GUIDE

Stock Name: Guide Technology
Stock Code: 301633

Guide the Drive Innovation

Intellectualize the Future of Industry

Become a Top-Ranking Supplier of Industrial Automation Products and Solutions

GUIDE Intelligent
Guide the Intelligent Future

Intelligent Overhead Crane
Product Introduction

WeChat

Wuhan Guide Intelligent Technology Co., Ltd.

Company Profile

Wuhan Guide Intelligent Technology Co., Ltd. is a high-tech enterprise under Wuhan Guide Technology Co., Ltd. (Stock name: Guide Technology; Stock code: 301633). GUIDE provides system solutions for intelligent and unmanned operation of lifting and transportation equipment in industries such as ports, railways, construction, metallurgy, chemical engineering, and electric power.

GUIDE's intelligent control system for lifting and transportation equipment enables unmanned operation of various types of lifting and transportation equipment. The intelligent control systems for container gantry cranes (RTG/RMG), Ship-to-Shore cranes (STS), portal cranes, ship loaders, ship unloaders, bucket wheel stacker reclaimers, and hold cleaning loaders are widely applied in the port industry. The intelligent control system for rail-mounted gantry cranes (RMG) is widely used in the railway industry. The full-process management and control system for bulk cargo terminals is applied in the port industry, supporting the construction of smart bulk terminals. The intelligent overhead crane intelligent control system is widely used in industries such as construction, metallurgy, chemical engineering, and electric power.

GUIDE adheres to innovation-driven development and has obtained a series of technical patents and software copyrights, as well as received numerous prestigious industry technology awards. Among them, products related to intelligent control systems have won awards such as the "First Prize of the China Port Science and Technology Progress Award", and the "First Prize for Technological Progress" from the China Ceramic Society of the China Building Materials Federation. Furthermore, GUIDE has received numerous innovation honors, including the "China Automation Annual Innovation and Growth Enterprise" award. GUIDE has also been recognized as one of the "Top 10 Intelligent Information-Based Enterprises in China's Cement Industry", and "Top 100 Chinese Innovative Building Materials Enterprises".

GUIDE will continue to uphold the business philosophy of "Quality and Service", practice the core values of "Creating value for customers, benefiting employees, rewarding shareholders, and contributing to society", and move forward firmly toward the vision and mission of "Guide the drive innovation, intellectualize the future of industry, become a top-ranking supplier of industrial automation products and solutions".

Intelligent Grab Overhead Crane

Intelligent Clamp Overhead Crane

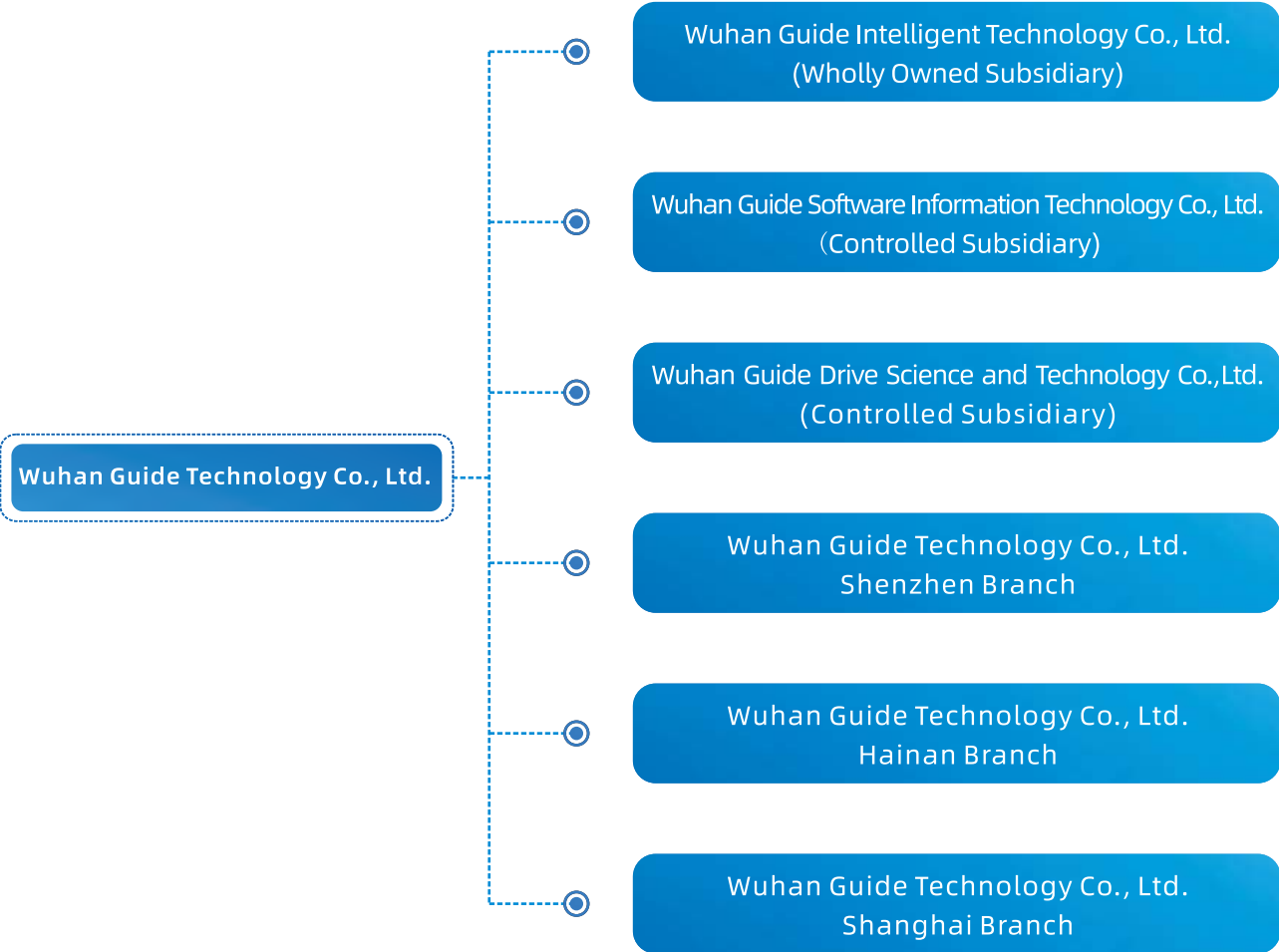**Intelligent Magnetic/ Vacuum Lifter Overhead Crane**

