Company code: 688777 Company abbreviation: SUPCON

SUPCON Technology Co., LTD
Semi-annual Report 2024

Important Note

I、 **The company's board of directors, board of supervisors and directors, supervisors and senior management personnel to ensure a semi-annual report the truthfulness, accuracy and completeness of the contents, there are no falsified description, misleading statements or major omissions, and bear individual and joint legal responsibilities.**

II、 **Major Risk warning**

In this report, the Company has elaborated on various risks that the company may face in the course of operation and the countermeasures. Please refer to the "Risk Factors" section of "Management Discussion and Analysis" in Section 3 of this report, and investors are requested to pay attention to investment risks.

III、 **All directors of the company attend the board meeting.**

IV、 **This semi-annual report is unaudited.**

V、 **The head of the company, CUI SHAN, the head of the accounting department of the company, Fang Yongsheng and the head of accounting organization (accounting supervisor) MAO Feibo statement that the financial reports in the semi-annual report are true, accurate and complete.**

VI、 **Profit distribution plan or reserve fund to increase capital stock plan approved by the resolution of the board of directors for the reporting period**

None

VII、 **If there is a special arrangement of corporate governance, and other important matters**

No

VIII、 **The risk of forward-looking statements**

Applicable

The company's future plans, development strategies and other forward-looking statements involved in this report do not constitute a material commitment of the Company to investors, investors are advised to pay attention to investment risks.

IX、Whether there is any non-operational appropriation of funds by controlling shareholders and other related parties

No

X、 Whether there is any violation of the prescribed decision-making procedure to provide external guarantee

No

XI、Whether more than half of the directors cannot guarantee the truthfulness, accuracy and completeness of the semi-annual report disclosed by the Company

No

XII、 Others

Not applicable

Catalog

Directory of documents for reference	Financial statements bearing the signature and seal of the person in charge of the company, the person in charge of accounting work and the person in charge of accounting institution (the person in charge of accounting)
	The original of all company documents and announcements publicly disclosed on the website designated by the CSRC during the reporting period

Section1 Interpretation

In this report, unless the context otherwise requires, the following terms have the following meanings:

Definitions of commonly used words		
Company, our company, SUPCON	Refers to the	SUPCON Technology Co., LTD
Sinopec	Refers to the	China Petrochemical Corporation and its subsidiaries
Petrochina	Refers to the	China National Petroleum Corporation and its subsidiaries
Hangzhou Yuancheng	Refers to the	Hangzhou yuancheng enterprise management partnership (limited partnership), the shareholders of a company
Chint electric	Refers to the	Zhejiang Zhengtai Electric Appliance Co., LTD., a shareholder of the Company
Sinopec capital	Refers to the	China petrochemical group capital co., LTD., the shareholders of a company
CNPC Fund	Refers to the	CNPC (Zhejiang) Emerging Industries Equity Investment Fund (Limited partnership), a shareholder of the Company
Lenovo Beijing	Refers to the	Lenovo (Beijing) Company Limited, a shareholder of the Company
Tan Ying, Shanghai	Refers to the	Shanghai Tanying Investment Partnership (limited partnership), a shareholder of the Company
Lanxi Yihui	Refers to the	Lanxi Yihui Puhua Investment Partnership (Limited partnership) (formerly known as: Lanxi Yihui Investment Partnership (Limited Partnership)), a shareholder of the Company
Citibank	Refers to the	Citibank (China) Co., LTD., a shareholder of the Company
Industry 3.0	Refers to the	One of the stages of industrial development, since the 1970s, it refers to the extensive application of electronic and information technology in industry, which greatly improves the degree of automation control of manufacturing process
Industry 4.0	Refers to the	The latest stage of industrial development, also known as the fourth Industrial Revolution, or the Age of intelligence
Process industry	Refers to the	An industry that uses chemical reaction, separation or mixing to make new products, improve existing products or dispose of waste, such as chemical, petrochemical, electric power, pharmaceutical, metallurgy, building materials, etc
Intelligent manufacturing	Refers to the	Based on the new generation of information technology, through the design, production, management, service and other manufacturing activities of each link, with information depth self-perception, intelligent

	the	optimization self-decision, precise control self-execution and other functions of advanced manufacturing processes, systems and models. It is characterized by intelligent factory as the carrier, intelligent key manufacturing links as the core, end-to-end data flow as the basis, and network interconnection as the support, which can effectively shorten the product development cycle, reduce operating costs, improve production efficiency, improve product quality, and reduce resource and energy consumption
Automatic control system	Refers to the	The use of automatic control technology for automatic adjustment and control of the production process of the device, generally can be divided into distributed control system (DCS, also known as distributed control system), safety instrument system (SIS) and network hybrid control system (PLC)
OMC	Refers to the	Operation Management & Control System is the company's combination of customer demand and a new generation of new information technology development process industry equipment highly autonomous operation of a new generation of system architecture, beyond the traditional ability of collecting and distributing control system to realize the integration of production management and control, at the same time with open architecture, more convenient effectively integrated the manufacturers and users, the huge amounts of industry knowledge and experience, to realize the process industry from the traditional automation to the intelligent and independent operation of the major innovation and upgrading
DCS	Refers to the	Distributed Control System, based on the controller and field equipment, the relevant process signals are collected into the system, and the operation station is used for monitoring or other control operations. The industrial automation control system is mainly characterized by decentralized control, centralized operation and hierarchical management
SIS	Refers to the	Safety Instrumented System, the combination of sensor, logic controller and the final element composition, can achieve one or more of the security function of the system, alarm and interlock part of the main control system for the factory, to the testing results of the control system in the implementation of the police action or adjust or stop control
Networked hybrid control system	Refers to the	Based on the universal Communication Protocol (UCP) network architecture, making the product adapt to the field of decentralized use occasions, to meet the continuous or semi-continuous industrial process and large infrastructure site control requirements of the control system, its integration of a variety of control functions, visualization, network and information technology, for all kinds of applications to provide a fully integrated solution
CCS	Refers to the	Compressor Control System. It is composed of stable and reliable hardware platform and special optimization control software package,

		which is used to complete the parameter display, alarm, control, regulation and interlock logic protection of the compressor unit, and realize the anti-surge control, performance regulation and speed regulation of the compressor to ensure the safe and stable operation of the compressor unit
SCADA	Refers to the	Supervisory Control And Data Acquisition, Data Acquisition And monitoring Control system. Computer based production process control and dispatching automation system, can run equipment monitor and control of the scene
Industrial software	Refers to the	On the basis of automation control system, solve the production planning management and production control series of coordination and optimization software
APEX	Refers to the	The Advanced Process Engineering Expert, Process industry Process simulation and design platform. Is a general process simulation software, through the calculation and describes the technological process, have the effect of process simulation and prediction, so as to guide engineering design, production, plant modification, achieve the goal of safety production, the authors advocate efficiency. Based on APEX can accurately describe the actual factory production process and predict the future production and operation, the lifecycle of the auxiliary factory process.
APC	Refers to the	The Advanced Process Control, a system that assists automated control systems to handle complex production process control, so as to achieve the stationarity improvement and card edge optimization function of complex processes that cannot be effectively handled by conventional control.
MES	Refers to the	Manufacturing Execution System, from production planning to production scheduling, organization, execution, control, until the production of qualified products of the whole process of information management system.
Instruments and meters	Refers to the	Installed in the industrial production scene, used for pressure, flow, process parameters, such as temperature, material/liquid level measurement and control instrument, including transmitter, actuators and other detection instruments, etc.
Control valve	Refers to the	In the industrial process control system regulates fluid flow control device, also known as the regulator. Can be adjusted through the control of the fluid flow of the process parameters such as fluid pressure, temperature, flow, liquid level, etc.
Pressure transmitter	Refers to the	Using a pressure sensor, will feel physical pressure parameters such as gas, liquid into a standard electrical signals (such as 4 ~ 20 ma) or in digital communications equipment (such as Modbus RTU protocol), in order to supply instructions alarming device, recorder, control system and other secondary instrument for measuring, instructions and process adjustment.

