



Part 1

Introduction to Weihua Group









Weihua Honors 500+

- National Advanced Grassroots Party Organizations for Creating Excellence and Striving for Excellence
- National Civilized Unit
- Demonstration Enterprise of Single Product Manufacturing Champion
- National Quality Benchmark
- Top 100 Machinery Industry Companies in China
- Top 500 Chinese Manufacturing Enterprises
- National Green Factory
- National Industrial Design Center
- National-recognized Enterprise Technology Center
- National Local Joint Engineering Research Center

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Complete Categories, Diverse Types, and Complete Qualifications

The product covers 10 major series and over 200 categories

Applied in over 500 industries across 31 major categories, including aerospace and military industry, mechanical metallurgy, port and railway, and petrochemicals.

To serve national key projects such as the Olympic Games, the West East Gas Pipeline, the South to North Water Diversion Project, the Hangzhou Bay Cross Sea Bridge, and the new generation nuclear power plant.

Our products are exported to over 130 countries and regions.





Weihua cranes for China's Defense and Aerospace

Jiuquan, Taiyuan, Xichang, Wenchang

4 major satellite launch base lifting equipment manufacturer

Successfully assisted the Shenzhou series spacecraft, Long March series rockets, Chang'e, and Tiangong series probes in their successful spaceflight





Part 2

Core Advantages of Weihua Group

R&D / Intelligent Manufacturing / Service





Weihua Group has built a firstclass domestic and world leading research and development center and pilot base

33 national and provincial R&D platforms

Develop high-end intelligent equipment, core key components, and industrial intelligent control software





Academic leader: Academician of the CAE Member

Zhang Tiogang, Li Peigen, Ma Yushan

The largest technology research and development team in the lifting industry with over 1400 people

6 foreign experts

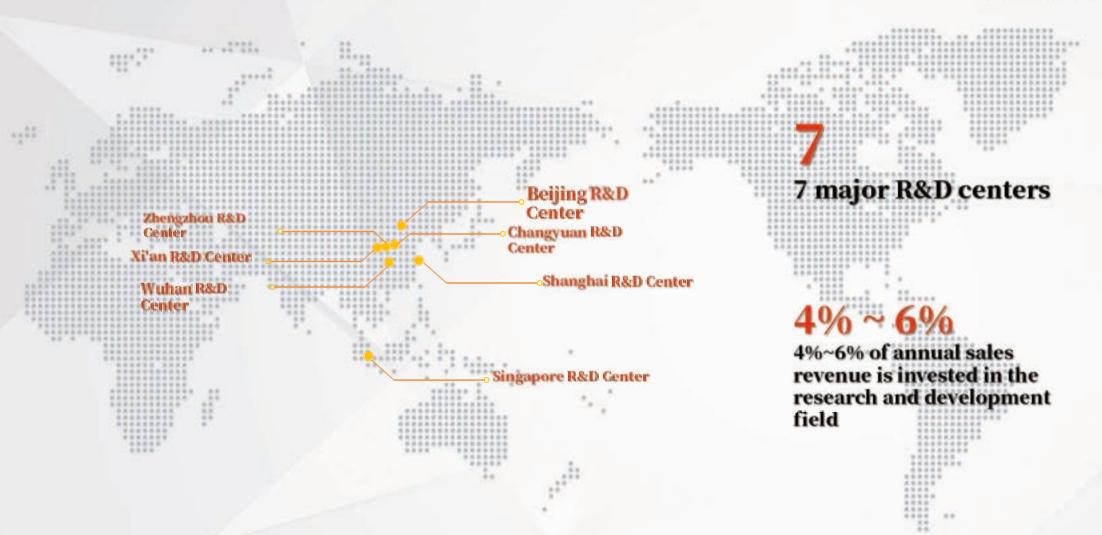
29 professor level senior engineers

18 postdoctoral fellows and over 400 doctoral and master's degrees

More than 500 engineers

More than 700 highly skilled talents 11/64







National Science and Technology Support Plan



2 National Torch Program

- Research and Application of Key Technologies for Robot Welding Production Lines for Large Structural Companents of Construction Vinchinery
- Research on Common Technologies of Lightweight Bridge Cranes
- Research on the Promotion and Application Technology of Lightweight Bridge Crame
- Research on Lightweight and Noise Reduction Technology of Gear Transmission Devices for Large Wine Hoisting Equipment

National 863 Plan

 New intelligent large grab dredger

Research on Lightweight Technology of Cranes

 Research on Dual Drive AC Variable Frequency Tire Crane Technology





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1400+ authorized patents

118 invention patents

50%+ of the total number of patents in the industry

Ranked No.1 in the crane industry

Data source: China Heavy Machinery Industry Association





河南省科学技术进

为贵那河南省科学技术进步主奏符 此证书.