Contents

Organizational Structure

Wuhan Guide Technology Co., Ltd.

- Wuhan Guide Intelligent Technology Co., Ltd. (Wholly Owned Subsidiary)
- Wuhan Guide Software Information Technology Co., Ltd. (Controlled Subsidiary)
- Wuhan Guide Drive Science and Technology Co.,Ltd. (Controlled Subsidiary)
- Wuhan Guide Technology Co., Ltd. Shenzhen Branch
- Wuhan Guide Technology Co., Ltd. Hainan Branch
- Wuhan Guide Technology Co., Ltd. Shanghai Branch

Qualifications and Honors

Technical Strengths

control, path planning, anti-sway positioning algorithms, and high-precision motion control, have been fully integrated into its intelligent control system products, enabling efficient and coordinated automated operations for large fleets of equipment. By continuously focusing on intelligent technology development, GUIDE has built a comprehensive patent protection system that covers core algorithms, system architecture, and hardware design, and has obtained a total of 87 patents (including 18 invention patents) and 23 software copyrights. These intellectual property achievements not only effectively protect technological innovation but also significantly enhance its core competitiveness and contribute to the advancement of intelligent solutions across the industry.

Guide Intelligent has a highly skilled R&D team. Led by senior researchers with PhDs and Masters degrees, the core team also includes experienced engineers in electrical, mechanical, and information technology fields. The team members possess not only strong professional expertise but also interdisciplinary capabilities, enabling them to carry out comprehensive R&D and optimization across the entire project process, encompassing mechanical structure design, electrical system integration, and intelligent algorithm development. Through efficient collaboration, the team has successfully overcome numerous technical challenges, providing strong intellectual support for new product development.

In areas such as intelligent port equipment, Guide Intelligent has established a mature technical application system. GUIDE's independently developed core technologies, including multimodal perception fusion, multi-machine collaborative

110+ Patents and Software Copyrights

20+ Provincial and Ministerial Technology Awards

50+ PhD and Master's Degree R&D Team

Intelligent Grab Overhead Crane System

Introduction

The Intelligent Grab Overhead Crane is used in bulk material warehouses for raw coal, grain, ore, waste, etc. Through advanced perception technology, digital modeling technology, AI intelligent technology, safety management and other technologies, the bulk material warehouse management system integrates with plant DCS (Distributed Control System) and logistics system to achieve real-time scanning of material piles, the crane automatically identifies and generates 3D simulation models of stockpiles. With these capabilities, the Intelligent Grab Overhead Crane can efficiently carry out operations such as automatic feeding, discharging, unloading, and mixing of bulk materials.

Applicable Industries: construction materials, chemical engineering, metallurgy, mining, and power industries. The system enables full-automatic operations such as feeding, discharging, and unloading.

Applicable Materials: limestone, auxiliary materials, mixed materials, raw coal, solid waste, household waste, phosphate ore, sulfur, tailings, desulfurized gypsum, copper concentrate, iron concentrate, bauxite, aluminum hydroxide, and spodumene.

Applicable Feeding Methods: truck, belt conveyor, loader, and train.

Applicable Discharging Methods: open-type silo, flat grid silo, inclined grid silo, dual-outlet silo, single-outlet silo, truck and train.

Spreader Type: hydraulic two-jaw grab, mechanical two-jaw grab, hydraulic multi-jaw grab, mechanical multi-jaw grab.