Safety barrier	Refers to the	The safety of the Ann circuit interface, called a security holder, can transmit electrical signals in two-way between safety and danger zone, and can limit energy transfer caused by fault zone to the danger zone.
5T	Refers to the	5T technology, is first put forward by the company, a big difficult problem for industrial and important requirement, based on AT (Automation Technology), IT (Information Technology), PT (Process Technology), OT (Operation technology) and ET (Equipment Technology) .
EPA	Refers to the	Ethernet Ethernet for Plant Automation. It is a new open network communication platform which is suitable for the communication between equipment in the industrial field by applying the mainstream technology in the field of communication to the industrial control system.
Field bus	Refers to the	An all-digital, bi-directional, multi-station underlying data communication system used in the field of automation to connect field equipment and automation systems.
HART	Refers to the	Highway Addressable Remote Transducer, an open communication protocol for highway addressable remote transducer. Launched by the United States Rosemount company, on the analog signal transmission for digital signal communication, belongs to the simulation system to make the transition to digital system products.
FF	Refers to the	Foundation Fieldbus. Launched by the Fieldbus Foundation, on the basis of the ISO/OSI open system interconnection model, take the physical layer, data link layer, application layer for the FF communication model of the corresponding level, and increase the user layer on the application layer.
Profibus	Refers to the	Fieldbus using German standard (DIN19245) and European standard (EN50170), introduced by German Siemens company, including Profibus-FMS, Profibus-DP and Profibus-PA, which are suitable for different automation fields respectively.
ARC	Refers to the	ARC Advisory Group. A focused on the areas of industrial consulting company, providing customers with market, technical, operational and strategic advisory services.
Rui Industrial	Refers to the	Beijing Platinum Rui Dejia Information Service Co., LTD., focusing on the industrial field (B2B) market research consulting company, especially specializing in automation, power transmission and distribution, new energy, building, medical equipment, general equipment field.
Industrial control network	Refers to the	Industrial Control Network (Beijing) Information Technology Co., LTD., a consulting company in the field of industrial control, providing industry users with comprehensive information on manufacturers, products, technologies and applications.
TUV certification	Refers to the	Technical supervision association (Technischer Uberwachungs Verein), the German abbreviation, is TUV rheinland, TUV south and TUV north

		German institutions such as specially designed for safety certification marks of the components product customization.
CE certification	Refers to the	Communate Europpene, French abbreviation, is the mandatory safety certification mark of the European Union for products sold on the markets of member states, and is also an internationally common safety certification.
SIL certification	Refers to the	Safety Integrity Level certification. In view of the safety integrity level of safety equipment certification, including hardware, software reliability calculation and assessment, environmental testing, electromagnetic compatibility test and so on.
Achilles	Refers to the	An internationally renowned industrial control network security certification, which provides proactive preventive technical solutions to improve network reliability and security, and can verify the resilience of industrial automation components and networks under attack. Achilles Level 2 is the highest level.
The company law	Refers to the	Company Law of the People's Republic of China
Securities law	Refers to the	Securities law of the People's Republic of China
The Articles of Association	Refers to the	The Articles of association of the Company currently in effect
China Securities Regulatory Commission	Refers to the	China Securities Regulatory Commission
Shanghai Stock Exchange	Refers to the	The Shanghai stock exchange
National Development and Reform Commission	Refers to the	National Development and Reform Commission of the PRC
Ministry of Industry and Information Technology	Refers to the	Ministry of Industry and Information Technology, PRC
Ministry of Finance	Refers to the	Ministry of Finance, PRC
Administration of Taxation, the State Administration of Taxation	Refers to the	The State Administration of Taxation of the PRC
General Administration of	Refers to the	General Administration of Customs of the PRC

Customs		
Yuan, ten thousand yuan, hundred million yuan	Refers to the	RMB yuan, RMB 10,000 yuan, RMB 100 million yuan
Reporting period	Refers to the	From January 1, 2024 to June 30, 2024

Section 2 Company profiles and key financial indicators

I、 Basic INFORMATION about the Company

The Chinese name of the company	SUPCON Technology Co., LTD
Chinese abbreviation of the Company	SUPCON
Foreign language name of the company	SUPCON Technology Co.,Ltd
Abbreviation of the company's name in foreign language	SUPCON
The legal representative of the company	CUI SHAN
Registered address of the company	309 Liuhe Road, Binjiang District, Hangzhou, Zhejiang Province, China
Historical changes of the Company's registered address	None
Office address of the company	309 Liuhe Road, Binjiang District, Hangzhou, Zhejiang Province, China
The postal code of the office address of the company	310053
Company website	http://www.supcontech.com
Email address	ir@supcon.com
During the reporting period change index of the query	Not applicable

II、 Contacts and contact information

	The board secretary (representative) within the territory of information disclosure	Representative for Securities Affairs
Name	Fang Yongsheng	Zhong Fei
Contact address	309 Liuhe Road, Binjiang District, Hangzhou, Zhejiang Province, China	309 Liuhe Road, Binjiang District, Hangzhou, Zhejiang Province, China
Telephone	0571-86667525	0571-86667525
Fax	0571-81118603	0571-81118603
Email address	ir@supcon.com	ir@supcon.com

III、 Brief introduction of information disclosure and change of place of preparation

Name of newspaper selected by the Company for information disclosure	China Securities Journal, Securities Times, Securities Daily, Shanghai Securities News
Address of the website where the semi-annual report is published	http://www.sse.com.cn/
Place where the company's semi-annual report is prepared	Securities Department of the Company
Inquiry index of changes during the reporting period	Not applicable

IV、 Brief profile of the Company's shares/depositary receipts

(I) Brief profile of the Company's shares

Brief profile of the company's stock				
Type of stock	Stock exchange and sector on which the stock is listed	Stock abbreviation	Stock symbol	Stock abbreviation before change
A shares	The Shanghai stock exchange kechuang board	SUPCON	688777	Not applicable

(II) Brief introduction of the company's depositary receipts

Brief introduction of the company's depositary receipts					
Types of securities	Conversion ratio of depositary receipts to underlying shares	Exchange and sector on which the depositary receipts are listed	Abbreviation of depositary receipt	Depositary receipt code	Abbreviation of depositary receipt before change
Global Depositary Receipt	1:2	Swiss Stock Exchange	Not applicable	SUPCON	Not applicable

Depositary institution	Name	Citibank
	Office address	388 Greenwich Street,New York, New York 10013 United States of America
	Agent	-
Custodian agency	Name of the	Industrial and Commercial Bank of China Limited, Beijing,Zurich Branch
	Office address	Nüschelerstrasse 1,8001 Zurich, Switzerland
	Agent	Henry Luo

V、 Other relevant data

Not appliable

VI、 Major accounting data and financial indicators of the Company

(I) Major accounting data

Unit: Yuan Currency: RMB

Major accounting data	This reporting period (January-June)	The same period of last year	Increase or decrease in this reporting period as compared with the same period of last year (%)
Operating income	4,252,171,379.80	3,641,206,964.84	16.78
Net profit attributable to shareholders of the listed company	516,629,098.69	510,711,580.63	1.16
Net profit after deducting non-recurring gains and losses attributable to shareholders of the listed company	472,223,046.28	423,871,173.02	11.41
Net cash flows from operating activities	-419,927,510.36	-983,409,229.13	Not appliable
	End of this report	End of the previous year	Increase or decrease at the end of this report as compared with the end of the previous year (%)
Net assets attributable to shareholders of the listed company	9,796,242,648.42	9,824,957,267.11	-0.29
Total assets	17,412,172,734.30	17,879,654,035.29	-2.61

(II) Key Financial Metrics

Key Financial indicators	This reporting period (January-June)	The same period of last year	Increase or decrease in this reporting period as compared with the same period of last year (%)
Basic earnings per share (yuan/shares)	0.65	0.67	-2.99
Diluted earnings per share (RMB/share)	0.65	0.67	-2.99
After deducting non-recurring gains and losses of the basic earnings per share (yuan/shares)	0.60	0.56	7.14
Weighted average return on equity (%)	5.18	7.56	Decrease by 2.38 percentage point
Weighted average return on equity after deducting non-recurring gains and losses	4.73	6.27	Decrease by 1.54

(%)			percentage point
R&d investment as a percentage of revenue (%)	10.45	11.16	Decrease by 0.71 percentage point

Description of major accounting data and financial indicators of the Company

1. In the reporting period, the GDR money exchange loss amount to 2.8417 million yuan (excluding tax, hereinafter the same), in the same period last year GDR money exchange gain of $16392.79 ten thousand yuan, excluding GDR money exchange gains and losses, during the reporting period net profit attributable to shareholders of listed companies of 51947.08 ten thousand yuan, an increase of 49.80% compared with the same period of last year.
2. From January 1, 2024 to June 30, 2024, the company's net business activities generated cash flow is -41992.75 ten thousand yuan, increase 57.30% from last period, mainly caused by optimizing company contract for the sale and purchase contract terms.

