox



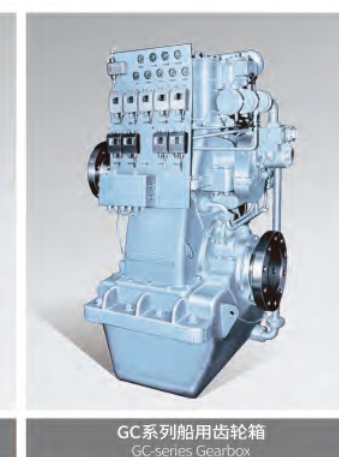
GWW系列船用齿轮箱
GWW-series marine Gearbox



GQST船用齿轮箱 / GAST船用齿轮箱
Marine gearbox GQST / Marine gearbox GAST



GW系列船用齿轮箱
GW-series marine Gearbox



GC系列船用齿轮箱
GC-series Gearbox

A

船用齿轮箱
MARINE GEARBOX



公司从德国引进系列船用齿轮箱设计及制造技术（含专利技术和制造标准），通过消化、吸收和自主研发，掌握了船用齿轮箱的设计加工核心技术。自2001年以来，根据市场发展需求，拓展原引进齿轮箱系列规格，开发出更大功率的船用齿轮箱，其离合器传扭能力比引进产品最大规格提高了2.5倍，单机最大传递功率达50000马力，创国内大功率船用齿轮箱记录。

公司开发的船用齿轮箱广泛应用于集装箱船、散货船、邮轮、LNG船、工作船、守护船、挖泥船、公务船等，产品可按用户要求进行定制化设计。

公司开发了中、小功率、高速轻量化船用GA、GQ系列齿轮箱，可满足速比 ≤ 25 的需求。产品适用于内河标准船型及沿海的各类运输、渔业、休闲游艇、公务快艇等。齿轮箱功率传递能力可适应0.15~1.84kW/r/min。

“重齿”牌船用齿轮箱通过了美国ABS船级社、英国LR船级社、法国BV船级社、俄罗斯RS船级社、德国GL船级社、挪威DNV船级社、意大利RINA船级社、日本NK海事协会、中国CCS船级社认证。

The company introduced marine gearbox design and manufacturing technology (including patent technology and manufacturing standards) from Germany. By absorption and independent research and development, the company has acquired the key technology to design and manufacturing of marine gearboxes. According to the market demands, since 2001 the company has developed larger size gearboxes with maximum transmission power 2.5 times more than the biggest imported counterparts. The company has manufactured gearboxes with the transmission efficiency as high as 50000 HP, which breaks the largest marine gearbox record.

The company has developed many marine products used for special purposes such as container ships, bulk carriers, cruises, LNG carrier, work ship, stand-by vessel, dredgers, official ships etc. We can also design specifically according to customer requirements.

The company independently develops medium or low-powered high-speed lightweight GA and GQ series marine gearboxes to satisfy the demands for gear ratio ≤ 25 and power transmission 0.15 ~ 1.84kW/r/min. Such gearboxes are widely used for transportation vessels, fishing boats, yachts or business speed boats in river or coastal applications.

“Chongchi” Brand marine Gearbox have been approved by following classification Societies: ABS, LR, BV, RS, GL, DNV, RINA, NK.

* 船舶行业国内重点客户 *

Domestic vips in shipping industry



COSL



CSSC
中国船舶研究中心

CSSC
哈尔滨船舶锅炉涡轮机研究所

CSSC
上海船舶设备研究所

CSSC
上海船用柴油机研究所

CSSC
江南造船(集团)有限责任公司

CSSC
大连船舶重工集团有限公司

CSSC
沪东中华造船(集团)有限公司

CSSC
中船黄埔文冲船舶有限公司

CSSC
广船国际有限公司

CSSC
武昌船舶重工集团有限公司

WEICHAI
潍柴

GDF 广州柴油机厂股份有限公司
GUANG ZHOU DIESEL ENGINE FACTORY CO.,LTD



CSSC 陕西柴油机重工有限公司
SHANXI DIESEL HEAVY INDUSTRY LTD

CME 镇江中船设备有限公司
Zhenjiang CME CO.,LTD

* 船舶行业国外重点客户 *

Foreign vips in shipping industry



DAIKAI
DAIKAI ENGINEERING PTE LTD



B

弹性阻尼联轴节 & 扭振减振器

COUPLING & TORSIONAL VIBRATION DAMPER

重齿永进弹性阻尼联轴节可以有效地降低轴系的扭转振动,确保轴系在工作转速范围内安全运行。重齿永进弹性阻尼扭振减振器利用刚度、阻尼和惯量值的精确计算和合理匹配,从而有效保护柴油机曲轴、中间轴和螺旋桨轴,使整个推进系统结构更紧凑。公司联轴节、减振器已通过CCS、BV船级社的型式认可,也可进行ABS、LR等船级社的产品认可交检,无需作任何改动,就能满足全球各主要船级社的要求。年产量达到2000台。

Chongchi Yongjin coupling and dampers can effectively reduce the torsional vibration of shafting and ensure the shafting is safely running within working speed range. They are precisely calculated and properly matched according to the stiffness, damping and inertia moment, so as to protect the diesel engine crankshaft, intermediate shaft, propeller shaft, and make the propulsion system more compact. Both couplings and dampers are successfully accepted type approval by CCS, BV Societies and also can be approved without any modifications by main Societies, such as ABS, LR, etc. Its annual output amounts to 2000 sets.



重齿“永进”弹性阻尼联轴节
Chongchi "Yongjin" Elastic Damping Coupling



重齿“永进”弹性阻尼扭振减振器
Chongchi "Yongjin" Torsional vibration damper (two-stroke)



* 联轴节 减振器国内重点客户 *

Domestic vips for couplings and Torsional vibration damper

CSSC 沪东重机有限公司
HUDONG HEAVY MACHINERY CO.,LTD.

CSE 中国动力(集团)有限公司

中北集团 中国北方车辆研究所
ZHENGLI GROUP CHINA NORTH VEHICLE RESEARCH INSTITUTE

中北集团 内蒙古第一机械集团有限公司
ZHENGLI GROUP INNER MONGOLIA FIRST MACHINERY GROUP CO.,LTD.

中国中车
CRRC

WEICHAI 潍柴动力股份有限公司

2

ENERGY
FIELD

能源 应用领域



A

风电

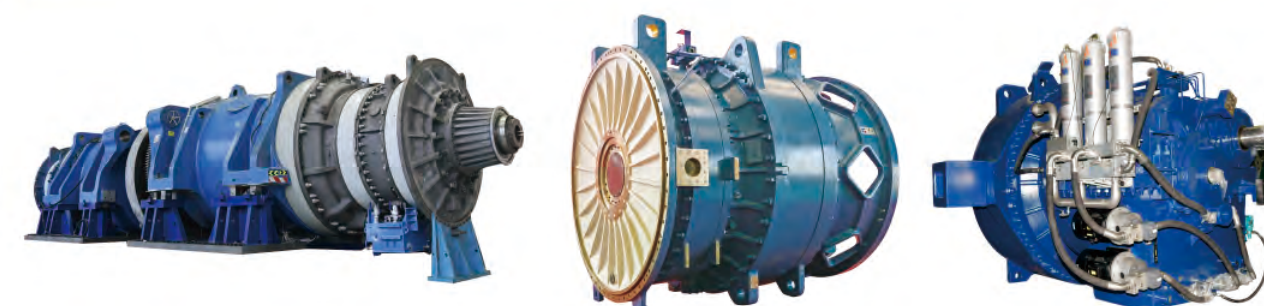
WINDPOWER

公司是国内首家从事风力发电齿轮箱研制的专业化企业，不断进行创新以满足市场的需求。在国内率先成功研制1.25MW、1.5 MW、2MW、2.5MW风电机组用齿轮箱，保持了在国内风电市场的主导地位。

到目前，公司自主开发的2.XMW、3.XMW、4.XMW、5.XMW、6.XMW、8.XMW及10.XMW齿轮箱已实现批量化生产，18MW齿轮箱已挂机运行，并向国际市场渗透，已经形成为国内外数十个不同技术类型机组配套的能力，年产出齿轮箱3000台以上。

公司有100kW~10MW机组配套的偏航和变桨齿箱设计制造技术。与国内30多家知名大型主机厂家的风力发电机组配套，广泛应用于各类型风力发电成套设备上，适用于陆地和海洋各个环境的使用，年生产能力达到8万台。

★ 风力发电增速齿轮箱 Wind power gearboxes



18MW

10MW

7MW



5MW

3.6MW

3MW



2.5MW

2MW

1.5MW

The company is China's first specialized enterprise dedicated to the research and development of wind power gearboxes, continuously innovating to meet market demands. It pioneered the successful development of 1.25MW, 1.5MW, 2MW, and 2.5MW wind turbine gearboxes in China, maintaining a dominant position in the domestic wind energy market.

To date, the company's independently developed 2.XMW, 3.XMW, 4.XMW, 5.XMW, 6.XMW, 8.XMW, and 10.XMW gearboxes have achieved batch production, while its 18MW gearbox has been installed and operational. Expanding into international markets, the company now supports over dozens of wind turbine models with varying technical specifications globally, with an annual output exceeding 3,000 gearboxes.

The company possesses design and manufacturing technologies for yaw and pitch gearboxes compatible with 100kW-10MW wind turbines. Partnering with over 30 leading domestic wind turbine OEMs, its products are widely integrated into wind power systems suitable for both onshore and offshore environments, boasting an annual production capacity of 80,000 units.

★ 风力发电偏航齿轮箱 Yaw gearboxes



PH2000J

PH3000YJ

PH5000YJ

PH7000J

PH7000Y

★ 风力发电变桨齿轮箱 Pitch gearboxes



BJ2200SY

BJ2500YJ

BJ5000J

BJ6000HZ

BJ6500MY

★ 风电产品国内重点客户 ★

Domestic vips in wind energy industry



金风科技



中船海装



远景能源



运达风电



明阳智能



三一重能



东方风电



中车风电



电气风电



华仪风能



联合动力



湘电风能

★ 风电运维 ★

Operations and Maintenance for Windpower Products



服务范围

Scope of Services

- 主齿轮箱: 备机备件提供、替代机开发、返厂维修 (含优化升级)、塔上维修及技改、检测服务、失效分析、维护维保方案、维护使用体系培训等;
- 偏航变桨: 备机备件提供、塔上维修、返厂维修、替代方案等;
- 传动链: 主轴维修、清洗换脂、弹支更换、调整对中等;
- 电气电控: 发电机维护维修、控制系统升级改造、变频器升级维修、在线监控系统等;
- 其它: 油品销售、换油加油、油品检测、润滑系统升级改造等。

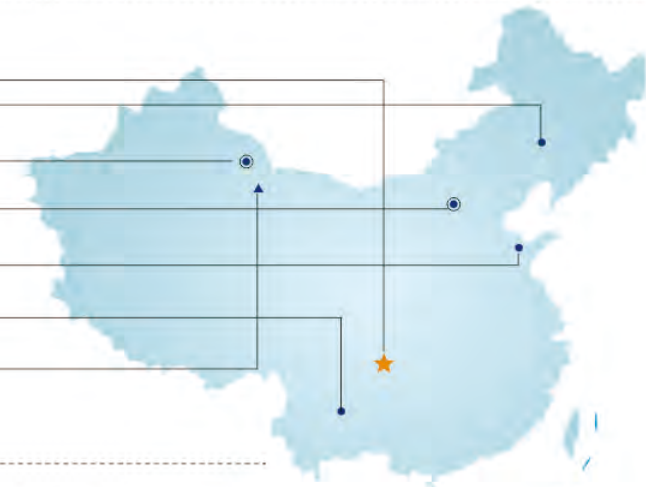
Main Gearbox: Provide spare parts, develop replacement units, overhaul and optimize units, perform on-site repairs and technical upgrades, and conduct testing services. Also offers failure analysis, customized maintenance programs, and training on maintenance systems.
Yaw and Pitch systems: Provide spare parts, conduct on - site repairs, perform overhauls, and develop alternative solutions.
Drive Chain: Repair main shafts, clean and replace grease, replace elastic supports, and adjust alignment.
Electrical and Control Systems: Maintain and repair generators, upgrade control systems, repair and upgrade frequency converters, and install online monitoring systems.
Other Services: Sell oils and lubricants, conduct oil changes and top - ups, perform oil testing, and upgrade lubrication systems.