Key Parameters

1. Automated operation rate: 100%
2. Automation rate of automatically generated operation commands: up to 98%
3. Material profile scanning accuracy: ±100 mm
4. Inventory repeatability error: within 3%
5. Grab full-load rate: 90%
6. Communication system packet loss rate: ≤1%
7. Reduction in manual operation: 90%
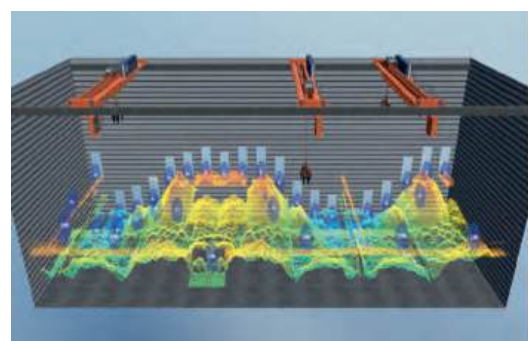

Two-jaw Grab

Six-jaw Grab

Integrated Warehouse with Intellligent Overhead Crane

Software System

3D Modeling

Remote Monitoring and Supervision

Intelligent Grab Overhead Crane System

Technical Features

Guide Intelligent's independently developed intelligent grab crane control system for bulk material storage integrates multi-dimensional intelligent functions. The system provides a human-machine interface and connects with the DCS to receive and automatically execute operational commands, ensuring data interoperability throughout the entire process.

Through multimodal perception fusion technology, combined with laser and radar detection methods, it achieves 3D modeling of the storage area and utilizes a highly efficient optimal path algorithm to plan operational trajectories. Its multi-crane collaboration capabilities improve maximum efficiency by 35%, while ensuring high bucket fill rates through real-time material modeling. A data visualization platform and mobile app also support real-time monitoring of equipment status, operation progress, and energy consumption data, comprehensively enhancing the intelligent level of storage operations and management efficiency.

Application Benefits

1.Reduced Labor Costs: The intelligent grab overhead crane enables safe, efficient, and full-automatic operations, reducing manual labor input by up to 90%.

2.Improved Working Environment: Operators work comfortably from the central control room with no need for on-site presence, minimizing exposure to harsh environments and occupational health risks.

3.Enhanced Safety Protection: A full-automatic safety protection system increases operational safety by detecting potential hazards in real time, effectively preventing accidents and reducing incident rates.

4.Equipment Protection: Stable crane operation minimizes abnormal wear caused by aggressive operation. Remote real-time monitoring helps identify potential failures timely.

5.Energy Saving and Consumption Reduction: Intelligent scheduling optimizes operation paths, reduces idle tome, and reduce power consumption.

6.Automation Upgrade: The company's automation level is enhanced, integrating the plant's information platform to achieve seamless integration of upstream and downstream cement production.
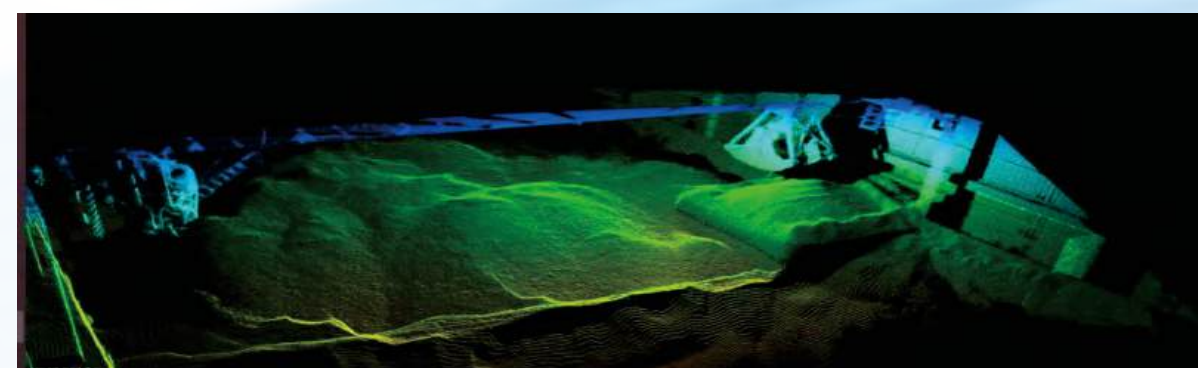

Data Visualization

Mobile App

Multi-crane Collaborative Operation

Multimodal Perception Fusion

Intelligent Grab Overhead Crane System

Application Scenarios

1. Cement
Auxiliary raw material warehouse, raw coal warehouse, alternative fuel warehouse, household waste co-processing plant, cement mill mixed material warehouse, gypsum warehouse, limestone warehouse.

2. Metallurgical Concentrate
Iron concentrate warehouse, slag warehouse, copper concentrate warehouse, alumina warehouse, zinc concentrate warehouse, tailings warehouse, coal shed.