VII、 Differences in accounting data under domestic and foreign accounting standards

Not applicable

VIII、 Non-recurring profit and loss items and amount

Unit: RMB currency:yuan

Non-recurring profit and loss	The amount of	Notes (if applicable)
Illiquid assets disposal of profits and losses, including offset part of the provision for assets impairment provision	- 1,197,744.67	Vii, 68; Vii, 71; Vii, 75
Recorded into the profits and losses of the current government subsidies, but closely related with the company's normal business operations, in line with national policy, enjoyed according to certain standard, except the continuing impact on the company profit and loss of government subsidies	13,977,904.80	Vii, 67
In addition to the effective hedging business related to the normal operation of the company, the gains and losses arising from changes in fair value of financial assets and financial liabilities held by non-financial enterprises and the gains and losses arising from the disposal of financial assets and financial liabilities		
Included in the current profits and losses of capital cost of non-financial companies charge		
The profits and losses of the entrust other investments or assets under management	37,195,727.36	Vii, 68
Gains and losses from external entrusted loans		

Due to force majeure factors, such as natural disasters of all assets losses		
Separate impairment test of the impairment of receivables back	687,477.21	vii, 5
Companies have subsidiaries, associated companies and joint venture investment cost less than get investment should enjoy the invested entity produced by the fair value of the identifiable net assets yield		
The current net profit or loss from the beginning of the period to the merger date of the subsidiaries arising from the merger of enterprises under the same control		
Gain or loss on exchange of non-monetary assets		
Gains and losses on debt restructuring		
No longer continue and business related activities for one-time charges, such as staffing costs, etc		
The one-time impact on current profit and loss due to the adjustment of laws and regulations such as taxation and accounting		
Due to cancel, modify, equity incentive plan one-time share-based payment charges		
For a cash-settled share-based payment, after the vesting date, deal with employee compensation due to changes in the fair value of the profit and loss		
Gains and losses arising from changes in fair value of investment real estate that are subsequently measured using the fair value model		
Trading loss of fair trading to produce benefits		
Gains and losses arising from contingencies unrelated to the ordinary course of business of the Company		
Income from custodian fees derived from entrusted operations		
Other non-operating income and expenses other than those mentioned above	473,013.23	vii, 74; vii, 75
Other profit or loss items that meet the definition of non-recurring profit or loss		
Reduction: income tax influence the forehead	6,715,004.27	
Impact of minority shareholders' equity (after tax)	15,321.25	
Total	44,406,052.41	

Where the Company identifies the items not listed in the Explanatory Announcement on Information Disclosure of Companies Publicly Offering Securities No. 1 - Non-recurring Profit and Loss as non-recurring profit and loss items and the amount is significant, and defines the non-recurring profit and loss items listed in the Explanatory Announcement on Information Disclosure of Companies Publicly Offering Securities No. 1 - Non-recurring Profit and loss items as recurring profit and loss items, The reasons shall be explained.

Not applicable

IX、 Explanation of non-business accounting standards performance indicators

Not applicable

Section 3 Management Discussion and analysis

I. Description of the industry and main business of the Company during the reporting period

(I) Basic information of the industry to which the Company belongs during the reporting Period

1. Basic information of the industry to which the company belongs

The company focuses on the needs of process industry automation, digitalization and intelligence, and strives to create a new architecture of "1+2+N" process industry intelligent factory, that is, 1 factory operating system +2 automation (PA production process automation +BA enterprise operation automation) +N industrial apps, leading the new industry standard of intelligent factory construction. At the same time, based on the core concept of "AI+ data", the company will also deeply integrate a large number of industrial data, industrial knowledge, industrial model, industrial experience, etc., to build an industrial AI value system, enabling the traditional factory to intelligent independent operation, excellent operation of the future factory leap transformation. The company is committed to becoming a global leader in industrial AI, using AI to promote sustainable industrial development, make the industry more intelligent, and make customers more successful.

Process industry is the pillar industry of the national economy and the mainstay of the manufacturing industry. After decades of development, China has become the country with the largest scale of process industry in the world. However, the average process and operation level of the domestic process industry is still relatively backward, and it is in urgent need of automation, digitalization and intelligent upgrading to enhance the new driving force of industrial development. With the acceleration and deepening of industrial automation process driven by AI technology, and the comprehensive upgrading of industrial technology with the help of AI algorithm, intelligent manufacturing will step into a new stage of high-quality development.

2. Industry development

1) The overall market for automation control systems continues to grow

The company's automation control system segment covers distributed control system (DCS), safety instrument system (SIS) and programmable logic controller (PLC) and other products. In June 2024, the company successfully held the global launch in Singapore, officially launched UCS (Universal Control

System) - Nyx, the first general in the field of global automation Control System, with software definition, fully digital, cloud native, Which completely subverted the traditional DCS technology architecture that has been applied for nearly 50 years.

In recent years, the automation control system has been highly valued by governments at all levels and the key support of the national industrial policy. In the first half of 2024, the introduction and implementation of the national Action Plan to Promote large-scale equipment Renewal and Consumer Goods Trade-in has injected new vitality into the industrial field and the automation market, which is expected to promote the continuous and steady growth of the automation market in the future. According to China's industrial control network and industrial statistics, in 2023 China's industrial control system (DCS, SIS, PLC products) the size of the market reached 31.49 billion yuan, the main applications in chemical, petrochemical, electric power, municipal industry, metallurgy, oil and gas, food, pharmaceutical, building materials, paper making and intelligent equipment.

According to Rui industrial statistics, in 2023 China DCS product market size reached 12.18 billion yuan, a year-on-year growth of 3.0%, is expected that 2024 to 2030 DCS market will maintain steady growth, the annual growth rate will maintain at 5% to 10%. At the same time, general control system UCS defined open software platform, the minimalist and efficient network architecture design and the depth of the fusion of AI technology, industry, these innovative features not only reshaped the DCS architecture foundation, the future development of a more opened up a broad space and huge opportunities. According to the statistics of China Industrial Control Network, the market size of SIS products will reach 2.91 billion yuan in 2023, with a year-on-year growth of 18.8%. The implementation of large-scale equipment renewal and other related policies will bring more market opportunities, and it is expected that the renovation investment of chemical, petrochemical and oil and gas industries will be the main growth driver of SIS market.

2) The scale of industrial software market is growing rapidly

The company's industrial software sector covers production and operation, product research and development management and process design, energy saving and low-carbon, industrial information security, equipment health, quality improvement, safety priority, supply chain management and optimization, data resource system, sales and service, support and guarantee, a total of 11 categories of industrial software. It is mainly used in petrochemical, chemical, electric power, oil and gas, pharmaceutical, food, metallurgy and building materials and other fields.

According to the data of the Ministry of Industry and Information Technology, from January to May 2024, the revenue of China's software business was 4,931.7 billion yuan, up 11.6% year on year, and the total profit was 575.6 billion yuan, up 16.3% year on year. The operation situation of the industry continued to improve, and the total profit increased significantly. As during the period of "difference" domestic intensify industrial transformation and upgrading, and vigorously develop high-end intelligent equipment industry, software industry rapid growth in the size of the market. According to the Ministry of Industry and Information Technology, from January to May 2024, the revenue of China's industrial software products was 102.8 billion yuan, up 9.3% year on year. It is important to note that due to software industry development in China started late, compared with starter countries there is still a big gap between the development level, all kinds of suppliers to accumulate its own industry, occupy a certain market share in the niche, but the overall level of development is still not system, incomplete, concentration is relatively low. The State Council "to promote large-scale equipment update and consumer goods to old change new action plan required to 2027, industry, agriculture, construction, transportation, education, travel, medical equipment in such fields as investment scale is more than 25% growth in 2023; The energy efficiency of major energy-using equipment in key industries will basically reach the energy-saving level, and the proportion of production capacity with A-level environmental protection performance will be significantly increased. The penetration rate of digital R&D and design tools in industrial enterprises above designated size and the numerical control rate of key processes will exceed 90% and 75%, respectively. Expected future trend of the industrial software localization alternative accelerates, will apply to more subdivision scenarios.

Since 2023, by ChatGPT sweeps across the whole world of artificial intelligence to upsurge, AI industry has obtained the unprecedented development. All kinds of emergent AI (also called AIGC) models are available, its influence, application scope and speed of iteration is especially remarkable. Therefore, 2023 is known as the "first year of generative AI" inside and outside the industry. According to the Ministry of Industry and Information Technology sadie, according to data from the institute in 2023 China's emergent AI market size is about 14.4 trillion yuan. Meanwhile, it is expected to exceed 30 trillion yuan by 2035, accounting for more than 35 percent of the global total market size and becoming an important link in the global AI industry chain. In Singapore in June 2024, the company's global blockbuster also released a new conference process industry's first AI time-series big model TPT (Time - Series Pre - steeped the Transformer). TPT is company in industrial innovation and breakthrough in the field of AI landmark value of typical results, will lead a comprehensive process industry to accelerate the "wisdom".

3) The scale of the instrumentation market is growing steadily

The company's instrumentation segment covers regulating valves, pressure transmitters, flow meters, level meters, analyzers, safety barriers, isolators and other products, mainly used in chemical, petrochemical, fine chemical, coal chemical, pharmaceutical, metallurgy, electric power and other industries.

Instruments and meters are the basis of deep integration of informatization and industrialization and important equipment to realize industrial automation and intelligent manufacturing. For a long time, the concentration of the instrument and meter industry in the field of domestic industrial automation is low, the low-end products are surplus, the middle and high-end products are still dependent on imports, and the high-end user market is dominated by large foreign enterprises. However, in recent years, the domestic instrument and meter technology has made rapid progress, and the domestic leading enterprises have begun to independently research and develop and master some core technologies. And gradually replace foreign brands in chemical, petrochemical, electric power, metallurgy and other industries, the industry domestic substitution is ushering in historical opportunities. At the same time, APL technology also Ethernet advanced physical layer technology defines a new "communication + power supply" two-wire Ethernet physical layer communication technology, perfect solution to the field deployment, communication, power supply and other problems, can meet the special requirements of the automation field, all kinds of TCP/IP based industrial Ethernet protocol can run on APL. It also brings more development opportunities for the instrumentation industry and has broad prospects.