服务网络

Service Network

★ 重庆总部基地
Chongqing Headquarters Base

- 通辽服务站
Tongliao Service Station
- 哈密服务站 (区域库)
Hammi Service Station (Regional storage)
- 大同服务站 (区域库)
Datong Service Station (Regional Storage)
- 潍坊服务站
Weifang Service Station
- 曲靖服务站
Qujing Service Station
- 敦煌检修中心
Dunhuang Maintenance Center



服务承诺

Service commitment

- 4 小时反馈处置方案
Feedback on handling plan within 4 hours
- 24 小时人员到达现场
On - site personuel within 24 hours
- 72 小时备机备件送达现场
Spare pats and backup equipment delivered to site within 72 hours



应用领域
Application field

Gearing interdependence
Moving future
齿齿相依 带动未来

CSSC 重齿公司

B

火电

THERMAL POWER



立式煤磨粉磨机系统是一种理想的大型粉磨设备，具有生产效率高、节能环保、物料烘干能力强、产品质量稳定、易检测、磨损小，利用率高等优点，为火电行业关键主流设备。我公司生产的JLX、JLXM、JLZX系列煤立磨减速机，作为立式煤磨粉磨系统中的关键设备，型谱完善，技术成熟，运行稳定可靠。目前生产数量超过2500台，广泛用于国内300多家电厂，国外五十多个国家近100家电厂，超过600台机组，广受用户好评。

Vertical mill used for large sized mill is popular critical equipment characteristic for high efficiency, environmental friendly, quickly drying, quality stable and etc.. The vertical mill reducers JLX, JLXM, JLZX series designed by the company, as the key components for mill system, take an advantage for mature technology, smooth operation and complete types. Presently more than 2500 sets are running smoothly on over 600 sets of power generators spreading in more than 300 power station factories domestically and more than 100 abroad.

* 风电运维国内重点客户 *

Domestic vips in wind power operations division





核电

NUCLEAR POWER



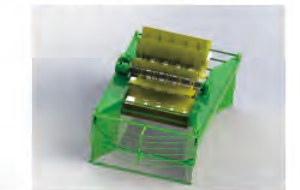
公司于2011年完成了百万千瓦级核电站海水循环泵齿轮箱试制工作。同年4月，国家能源局委托中国机械工业联合会组织，由中国工程院院士牵头，核电领域资深专家、中国核电三大应用企业和三大主机厂、相关大学和研究院等单位代表组成专家组，对“HDBT410百万千瓦级核电站海水循环泵齿轮箱”进行了样机鉴定。经过鉴定，专家组认定该产品的技术水平和产品性能达到了“国际先进水平”。同时，公司也牵头完成了国家重点研发专项《高可靠核电循环泵用齿轮箱关键技术研究与应用》。公司核电站海水循环泵系列齿轮箱先后获得中广核、中核的阳江、防城港、昌江、福清、田湾、太平岭、三澳、徐大堡、陆丰、宁德、漳州、石岛湾等核电站新建设项目订单，并陆续交付。2016年，承接国家重点项目“华龙一号”出口巴基斯坦核电项目。目前，重齿研制的核电循环泵齿轮箱在各大核电站得到了可靠稳定应用，奠定了重齿公司在中国核电循环泵齿轮箱市场中的主导地位。

In 2011, the company completed the trial production of a gearbox for seawater circulation pumps in gigawatt-class nuclear power plants. In April of the same year, under the commission of the National Energy Administration, the China Machinery Industry Federation organized an expert panel led by a Chinese Academy of Engineering academician, with participation from senior nuclear energy experts, representatives of China's three major nuclear power operators, three leading reactor manufacturers, universities, and research institutes. This panel conducted a prototype appraisal for the "HDBT410 Gigawatt-Class Nuclear Power Plant Seawater Circulation Pump Gearbox". After rigorous evaluation, the experts concluded that the product's technical standards and performance "reached internationally advanced levels". Concurrently, the company spearheaded the completion of the National Key Research and Development Program: "Research and Demonstration of Key Technologies for High-Reliability Gearboxes in Nuclear Power Circulation Pumps". Its series of nuclear power plant seawater circulation pump gearboxes have since secured orders for new projects at nuclear power stations including Yangjiang, Fangchenggang, Changjiang, Fuqing, Tianwan, Taipingling, San'ao, Xudabao, Lufeng, Ningde, Zhangzhou, and Shidaowan, developed by CGN and CNNC, with progressive delivery milestones achieved. In 2016, the company undertook the national key project: the "Hualong One" (HPR1000) nuclear reactor export initiative to Pakistan. To date, the nuclear circulation pump gearboxes developed by the company have demonstrated reliable and stable performance across major nuclear power plants, solidifying its dominant position in China's nuclear power circulation pump gearbox market.

潮流能发电



TIDAL STREAM POWER GEN GENERATION

BFD5.0振荡浮子波浪能发电系统
BFD5.0 oscillating buoy wave energy power generation system100kW门板式潮流能发电系统
100kW door-type tidal current power generation system470kW潮流能发电系统
470kW tidal current power generation system1.5MW潮流能发电齿轮箱
1.5MW tidal current power generation gearboxLFD5.0 5kW潮流能发电机组
LFD5.0 5kW tidal current power generation unit5kW浮管式发电系统
5kW floating pipeline power generation system5kW水车式漂浮发电系统
5kW water wheel floating power generation system

公司自2009年以来，开始进入海洋能开发行业，先后完成了中英国际合作项目470kW潮流能发电系统，国家海洋局1.5兆瓦潮流能发电系统齿轮箱，中英合作牛顿基金振荡浮子式波浪能齿轮齿条传动系统等项目，在潮流能、波浪能传动装置的利用方面拥有比较好的实践经验。公司设有能源海工传动装置研究所，定向于核能传动装置、海工传动、海洋能开发传动装置等方向的研究，拥有高水平的技术队伍，涵盖结构设计、仿真分析、工艺实现及现场测试等方面。

Since 2009, the company has entered the marine energy development industry, successively completing multiple landmark projects including the 470kW tidal current energy generation system under the China-UK international cooperation program, the 1.5MW tidal current energy gearbox for the State Oceanic Administration, and the Newton Fund collaborative project on rack-and-pinion transmission systems for oscillating buoy wave energy converters. These achievements have enabled the company to accumulate substantial practical experience in utilizing tidal current energy and wave energy transmission devices. The company has established the Marine Energy Transmission Research Institute, specializing in development directions such as nuclear energy transmission systems, offshore engineering transmissions, and marine energy development transmission devices. It maintains a high-caliber technical team with comprehensive expertise covering structural design, simulation analysis, manufacturing processes, and field testing. This multidisciplinary approach ensures integrated solutions from theoretical design to practical implementation.



低水头发电

LOW HEAD POWER GENERATION



2300kW水力发电行星齿轮箱
2300kW hydroelectric power generation planetary gearbox

2023年以来，依托钱塘江中上游航电枢纽项目，进军低水头发电行业。先后研制了2300kW黄塘桥水利枢纽行星齿轮箱SL2300、1200kW东湖水利枢纽行星齿轮箱SL1200，同时正在研发1100kW/2580kW/ 2900kW/3000kW/3526kW/5200kW等SL系列行星齿轮箱，在水力发电齿轮传动装置研制方面拥有丰富的经验，可替代进口。

Since 2023, building on the Qiantang River Upper-Middle Reaches Navigation-Power Junction Project, the company has ventured into the low-head hydropower generation industry. It has successfully developed the SL2300 planetary gearbox (2300kW) for the Huangtangqiao Hydropower Junction and the SL1200 planetary gearbox (1200kW) for the Donghu Hydropower Junction. Concurrently, the company is actively advancing the research and development of its SL-series planetary gearboxes with capacities ranging from 1100kW/2580kW/2900kW/3000kW/3526kW to 5200kW. With extensive expertise in designing and manufacturing hydropower gear transmission systems, the company's solutions demonstrate robust localization capabilities, serving as competitive domestic alternatives to imported products.

光热



SOLAR PHOTOVOLTAIC POWER GENERATION



齿轮箱式传动装置 Gearbox type transmission device 齿轮箱式传动装置 Gearbox type transmission device 摆线式传动装置 Cycloid type transmission device 回转式减速机 Rotary type reducer 回转式减速机 Rotary type reducer

近年来，公司将核心的精密传动技术移植于太阳能热发电，积极开拓该行业市场。2013年完成了64m²镜面定日镜的齿轮箱式传动装置的试制工作，随后与国内知名的大型太阳能热发电公司合作，先后开发了回转式减速机、摆线式传动装置等，产品可用于小至数十平方米镜面，大到140平方米镜面定日镜的跟踪传动装置。

In recent years, the company has extended its core precision transmission technology to solar thermal power generation, actively expanding its market presence in this sector. In 2013, the company completed the trial production of a gearbox-driven transmission system for 64m² mirror heliostats. Subsequently, collaborating with leading domestic solar thermal power companies, it developed a range of products including rotary reducers and cycloidal transmission systems. These solutions are adaptable to heliostat tracking systems of varying scales, from small mirrors covering dozens of square meters to large-scale installations with mirror surfaces up to 140 square meters.

* 建材行业国内重点客户 *

Domestic vips in building material industry

COINCH
海螺水泥

BBMG 金隅冀东水泥

华新水泥
HUAXIN CEMENT

SINOMA 中材
中国中材 水泥

SUNNSY
山水集团

HONGSHI 红狮
水泥

华润水泥

CUCC
中联水泥

南方水泥

中国建材集团有限公司
China National Building Material Group Co., Ltd.

天瑞集团

台泥水泥

万年青
WANNIANQING

青松
建化

祁连山

亚泥(中国)

MS
MELICSEA
海拉尔蒙西水泥有限公司
Hailuaila Mengxi Cement Co., Ltd.

CEEC 中国能建
葛洲坝水泥

同力水泥
TONGLI CEMENT

LafargeHolcim

金牛水泥

亚泰集团
YATAI GROUP

上峰水泥

西南水泥
CNBM

* 建材行业国外重点客户 *

Foreign vips in building material industry

LafargeHolcim

CEMEX

HEIDELBERGCEMENT

KHD HUMBOLDT
WEDAG

拉豪

西麦斯

海德堡

洪堡

LOESCHE

CHH

莱歇

老城堡

BUILDING MATERIAL FIELD

建材 应用领域



公司在引进德国硬齿面技术基础上消化吸收，于上世纪自主创新研发了日产1000吨干法水泥生产线的JS110中心传动磨机减速机，开创了国内首台硬齿面中心传动磨机减速机国产化的历史。到现在为止公司建材减速机全面覆盖了建材领域减速机：原料磨、煤磨、回转窑、水泥磨、辊压机、提升等齿轮传动设备，满足了水泥行业日产1000吨到12000吨各种生产线用各种磨机所需驱动减速机的要求。

公司建材行业产品除大量应用于国内所有的大型水泥集团外，同时也出口到世界各地如非洲、南美洲、亚洲等地区与德国、葡萄牙、俄罗斯等国家，已有上万台不同齿轮箱在全球水泥厂应用，极大推动了中国建材行业大型传动装备的发展。

The company independently develops its own JS110 center driving mill reducer used for dry-mix cement production line of 1,000-ton daily capacity, which becomes the first made-in-China product. The reducers manufactured for building material industry covers central driving mill reducer, vertical mill reducer, side driving mill reducer and grinding roll reducer, etc, which can meet needs for various cement line of daily output 1,000- 12,000 tons.