3. Chemical Raw Material
Sulfur ore raw material warehouse, sulfur warehouse, phosphate ore raw material warehouse, fertilizer warehouse, phosphogypsum warehouse.

4. Thermal Power Coal
Coal shed, slag warehouse, waste screening warehouse.

Cement Integrated Warehouse

Mining Concentrate Warehouse

Chemical Plant Sulfur Warehouse

Thermal Power Plant Coal Shed

Non-ferrous Copper Concentrate Warehouse

Alternative Fuel Warehouse

Intelligent Clamp Overhead Crane System

The Intelligent Clamp Overhead Crane is designed for warehouses handling steel coils, anode carbon blocks, electrolytic copper, and other heavy bulk items. By integrating with the depot management system, as well as the plant DCS/L3 and logistics systems, it enables seamless data exchange and automated operation.

Key Parameters

1. Automatic operation rate: 100%

2. Automation rate of automatically generated operation commands: up to 98%

3. Material profile scanning accuracy: ±100 mm

4. Inventory repeatability error: within 3%

5. Communication system packet loss rate: ≤1%
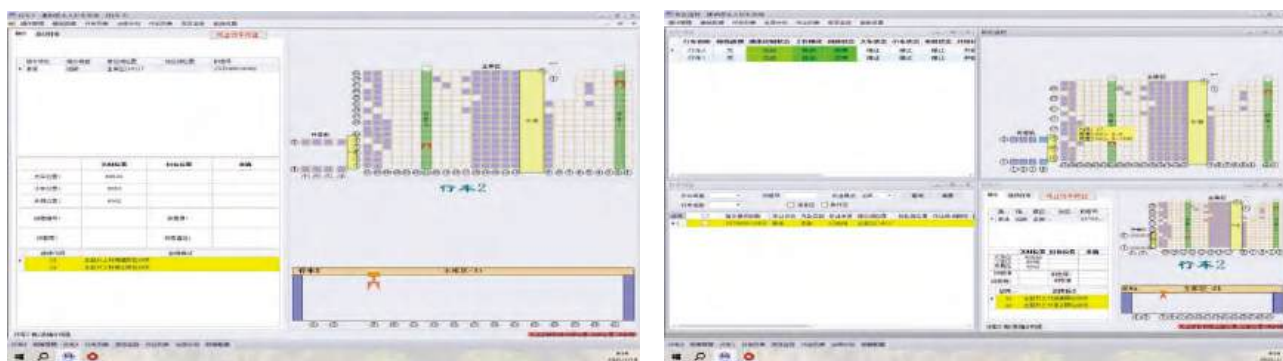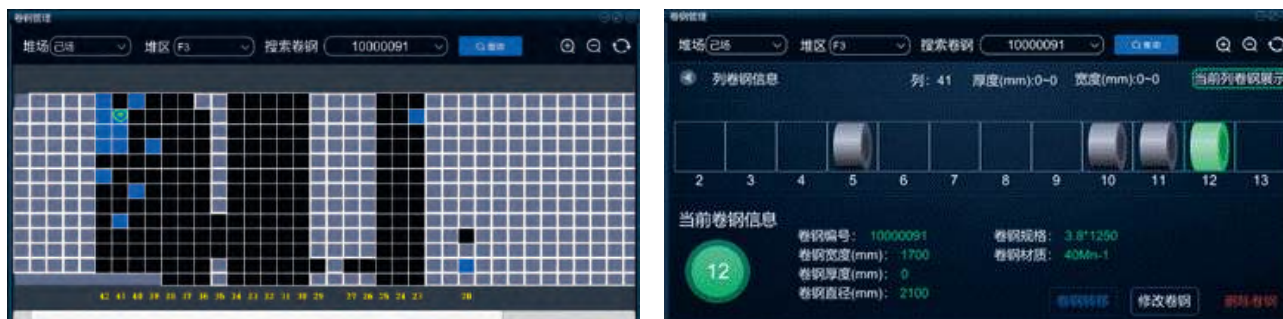
Anode Carbon Block Warehouse   Coil Warehouse   Coil Clamp

Anode/Cathode Plate Clamp   Segment Clamp   Slab Clamp

Precision Management

Central Control Room

Intelligent Clamp Overhead Crane System

Technical Features

The system integrates multiple intelligent functions: the depot management system updates material information (such as rebar and steel plates) in real time with high accuracy, while intelligent inventory management automatically issues alerts for shortages or overstock. The equipment scheduling system allocates tasks by priority and distance, dynamically plans paths, and supports multi-crane collaboration to avoid collisions and idle runs. The material management system ensures full-process traceability.

Steel coils, saddles, and vehicles are scanned for precise positioning, with coil ID recognition achieved through barcode tracking. The clamp calculates the optimal closing point to ensure stable coil grabbing. The 3D modeling continuously updates a real-time digital map, ensuring consistency between physical and virtual environments. The crane is equipped with industrial cameras and structured light emitters to achieve visual alignment. The segment clamp adopts a symmetrical double-arm design with inner elastic pads to adapt to segments of different curvatures. Vehicle guidance ensures efficient vehicle-crane docking, comprehensively enhancing operational efficiency and safety.