项目名称: 西州东北省政治教化会自己起源的

從助等級; 玄等集

技 災 者。河北2年近型机械股份有效



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NO.K HIGGIST 河南省科学技术讲步奖 为表彰河南省科学技术进步奖获 得者。特赖发此证书。 項目玄称。基于全別环轉确定位的複雜及智能控制 特性的系列全自动起重机开发 美励等级: 氨等奖 获 奖 者: 阿南卫华重型机械股份有限公 证书号。 2019-1-027-001/01



中国机械工业科学技术奖 证书

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为表彰中国机械工业科学技术 奖获得者,特颁发此证书。

基于多假同步抓取智能控制技术的轧钢换 辊起重机

获奖单位: 河南卫华重型机械聚份有限公司

证书编号: D1904018-01



130 scientific and technological achievements have been identified

International leading 4

International advanced 6

World record 1

135 provincial and ministerial level scientific and technological progress awards

Participated in 127 international, national, industry, local, and group standards





Weihua Group has introduced high-end production and processing equipment, and built three major manufacturing bases in Changyuan, Zhengzhou and Jiangsu, as well as six globally advanced intelligent factories.

Construction of automated main beam, end beam welding production line, automated coating production line, pioneering the lifting industry discrete equipment flexible manufacturing precedent













Main beam robot welding production line





End beam robot welding production line





Intelligent Painting Line









100000+

Annual production capacity of intelligent lifting and logistics equipment and ancillary products more than 100,000 units (sets)

70 +

Inspection report is recognised in more than 70 countries

300 +

Various types of experimental instruments, equipment more than 300 (sets)

180 +

180 major control nodes to develop strict process standards and testing standards





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Customer First

Value Creation

Weihua is committed to becoming a global leading material handling equipment manufacturer and system solution provider, adhering to the "customer first, create value" service concept, to provide customers with high quality and efficient service and support!





The industry's first 5G industrial Internet platform

Achieve lifting product design optimisation, remote monitoring, fault diagnosis, predictive maintenance, remote operation and maintenance service applications.

Weihua Big Data Centre has accessed more than 35,000 lifting equipment, covering 29 provinces and Southeast Asia.

Crane Index

Provide accurate "crane index" for the government, industry and customers, and provide important support for macroeconomic situation analysis.





Domestic service network more than 390

24-hour customer service hotline

400-779-0686

Service demand, complaints and feedback, comments and suggestions, reply within 24 hours

Service personnel, all day, anytime standby

Warranty period No holiday maintenance service



Part 3

Typical Applications of Weihua Products

I、100t tower crane serves the construction of "Aerospace Power".

Weihua's innovative R&D 100t tower crane serves Taiyuan Satellite Launch Base, integrating 8 core technologies such as the world's first "anti-swing precise positioning control technology".

The equipment has large lifting capacity, remote control, high reliability, good safety and high positioning accuracy. It applies independent and controllable localised electrical control system, adopts domestic PLC for actuators and develops module program on domestic Kirin system; the control system and upper computer system all adopt localised hardware and software to protect national secrets.



II, 2000t crane assists offshore wind power construction





The 2,000t rail mounted gantry crane made in 2022 for China General Nuclear Corporation (CGNPC) serves the largest offshore wind power home port in China - Lufeng Offshore Engineering Base, and is the largest tonnage gantry crane for offshore wind power projects in the world at present.

The equipment adopts AWS standard and double trolley design, which can guarantee the safe lowering of lifted weights to the ground under extreme conditions, and is equipped with industry-leading crane management safety monitoring 5G data and information management system, which can realize the overall statistics of data, real-time monitoring of product conditions, historical data querying, rapid repair of product failures, predictive maintenance of equipment and other functions.

III、The world's largest indoor lifting equipment -Overhead crane with span WEIHUA
70m for nuclear power



In 2015, Weihua developed the world's largest indoor lifting equipment for nuclear power-overhead crane with span of 70m for China Nuclear Power Research and Design Institute.