The products for cement industry are not only popular in major cement corporations, and also exported to Africa, South America, Germany, Portugal, Russia etc. More than 10 thousand gearboxes are operating all around the world, which greatly promotes the large-sized facilities development for China Building Materials.

A 水泥磨机减速机 CEMENT MILL GEARBOX



JS系列中心传动磨机减速机
JS-series Central-driving MILL Reducer



JD系列磨机减速机
JD-Series MILL Reducer



MDH系列单边双传动磨机减速机
MDH-Series Single-side Double-driving MILL Reducer



JST系列中心传动磨机减速机
JST-series Central-driving MILL Reducer



根据不同的水泥生产线结构，最大功率 8400kW，传动比范围为 35: 1~80:1 可配中心传动 JS、JST，JD (X) 系列、MDH 系列减速机，可满足日产 2500 吨至 10000 吨，甚至更大水泥生产线的需求。

According to different cement production lines with transmission power up to 8400kW and ratio from 35:1 to 80:1, we can match JS, JST, JD(X) and MDH series central driving mill reducers to meet needs for various cement lines of daily output 2500- 10,000 tons.

B 立式磨机减速机 VERTICAL MILL GEARBOX



JLXM/JLZX 立式磨机减速机
JLXM/JLZX Vertical Mill Reducer



JLW(S) 立式磨机减速机
JLW(S) Vertical Mill Reducer



JLP 型立式磨机减速机
JLP Vertical Mill Reducer

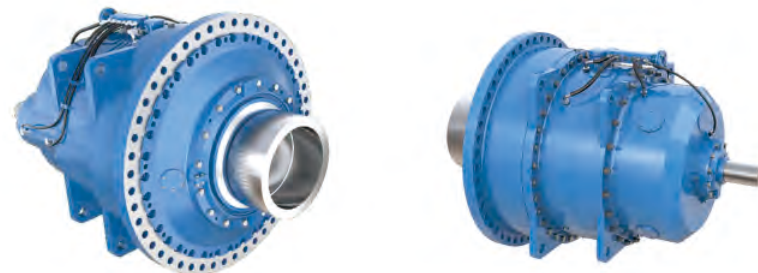
立式磨机减速机传递功率从 200kW~10000kW，有 JL (XM、ZX、P、W、WS) 五个系列，应用于水泥生产工艺过程中的生料粉磨、煤粉制备、水泥成品制备等关键设备的核心传动部件；同时也作为矿渣粉磨系统中的核心传动部件而得到广泛应用。

The vertical mill reducer transmits power ranging from 200 kW to 10000 kW. It comprises five series: JL (XM, ZX, P, W, WS), and serves as a core component in the core transmission systems of key equipment used in the cement production process, such as raw material grinding, coal powder preparation, and cement product preparation. Additionally, it is widely used as a core transmission component in the slag grinding system.

C 辊压机行星减速机 GEARBOX FOR ROLLER PRESS

辊压机行星减速机作为水泥粉磨和矿渣磨中的关键设备，广泛应用于水泥、矿山、陶瓷、矿渣等行业。该系列产品具有功率密度高，结构紧凑，通用互换性好等特点。公司研制了传递功率覆盖80kW-5000kW，最大传递扭矩达到6050kN.m的全系列辊压机行星减速机，型谱完整。目前生产数量超2000台，广泛运用于国内海螺、华新、冀东、华润等多家水泥厂，广受用户好评。

As a key component in cement and slag grinding, the roller press planetary reducer is widely used in industries such as cement, mining, ceramics, and slag processing. This product line is characterized by its high power density, compact structure, and excellent interchangeability. Our company has developed a complete series of roller press planetary reducers, with transmission power ranging from 80 kW to 5000 kW and a maximum transmission torque of 6050 kN·m. To date, we have produced over 2000 units, which are extensively utilized in numerous cement plants in China, including Anhui Conch Cement (Conch), Huaxin Cement, Tangshan Jidong Cement, and China Resources Cement (CR Cement), and have received widespread acclaim from users for their performance.

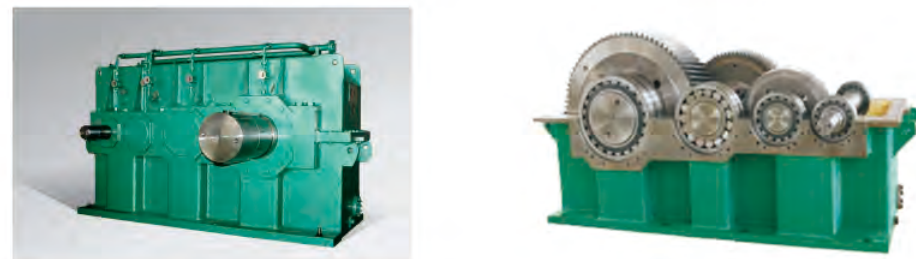


JGR系列辊压机减速机 JGR Reducer for Roller Press

D 回转窑减速机 GEARBOX FOR ROTARY KILN

JH系列回转窑用工业齿轮箱属平行轴渐开线圆柱齿轮传动装置，有1-4级减速，4种基本结构，50余个型号。该系列齿轮箱采用标准化、系列化、模块化设计，使用维护便捷，可靠性高。

JH series gear reducers for cement kilns are involute cylindrical gear units with parallel shafts which has four reduction stages. This series has four basic structure including over 50 types. Thanks to the standardized, series and modulated design, the reducers can be manufactured according to standard or specific requirements at customers' choice with good reliability and maintenance.



TRANSPORTATION AND PEOPLE'S LIVELIHOOD

应用领域 交通民生



水利升船机

GEARBOX FOR HYDRO POWER



向家坝升船机齿轮箱
Xiangjiaba Ship Lift



三峡升船机
Three Gorges Ship Lift



构皮滩升船机
Goupitan Ship Lift



2010年以来，重齿公司先后承担了三峡升船机、向家坝升船机、彭水升船机、构皮滩升船机、百色升船机等多个水工项目，其中：构皮滩升船机是当今卷扬提升式提升高度最高的升船机；三峡升船机是目前世界上齿轮齿条爬升式规模最大、技术难度最高的升船机，其输出齿轮轴齿轮模数超62mm，是目前世界上已加工的硬齿面的最大模数，远超硬齿轮公知加工极限。升船机配套减速器我公司在行业内处于绝对领先地位。

Since 2010, Chongchi has undertaken numerous hydraulic projects, including the Three Gorges Ship Lift, Xiangjiaba Ship Lift, Pengshui Ship Lift, Goupitan Ship Lift, and Baise Ship Lift. Among them: The Goupitan Ship Lift is the highest hoist-type ship lift in the world; The Three Gorges Ship Lift is the largest and most technically challenging rack-and-pinion climbing ship lift in the world. Its output gear shaft has a module exceeding 62 mm, which is the largest module of hardened gears ever processed globally, far surpassing the known processing limits for hard gears. In the field of ship lift reducers, the company holds an absolute leading position in the industry.

* 水利行业国内重点客户 *

Domestic vips in cement industry





无人机驱动齿轮箱
UAV drive gearbox



航空增速发动机齿轮箱
Aerospace engine gearbox



公司在无人机传动领域积累了丰富经验，技术团队先后开发了无人机传动齿轮箱，增程式航空发动机用增速箱，水下无人机传动齿轮箱等多款产品。目前产品的设计最高转速可达50000转，齿轮最小模数1。还可根据客户需求，开发不同功率、转速及安装形式的传动系统。现已和国内多家主流无人机制造商取得了合作。

The company has accumulated extensive experience in the field of unmanned aerial vehicle (UAV) transmission. The technical team has developed a variety of products, including UAV transmission gearboxes, range-extended aero-engine gearboxes, and underwater UAV transmission gearboxes. Currently, the maximum design speed of the products can reach 50,000 rpm, and the minimum gear module is 1. Additionally, transmission systems with different power ratings, speeds, and installation configurations can be developed according to customer requirements. The company has established collaborations with many mainstream UAV manufacturers in China.

★ 轨道交通车辆驱动产品 Products applied to rail transit Vehicle drive

公司通过了铁路行业ISO/TS22163质量体系认证。

公司于2009年正式启动轨道交通车辆驱动装置的研发，经过多年的发展积累，开发了地铁车辆驱动齿轮箱、跨座式双轴单轨驱动齿轮箱、跨座式单轴单轨集成式驱动单元、悬挂式单轨驱动齿轮箱、100%低地板有轨电车驱动装置等各系列化产品，实现了城市轨道交通车辆驱动装置的全覆盖，并陆续实现批量装车。

另外，公司在轨道交通高端、特种传动零部件研制方面具有明显优势，产品主要包含时速400公里高铁动车组变轨距传动花键核心组件、动车组无退刀槽人字齿齿轮副、动车组锥齿轮副以及各类高精度端面齿等。

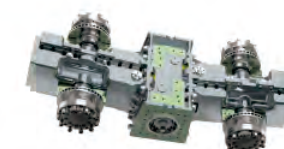
与此同时，公司将继续以解决“铁路行业共性传动技术难题”为目标，立足发展成为轨道交通行业齿轮传动一流供应商。

The company was certified with ISO/TS22163 Quality Management System.

Early in 2009, the company launched development of driving units for railway vehicle. After years' accumulation, serial new products such as driving gearboxes for subway vehicles, driving gearboxes used for single turnout for straddle monorail transit, integrated driving units for single turnout for straddle monorail transit, gearboxes for suspension monorail, driving units for 100% low-floor streetcars are developed in succession and are put into use in batch. Entire type spectrum is developed and manufactured covering city railway vehicles.

Furthermore, the company is superior in R&D hi-tech and special driving parts and components for railway vehicles. The typical products include driving splines core components for CRH variable track pitch, recessless herringbone gear pairs for CRH, bevel gear pairs for CRH and kinds of high precision transvers tooth.

The company will continue to make efforts to become the best supplier for railway vehicles driving gear units.



脊梁式单轨传动系统
Backbone Type monorail Transmission System



动车组人字齿轮副
Double Helical gearing



跨座式单轨驱动齿轮箱
Straddle Type Monorail Train gearbox



跨座式单轨驱动系统
Straddle Type Monorail Train Driving System



地铁驱动齿轮箱
Subway drive gearbox



单轨驱动齿轮箱
Monorail drive gearbox



有轨电车驱动轴桥
Tramcar Bridge With Drive



山地齿轨列车驱动系统
Mountain gear rail train drive system



齿轨列车驱动齿轮箱
Gear rail train drive gearbox

★ 轨道交通道岔产品

Turnout applied to rail transit



公司从上世纪90年代末开始研制单轨道岔用驱动装置，2004年，成功研制国内第一套跨座式单轨关节型道岔驱动装置，应用于重庆轨道交通2号线较新线段；2009年成功研制国内第一套跨座式单轨关节可挠型道岔驱动装置，应用于重庆轨道交通3号线一期工程；2015年成功研制跨座式单轨三开/五开关节型道岔驱动装置，应用于重庆轨道交通3号线北延伸段；公司现已发展成为跨座式单轨国产化道岔驱动装置的核心供应商。

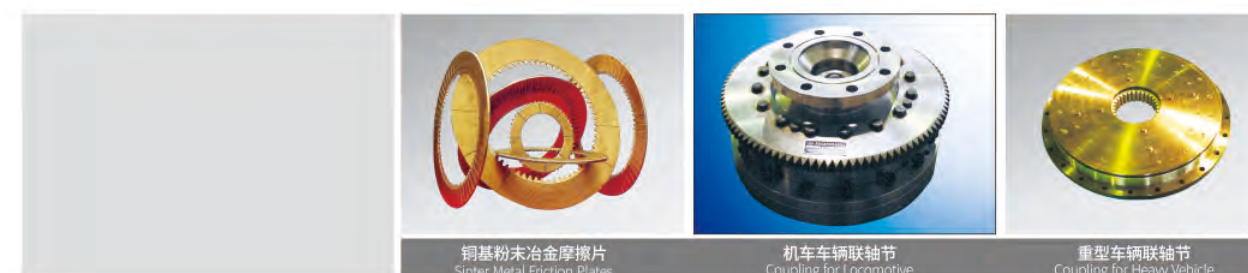
2019年，牵头起草的国家标准GB/T 37531-2019《跨座式单轨交通单开道岔》正式发布。

Since 1990s the company has initiated the R&D of driving units for single turnout. Early in 2004, the company designed the first joint type switch in China for straddle monorail, which has been safely running more than 16 years in rail transit #2 line in Chongqing. In 2009, the first single turnout for straddle monorail transit was developed by the company, and has been safely running on the #3 line for nearly 11 years. In 2015 year, the third stage of the #3 line project of the three-open and five-open joint type switch equipment which has been designed and put into use. The company has grown to the first in China to replace import items with local-made curving railroad switch equipment.