Application Benefits

1.High-Efficiency Operation: Automatically completes the entire process of grabbing, transferring, and placing materials such as steel coils, minimizing manual intervention and significantly improving turnover efficiency.

2.Precise Operation: With advanced scanning and vision technology, the system achieves accurate positioning of coils, segments, and other materials. The clamp precisely controls closing timing, ensuring stable grabbing with minimal error.

3.Intelligent Scheduling: Multi-crane collaborative operation with dynamic path planning avoids collisions and idle runs, while optimized task allocation maximizes overall productivity.

4.Precision Management: Integrated coil ID recognition and inventory systems enable full-process traceability, while 3D modeling ensures real-time synchronization of operational data with the physical environment.

5.Safe & Reliable: Adaptive to various material specifications, clamps feature buffer designs to protect workpieces, while multiple collaborative safety mechanisms guarantee secure operations.
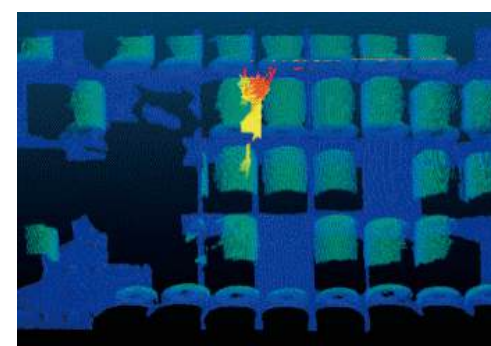
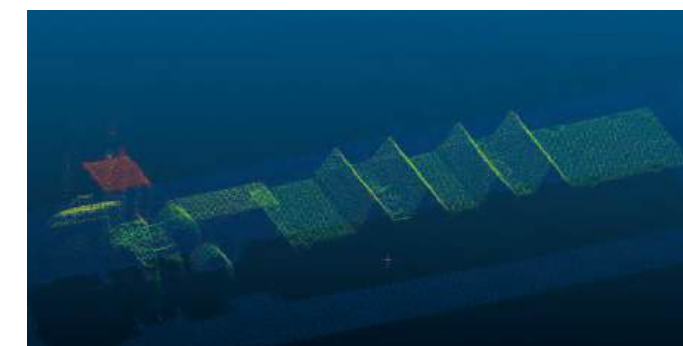Dynamic Path Planning

Multi-crane Collaboration
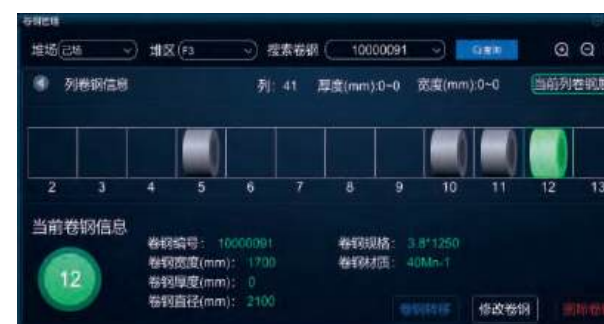
Material Management System

3D Modeling

Steel Coil Scanning

Saddle Scanning

Vehicle Guidance
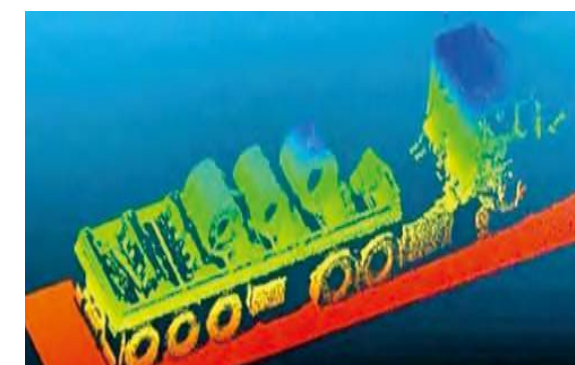
Vehicle Scanning

Intelligent Clamp Overhead Crane System

Application Scenarios

1. Steel Coil Production Plant
Finished coil warehouse, electroplating intermediate warehouse, cold-rolled coil warehouse, coil transit warehouse.