According to the statistics of China Industrial Control Network, in 2023, the market size of mainstream instruments and meters (including regulating valves, pressure transmitters, flow meters, physical level meters, online analysis meters, safety barriers, etc.) in China's process industry will exceed 47 billion yuan, and the mainstream downstream application industries are chemical, petrochemical, electric power, oil and gas, metallurgy, food and beverage, papermaking, municipal administration, pharmaceutical, building materials, etc. Among them, the market size of the regulating valve is 20.40 billion yuan, with a year-on-year growth of 6.3%; The market size of pressure transmitters was 5.90 billion yuan, up 15.7% year on year; The market size of safety barrier was 1.23 billion yuan, up 3.4% year on year, both maintaining a stable growth trend.

(II) Product Family

The company comprehensively promotes product integration and upgrading, focusing on the high-quality production and intelligent operation needs of smart factories in process industry. Throughout the enterprise's Data Resource System (DRS) and multi-layer and in-depth industrial CyberSecurity System (ICSS), The formation of enterprise operation automation (BA) and production process automation (PA) two product systems.

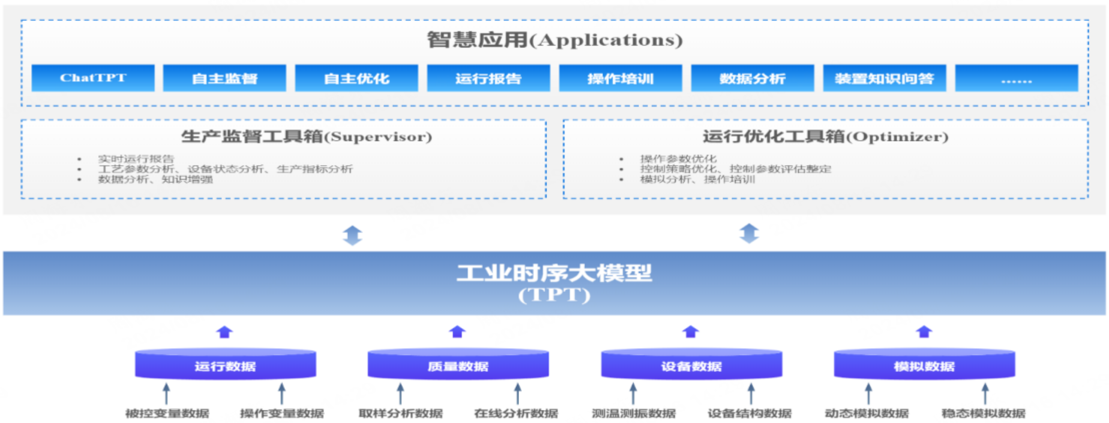
Enterprise operation Automation (BA) refers to the use of AI, big data, digital twins and other advanced technologies and management innovation for enterprise operations to achieve digital intelligence, high-quality, sustainable operation excellence. Including Product R&D Management and Process Design System (R&DS), Production Operation System (POS), Supply chain Management System (SMS & Supply-Chain Optimization System, SCO), Sales & Service System (SSS), Support & Guarantee System (SGS).

Production process automation (PA) refers to the whole production process of the factory from raw materials to products, the use of advanced technology, equipment, operation, information, automation and other technologies integration and innovation, on the basis of instrumentation, control system products, the development of Energy-saving and Low-Carbon system (energy-saving & low-carbon). ELC, Safety-Priority System (SPS), Equipment Health Supervisory System (Equipment Health Supervisory System) EHS, Quality Improvement System (QIS), to achieve a safe, stable, efficient and low-carbon production process.

The company builds 4 big data bases +1 intelligent engine, 4 big data bases including equipment base (PRIDE), operation base (OMC), quality base (Q-Lab) and simulation base (APEX), superimposes intelligent engine (TPT) based on industrial large model, builds AI+ data core competitiveness, and maximizes data value. To help enterprises achieve the high-quality development goals of "safety, quality, low carbon and efficiency".

1. Industrial AI product family

① Time-series Pre-trained Transformer (TPT) of SUPCON process industry



The process industry AI time series large model TPT is independently developed by SUPCON. Based on the generative AI algorithm framework, TPT is trained by the fusion of massive production operation, process, equipment and quality data of different industries.

Industrial time series large model TPT has three typical characteristics of "multi-capability", "cross-scene" and "cross-device" :

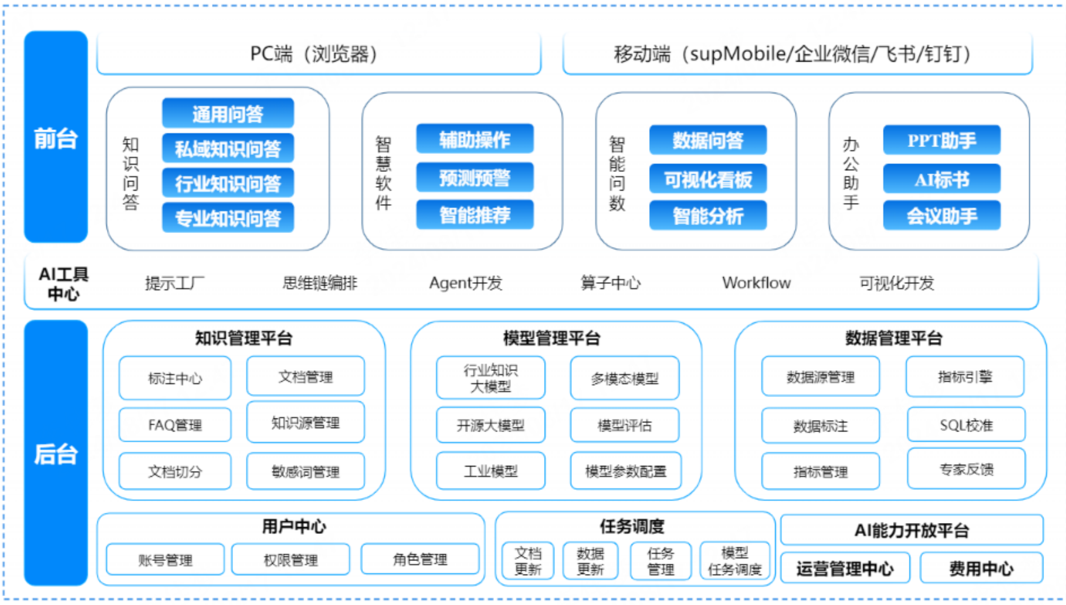
- Multi-capability: TPT integrates simulation and prediction capabilities. Through long and short period prediction, dynamic and steady state simulation, TPT can greatly improve modeling efficiency and support a variety of tasks. Unified simulation class, optimization class, analysis class, control class, training class and other industrial applications.
- Cross-scene: TPT unifies the modeling process of multi-scene, comprehensively simplifies the threshold and process of cross-application of multi-technology systems such as simulation optimization, mechanism modeling and automatic control, and can effectively cope with the application requirements of complex industrial scenarios. Compared with the traditional AI model, TPT can accurately match the production status, has stronger applicability and higher reliability, and can directly control the device to achieve closed-loop operation, ensuring the long-term optimized production of the device.
- Cross-device: TPT collects massive data from different devices for pre-training, and learns the general rules of industrial device operation. Through a small amount of fine-tuning or zero fine-tuning, TPT can be multiplexed between different devices and working conditions, showing the ability to migrate across devices and working conditions.

Through the use of TPT, the following values can be brought:

- The data prediction function of TPT can identify and find anomalies in advance, and the early warning function covers the trend anomalies of key process parameters and production indicators, as well as the health status anomalies of instruments, controllers and key equipment.
- The user only needs one sentence input to generate the physical examination report of the whole device, summarize the operation status of the device, and make a detailed analysis of the abnormal phenomenon of process parameters, production indicators and equipment health.
- TPT can quickly assist users to establish a "zero threshold, cross-scene, executable" optimization model, and perform real-time optimization based on the model to improve revenue.
- TPT integrates multi-industry experience, provides operation guidance, reduces dependence on production experience, reduces labor intensity of production management and operation operation, and saves manpower.
- Private domain knowledge base query, report query, and data processing functions can improve users' information and knowledge acquisition efficiency and reduce personnel's dependence on experience.

TPT will completely solve the problems of scattered industrial applications and fragmented data applications, and realize a new mode of software support for multiple application scenarios based on a TPT model. TPT is equipped with "smart brain" to the production device, so that the device can think and speak, and supervise and optimize the operation of the device like experts, so as to achieve the goal of improving efficiency, stable operation and increasing revenue, and will comprehensively lead the process industry to accelerate "intelligent change".

② InPlant ChatBA



InPlant ChatBA is a self-developed AI application development and management software that integrates cutting-edge technologies such as LLM and AI Agent, aiming to release the potential of enterprise AI and build an industrial AI value system.

Software includes knowledge questions, office assistant, AI tools, intelligent questions, intelligent software five categories of product functions. It can build an enterprise-specific knowledge question-and-answer and management system, reconstruct industrial software, realize intelligent business automation, and support customized or independent construction of various AI scenarios.