In 2019, national standard GB/T 37531-2019 Single Turnout for Straddle Monorail Transit leading by the company was issued officially. And the company has successfully passed ISO/TS22163 quality system certification.

机车 重型车辆

PRODUCTS APPLIED TO LOCOMOTIVE AND HEAVY VEHICLE

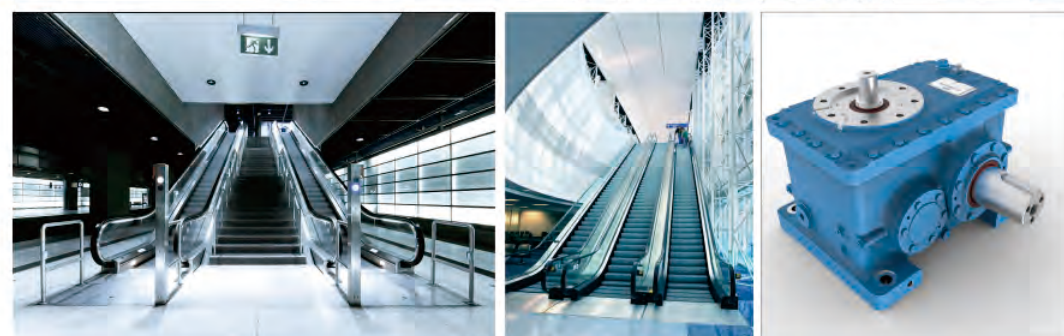


公司设计制造的重齿永进弹性阻尼联轴节是用来解决柴油动力装置不可避免的扭转振动，已广泛用于机车、坦克、重型车辆等柴油动力系统。并且它还能满足泵、压气机和燃气轮机及其它机械要求，这已在国内外建造好的许多动力装置中得到证实。

Chongchi Yongjin elastic couplings produced by the company is designed to eliminate torsional vibration of diesel engine power system, and are applied to the diesel power systems for automobiles, tanks and heavy-duty vehicles. In addition, this type of couplings can also be used on pumps, compressors, gas turbine engines and other machineries, which has been verified by many power systems operating at home and abroad.

E 电扶梯齿轮传动

GEARS FOR ESCALATOR

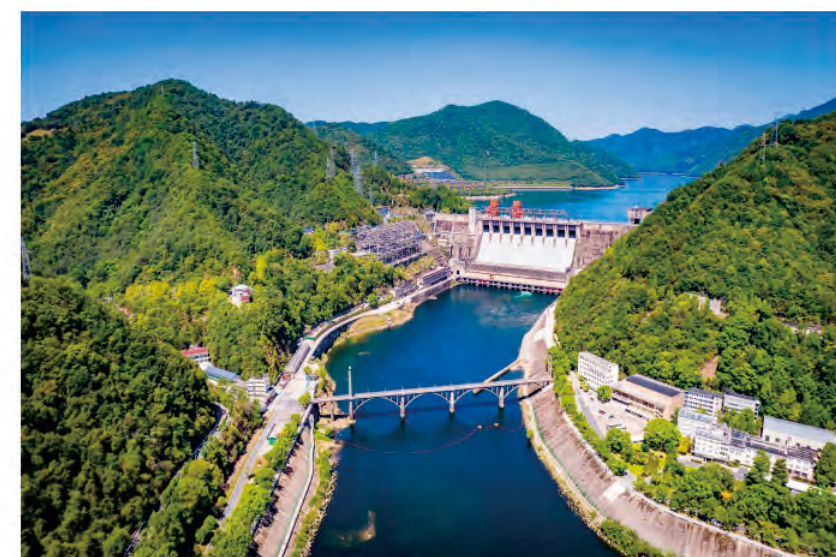


开展电扶梯齿轮传动装置的国产化研究，采用“锥齿轮+斜齿轮”的全硬齿面传动结构的电扶梯驱动齿轮箱，相比进口减速机60%等效工况设计具有更大的承载能力，具有承载力高、抗过载强、效率高、振动小、噪音低、密封可靠等特点。

Localized research on escalator gears are carried out by the company with a transmission structure “bevel gear+ helical gear” and case harden tooth. Compared with the gears imported abroad, this design is of bigger load capacity, and typical for strong overload capacity, high efficiency, low vibration & noise and good tightness etc.

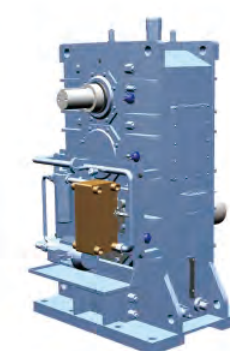
F 水利工程

WATER CONSERVANCY PROJECT



竖井贯流泵齿轮减速器通常用于大扬程、大流量场合，如灌溉，防洪排涝、调水供水等场景。减速器要求满足狭小使用空间，具有高可靠性，能够适用高速，高扭矩反转工况，还要求有良好的防水密封性能和高精度智能监测能力。公司始终致力于为用户提供优质的竖井贯流泵齿轮减速器，完成了乌沙河泵闸枢纽工程2500kW竖井贯流泵等的配套应用。

Vertical shaft tubular pump gear reducers are typically used in applications requiring high lift and large flow rates, such as irrigation, flood control and drainage, and water diversion and supply. The reducers are designed to operate in confined spaces while offering high reliability, high-speed performance, and high-torque reversal capabilities. Additionally, they are required to have excellent waterproof sealing performance and high-precision intelligent monitoring capabilities. The company is committed to providing customers with high-quality vertical shaft tubular pump gear reducers and has successfully implemented these in projects such as the 2500 kW vertical shaft tubular pump for the Wushahe Pump Gate Hub Project.



贯流泵齿轮箱
Tubular pump gear reducer

5

PETROCHEMICAL
INDUSTRY

石化 应用领域

A

页岩气
开采

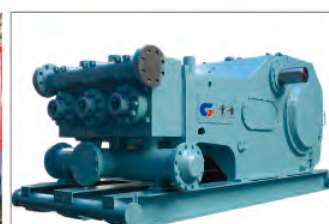
SHALE GAS
INDUSTRY



页岩气齿轮箱JBX232C
Shale Gas Gearbox JBX232C



8000HP连续满载全电动压裂装置
8000HP Continuous Full-Load Fully-Electric Fracturing Unit



泥浆泵齿轮箱
Mud Pump Gearbox



公司页岩气装备行业经过多年发展已经研制了3000HP~8000HP多款压裂泵减速箱、泥浆泵减速箱以及配套齿轮件，不仅完成了部分类型减速箱的系列化，而且已经具备页岩气装备全类型减速箱的定制开发设计、生产能力。产品以小退刀人字齿结构为主，结构紧凑重量轻，具有高功率密度、传动稳定以及传动效率高等优点，压裂效率得到了较大幅度的提升，受到客户的信赖和好评。

After years of development, the company's shale gas equipment division has developed a range of 3000 HP to 8000 HP fracturing pump gearboxes, mud pump gearboxes, and supporting gear components. It has not only achieved serialization of certain types of gearboxes but also possesses the capability for customized design and production of all types of gearboxes for shale gas equipment. The products primarily feature a compact herringbone gear structure with minimal undercut, offering a compact design, lightweight construction, high power density, stable transmission, and high transmission efficiency. These improvements have significantly enhanced fracturing efficiency, earning the trust and praise of customers.

石油钻采

OIL DRILLING AND PRODUCTION

B



重齿公司于2018年便开始与相关石油钻采主机厂展开合作，2021年与中船海声科技展开船用绞车减速机WPR300的合作研发；与多家企业展开多次技术交流经验，对换挡机构的可靠性、密封结构的可靠性等关重难点展开研究攻关。

In 2018, Chongchi Company began collaborating with relevant oil drilling and production equipment manufacturers. In 2021, it initiated a joint research and development project for the marine winch reducer WPR300 with China Shipbuilding Industry Corporation Haisheng Technology Co., Ltd. The company has also conducted extensive technical exchanges with multiple enterprises, focusing on research and development of critical challenges such as the reliability of the shift mechanism and the reliability of the sealing structure.





化工

CHEMICAL INDUSTRY



搅拌槽用齿轮箱
Gearbox for agitator tank

化工行业搅拌槽类设备运行工况复杂特殊，作为搅拌动力传输的齿轮箱将承受较大的轴向载荷和径向载荷，在配置推力轴承、采用多道组合密封结构，增强齿轮箱承载能力、有效降低漏油风险，提高产品可靠性。目前，重齿公司已积极开发和布局煤化工、氧化铝等各种化学制备细分领域，也具备实现进口品牌原位替换和永磁半直驱升级改造能力。

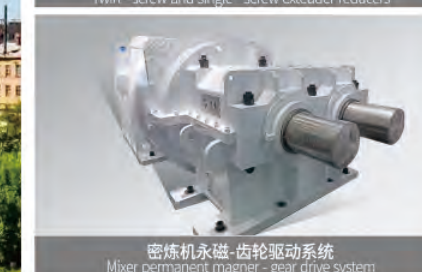
The operating conditions of stirred tank equipment in the chemical industry are complex and demanding. The gearbox is subjected to significant axial and radial loads as the power transmission component for stirring. By incorporating thrust bearings and adopting a multi-channel combined sealing structure, the gearbox's load-bearing capacity is enhanced, the risk of oil leakage is effectively reduced, and the reliability of the product is improved. Currently, Chongchi has actively developed and expanded into various chemical processing sectors, such as coal chemical industry and alumina production. Additionally, the company has the capability to provide in-situ replacements for imported brands and upgrade to permanent magnet semi-direct drive systems.