The equipment combines mechanical and electronic technology for the first time, applying microelectronics technology, power electronics technology, fuzzy control technology to the driving and control systems of the machinery. Systematically design of the human, machine and environment, using capsule driver's cabin and equip it with visually human-machine exchange panel to achieve optimal performance of human-machine system. The hook group can be quickly lifted and lowered with no load or light load by using overclocking control. This equipment is one of the typical applications of Weihua products with international competitiveness.

IV. Green and environmentally friendly industry cranes makes contributions to WEIHUA Low-Carbon China



Double girder overhead crane for garbage is one of the green and environmentally friendly industry specific cranes developed by Weihua. It has served Chongqing Sanfeng waste incineration power generation project.

Laser+ultrasonic dual recognition technology with the features of fully automatic operation, fully automatic recognition, fully automatic precise positioning for charging and uncharging, fully automatic parking and lifting, fault self-diagnosis and fully automatic weighing, can continuously operate in harsh environments such as high temperature, strong corrosion, heavy wear, and high load. The comprehensive technical level of this equipment has reached international leading level. 32/64

V. World record - gantry crane with lifting height of 400 meters





Entrusted by China Water Resources First Bureau, the project is designed and manufactured by Weihua Group for Zhanghewan Reservoir Energy Storage Power Station, which is a supporting project for 2008 Beijing Olympics.

It is the first time in China that the inclined shaft method has been changed to vertical shaft method in water conservancy projects with steel lining pipes exceeding 200m. It solves technical problems such as large storage capacity of steel wire ropes, disorderly arrangement, rope turning, asynchronous lifting points and entanglement

VI. The world's first set multifunctional graphite electrode grouping and loading and load



In 2022, multifunctional graphite electrode assembling and unloading Crane manufactured by Weihua made a magnificent appearance at Lanzhou Municipal Government China Baowu Strategic Cooperation and Baofang Carbon Material 100000 ton Ultra High Power Graphite Electrode Project Production Ceremony. This is the first application in China's carbon industry and the world's first assembled crane.

The intelligent grouping equipment for graphite electrodes adopts SOLIDWORKS 3D simulation technology, thermal radiation induction technology, visual recognition and processing technology to achieve reconstruction of the centerline of graphite electrodes before sintering, solving the industry problem of different axes of graphite electrodes after sintering.

VII. Anti-sway technology - assisting in the testing of Beijing Winter Olympics Fifth Rings



In February 2022, Weihua Group provided high-end intelligent overhead cranes to assist in Beijing Winter Olympics.

This equipment applies the world's first and internationally leading anti-sway technology, achieving control accuracy of 2 millimeters. It successfully completed the brightness test of the Fifth Ring at a certain space base in Beijing, providing strong support for magnificent opening ceremony of the Beijing Winter Olympics.

VIII、Port Freight Power - Zhejiang Petrochemical Ship to Shore Crane





Weihua's port machinery are widely used in 38 ports around the world, including Hainan Port, Huanghua Port. Remote control of container cranes on the shore is one kind of highly intelligent product which can achieve intelligent operation, life prediction, data collection, analysis, remote status monitoring, active fault diagnosis and fault warning functions. Compared to traditional STS, work efficiency is improved by 20% and energy consumption is reduced by 15%. The complete solutions of Weihua's port machinery has filled the industry gap in intelligent upgrading of

Four link gantry crane exported to Indonesia





IX. Largest tonnage in China-Four girder six rail metallurgical crane with lifting capacity of



In 2022, four girder six rail metallurgical crane with the largest tonnage of 500t independently developed by Weihua Group serves Tangshan Ganglu Iron and Steel Co., Ltd.

Compared to traditional metallurgical cranes, the metallurgical crane uses full process control with ultra strict and high standards and advanced energy feedback technology in the industry for electrical system. Its superior performance perfectly meets the metallurgical operation needs of customers in the workshop.