It has the following values: easy access to knowledge; AI tools allow users to cross the technical threshold and independently build personalized AI applications through intuitive operation; All the tasks that can be automated are completed by robots to help enterprises operate intelligently; "Silky" office experience, intelligent and convenient to complete a variety of tasks.

2. Automatic control product family

(1) Control system product family

① Operation Management & Control system (OMC)

Intelligent autonomous operation system is the core basic subsystem of production process automation. It integrates intelligent, digital and automation technologies to realize intelligent perception, intelligent control, intelligent operation, intelligent optimization and intelligent operation and maintenance of production equipment, and meets the functional requirements of process control, safety control, unit control, logic control, process operation and operation management of the whole process. SUPCON technology continues to deeply cultivate the process industry and create value for customers in the process industry. Based on practical application and customer feedback, OMC system focuses on customer pain points, integrates a large number of innovative technologies, and embodies three new features: extreme interconnection, virtual and real intelligent control, and global optimization. The essence and realization path of independent operation are very clearly defined. The system can respond autonomously to external demand interference and manage autonomously in the face of internal operation: 1) extreme interconnection, distributed saving initial investment; 2) virtual and real intelligent control, digital precipitation experience to improve the process; 3) global optimization, intelligent improvement of operation efficiency. Based on industrial big data, mechanism model and machine learning and other multi-field technologies, combined with industrial Know-how, OMC carries out all-weather assessment of total factors of production, grasps the key parameters of production equipment at any time, and excavates the production and operation potential of equipment. Through cross-device collaboration, the material and energy balance between regional devices can be achieved, and the production benefit improvement can be expanded from single device to multi-device region. In addition, for abnormal events, intelligent identification and processing plans are provided to maximize the comprehensive economic benefits of the whole plant.

② **Safety Instrumented System (SIS)**

The safety instrumented system (TCS-900&TCS-500) has been the first supplier in the Chinese market for two consecutive years. It is an industrial control system independently developed by TCS-technology for ESD, F&GS, GDS, BMS, HIPPS and other application scenarios in the process industry. It provides product portfolio solutions with the best balance between safety and economy to ensure the safe operation of key equipment and high-value process of enterprises, and reduce the risk of human life safety. The SUPCON safety instrument system has three high characteristics of high safety, high reliability and high availability. 1) High security: functional safety level SIL3, security architecture 2×2oo3D, fault diagnosis coverage >99%, information security IEC 62443 SL1, Xinchuang localization; 2) High reliability: EMC standard 4A, G3 anti-corrosion /CE/ classification society certification, maximum altitude of 4000 meters, working temperature (-20~70) ℃, working humidity (5% ~ 95%) RH, no condensation; 3) High availability: DCS configuration monitoring integration, double work full redundancy, online capacity expansion, availability rate of 99.999~99.9999%, fault tolerance margin of 3-3-2-2-0.

③ Coordination Control System (CCS)

Coordination Control system (T9100 & T5100) is a control technology for petrochemical, chemical industry, flammable and explosive high-risk areas of application scenarios, compressor control and protection for the centrifugal and axial flow compressor, independent development of professional portfolio solutions applied compressor control system. System adopts the most advanced technology of compressor control algorithm, including the surge control, performance control and speed control and extraction steam control, optimal control technology, power users to realize safety production and saving energy and reducing consumption, improve enterprise intelligent operation level. Level control of compressor control system with SIL3 hardware platform, advanced control technology, integration, deployment and operation optimization of four major technical characteristics. 1) SIL3 level hardware platform: based on the triple redundant fault-tolerant (TMR) security control system, function SIL3 safety grade, industrial character of EMC standard 4 a grade, the greatest degree to meet user demand for production safety and availability. 2) Advanced control technology: the self-developed international advanced unit control technology, based on the dimensionless anti-surge coordinate system, implements various forms of control and protection combination strategy, multi-loop coordinated control and decoupling control to meet the complex control requirements of unit series and parallel, and realizes automatic and efficient energy saving operation. Deploy: 3) integration can be integrated with the control of DCS system, SIS system seamless connection and integration, the convenient user implementation factory integration of process control, improve efficiency, reduce cost and guarantee quality. 4) : Automatic control and optimization: realize one-button start and stop and automatic loading and unloading, without manual intervention in the whole process, truly realize automatic control, control energy consumption reduced by 10%, process fluctuation reduced by more than 15%.

④ Programmable Logic Controller (PLC)

SUPCON (GCS) has launched GCS-G and GCS-M series products for different needs through deep cultivation in the field of process and mechanical control. GCS - G series for large-scale distributed measurement and control field, provide the control system of the long process of high reliability, redundancy and network solution; GCS - M series focused on intelligent equipment, provide the complex control scheme of high-speed, high precision. The two complement each other to provide customers with large-scale monitoring and at the same time provide the ultimate control of key core equipment.

The GCS-G networked hybrid control series includes G5 medium and large scale hybrid control series and G3 distributed RTU series. The G5 series features full redundancy, high reliability, the advantages of the network, completely independent controllable, both conforms to SIL3 Safety level G5Pro Safety system; G3 series satisfy the application requirement of high density and distributed remote I/o station and can be used as the G5 series controller for hybrid applications. The GCS-G series has been widely used in oil and gas pipelines, rail transit, municipal water, water conservancy and hydropower, nuclear power and other scenarios.

The GCS - M series give full play to the characteristics of its high performance, high precision, high reliability, enhance the level of intelligent equipment. It integrates a variety of complex mechanical control functions and communication protocols, and can cope with professional equipment such as fans, packaging machinery, metallurgical equipment, and high-speed production lines of building materials. And can be equipped with machine vision algorithm, for the industrial installation of "AI eyes".

⑤ **Universal Control System (UCS)**

UCS is control technology break through the limited force of existing system which is closed, rigid hierarchy, calculate constraints, innovation of a new generation of general technical architecture of the control system, breaking the traditional physical controller, I/O module and shackles of rack, with private cloud, all-optical deterministic network and intelligent equipment minimalist new form, leading the revolutionary innovation of control system.

Universal control system Nyx is introduced based on the general control system for intermediate UCS architecture products. Company on the basis of real-time NyxOS cloud operating system, the depth of the fusion cloud native, light industrial network, APL, Al - Inside. Company is geared to the needs of future automation intelligent control system, industrial control in AI, has realized the on-demand definition of flexible control, customer knowledge assets sustainable, digital intelligent has injected new vitality for the enterprise.

It has the following value: 1) the minimalist architecture, low cost, easy maintenance: can save 90% of cabinet space, 80% of the cost of cable, 50% of the transformation period; 2) AI-Inside, accurate decision-making, auxiliary efficiency improvement: deep integration of Al technology, GPU-based control engine, providing automatic configuration generation, Al fusion PID and other functions, to achieve data prediction and adaptive control, improve the efficiency of device operation, leading the new era of "artificial intelligence" in the control field, liberation of productivity; 3) all software definition, faster and safer more reliable: computing, storage, network virtualization, the software and hardware decoupling, achieve rapid deployment and flexible adjustment; Fault isolation, since derived from repair, to ensure the safety of production.

(2) instrument product family

The instrument industry is the basic and strategic industry of the national economy, but the rate of localization is still low and the foreign dependence is high. In recent years, with the rapid pace of scientific and technological self-reliance, china-controlled technology is committed to overcoming key core technologies and promoting domestic alternatives. The medium control technology instrument business plate covers multiple product series and provides the value for the customers.

① **Measurement Instrument**

The measuring instrument product series includes pressure measuring instrument, measuring instrument, measuring instrument, temperature measuring instrument, intelligent calibration instrument, safety grating, etc., which is widely used in petrochemical, chemical, metallurgy, electric power and food and medicine etc.

The main functions of measuring instruments in industrial intelligence include:

Accurate measurement: can accurately measure various physical parameters, such as temperature, pressure, traffic, and other objects, which are the basis for controlling and optimizing the production process;

Data acquisition and transmission: automatically collect field data and send to control system through communication network, support remote monitoring and management, ensure real-time control of production status;

Fault diagnosis and warning: by continuously monitoring the operation of the equipment, the abnormal condition can be detected in time, and the warning signal can be used to prevent the occurrence of equipment failure or accident and reduce the downtime.

System integration and optimization: seamless integration with DCSC, scada, support for advanced analysis and decision support, improving overall production efficiency and safety;

Security: integrated with the safety instrument system (sis) to ensure that the safety of human and equipment can be quickly responsive and responsive. With the pressure/differential pressure, flow and object level, the long-term stability of the gas and liquid is better than 0.1%/10, and the nepsil atexe is certified by the nepsistatic atexis, and supports the main field bus of fferand profibus-pais (including wireless hartred), and supports the apl new high-speed bus, which supports 5g wireless communication, which is widely used in the measurement of pressure, flow and space.

② **Analyzer**

The analyzer product series includes calorimeter, optical gas body analyzer, the XFR element analyzer, and the ramman spectroscopy analyzer, the system of the system, the humidity detection system, the laser gas analyzer, etc., which is widely used in the fields of oil and gas, metallurgy, chemical, food and medicine and energy.