橡塑

RUBBER AND PLASTIC



双螺杆挤出机
Twin-screw and single-screw extruder reducers



密炼机永磁-齿轮驱动系统
Mixer permanent magnet-gear drive system

橡塑行业大型减速器设备，如密炼机减速器，挤出机减速器的发展越来越趋向于智能化和自动化，越来越注重高效节能。重齿MLBZ系列密炼机永磁-齿轮驱动系统，产品系列覆盖600kW-2500kW，使用低速永磁同步电机配合行星级加分配级减速机实现超低速大扭矩输出，形成一体化驱动系统，节能效果显著，高控制精度，能够实现系统自我检测，故障诊断和预测性维护。

橡塑行业小型减速器设备，如双螺杆挤出机减速器的发展越来越小型化集成化，定制化和专业化。双螺杆挤出机减速器通过紧凑的传动分列链条以双螺杆输出互相螺旋交替运动，实现应用加工。重齿公司双螺杆单螺杆挤出机减速器有多重技术储备。

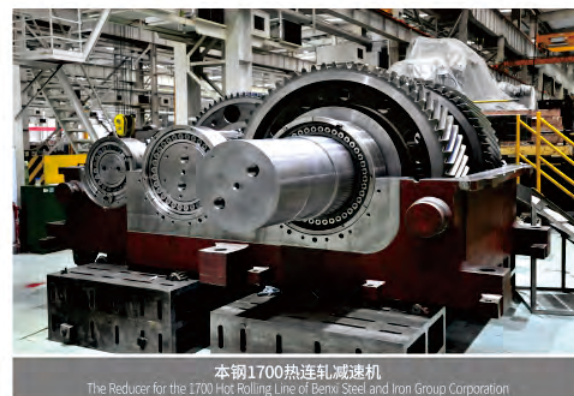
The development of large reducer equipment in the rubber and plastic industry, such as mixer reducers and extruder reducers, is increasingly trending towards intelligence and automation, with a growing emphasis on high efficiency and energy savings. The MLBZ series mixer permanent magnet-gear drive system developed by Chongchi covers a power range of 600 kW to 2500 kW. By utilizing a low-speed permanent magnet synchronous motor combined with a planetary and distribution-level reducer, the system achieves ultra-low speed and high torque output, forming an integrated drive system. This system offers significant energy-saving benefits, high control precision, and the ability to perform self-detection, fault diagnosis, and predictive maintenance.

The development of small reducer equipment in the rubber and plastic industry, such as twin-screw extruder reducers, is increasingly moving towards miniaturization, integration, customization, and specialization. The twin-screw extruder reducer achieves processing applications through a compact transmission chain that enables alternating spiral motion of the twin-screw output. Chongchi has extensive technical expertise in the development of twin-screw and single-screw extruder reducers.

6

PRODUCTS APPLIED TO METALLURGICAL

冶金 应用领域



本钢1700热连轧减速机
The Reducer for the 1700 Hot Rolling Line of Benxi Steel and Iron Group Corporation



西门子冶金项目
Metallurgical Gearbox For SIEMENS Project



ESP热轧齿轮箱
ESP Main Reducer ESP



棒线齿轮箱
Horizontal gearbox



立辊齿轮箱
Vertical roller gearbox

公司一直致力于冶金行业的热、冷轧板材生产线、棒线材生产线及烧结机柔性传动等大型高精度硬齿面齿轮传动装置的研究、设计与制造。与SMS、普锐特、IHI、意大利POMINI、DANIELI、法国REDEX、中国一重、长沙冶金设计研究院等知名企业、研究院合作，相继为本钢、首钢、宝钢、唐钢、西南铝、武钢、魏桥铝、鞍钢、日钢、山钢、福建鼎盛、太行钢铁、河北纵横集团、首钢迁安钢铁、包钢、明泰铝业、中冶集团以及俄罗斯马格尼托格尔斯克钢铁集团MMK、北方钢铁集团Sevelstal、新利佩茨克钢铁集团HLMK、耶弗拉兹钢铁公司Evras、白俄罗斯钢铁公司BMZ等国内外大型钢厂研制完成了上百条高质量整产线、全系列的配套减速机。与普瑞特在ESP无头轧制产线上建立深度合作，国内已建和在建的短流程ESP无头轧制产线减速机，90%由我公司设计、生产。棒线材领域，加强与西马克合作，不断地在棒线材领域向国际市场扎实迈进，先后承接了出口菲律宾、印尼、西班牙、墨西哥等多个棒线项目。

The company has been committed to the research, design, and manufacture of large-scale, high-precision hardened gear transmission devices for applications such as hot and cold rolled plate production lines, bar and wire production lines, and flexible transmission systems for sintering machines in the metallurgical industry. The company has cooperated with SMS, Primetals Technologies, Limited, IHI, Italy's POMINI, DANIELI, France's REDEX, China first heavy industries(CFHI), Changsha Design and Research Institute of Nonferrous Metallurgy(CINF), and other well-known enterprises and research institutes. It has successively developed hundreds of high-quality complete production lines and full series of supporting reducers for Bensteel Group Corporation Limited(BX STEEL), Shougang Group, Baoshan Iron & Steel Co., Ltd.(Baosteel), Tangshan Iron and Steel Co., Ltd.(HBIS), Southwest Aluminum Co., Ltd., Wuhan Iron and Steel Corporation, Shandong Weiqiao Aluminum and Power Co., Ltd, Ansteel, BX Steel, Rizhao Steel Holding Group Co., Ltd., Shandong Iron & Steel Group Co., Ltd, Fujian Dingsheng Iron and Steel Group Co., Ltd, Hebei Taihang Iron and Steel Group Co., Ltd, Hebei Zongheng Iron & Steel Group Co., Ltd, Shougang Qian'an Iron & Steel Company, Baogang Group, Henan Mingtai AL. Industrial Co., Ltd, Metallurgical Corporation of China Limited(MCC), as well as international companies such as Russia's PJSC Magnitogorsk Iron & Steel Works(MMK), Public Joint Stock Company Severstal(Sevelstal), HLMK Group, Evras, and Byelorussian Steel Works(BMZ). The company has established in-depth cooperation with Primetals Technologies China Ltd. on the ESP endless rolling production line. Ninety percent of the short-process ESP endless rolling production line reducers built or under construction in China are designed and produced by our company. In the field of bar and wire, we have strengthened cooperation with Siemag Siegener Maschinenbau AG(SMS) and have steadily advanced into the international market. We have successfully undertaken several bar and wire projects for export to the Philippines, Indonesia, Spain, Mexico, and other countries.

* 冶金行业国内重点客户 *

Domestic vips in metallurgical industry



* 冶金行业国外重点客户 *

Foreign vips in metallurgical industry



西马克

普锐特

IHI

达涅利

应用领域
Application field

Gearing interdependence
Moving future
齿齿相依 带动未来

CSSC 重齿公司

CONSTRUCTION MACHINERY

应用领域 工程机械

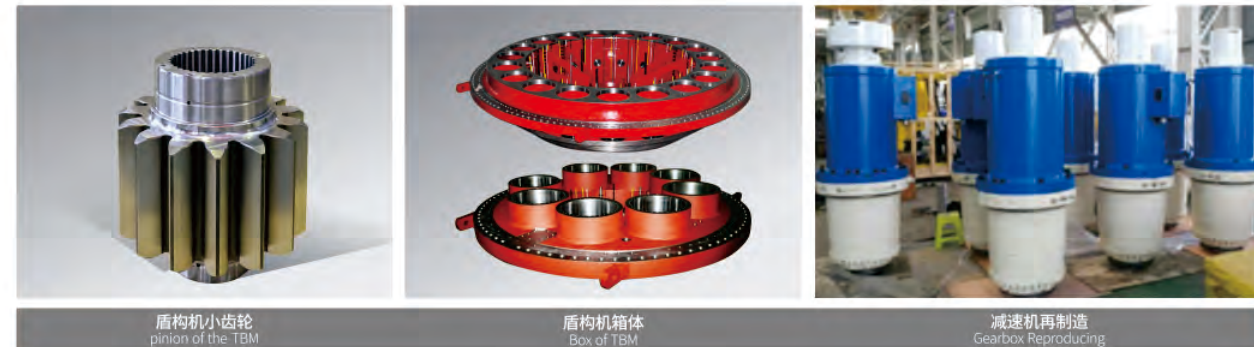
7



近年来，公司依靠自身的技术储备，积极拓展工程装备市场，与国内知名大型工程装备制造施工企业进行配套，先后开发了全覆盖TBM系列盾构机电驱、液驱主驱减速机，主驱动配套齿轮件，盾构机刀盘刀箱，盾构机主驱动系列箱体，顶管机系列箱体及配套件等产品。公司产品质量得到用户广泛认可，逐渐成为国内工程装备减速机及零部件配套服务的主要供应商。同时，公司在盾构机主机再制造减速机维修方面积极与各大主机使用单位开展项目合作，目前已取得良好业绩。

The company has successfully developed many engineering equipment products, including TBM series electrical / hydraulic driving gear unit for tunnel boring machine, gear and gear ring, tool box unit, driving box for TBM and pushing bench, etc.

The quality of these products has been widely recognized by customers. The company has gradually become the main gearbox supplier in engineering equipment and service in China. Also the company has well cooperation with the main TBM user in TBM gearbox reproducing maintenance.



* 工程机械行业国内重点客户 *

Domestic vips in Construction Machinery industry



铁建重工

中铁装备

中船重型

上海隧道股份



北方重工

罗宾斯(上海)地下工程设备

中铁一局

中铁隧道集团

ENVIRONMENTAL PROTECTION

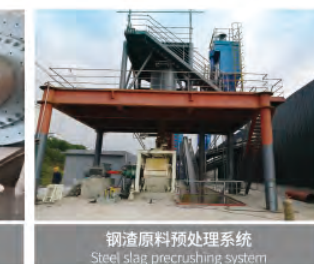
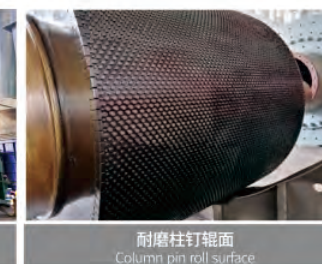
应用领域 环保

8



冶矿破碎行业

PRODUCTS APPLIED TO METALLURGICAL MINE CRUSHING



辊压机是一种基于料层粉碎原理的节能粉碎设备，具备产品粒度细、高效、低耗、能有效降低粉磨功等特点，主要应用于陶瓷、钢渣、铁矿以及水泥等行业。

Roller press is a kind of energy-saving crushing equipment based on the crushing principle of material layer. It has some characteristics such as fine particle size, high efficiency and low consumption, and reducing the grinding work of ore, etc.



环保固废处置行业

ENVIRONMENTAL SOLID WASTE DISPOSAL INDUSTRY



固废处置回收行业应国家号召而积极发展，已自主设计制造了多种单、双、四轴预处理关键设备，并研制了水泥窑协同处置SMP系统、大件垃圾处置回收、生活垃圾处理、废旧轮胎回收、餐厨垃圾回收预处理等多种系统解决方案，同时为客户提供个性化定制固废处置系统解决方案。

The waste disposal and recycling industry is called for active development in China, a variety of single, double and four-axis pre-processing equipment has been designed and manufactured. The cement kiln co-disposal SMP system, bulky waste disposal recycling, domestic waste disposal, waste tire recycling, kitchen waste recycling pretreatment and other system solutions had been developed also. At the same time, customized solid waste disposal system solutions provided to customers too.

制浆系统

PULP MAKING SYSTEM



公司可根据用户需要，针对玉米秸秆、小麦秸秆等各类生物质原料，定制化设计卸车、拆捆、筛分、破碎、制浆全自动预处理系统。核心装备及控制系统均由重齿公司自主研制，整个系统自动化程度高，破碎制浆效果佳，密封除尘效果好，刀具等磨损件寿命长，节能高效。

According to the needs of users, the company can customize the design of an automatic pretreatment system for unloading, unbaling, screening, crushing, and pulping of corn straw, wheat straw, and other biomass raw materials. The core equipment and control system are all independently developed by Chongchi. The entire system features a high degree of automation, excellent crushing and pulping performance, effective sealing and dust removal, a long service life for wear parts such as blades, and is energy-efficient and highly productive.

D

餐厨垃圾处理

KITCHEN WASTE TREATMENT



公司研发的餐厨（厨余）垃圾预处理系统，主要由接料斗、大物质筛分、破碎、制浆、渣料压榨及电气控制监测等设备系统组成，具有适用范围广，刀具寿命长，有机物及毛油提取率高，出渣含水率低等优点。可针对厌氧发酵、堆肥、养虫、有机饲料等不同领域后处理工艺系统进行定制化设计。

The kitchen (kitchen waste) waste pretreatment system developed by the company is mainly composed of hopper, large material screening, crushing, pulping, slag pressing, electrical control monitoring and other equipment systems. It has the advantages of wide application range, long tool life, high extraction rate of organic matter and crude oil, and low moisture content of slag. Customized design can be carried out for post-treatment process systems in different fields such as anaerobic fermentation, composting, insect breeding, and organic feed.