X. Intelligent unmanned overhead crane - fully automatic electromagnetic exerbead crane v

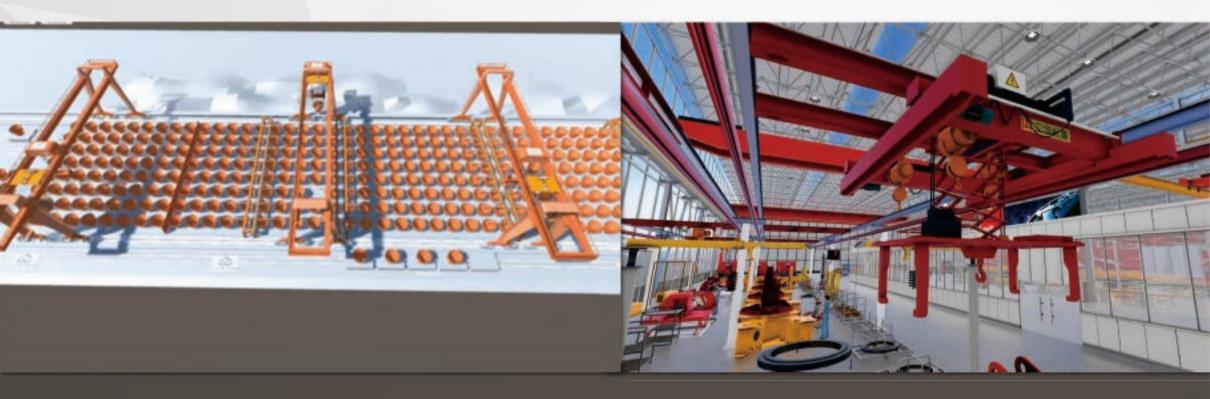


The intelligent unmanned crane independently developed by Weihua Group for the construction industry is customized and developed for the prefabricated construction industry. In 2021, Weihua provided Guangxi Construction Engineering with a fully automatic electromagnetic double girder overhead crane with carrier-beam.

This equipment can achieve automatic identification and replacement of various types of lifting equipment, automatic storage and storage of building materials such as steel wire coils and threaded pipes, automatic loading and transportation of semi-finished structural panels. It is equipped with some functions such as automatic identification and replacement of various types of lifting equipment, automatic handling and loading of plate structures, automatic stacking and storage of steel wire coils, automatic stacking and storage of bundled

XI、"Digital Twin Platform - AICrane DT" only applied in industry





Weihua is the only enterprise in the lifting industry that applies digital twin technology. AlCrane DT can integrate and calculate data from four domains: perception, simulation, control, and visualization, ensuring the speed and accuracy of analysis and deduction in the twin world.

At present, the platform has successfully applied in unmanned overhead crane projects such as Jinchuan Group and a cement plant in Hainan. The AlCrane DT and AlCrane unmanned overhead crane system are deeply integrated to obtain real-time physical information of the equipment and operation status of the entire workshop, achieving multi-channel, multi-dimensional and multi-form interactive

XII. Intelligent programmable rail-mounted container gantry crane at Jiangyi Jiwijang Hong











Part 4

Weihua Group's Strategy

Internationalization/Digitization/Intelligence/Greenization



Create international brand, Revitalize Chinese industry.

In the new era, Weihua will firmly implement the new development concept of "innovation, coordination, green, openness, and sharing", build a new development pattern, and continue to make efforts in high-end manufacturing, intelligent manufacturing, and green manufacturing on the basis of independent innovation and self-reliance, integrating into the global network with a more ambitious attitude.

Rooted in China, the Global radiation.

In the future, Weihua will actively integrate domestic and foreign resources, further explore domestic and international markets, continuously strengthen the three core advantages of "R&D, Intelligent manufacturing and Service", further promote the transformation and upgrading of digitalization and intelligence, and continuously deepen the practice of full lifecycle service of equipment+scenario. Sharing the independent new Chinese crane standards with all of the world.

国际布局 GLOBAL LAYOUT



100+

100+marketing agencies

130+

130-countries and regions exported

10

After-sales teams in 10 countries

.....

5

5 assembly bases around the world

....

10

10 parts warehouses around the world

7*24h

full-time service per day

2000+

2000+service engineers







Enhance strategic resilience through global layout Develop business in cranes and other fields. speed up overseas merger and acquisition, build overseas factories.