2. Logistic Park and Port
Coil transit warehouse.

3. Non-ferrous Metal Wire and Coil
Electrolytic workshop, copper coil warehouse, anode and cathode material warehouse.

4. Segment Crane
Segment in tunnel boring machine.

Coiled Steel Logistics Warehouse

Segment
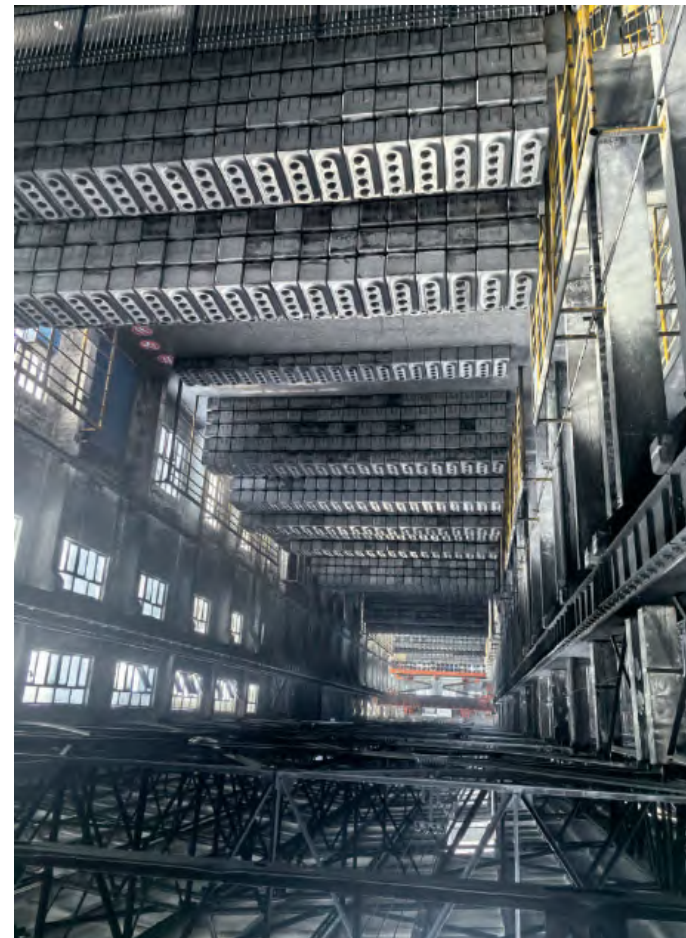
Anode Carbon Block Warehouse

Segment in TBM

Steel Coil Production Plant

Wire Coil

Slab

Intelligent Magnetic/Vacuum Lifter Overhead Crane System

Introduction

The Intelligent Magnetic/Vacuum Lifter Overhead Crane is designed for steel plate warehouses. It integrates advanced perception, digital modeling, AI-based intelligence, and safety management technologies. By connecting the depot management system with the DCS and logistics systems, it enables seamless data exchange and coordinated operations. With these capabilities, the Intelligent Magnetic/Vacuum Lifter Overhead Crane can efficiently carry out operations such as warehousing (inbound & outbound), stock shifting, and vehicle loading/unloading.

Key Parameters

1. Automated operation rate: 100%

2. Automation rate of automatically generated operation commands: up to 98%

3. Material profile scanning accuracy: ±100 mm

4. Inventory repeatability error: within 3%

5. Communication system packet loss rate: ≤1%

Software System

Vacuum Lifter
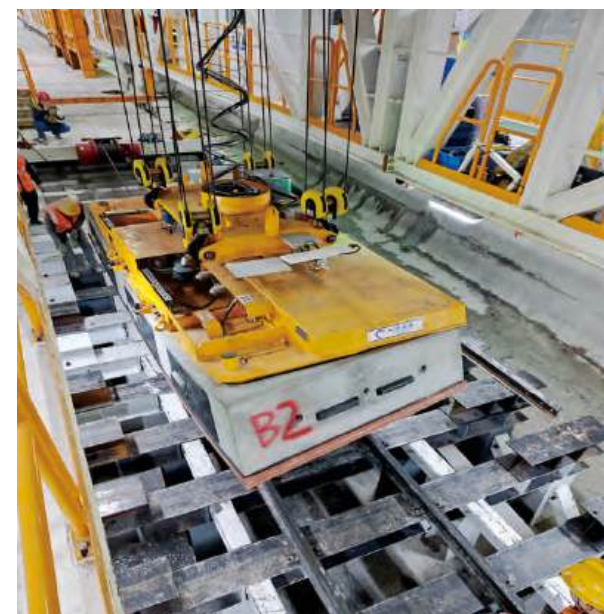

Bar Warehouse

Plate Warehouse

Central Control Room

Intelligent Magnetic/Vacuum Lifter Overhead Crane System

Technical Features

The Intelligent Magnetic/Vacuum Lifter Overhead Crane System integrates multiple core technologies. The software platform enables equipment control and human-machine interaction, and can be linked to the DCS. Depot management and scheduling functions ensure multi-crane collaboration and efficient storage and retrieval.

Vehicle scanning and modeling, and guided positioning, combined with visual recognition and laser steel plate scanning, enable precise material loading and unloading. Electromagnetic lifters improve metal lifting efficiency.

A comprehensive safety protection system, including anti-collision radar, overload protection, and emergency stop mechanisms, ensures all-around operational safety while enabling full-process automated management of materials.

Application Benefits

1.Automated Operations: Eliminates manual intervention, the system autonomously completes the entire material handling, transporting, and placement process, reducing manual intervention and labor intensity.