E

风电叶片处理

WIND TURBINE BLADE PROCESSING



退役风电叶片资源循环利用是重齿公司积极应对市场形势孵化的新兴产业，将退役风电叶片进行切割破碎及筛分，并通过专利技术将玻纤等高分子材料再生制造成其他工业原料或产品，解决风电叶片回收再利用难的问题。重齿公司提出的退役风电叶片资源循环利用解决方案，技术适用性强，配备撬装化切割破碎减容装备，结合多种高值化应用技术，确保全产业链具有较好的经济效益。

Decommissioned wind turbine blade resource recycling is an emerging industry actively developed by Chongchi in response to market conditions. The decommissioned wind turbine blades are cut, crushed, and screened, and polymer materials such as glass fiber are reprocessed into other industrial raw materials or products through patented technology, addressing the challenges of wind turbine blade recycling. The decommissioned wind turbine blade resource recycling solution proposed by Chongchi features strong technical applicability, equipped with skid-mounted cutting and crushing equipment for volume reduction, combined with various value-added application technologies, ensuring the entire industry chain achieves favorable economic benefits.

9 MINING INDUSTRY

矿业 应用领域

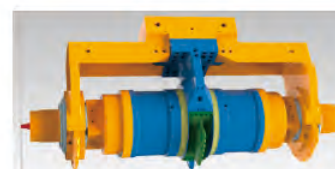
A 煤矿机械行业 COAL MINING MACHINERY INDUSTRY



无推刀槽人字齿减速机
non-relief groove herringbone cutting reducer



行走减速机
travel reducer



掘锚机截割减速机
excavating winchless cutting reducer



连采机减速机
Continuous miner reducer



半直驱刮板机一体机
Semi-direct drive scraper conveyor integrated machine



掘锚一体机减速机
Roadheader tunneling machine reducer



截割减速机
Cutting reducer

近年来，公司依靠自身技术储备，积极开拓煤矿机械市场，与山西煤科院、铁建重工等国内知名大型煤矿机械装备制造企业进行配套，先后开发用于高端掘进设备的无退刀槽人字齿截割减速机、掘锚机截割减速机、连采截割减速机，产品已覆盖560kW以下常用型号。配套用于行走、装载、刮板输送等设备的减速机已实现多批次稳定供货。同时响应国家节能减排的号召，与国内知名主机厂合作，在国内首先联合推出高度集成的半直驱刮板机一体机，在业界引起强烈反响。

In recent years, leveraging its own technical expertise, the company has actively expanded into the coal mining machinery market. By collaborating with prominent domestic industry leaders such as Shanxi Coal Science Research Institute and China Railway Construction Co., Ltd, the company has developed a series of advanced reducers for high-end excavation equipment, including herringbone cutting reducers without relief grooves, roadheader cutting reducers, and continuous miner cutting reducers. These products now cover commonly used models with power ratings below 560 kW. Furthermore, reducers for walking, loading, and scraper conveyor equipment have achieved stable multi-batch supply. In alignment with the national initiative for energy conservation and emission reduction, the company has partnered with renowned domestic OEMs to jointly introduce China's first highly integrated semi-direct drive scraper conveyor, which has garnered significant attention and acclaim within the industry.

矿山机械 MINING MACHINERY



塔式磨机行星减速机主要应用于金属矿石的二次粉磨、非金属矿石的细磨或超细磨、化工原料细磨等设备。我公司开发塔磨机减速机较早，现已升级到第二代JT系列。JT系列塔磨机减速机可实现功率覆盖200kW ~4500kW，速比覆盖20 ~100，最大输出扭矩达到7500kNm。

The tower mill planetary reducer is primarily used in equipment for secondary grinding of metal ores, fine or ultra-fine grinding of non-metallic ores, and fine grinding of chemical raw materials. Our company started developing tower mill reducers at an early stage and has now upgraded to the second-generation JT series. The JT series tower mill reducers can cover a power range of 200kW to 4500kW, with speed ratios spanning 20 to 100, achieving a maximum output torque of 7500 kN·m.



深海采矿

DEEP-SEA MINING



深海矿产采集车，是一种专门设计和制造用于深海矿产开采的无人操作车辆，主要目标是收集深海底部的矿产资源，如多金属结核、硫化物和磷酸盐等。对陆用采掘行走装备，我公司在煤矿采掘等行业已积累了丰富的设计研发和应用经验；与陆用采掘装备相比，深海采矿装备还必须克服海底高压环境，在减速机设计制造方面，需解决设备抗压、密封等难题。2023年，重齿公司联合多所高校和制造应用企业申报了国家重点研发计划，旨在解决海底移动式采矿装备所面临的难题。

The deep-sea mineral collection vehicle is an unmanned vehicle specifically designed and manufactured for deep-sea mineral extraction. Its primary objective is to collect mineral resources from the deep-sea floor, such as polymetallic nodules, sulfides, and phosphates. For land-based mining and walking equipment, our company has accumulated extensive design, development, and application experience in industries such as coal mining. Compared to land-based mining equipment, deep-sea mining equipment must also overcome the challenges of high-pressure underwater environments. In the design and manufacturing of reducers, issues such as pressure resistance and sealing must be addressed. In 2023, Chongchi, in collaboration with several universities and manufacturing enterprises, applied for the National Key Research and Development Program, aiming to tackle the challenges faced by mobile deep-sea mining equipment.



海洋钻井平台

GEARBOX FOR
OFFSHORE
DRILLING PLATFORMS



SJ265升降齿轮箱
SJ265 Lifting Gearbox



SJ450升降齿轮箱装置
SJ450 Lifting Gearbox

公司先后承担了工信部400英尺、发改委350英尺和科技部300英尺的海洋平台提升齿轮箱样机研制，并顺利通过型式试验。开发的海洋工程平台升降单元齿轮箱主要应用于生活服务平台、海洋钻采平台、风电安装船等项目。如SJ150齿轮箱应用于阿布扎比等生活服务平台项目，SJ160型齿轮箱应用于JANA等海洋钻采平台；SJ265型齿轮箱应用于华西村和天津港航等16MW级以上风电机组海上风电安装船平台。至此，公司已实现作业水深为200至450英尺的海洋钻井平台提升齿轮箱全覆盖。产品均通过了ABS或CCS的设计认证和产品载荷试验认证。

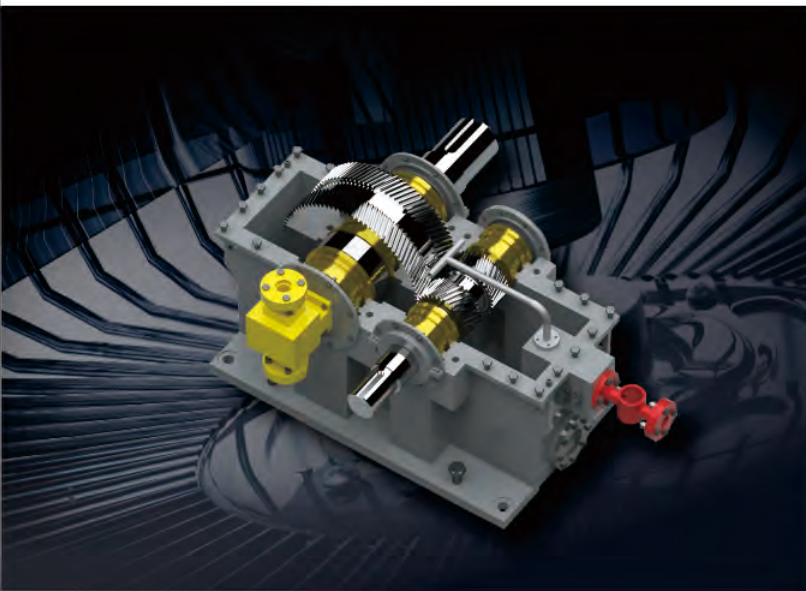
Our company has undertaken the development of prototype gearboxes for offshore platform lifting, which are 400ft long for the Ministry of industry and information technology, 350ft for the national development and reform commission, and 300ft for the ministry of science and technology, and have successfully passed type tests. The developed marine platform lifting unit gearbox is mainly used in projects such as lift service platforms, marine drilling and production platforms, and wind power installation ships. The SJ150 gearbox is applied to life service platform projects such as Abu Dhabi, and SJ160 gearbox is applied to marine drilling and production platforms such as JANA. The SJ265 gearbox is applied to offshore wind power installation platforms for wind turbines above 16MW level, such as Huaxi 1600 and Tianjin port 1800. At this point, our company has achieved full coverage of lifting gearboxes for offshore drilling platforms operating at depths 200ft to 450ft. Lifting gearbox has been successfully approved with design certificate and loading test certificate by ABS or CCS Societies.

MARINE
INDUSTRY

应用领域 海洋

10

Other Products



GSC系列高速箱 GSC Series High Speed Gearbox



GST系列高速箱 GST Series High Speed Gearbox



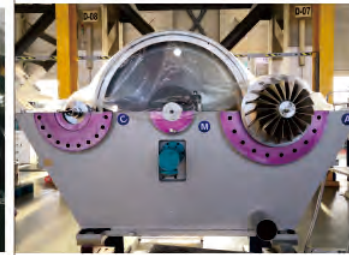
CQ359



GSC600



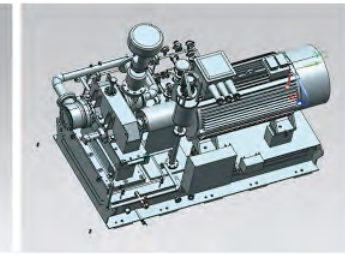
GSD系列高速箱 GSD Series High Speed Gearbox



整体齿轮式离心压缩机齿轮副 Integral Gear Centrifugal Compressor Gears



GSD450



GSD310F



公司从1997年开始从事高速齿轮传动的设计制造，具有专业的技术团队和先进的设计、分析和测试手段。致力与针对不同行业的高速齿轮传动装置提供相应的解决方案，能够自主设计满足API、AGMA、ISO和GB相关标准以及用户需求的定制化产品。公司推出的GS系列高速齿轮传动装置，主要用于燃机、汽轮机、压缩机、泵等机组配套设备中。高速齿轮传动装置的最大节线速度180m/s，最高转速80000r/min，最大传递功率85000kW。

Our company has been engaged in the design and manufacturing of high speed gear transmissions since 1997, with a professional technical team and advanced design, analysis, and testing methods, dedicated to providing corresponding solutions for high speed gear units in different industries, capable of independently designing customized products that meet API, AGMA, ISO, and GB standards as well as user needs. The GS series high-speed gear units are mainly used for gas turbines, steam turbines, compressors, pumps and other units. The maximum pitch speed of the high-speed gear is 180m/s, the maximum speed is 80000r/min, and the maximum transmission power is 85000kW.