By 2025, the business in new field will account for more than 50% of total international business

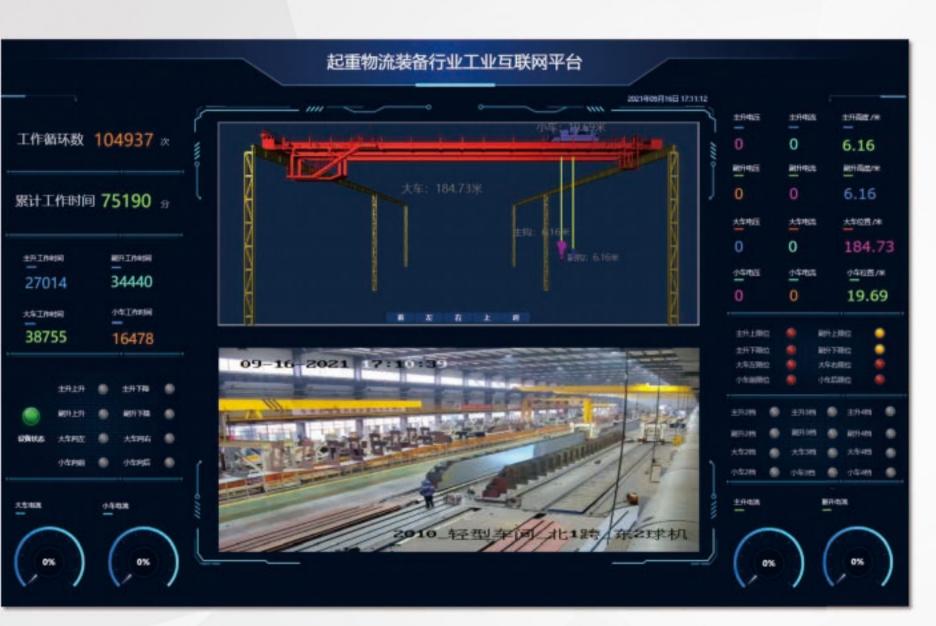
数字转型 DIGITAL TRANSFORMATION







With "customer-oriented" as the goal of digital transformation, Weihua independently develops a digital support platform, operational analysis data platform, HR system, CRM system, FSSC, and implements the MES system, PLM system and ERP system. Through the uses of digitization and information technology, the reorganization and optimization of the core business process is completed and a digital company decision-making and execution system is constructed.





Reduce equipment management costs by 10%

Reduce equipment maintenance frequency by 25%

Reduce equipment failure rate by 30%



sales service through industrial internet platforms

Realize the transformation from manufacturing products to providing project contracting and remote maintenance services

52/64

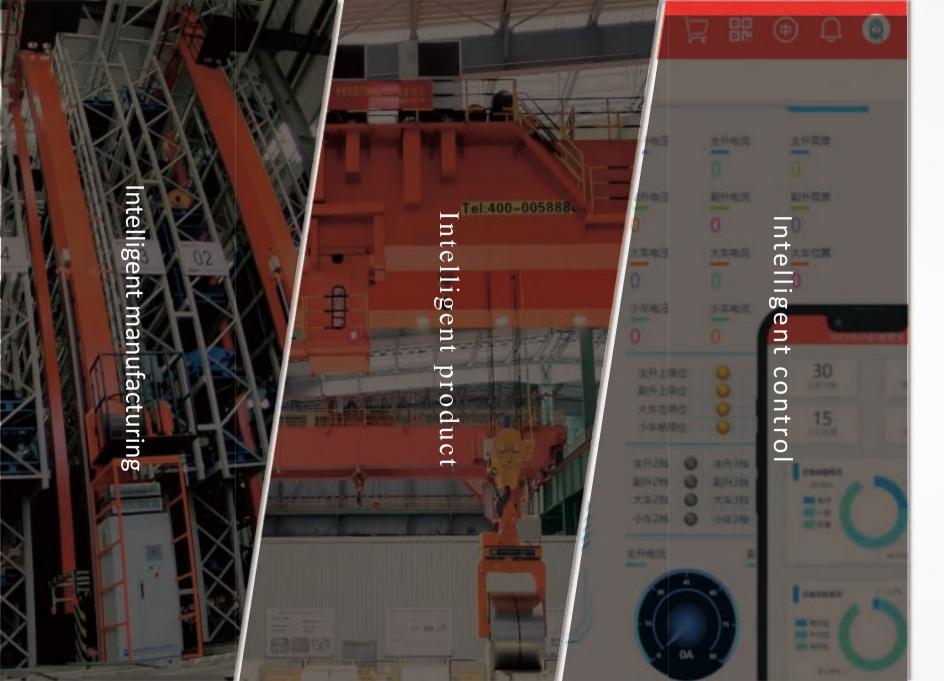
智能制造

INTELLIGENT MANUFACTURING





Relying on advanced technologies such as 5G, artificial intelligence, and visual recognition, focusing on the R&D of software control system and integration of intelligent control system in the material handling industry, Weihua Group will provide intelligent handling solutions for industries such as steel, logistics, building materials, and mechanical manufacturing, which will consolidate its leading position.