The main functions of analyzer in industrial intelligence include: component analysis: real-time monitoring of chemical composition in fluid or gas, which helps the quality control of raw materials and finished products. Concentration measurement: the ability to detect and quantify specific components in the mixture, even in extremely low concentrations, can achieve high sensitivity measurements, helping operators adjust the response conditions to improve production and product quality; State monitoring: can continuously monitor key parameters, ensure the stability and consistency of the process, and implement predictive maintenance and reduce unexpected downtime; Failure warning: the real-time data provided can help to detect early signs of equipment failure and safety hazards, improve process safety, and reduce the risk of fire and explosion. Process optimization: the real-time data provided can be used to optimize reaction conditions, mixing ratios and other process parameters, reduce energy consumption and waste emissions, and achieve green production. In this paper, the key parameters such as the wo index, heat value and combustion air demand index are measured by the thermal value meter. With rapid response, high accuracy, high repeatability, simple, open fire (non-extinguishing failure) and easy to be affected by environmental temperature influence, have the atex/iecex/nepsi and other certification, apply the explosion prevention 1 area, widely used in combustion control, gas unit control, torch combustion and other working conditions.

③ **Intelligent Control Valve**

Intelligent control valve product series includes intelligent control valve, intelligent control ball valve, intelligent control butterfly valve, eccentric rotary control valve, the furnace base discharge valve, special control valve, intelligent valve localizer, etc., which is widely used in the industry of petrochemical, chemical, metallurgy, power and new energy, such as photothermal power generation.

The main functions of intelligent control valves in industrial intelligence include:

Flow regulation: combined with the intelligent valve locator, the flow of the fluid can be adjusted accurately, and the fluid throughput in the process is met by the set value, ensuring the stability and accuracy of the flow.

Pressure regulation: by adjusting the valve opening to control the pressure, ensure that the pressure within the pipe, reactor or tank is maintained in security, which is critical to the stable operation of the maintenance system.

Temperature regulation: the control of the chemical reaction is critical by adjusting the temperature of the coolant or heating medium to control the temperature inside the reactor to maintain the ideal reaction condition.

Fluid cutting: when necessary, the intelligent control valve can completely block the flow of fluid and act as a safety isolation.

Flow distribution: supports the distribution of fluid to different branch paths, ensuring that all parts can be supplied with appropriate fluid supply, which can improve the production efficiency and product quality. With intelligent control valve as an example, the new functional modularity design, high adjustment precision, good sealing ability, long service life, easy maintenance, widely applied in the general and special strict (high pressure, strong corrosion, gas erosion, multiple flow, etc.) condition.

(3) Industrial software product family

① Industry CyberSecurity System (ICSS)

Industrial system including industrial control system security, information security industry information system security and safety aspects of products and technical services operations, the company independent research and development the host firewall security guards, industrial control, industrial control, security management platform, security isolation control in the gateway, so diagnosis software, industrial control network security monitoring and auditing system and a series of security products, To build the intelligent factory industrial integration of information security solutions, including data security, the host security, network security, built-in security, disaster emergency core functions such as "all-round, multi-dimensional" security technology system, to provide network security evaluation, network security operations, such as insurance construction covers the whole life cycle of industrial network security services such as consulting, Help promote customer enterprise for production control disaster accident of malware protection, information source, backup, security operations, such as ability, help enterprise implement laws and regulations, standards, policy compliance level protection construction. Industrial control technology based on information security in the process industry of sustained agriculture, closely integrated control system, build the central industrial information security level 3 operating protection system, from inside to outside constitute independent controllable multi-level "built-in safety (solid), defense in depth (prevention), security operations (tube)" technical system. Effectively improve the security protection ability of the industrial site, the scheme is relatively easy to land, suitable for the relevant industry business scenarios, with relatively good generalization.

1) Host security software (InPlant Defender)

InPlant Defender is a multi-functional industry host protection software, integrating the software and network white list protection, virus detection, mandatory access control, safety baseline, safety disk, patch management, group immunization, dynamic measurement and other security functions.

It has the following value: "white + black" protection mode, the addition of the white list file forward, the virus scan, the identification of the file risk; Supports the protection of the network white list based on the "port + program" strategy, effectively protecting against all kinds of cyber attacks; Support access to the control safety management platform, implement the compatibility verification Windows patch one key download, installation; Support for "group immunization" any client finds and detects the virus, and is pushing the safety management platform to other clients to push against the safety strategy of the disease.

2) The situational awareness and security operation platform (InPlant SOC)

InPlant SOC is the information gathering center, security analysis center and security command center of security operation. The platform collects all kinds of detection information, alarm information and audit information in real time, and combines threat intelligence to centrally analyze security data, identify security threats, and realize intelligent perception and dynamic research and judgment of security risks. At the same time, the event handling process is established, and the coordination handling mechanism is combined to realize the fast handling of security events. The platform can intuitively display and provide a complete, easy-to-use and efficient man-machine analysis interface for security operation personnel to quickly analyze and judge, and improve operation efficiency.

Enhanced security operations and response efficiency: Security Orchestration Automation and Response (SOAR) enables security analysts to orchestrate their manual analysis capabilities into automated execution for more accurate and timely analysis and response. Build multi-structure and multi-level security management capabilities: transfer offline work actions of daily management and key activities to online, open up online and offline workflow channels, have multi-structure and multi-level command and decision delivery and management channels, and can quickly issue and receive instructions, tasks, notifications, etc., to achieve controllable and manageable effects of key activity support processes; Visually present security status and work results: Integrate business, data, security, service, visualization and other capabilities to make security status and work results easy to understand, use and make judgments.

3) Network diagnostic platform (CS054 Series)

The whole network diagnosis platform is a network management and monitoring product suitable for industrial network. It can provide industrial network asset management, equipment configuration, automatic network topology drawing, working status monitoring, operating load monitoring, fault alarm and other functions, which can meet the monitoring and management requirements of control network and APL field Ethernet in large projects.

It has the following values: Automated industrial network asset management: unified management of a variety of equipment, greatly improving operation and maintenance efficiency; Mainstream managed switch remote unified operation and maintenance: real-time monitoring of port traffic and status, simplifying O&M management; Intelligent diagnosis of industrial control assets: covering network load, resource usage, etc., to provide visual diagnosis results; Intelligent alarm and proactive prevention: Ensure stable device operation and detect potential risks in advance. Deep integration with industrial application scenarios: Automatically draws network topologies, supports redundant network management, and fully ensures security and efficiency.

4) Industrial control Network Security Monitoring and Auditing System (CS056 Series)

Industrial control network security monitoring and audit system is a security audit system for industrial control network. It not only includes anomaly monitoring at the network security level, but also integrates critical business behavior alarms in different industries.

It has the following values: Deep parsing of industrial control protocols based on DPI: supports deep parsing of protocols such as MODBUS-TCP and OPC, identifies dynamic ports, and provides packet check and industrial control behavior identification functions; Behavior modeling based on asset role: Conduct behavior modeling for different assets, configure behavior baseline, sense abnormal operations, record events, evaluate information security and locate security events; Custom protocol identification: Built-in identification engine, based on port and keyword characteristics, accurately identify other protocols supported by the system default; Health assessment: evaluates asset health and quickly locates potential threats based on communication behaviors and events.

5) Security Switch (SW3000 Series)

Security switch is a product independently developed by central control technology to control network access and management, and has complete layer 2 management functions. This series of industrial switches integrates various protocols, such as switching, security, and SNMP, and has superior networking capabilities to meet the reliability and security requirements of industrial networks.

It has the following values: Complete security protection: independent research and development platform, support 802.1X access protocol, to ensure terminal access and Intranet security; Rich network features: Layer 2 features, such as VLAN, STP/RSTP, and IPv6, provide smooth transition of network upgrade. Rich security features: Support 802.1X access control, with ARP anti-attack, ACL and other security functions to ensure the security of industrial control network; Industrial hardware quality: fanless cooling design, support wide temperature work, IP40 protection level, redundant power supply design, withstand extreme environment.

6) Next generation sb safety isolation terminal (NG USB Guard)

The NG USB Guard is a product that solves the safety and access, safety audit and safety management of factory mobile media, and effectively avoids the malicious code to enter the factory network through mobile media such as disk.

It has the following value: "white + black" protection mode: using the white list and the blacklist double mechanism, the integration of the top virus detection engine at home and abroad, the malicious code detection rate is more than 99.9%. Passive virus library update: supports it network and the ot network ng sb guard automatically upgrade the virus library, the full domain host security guard realizes the automatic upgrade of the unfeel; Comprehensive management and audit: support for Windows domain control, multidimensional security audit, illegal equipment access to alarm, perfect mobile media specification and audit process; Efficient and convenient use: support for physical isolation and network access mode, quick detection and forced detection, built-in sharing network, support large file backup and automatic parameter backup.

7) High performance/rail industrial firewall (GW031 series)

The high performance/rail industrial firewall is specially used for the isolation of safety protection products of the industrial and control network boundaries, through the construction of the industrial safety communication model based on the "white list" technology, and the industrial flow of the communication link is analyzed in depth message, and the safety of communication between the network area of the industrial control network is guaranteed. The industrial boundary protection system of core functional integrated industrial boundary is characterized by industrial asset recognition, asset behavior control, abnormal flow detection, virus detection, and vlan isolation of the vlan isolation of the SSLVVPN and other core functions.