2.Precise Positioning: Leveraging visual recognition and laser scanning technologies, the system achieves accurate positioning of materials and operation locations, ensuring minimal grabbing errors and improved operational precision.

3.Efficient Collaboration: Multiple cranes can operate collaboratively with optimized path planning, avoiding interference and enhancing overall efficiency while reducing material turnover time.

4.Safe & Reliable: Equipped with multiple protection mechanisms including anti-collision radar, overload protection, and emergency stop systems, the crane continuously monitors operations to eliminate potential hazards and safeguard both personnel and equipment.

5.Intelligent Management: Linked with the depot management system, the system provides real-time updates of material information, enabling precise inventory control, supporting remote monitoring and scheduling, and enhancing intelligent management.

Depot Management System

Equipment Management

Steel Plate Warehouse

Rebar Warehouse

Visual Recognition
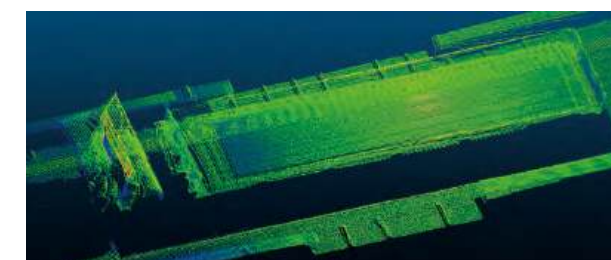
Vehicle Scanning

Steel Plate Number Recognition
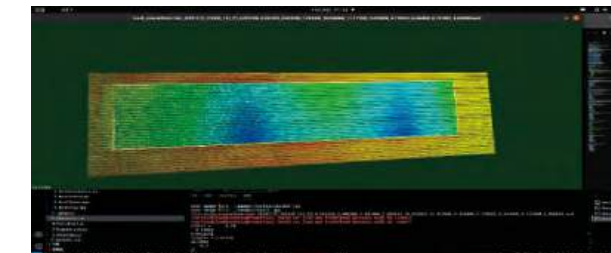
Steel Plate Scanning

Safety Protection

License Plate Recognition

Intelligent Magnetic/Vacuum Lifter Overhead Crane System

Application Scenarios

1. Steel structure manufacturing plant plate warehouse

2. Shipyard plate warehouse

3. Steel production plant plate warehouse, rebar warehouse

4. Logistics park, port plate warehouse, rebar transit warehouse
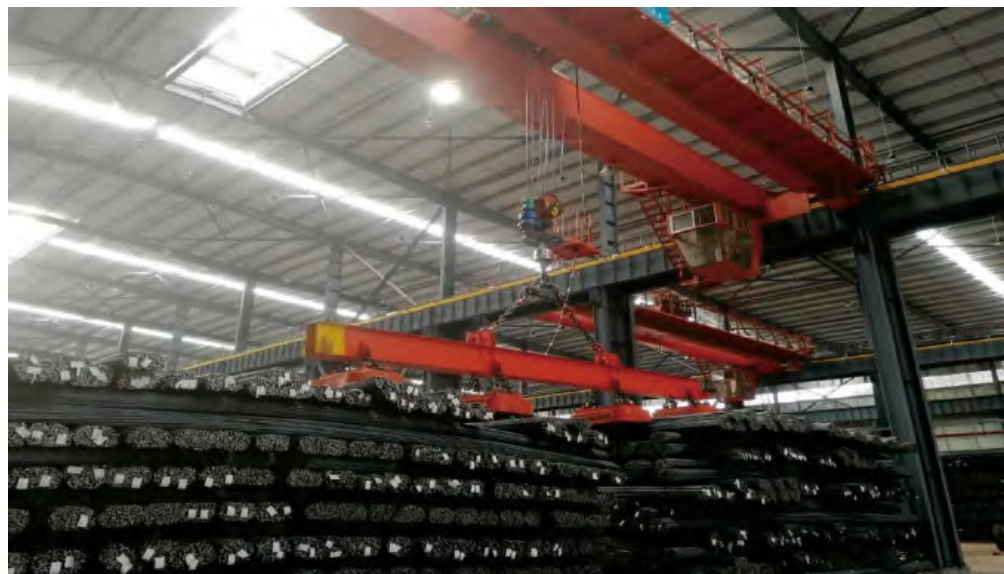
Rebar Warehouse