Major clients



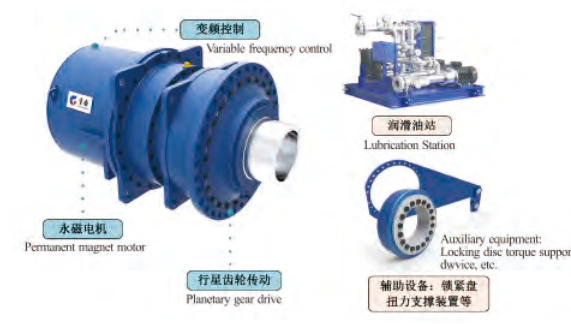
高速齿轮传动装置 HIGH SPEED GEARBOX



B 半直驱系统 SEMI DIRECT DRIVE SYSTEM



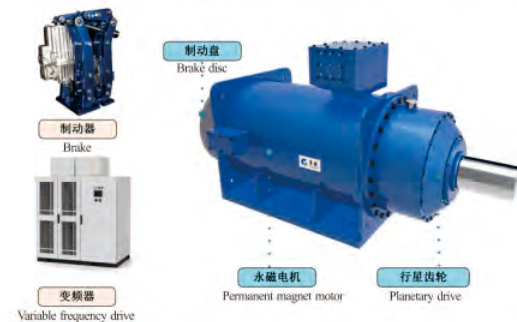
YLX立磨半直驱动力系统
YLX vertical mill semi direct drive system



YGW辊压机半直驱动力系统
YGW roller press semi direct drive system



BZML系列密炼机半直驱动力单元
BZML series semi-direct drive power unit for mixer



YBM球磨机半直驱动力单元
YBM ball mill semi-direct drive power unit

永磁半直驱动力系统(Permanent Magnet Semi-Direct Drive System)是一种将低速永磁同步电机与减速机集成一体化设计，直接驱动负载的新型动力技术，主要由永磁同步电机(PMSM)、减速机(Reducer)、变频控制(VFD)三部分组成。相较于永磁直驱系统，永磁半直驱动力系统在成本与可靠性等方面综合优势较为明显，具有系统效率高、节能高效、噪音振动小、功率密度高、可靠性高、智能控制、维护成本低等优点。

重齿公司全新研发的永磁半直驱动力技术，充分发挥齿轮传动高扭矩密度、永磁电机高效节能、变频系统控制智能化的优势，将整个驱动系统进行深度集成。研发的永磁半直驱产品广泛适用于建材、煤矿、冶金、电力、化工等高能耗领域。

The Permanent Magnet Semi-Direct Drive System (PMSD) is a novel power technology that integrates a low-speed permanent magnet synchronous motor (PMSM) with a reducer in a unified design to directly drive the load. It primarily consists of three components: the permanent magnet synchronous motor (PMSM), the reducer, and the variable frequency drive (VFD). Compared to the permanent magnet direct drive system, the permanent magnet semi-direct drive system demonstrates significant comprehensive advantages in terms of cost and reliability. It offers benefits such as high system efficiency, energy savings, low noise and vibration, high power density, high reliability, intelligent control, and low maintenance costs.

The newly developed permanent magnet semi-direct drive technology by Chongchi fully leverages the advantages of high torque density in gear transmission, high efficiency and energy savings of permanent magnet motors, and the intelligent control of frequency conversion systems, achieving deep integration of the entire drive system. The developed permanent magnet semi-direct drive products are widely applicable in high-energy-consumption industries such as building materials, coal, metallurgy, electric power, and chemical engineering.

工业通用齿轮箱行业 GEARBOXES FOR GENERAL-PURPOSE



JH型工业通用箱
JH-series General-purpose Industrial Gearbox



Z系列工业通用箱
Z-series General-purpose



CK型工业通用箱
CK-series General-purpose Industrial Gearbox



MLJ270密炼机减速机
MLJ270-series Reducer

公司研制开发的新一代HB通用齿轮箱(CH、CK)、传统通用齿轮箱(JH、JK)、标准齿轮箱(ZDY、ZLY、ZSY)、橡塑机械齿轮箱(MLJ、MLD、LJC)、提升机齿轮箱(MTP、QTD)等系列工业齿轮箱，以功率密度大、结构紧凑、模块化程度高、互换性能好、使用可靠等优点，广泛运用于水电、火电、风电、石油、橡塑机械、建材、矿山、起重、提升、运输和国防工业等领域。

The company has developed a new generation of industrial gearboxes, including the HB universal gearbox series (CH, CK), traditional universal gearbox series (JH, JK), standard gearbox series (ZDY, ZLY, ZSY), rubber and plastic machinery gearbox series (MLJ, MLD, LJC), and hoist gearbox series (MTP, QTD). These gearboxes are widely used in industries such as hydropower, thermal power, wind power, petroleum, rubber and plastic machinery, building materials, mining, lifting, transportation, and national defense, thanks to their advantages of high power density, compact structure, high modularity, excellent interchangeability, and reliable performance.

Equipment Introduction

公司可对各类型号不同的大型高精度硬齿面齿轮进行冷热加工、检测、试验，能够加工和检测最大直径5000mm、模数45mm、精度DIN3级的齿轮类零件以及重量达80t、同轴度0.03mm、长度1m范围内定位精度0.005mm、垂直度0.04mm/m的箱体类零件；最大立式车削直径Φ6300 mm、最大加工高度4000mm的盘类零件；最大车、磨削直径Φ2500mm、最大加工长度8000mm的盘类零件；最大镗铣床可加工8000mm~12000mm零件产品；具备热处理直径4000mm、重量50t以内的大型零件；试验台最大试验能力22.5MW。

公司拥有机械加工、热处理、试验、计量、检测等各类生产设备1670余台(套)。包括：德国DIN2、DIN3级精度系列成形磨齿机、德马吉五轴加工中心、意大利帕玛、英赛大型高精度落地镗铣床、格里森高速滚齿机及高精度插齿机等进口设备，8X12米龙门镗铣床、6.3米数控车床、大型滚齿机等国产大型加工设备；Φ4m渗碳、淬火、回火炉、Φ8m油槽等热处理设备；德国莱兹PMM303010高精度三坐标检测机、卡尔蔡司MMZG404030大型三坐标测量机、克林贝格P350、P300齿轮测量中心；2X3300KW、2X6500KW、2X1850KW、2X1580KW、1X6500KW、6X3300KW、1X22.5MW等大中型齿轮箱性能试验台等。

The company is capable of performing cold and hot processing, inspection, and testing on various types of large-scale, high-precision hardened gears. It can process and inspect gear components with a maximum diameter of 5000 mm, a module of 45 mm, and a precision level of DIN3, as well as housing components weighing up to 80 tons, with a coaxiality of 0.03 mm, a positioning accuracy of 0.005 mm within a 1-meter length, and a verticality of 0.04 mm/m. Additionally, the company can handle disc components with a maximum vertical turning diameter of 6300 mm and a maximum machining height of 4000 mm; disc components with a maximum turning and grinding diameter of 2500 mm and a maximum machining length of 8000 mm; and parts with a maximum boring and milling capacity of 8000 mm to 12000 mm. It is also equipped to perform heat treatment on large parts with a diameter of up to 4000 mm and a weight of less than 50 tons. The testing benches have a maximum testing capacity of 22.5 MW.

The company owns more than 1,670 sets of production equipment, including machining, heat treatment, testing, metrology, and inspection equipment. These include imported equipment such as German DIN2 and DIN3 precision series form grinding machines, DMG Mori five-axis machining centers, Italian Pama and Innse large high-precision floor-type boring and milling machines, Gleason high-speed hobbing machines, and high-precision gear shapers. Domestic large-scale machining equipment includes 8X12 meter gantry boring and milling machines, 6.3-meter CNC lathes, and large hobbing machines. Heat treatment equipment includes 4-meter carburizing, quenching, and tempering furnaces, and 8-meter oil tanks. Inspection equipment includes German Leitz PMM303010 high-precision coordinate measuring machines, Carl Zeiss MMZG404030 large coordinate measuring machines, and Klingelnberg P350 and P300 gear measuring centers. The company also has large and medium-sized gearbox performance testing benches with capacities of 2X3300 kW, 2X6500 kW, 2X1850 kW, 2X1580 kW, 1X6500 kW, 6X3300 kW, and 1X22.5 MW.



* 齿加工设备 Gear manufacturing equipment



德国NILES 公司高精度数控成型磨齿机 ZP50
(最大加工直径Φ5000mm)
Germany NILES Gear Profile Grinding Machine
(Max. Φ5000mm)



美国格里森—普法特公司数控高速滚齿机P3200
America Gleason NC High Speed Hobbing Machine P3200



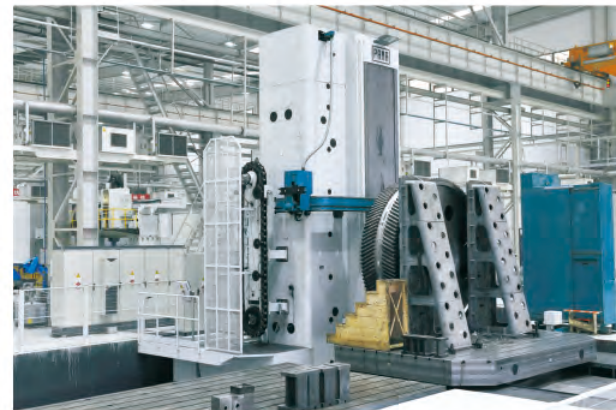
德国NILES公司高精度数控成型磨齿机 ZPI 30
(磨内齿最大加工直径Φ3000mm)
Germany NILES Gear Profile Grinding Machine
(Internal grinding, Max. Φ3000mm)



德国NILES公司生产的高精度数控成型磨齿机ZP40/4000(可磨内齿)、ZP20/2000(可磨内齿)、ZP80/800、加工精度DIN3级
Germany NILES Gear Profile Grinding Machine ZP40,ZP20,ZP80(capable of grinding internal gear),DIN-3Class



德马吉五轴加工中心
Demag five-axis machining center



意大利PAMA公司高精度数控落地镗铣床
Italy PAMA Floor-type NC Boring & Milling Machine

* 数控车床 NC Turning Machine



数控双柱立式车床 CKD5263×40/63
(最大车削直径 Ø 6300mm)
NC Turning Machine (Max. Ø 6300mm)



数控卧式车床
NC Horizontal Turning Machine

* 特大型数控设备 Extra-large NC equipment



数控立式复合磨床H322 (最大磨削外径φ1600mm)
Vertical NC Combined Grinding Machine (Max.O.D. φ1600mm)



捷克SKODA公司大型数控落地镗铣床: 镗杆直径: φ225 行程 X=11500
Y=4500 Z=1600 Czech SKODA Large-scale Floor-type
Boring & Milling Machine: Rod Diameter:φ225 Travel:X=11500 Y=4500 Z=1600



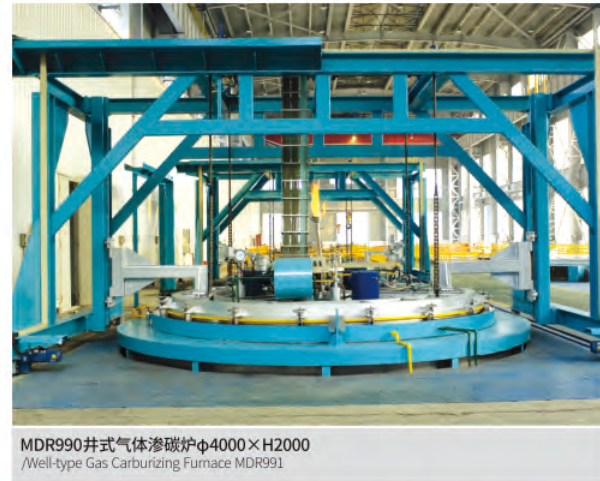
车铣复合加工中心 VTM φ3500
Combined Machining Center (Turning & Milling)



深孔钻镗床 DDBI 60×60/16
(钻镗孔最大长度6000mm 镗孔最大直径φ600mm
钻孔最大直径φ110mm)
Deep Hole Drilling & Boring Machine
(Max.Length 6000mm, Max.Boring Dia. φ600mm,
Max.Drilling Dia. φ110mm)