It has the following values: the depth of the various industrial agreements, and the support for the highest level access control; The diversified safety strategy configuration, the user can according to the on-site network security requirements, the precision and flexible configuration; Meet the various industrial application scenarios and support the highest level access control; Visual security trends, providing safety trends, graphical interfaces for understanding the risk risks in industrial networks; High ease of use, supports a variety of typical industrial control firewall deployment strategy key configuration, implementation centralized management.

② Data Resource System (DRS)

The data resource system USES the latest ai technology, which can be analyzed and analyzed with the natural language processing and large Numbers, which can handle and analyze complex data sets. It can provide one-stop data center construction and full domain data management ability, help enterprises to build enterprise index system quickly, mining data value, and assisting operation decision.

The data cloud product inplant essendata is based on multi-tenant model and cloud prototechnique, which can provide the basic ability to provide the basic ability to support data agile delivery, through the multi-scale ability component, realize the whole process of data collection, storage, management, nanotube and application, and provide the basic ability in a service-oriented way.

The software system is generally divided into three core product modules, including data base, data agile delivery, and number of product groups, while supporting saas and privatization.

It has the following value: the data base is based on the infrastructure of the cloud and distributed storage, which is based on the technology, and solves the problem of the data island and the low data performance. Rapid development and delivery of data requirements to solve repeated development, low calibrating, and operational cost. It provides calibration operation, systemization management, agile delivery, lean reduction and centralization integration.

③ Equipment Health System (EHS)

The equipment health system is a new generation of equipment intelligent sensing platform, based on the analysis of AI and machine learning, combined with et equipment technology, helps enterprise users to solve the intelligent perception and prediction diagnosis of various equipment in the field, and realizes the troubleshooting and diagnostic analysis ability of the factory equipment "diagnose a network".

Based on the pride all-equipment intelligent sensing platform, the equipment is analyzed and analyzed accurately by the equipment, the link and the whole device of the equipment, the link and the whole device, thus assisting the user to realize the comprehensive data perception and prediction of the whole factory, the static, the electric, the instrument, the control and other systems and equipment, including:

1) The sound management software (PRIDE ISDM) : for the overall factory instrument, the control system online monitoring, the device control equipment health monitoring system, the improvement of the meter maintenance work efficiency, the maintenance of the instrument maintenance from the preventive maintenance to the predictive maintenance direction and the reliability of the instrument control device.

2) Intelligent control system software (PRIDE Integrity) : through 24-hour online uninterrupted monitoring of the environment temperature and humidity and cabinet control system hardware, to solve the leakage detection rate of the accident, to ensure the safety of the production, and to cover the contents of the inspection, and the system hardware diagnosis, and the "inspection item".

3) Intelligent electromagnetic valve software (PRIDE ISVD) : using the ai large number, machine learning, etc., to diagnose the problem of the leakage of the electromagnetic valve, the viscosity card, etc.

4) Intelligent regulating valve software (PRIDE ICVD) : using the ai large number according to analysis, the deviation analysis model algorithm of various regulating valves at the site, the prediction diagnosis of the fault, the auxiliary instrument engineer combined the real-time operating condition for the fault assessment, the maintenance plan and so on;

5) **Acting equipment status monitoring and early warning software (PRIDE MP3000)** : on the basis of analysis, construction mechanism model, etc., realize the on-line monitoring of equipment, failure diagnosis alarm function, data report, analysis report and other functions to help users improve equipment management digital level, reduce production risk, and improve the efficiency of enterprise operation management.

It has the following value: the daily operation and management of various equipment in petrochemical and chemical industry project equipment and all kinds of equipment in the whole factory level. The monitoring of the device status monitoring by online reduces the number of inspection frequency of users and reduces the amount of inspection. To help the enterprise users to identify the potential fault risk of the device in time, and to maintain the equipment, thereby improve the reliability and stability of the equipment, reduce the parking risk and ensure the safety of production.

④ Product R&D Management and Process Design System (R&DS)

The product research and development management and technological design system is a combination of the intelligent simulation platform software inplant ots, process simulation and design platform apexe, which provides support for the whole life cycle of process industrial enterprise products.

1) SUPCON intelligent simulation platform InPlant OTS (Operator Training Simulator)

The SUPCON intelligent simulation platform can provide operator simulation training, process verification and control optimization, 3d simulation training, semi-physical simulation training and other solutions, which are applicable to the process industry such as oil refining, petrochemical, chemical, electric power, metallurgy, building materials, military industry and pharmaceutical. Based on the strict mechanism modeling, the traditional DCS model is based on the mature DCS technology and the leading virtual DCS simulation solution, using the real DCS configuration and monitoring software, so that the on-site DCS group state and the ots control group can be updated, and the process optimization and the advanced control strategy are seamlessly connected, and the operation experience with the field is achieved.

SUPCON is dedicated to the research of process simulation and simulation, and the existing ots platform is based on the rigorous mechanism model of dynamic simulation technology and advanced virtual controller technology, not only can be applied to operator simulation training, process optimization and control verification, condition prediction, etc., but also "the base of the digital twin" industrial element universe ". Ots has "two core, kernel - dynamic simulation technology, based on strict mechanism calculation, accurate simulation factory operation state; External core - 3d simulation technology, fusion 2/3d engine, cloud computing and large number according to the technology, build 3d virtual factory, provide the enterprise stability, efficient production provide help.

It has the following value: to conduct regular retraining and promotion examination of the job operators, the instrument and the technical manager, and the actual ability of actual operation and the ability to analyze and judge. Shorten the debugging cycle and drive/stop time, reduce economic losses and equipment damage caused by human error operations; Accident simulation and analysis, improve emergency handling ability, develop anti-accident measures, avoid casualties and property losses; To conduct test analysis and optimization of the technical scheme, technical reform plan and control plan; Bottleneck analysis, search for best operating plan, improve production efficiency; It is the intelligent decision and stable operation support of the whole life cycle.

2) SUPCON process simulation and design platform APEX（Advanced Process Engineering eXpert）

Apex is a common process simulation software that transforms the actual process industry process into a computer model, processes the object calculation and process process simulation, and answers the question of "if - so", which plays a role in process simulation and prediction, thus providing guidance for process development, engineering design, production operation, and installation modification, and the purpose of ensuring safe production and reducing the effect of this effect.

Apex is based on the b/s architecture, which is based on b/s architecture, which has the non-installation, the bilingual interface in both Chinese and English, the application of wide circulation, the easy access of the cyclic flow, the global optimization, the script operation, the non-standard equipment can model, support the functional characteristics of the multiple system interface and the independent intellectual property. The software support mechanism and ai fusion modeling, the boundary of process simulation is greatly expanded, and the digital application of the process industry is new.

It has the following value: the thermodynamic tool assists the development of the process, through the function of physical analysis, parameter estimation, parameter regression, etc., and the research and development department of the technical research and development department is conducting the fast road line selection, data acquisition, and improve the efficiency of development. To change the process optimization of oil refining, chemical, polymer and coal chemical industry, and to improve the efficiency of production of traditional software. To change the manual debugging of the model operation process, and to liberate the manpower by scripting the operation. Support non-standard equipment modeling, help user simulation, optimize its self-research equipment, realize software modeling ability long distance expansion; Using the mechanism and ai fusion modeling, changing the pattern that can only be used in the mechanism and the ai, can be fully played with the two points, more objective, efficient reaction device characteristics, and more scenarios.

⑤ Quality Improvement System (QIS)

The Quality improvement system is realized through Q-Lab Full-process Intelligent Quality Monitoring Platform, including quality data monitoring, palm inspection, laboratory management system and other software products. Collect, acquire, clean, store, analyze and manage enterprise quality-related data through smart LABS, online analyzers and distributed LABS with a unique quality perspective. Connect enterprise quality-related data with enterprise raw materials, production processes, products and public works as clues. Focus on quality to achieve "people, machines, materials, methods, rings, measurement" the whole life cycle, the whole chain management. A series of intelligent applications such as quality management, quality prediction, quality diagnosis and quality optimization are realized by combining TPT time series model and artificial intelligence technology.

1) Quality data monitoring software (Q-Lab DMA)

As the basis of the whole process intelligent quality monitoring platform, it is used for the acquisition, collection, aggregation, cleaning, storage and management of enterprise quality-related data. It includes quality data acquisition component library, quality data processing model library, quality data storage model library, quality data index model library, quality data open model library and quality data visual display and analysis. It has the following values: through the establishment of the relevant model base, the quality related data is sorted and cleaned, the invalid information is excluded, and the accuracy and reliability of the data are ensured.

2) Handheld quality control software (Q-Lab MQC)

Including sample registration, sample sampling, inspection tasks, sample review, sample review, sample report, sample ledger, personal workstation and other user interfaces, with the help of customers to achieve the dynamic management of sample inspection process, analysis data and reports. It has the following values: This system can realize the information management of the smallest unit laboratory in the form of mobile terminal and computer terminal, which can help small and micro enterprises in the industrial process industry to establish quality testing tools. While effectively improving the laboratory analysis level, standardizing the sample testing process and reducing the experiment cost, it avoids the heavy investment and operation and maintenance burden of traditional laboratory management software (LIMS). Complete the quality management chain for small and micro enterprises.