Long Plate Warehouse

Indoor Steel Plate Warehouse

Outdoor Steel Plate Warehouse

TBM Warehouse

Project Performance

Selected Projects in Building Materials Industry

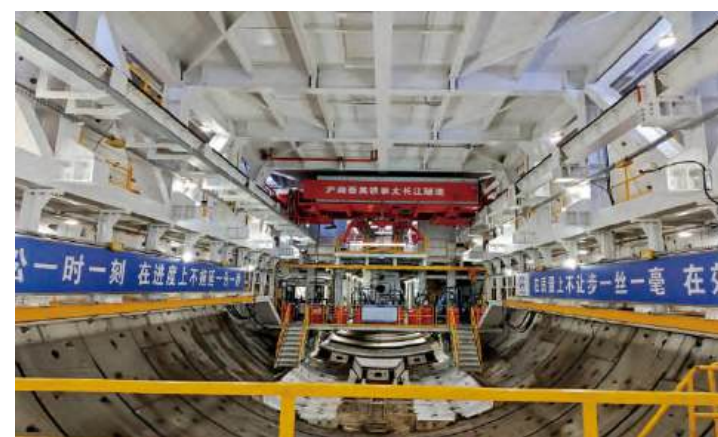| No.	Client	Project Location	Qty.	Industry
1	BBMG Jidong Cement	Tongchuan, Panshi, Tangshan	8	Building Materials
2	Nanfang Cement	Shanya, Jiande, Wuhu, Hefei, Shaofeng, Jinlei, Yicheng, Guangde	18	Building Materials
3	Huaxin Cement	Yangxin, Xiangyang, Yichang, Zhaotong, Chibi, Wuxue	25	Building Materials
4	CR Cement	Yangchun, Pingnan, Liangtian	7	Building Materials
5	Gezhouba Cement	Yicheng, Jingmen, Dangyang	9	Building Materials
6	Southwest Cement	Lijiang, Tongren, Saide, Zheng'an, Fuyuan, Bijie, Tongliang	22	Building Materials
7	Sunnsy Group	Changle, Pingyin	5	Building Materials
8	China United Cement Corporation	Chuzhou, Lunan	5	Building Materials
9	Other	Hubei, Shanxi, Guizhou, Yunan, Hunan	12	Building Materials

Selected Projects in Chemical Engineering and Mining Industry

No.	Client	Project Location	Qty.	Industry
1	TianAn Chemical	Yunan	3	Chemical Engineering
2	Zijin Mining	Fujian	3	Mining
3	Jinchuan Group	Gansu	2	Mining
4	Jinrisheng Mining	Anhui	3	Mining
5	Ganfeng Lithium	Fengcheng, Dazhou	5	Mining

Selected Projects in Metallurgy and Other Industries

No.	Client	Project Location	Qty.	Industry
1	Jiangxi Copper	Jiangxi	8	Metallurgy
2	Pangang Group	Chengdu	2	Metallurgy
3	Chongqing Liangjiang Logistics	Chongqing	2	Metallurgy
4	Qinhuangdao Port	Qinhuangdao	2	Metallurgy
5	Sichuan Steel Structure Smart Manufacturing Co., Ltd.	Sichuan	6	Metallurgy
6	Sulong Heat and Power	Jiangsu	6	Thermoelectricity

Cooperation Partners

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

CEEC | 中国葛洲坝集团水泥有限公司

山水集团 SUNNSY GROUP

秦皇岛港股份有限公司 QINHUANGDAO PORT CO.,LTD.

重庆港 Chongqing Port Co.,Ltd.

JINCHUAN 金川

赣锋锂业 Ganfeng Lithium

江铜集团

云天化集团

攀钢集团

紫金矿业 ZIJIN MINING

Weidun 威顿水泥集团 WEIDUN CEMENT GROUP

BBMG 金隅冀东水泥

华润水泥 CR CEMENT

CUCC 中联水泥

华新水泥 HUAXIN CEMENT

河南卫华 HENAN WEIHUA

常州市南港港口机械有限公司 NGPMC

JSPG 江苏港口

晶昊盐化 JINGHAO SALT CHEMICAL

中国中铁工程装备集团有限公司 CHINA RAILWAY ENGINEERING EQUIPMENT GROUP CO.,LTD.

四川省钢构智造有限公司 SICHUAN STEEL STRUCTURE SMART MANUFACTURING CO., LTD.

河南矿山起重

苏龙热电 SULONG HEAT AND POWER

开元重型机械 KAI YUAN ZHONG XING JI XIE

河南圣起机械集团有限公司 Henan Shengqi Machinery Group Co. Ltd.

瓮福集团 WENGFU GROUP

安徽金日晟矿业有限责任公司 Anhui Jinrisheng Mining Co., Ltd.

BNMC 白银有色集团股份有限公司 BAIYIN NONFERROUS GROUP CO.,LTD

GUIDE

Service
Network

天津
Tianjin

济南
Jinan

青岛
Qingdao

西安
Xi'an

郑州
Zhengzhou

徐州
Xuzhou

南京
Nanjing

无锡
Wuxi

上海分公司
Shanghai Branch

武汉
Wuhan
GUIDE

重庆
Chongqing

长沙
Changsha

南昌
Nanchang

广州
Guangzhou

深圳分公司
Shenzhen Branch

海南分公司
Hainan Branch

One Purpose:

Arrive at the site promptly and
solve the problem efficiently.

Three Commitments:

Problem solving with priority
Point-to-point service
Response within 30 minutes