Achieving the intelligent manufacturing from uncoiling to production completion

Developing intelligent products such as intelligent crane handling machinery, intelligent robots, and intelligent garages.

Independently developing WEIHUA crane manager, intelligent grab system, automated dock handling system to achieve intelligent control.



Focusing on the transformation and upgrading needs of enterprises, regions, and industries

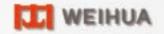
Building an intelligent manufacturing system based around factories and industrial supply chain.

Carrying out multi-scenario, full-chain and multi-level application demonstration

promoting new models and new business forms of intelligent manufacturing.

绿色发展

GREEN DEVELOPMENT





Create more national green factories and beacon factories

Achieve standard discharge of the "three Wastes" through adopting the most advanced equipment and technology

Establish an intelligent and green painting production line, which is the first to achieve intelligent rust removal and painting operations for heavy-duty equipment indoors in China





Further expand the range of green products

The key industrialization technology of the lightweight bridge crane has been listed in the "Recommended Catalogue of National Industrial Energy-Saving Technical Equipment" (2019)

Compared to traditional cranes, the new-generation Crane reduces its weight, height, and comprehensive energy consumption by 15% to 30%





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The electrical anti-sway control technology developed independently is in the international advanced level.

The hoist with lifting height of 400m set a world record.

Alcranes control systems make lifting robots a reality

The new-generation crane redefine new concepts of Chinese standard cranes.

In the future, Weihua will continue to focus on equipment manufacturing and promote the continuous updating of crane technology.



Part 5

Cooperation between WEIHUA & SINOSURE

Symposium/Risk Management/Market Development/Project Development

2022 Henan Province Key "Going Global" Enterprises Collaborative Development Symposium







- On the morning of July 13, 2022, the 2022 Henan Province Key Going Global Enterprise Collaborative Development Symposium jointly prepared by China Export&Credit Insurance Corporation Henan Branch and Weihua Group Co., Ltd. was held in Weihua Intelligent Industrial Park.
- As the only policy insurance company in China that specializes in handling export credit insurance business, China Export&Credit Insurance Corporation (Sinosure) will prioritize the role of export credit insurance as its most important political task. It will leverage the role of policy export credit insurance and increase support and services in information, underwriting, policy financing, and other aspects for key overseas enterprises in Henan Province
 - ——Chen Zhiqiang, Assistant General Manager of China Export&Credit Insurance Corporation Henan Branch
- Five suggestions for Henan enterprises to accelerate their pace of going global: Firstly, establish a standardized communication mechanism to achieve information exchange and resource sharing. The second is to share overseas market resources, unite and go global, enhance the cohesion of Henan enterprises, and create a living circle for Chinese enterprises. The third is the sharing of high-quality overseas agent channels, which enables enterprises to quickly increase market coverage and significantly reduce channel risks in overseas market development. The fourth is to fully leverage the advantages of each enterprise, jointly develop overseas major customers, provide complete solutions, and jointly maintain and enhance the brand image of Chinese enterprises. The fifth is to form groups for overseas investment and mergers and acquisitions, increase the chances of project approval, and reasonably control risks.

Exploration of the Cooperation Model between Weihua KEI WEIHUA and China Export&Credit Insurance Corporation



- Risk management:
- Credit investigation: Conduct a credit investigation on potential customers. With a grasp of the customer's credit situation, our company is more proactive in business negotiations.
- Risk coverage:
- Short term export credit insurance: It covers the risk of small amount orders through short-term export credit insurance, especially the use of autonomous limits, providing great convenience in the insurance process.
- Special Insurance: In August 2022, the Kazakhstan Mittal Steel project was insured for a total amount of 10.77 million US dollars.
- **Market development/support:**
- Understand the target market through overseas bill of lading reports, including market overview, customer information, and other key information.
- **Project development:**
- Project development: For newly developed large projects and clients, we invite China Export&Credit Insurance Corporation and banks to intervene in advance, providing customers with comprehensive solutions, reflecting our company's strength.
- In cooperation project: Saudi Aramco Project, with a total amount of 54 million yuan



Thank you for your attention!

Weihua is committed to contributing a world-class brand to the high-end equipment manufacturing industry