* 热处理 Heat Treatment



MDR990井式气体渗碳炉 $\phi 4000 \times H2000$
Well-type Gas Carburizing Furnace MDR991



气体淬火炉 $\phi 4000 \times H2000$
Gas Carburizing Furnace



MDR991井式加热回火炉 $\phi 4000 \times H3000$
Well-type Tempering Furnace MDR991

* 物流 Logistics



自动化物流系统
Automatic Logistics System

* 试验设备 Testing equipments

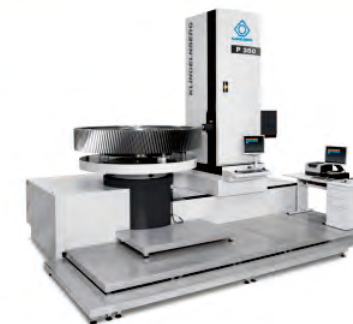


16MW+6.5MW试验台
Test Bench(16MW+6.5MW)



2X6500KW试验台(最大试车功率13MW)
Test Bench(Max.Power 13MW)

* 检测设备 Testing equipment



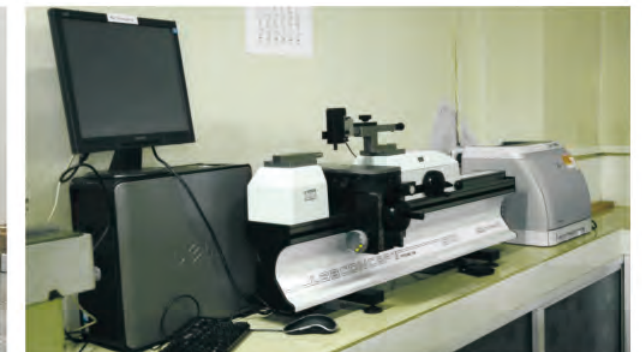
德国克林贝格P350齿轮检测中心 $\phi 3500$
Klingelberg P350 Gear Inspection Center 3500



齿轮测量中心P300 $\phi 3000$
Gear Measuring Center



德国蔡司MMZ G 40 40 30 三坐标检测仪
Germany 3D Measuring Apparatus



瑞士精密测长仪LABCP500
LABCP500 Switzerland Length Measuring Instrument

Reputation

- ★ 自1992年以来，先后15次获“重庆工业企业50强”（1992年至今）
- ★ 全国用户满意企业（1994年）
- ★ 中国机械500强（2005年）
- ★ 模范职工之家（2005年）
- ★ 重庆市质量效益型企业（2005年）
- ★ 全国五一劳动奖状（2006年）
- ★ 重庆市先进基层党组织（2006年）
- ★ 国家认定技术中心（2006年）
- ★ 全国文明单位（2009年）
- ★ 全国企业管理创新示范单位（2009年）
- ★ 国庆60周年阅兵保障服务先进集体（2009年）
- ★ 重庆市国企献奖（2010年）
- ★ 总装分公司军品班荣获中央企业红旗班组标杆（2010年）
- ★ 中央企业先进基层党组织（2011年）
- ★ 全国模范劳动关系和谐企业（2011年）
- ★ 全国实施卓越绩效模式先进企业（2012年）
- ★ 机加分公司镗钻工段镗铣班荣获全国工人先锋号（2014年）
- ★ 纪念中国人民抗日战争及世界反法西斯战争胜利70周年阅兵装甲装备保障突出贡献（2015年）
- ★ 重庆市两化融合管理体系贯标示范企业（2016年）
- ★ 改革开放40年建材机械行业优秀企业（2018年）
- ★ 国家级博士后科研工作站（2018年）
- ★ 建国70周年中国建材机械行业杰出企业（2019年）
- ★ 中国齿轮行业“最具影响力企业”（2019年）
- ★ 重庆市五四红旗团委（2019年）
- ★ 中国齿轮行业最具影响力企业（1989-2019年）
- ★ 五星优秀合作单位（2020年）
- ★ 工人先锋号（2020年）
- ★ 重庆市智能制造标杆企业（2021年）
- ★ 高新技术企业（2022年）
- ★ 军工系统安全生产标准化一级单位（2022年）
- ★ 重庆市文明单位（2022年）
- ★ 中央企业青年文明号（2023年）
- ★ 2021年度绿色工厂（2023年）
- ★ 两化融合AAA级认证的企业（2023年）
- ★ 重庆市职工之家市域标杆（2024年）

- ★ YJ牌永进-盖斯林格弹性阻尼联轴器荣获国家质量奖审定委员会颁发的国家银质奖章。（1989年）
- ★ GW系列船用齿轮箱荣获国家质量奖审定委员会颁发的国家银质奖章。（1990年）
- ★ 永进纳维勒斯GW系列船用箱荣获国家质量奖审定委员会颁发的国家银质奖章。（1990年）
- ★ 盖斯林格减振器联轴节（大型专用设备）荣获中国船舶工业总公司颁发的科技进步奖二等奖。（1994年）
- ★ 渗碳防护技术应用研究荣获中国船舶工业总公司颁发的科技进步奖二等奖。（1994年）
- ★ SCG025可逆转船用齿轮箱荣获中国船舶工业总公司颁发的科技进步奖三等奖。（1994年）
- ★ VBX-150立磨减速机荣获中国船舶工业总公司颁发的科技进步奖三等奖。（1996年）
- ★ C12V150ZAL柴油机荣获中国国防科学技术工业委员会颁发的国防科技进步奖一等奖。（2000年）
- ★ 052B型首舰后传动装置工艺工装研制荣获中国国防科学技术工业委员会颁发的国防科技进步奖三等奖。（2001年）
- ★ 兆瓦级风力发电增速齿轮箱关键的技术研究和应用荣获重庆市人民政府颁发的重庆市科技进步奖二等奖。（2007年）
- ★ GWC7085倒顺离合船用减速机荣获重庆市人民政府颁发的重庆市科技进步奖三等奖。（2009年）
- ★ 风力发电专用齿轮箱成套技术及产业化荣获重庆市人民政府颁发的重庆市科技进步奖一等奖。（2009年）
- ★ 双机并车离合船用齿轮箱关键技术及产业化荣获重庆市人民政府颁发的重庆市科技进步奖二等奖。（2010年）
- ★ “海洋工程多功能船用离合齿轮箱关键技术及应用”荣获中国海洋工程咨询协会海洋工程科学技术奖二等奖（2012）
- ★ 高性能船舰动力传动关键技术及应用荣获重庆市人民政府颁发的重庆市科技进步奖经济发展类二等奖。（2013年）
- ★ 重庆齿轮箱有限责任公司荣获重庆市人民政府颁发的重庆市科技进步奖创新类二等奖。（2013年）
- ★ 高效环保立磨动力传动系统关键技术及产业化荣获重庆市人民政府颁发的重庆市科技进步奖二等奖。（2014年）
- ★ 一种船用齿轮箱集成阀荣获第16届中国专利奖优秀奖。（2014年）
- ★ 辊压机用新型行星减速机关键技术研究及应用荣获重庆市人民政府颁发的重庆市科技进步奖三等奖。（2015年）
- ★ 重庆齿轮箱有限责任公司荣获重庆市人民政府颁发的重庆市企业技术创新奖一等奖。（2015年）
- ★ 偏航、变桨传动装置关键技术及产业化荣获重庆市人民政府颁发的重庆市科技进步奖二等奖。（2016年）
- ★ 大功率传动齿轮箱传动与推进系统关键技术研究及运用”荣获国家科学技术进步二等奖。（2016年）
- ★ “大型多功能船用齿轮箱关键技术及产业化”荣获中国造船学会科技进步二等奖。（2017年）
- ★ “精密绿色数控制齿关键技术及装备”荣获重庆市科技进步一等奖。（2017年）
- ★ “复杂修形齿轮精密数控加工关键技术与装备”荣获国家科学技术进步二等奖。（2018年）
- ★ “联合动力传动装置关键技术研究及产业化”荣获中国船舶工程学会一等奖。（2018年）
- ★ “离岸型高可靠性5MW海上风电增速齿轮箱研发团队”成功评为“重庆英才”创新创业领军人才——创新创业示范团队”。（2019年）
- ★ “舰船联合传动系统关键技术及产业化”荣获重庆市科技进步二等奖。（2020年）
- ★ 中国船舶工业行业协会会员单位功勋会员（2021年）
- ★ 中国机械工业科学技术奖一等奖（2022年）
- ★ 全国建材机械行业技术革新奖一等奖（2022年）
- ★ 中国建材机械行业杰出企业（2022年）
- ★ 大型盾构掘进机高功率密度行星齿轮减速器——TBM系列特等奖（2023年）
- ★ 高可靠核电循环水泵用齿轮箱的研发荣获合力杯第二届全国机械工业产品质量创新大赛金奖（2023年）
- ★ “合力杯”第二届全国机械工业产品质量创新大赛金奖（2024年）
- ★ JLW815大型智能化立式辊磨机减速机，科学技术成果，JK鉴字（2023）第2146号，CMIF-20232146（2024年）
- ★ 超大型智能化立磨减速机关键技术研究与应用荣获机械工业科学技术奖二等奖（2024年）

Service Guarantee

公司连续多年被中国质量管理协会用户委员会评为“全国用户满意企业”。公司拥有了一支技术过硬、经验丰富、能力全面的服务工程师队伍，主要负责产品的现场技术指导、安装、调试和维护保养等工作，分别在北京、上海、广州、武汉、沈阳、兰州、西安、乌鲁木齐、大连、台州及福州等地设有售后服务网点，在新加坡、印度、土耳其、加拿大等国设有办事处。公司秉承“以客户为中心、合作共赢”的理念，提供优质、高效的服务。对于产品质量问题，公司将在4小时内予以回复，在12小时内派人前往。

此外，公司成立了风电运维事业部，专门从事风电产品三包、有偿服务，专注于风电齿轮箱巡检定检、维护调试、故障诊断、维修技改、备品备件供应、润滑油更换以及整机返厂维修和升级优化等全生命周期服务，并在山东潍坊、内蒙古通辽、新疆哈密、山西大同、云南曲靖等地设立服务站，提供覆盖全国的风电运维服务。

The company has been awarded the title of "National Customer Satisfaction Enterprise" by the User Committee of the China Quality Management Association for many consecutive years. The company has a team of highly skilled, experienced, and versatile service engineers who are primarily responsible for on-site technical guidance, installation, commissioning, and maintenance of products. The company has established after-sales service centers in Beijing, Shanghai, Guangzhou, Wuhan, Shenyang, Lanzhou, Xi'an, Urumqi, Dalian, Taizhou, and Fuzhou, as well as offices in Singapore, India, Turkey, Canada, and other countries. Upholding the philosophy of "customer-centricity and win-win cooperation," the company provides high-quality and efficient services. For any product quality issues, the company will respond within 4 hours and dispatch personnel within 12 hours.

Additionally, the company has established a Wind Power Operation and Maintenance Division, specializing in warranty services and paid services for wind power products. The division focuses on providing full lifecycle services, including regular inspections, maintenance and commissioning, fault diagnosis, repair and technical upgrades, spare parts supply, lubricant replacement, and complete machine refurbishment and optimization. Service stations have been set up in Weifang, Shandong; Tongliao, Inner Mongolia; Hami, Xinjiang; Datong, Shanxi; and Qujing, Yunnan, offering nationwide wind power operation and maintenance services.



Traffic

公司地处重庆市郊，离厂区5公里有火车站及长江水运码头，离厂区50公里有重庆机场。同时有自己的运输公司。

The company is located in the suburb of Chongqing city, about 5km away from the railway station, Yangtze River and 50km from Chongqing airport. Meanwhile the company has its own transportation team.



齿 齿 相 依 ★ 带 动 未 来

GEARING INTERDEPENDENCE
MOVING FUTURE

策划设计：党建人事部 技术中心 销售总公司

翻 译：技术中心 国际贸易中心

Planning and Design: Party Building and Human Resources Department,
Technology Center, Sales Corporation.
Translation: Technology Center, International Trade Center.

———— ★ ————