3) Laboratory Management System (Q-Lab LIMS)

Including quality management, sample management, laboratory sample management, laboratory management (mobile), laboratory stability test management, laboratory environmental monitoring management, laboratory OOS investigation, laboratory accreditation system management, laboratory personnel ability verification management, laboratory quality control management and other laboratory management apps, this system builds a multi-APP platform system. It allows enterprises to select different apps according to industry management needs, enterprise operation needs and use scenario needs, create a laboratory management system that meets enterprise quality management, and promote quality testing compliance. It has the following values: Based on traditional LIMS products, this system creates more efficient, usable and concise data management. From the perspective of quality testing, while taking into account compliance and rationality, it covers multiple industries and multiple management dimensions, which can effectively improve the convenience and precision of enterprise laboratory management.

4) Online Analyzer Data Acquisition and Management System (Q-Lab AMADAS)

The system integrates international industrial standards, big data, industrial analysis network technology, expert database and visual operation interface to provide customers with effective online analyzer management tools. The system has the functions of monitoring, diagnosis, verification and maintenance of the online analyzer. Through the operation status monitoring and performance and availability diagnosis, abnormal behavior can be detected and predicted, and reasonable maintenance requests can be issued to ensure the availability, reliability and accuracy of the online analyzer. It has the following values: improve the management efficiency of the analyzer by 30%, reduce the failure rate of the analyzer by 30%, reduce the operation and maintenance intensity of the analyzer by 50%, save the total labor cost by 50%, reduce the consumption of standard samples by 20%, and comprehensively improve the management efficiency of analytical instruments in enterprises.

5) Statistical Process Control (Q-Lab SPC)

The system introduces a variety of algorithms to analyze and display data about the production process, monitor the production process in real time, identify changes and problems, optimize production efficiency, ensure product consistency, and support quality improvement. It has the following values: the introduction of a variety of management algorithms, the application of big data and artificial intelligence technology, the construction of quality analysis tool software, to help enterprises improve production quality, reduce costs, and continuously improve the production process to meet the production requirements, so as to enhance competitiveness.

6) Quality Review System (Q-Lab QRS)

According to the quality management requirements of pharmaceutical industry, the system builds the quality risk control software that meets the requirements of industry norms. The system includes product quality data analysis, risk control, automatic generation of product quality review report and other functions. It has the following values: reduce the workload of load-bearing personnel in the traditional quality risk control process, through this system can quickly query and import information, automatically generate quality risk control reports, reduce personnel workload and improve work efficiency.

7) Intelligent Laboratory Management System (Q-Lab SLMS)

Including laboratory scheduling management and intelligent management system, as an important part of the quality improvement system, with robots, automatic analysis and visual recognition and other AI technology, to achieve the automatic operation of the laboratory, scheduling and management. This system is gradually being applied, through the continuous exploration of enterprise KNOW-HOW, optimize the system software, while introducing AI and other technologies, to achieve scheduling optimization and function upgrading. It has the following values: to build a sorting system composed of mechanical arm and AGV, to realize the whole process of identification, grasping, coding, weighing, scanning and analysis of sample bottles. The smart laboratory has realized 7×24 hours automatic detection, the workload of the experimental personnel has been reduced by more than 40%, the efficiency has been increased by more than 30%, the business undertaking capacity has been increased by more than 60%, and the whole experiment process can be traced.

8) Intelligent Quality Analysis and Risk Control System (Q-Lab IA&IRC)

It includes intelligent quality manager, intelligent quality analysis, intelligent quality prediction and other apps. As a software system in development, this system adopts advanced quality prediction model and optimization algorithm, combined with online monitoring equipment to analyze real-time changes in production parameters, automatically predict the quality of key production processes, and optimize production parameters. Once anomalies or deviations from expectations are identified, the system will quickly work with the industrial control system to take corrective action to fully ensure the accuracy of quality improvement measures. At the same time, establish a traceable product quality information chain, enhance the transparency of the supply chain and the traceability ability of quality management, improve production efficiency, reduce traceability costs, and ultimately improve product quality and customer satisfaction. It has the following values: Taking the quality improvement system construction of a resin production enterprise as an example, through quality soft instruments and quality prediction models, key factors affecting product quality are mined, production adjustments are made based on key parameters, dynamic monitoring of the reaction process of resin products is carried out, and AI algorithm is used to predict the reaction stop time, effectively reducing the number of tests and improving the stability of product quality. Save about 400 hours of testing time/year, improve efficiency by 15%, reduce quality inspection manpower investment by 50%, and increase indirect income by 10%.

⑥ **Production operation system (POS)**

The production and operating system includes batch production management software, continuous production management software, operational data analysis management software, fusion large number according to the advanced technology such as ai, providing knowledge q&a, data q&a analysis, operation auxiliary and recommendation. To realize the value of production data, automatically identify and predict potential problems, realize the comprehensive control of the enterprise's production process, help enterprises to make more accurate production decision adjustment, meet the management requirements of safety, environmental protection, quality, reduction and enhancement of safety, environmental protection, environmental protection, environmental protection, environmental protection, environmental protection, environmental protection, environmental protection, environmental protection, environmental protection, environmental protection, environmental protection, environmental protection, environmental protection, environmental protection, new energy, medicine and food and beverage.

1) Batch production management software (InPlant MES-B)

The production management software product is the real-time monitoring and scheduling, process optimization, standardization operation procedure, data integration and analysis, improving production efficiency, ensuring product quality, enhancing production transparency and traceability, reducing production cost, improving flexibility and response ability, and supporting enterprises' "reduction, quality and enhancement" of enterprises.

The software is connected to the erp and automatic implementation system, and the production order is automatically issued, the production data is collected automatically and the production control integration is reported. Through the professional system of the limsand the wmsster and eam, the quality inspection and warehouse cooperation and the efficiency of the work are achieved. To integrate the information of production activity, production, process, quality, etc., to implement the function of batch of batch and batch.

It has the following value: the production process data is transparent, subtle and retrospective; The production operation is to prevent, misposition, standardize and systematise; Reduce production cost, improve product quality and promote enterprise efficiency.

2) Continuous production management software (InPlant MES-P)

Continuous production management software products are controlled by the continuous production industry, through monitoring the full process data, the problem of the running of the dribbetween, the production "stability and constant full" is supported.

Through the acquisition, monitoring and processing of the whole elements information, the software establishes the whole process's material balance model, and realizes the equipment, department and company level three material balance, so that the production process is more traceability, measurable and transparent. The system combines the operation process standard and the production operation specification, and solves the production problem through the production process visualization, the quantitative evaluation index and the continuous improvement.

It has the following value: the realization of the full process data measurement, balance, statistics, the automation of accounting, dehumanization, and improve the efficiency of the work; The production information indexing, visualization and index deviation pdca control are fully realized, and the control level of refined and refined control is promoted. To open up the production plan, schedule, execution, the full business flow of the decision, and eliminate the information island.

3) Operating data analysis and management software (InPlant ODS)

The management software product is controlled by the continuous production industry, through efficient data statistics, provide real-time and accurate quantifiable production process operation smoothly state, provide effective data foundation for enterprise implementation operation process analysis and evaluation, assist enterprises to optimize the stability and regulation of production process operation, and improve the production safety and efficiency.

The software provides the functions of the key data such as the process stability, the control rate, the rate of the chain rate, the calculation, the analysis and the change process management. It can realize the real-time and historical trends of various types of indicators, provide the production condition management, the statistical evaluation of the index and the analysis ability of the multidimensional historical comparison.

It has the following value: the convenient implementation of the four rate indicators visualization; The whole dimensional production process is monitored in real time, and the process of production process is high. According to the statistics of the second series, the series is calculated, and the real-time feedback production operation state is reported. To provide multidimensional statistical reports to meet the enterprise's quantitative assessment of the execution process of the group. To guide the process of automatic improvement of the device, and finally realize the stability rate of the enterprise control rate.

⑦ Safety Priority System (SPS)

The innovative concept of safety priority system is proposed to provide future factory construction with more systematic, more standard, more reliable and more intelligent sustainable development safety solutions covering the whole life cycle of enterprises, and build a strong safe production barrier. The safety priority system is based on the whole life cycle framework of the factory, sorting out the core elements of safety management in each stage of project planning, design, construction, test operation, production operation, equipment maintenance, emergency response and system audit and verification, integrating industrial AI advanced technology, real-time monitoring of various safety protection barriers. Build a systematic, digital and intelligent life-cycle security defense system. Its core is to fully rely on the industrial control system for deep data analysis and integration, close to the actual functional needs of customers, the use of digital intelligence means to real-time monitoring, analysis and optimization of various security protection barriers, the construction of intelligent security defense system, to achieve safe production of all elements, the whole process, integrated closed-loop management and control, and help industrial smart and safe operation. The system includes production safety management software, risk early warning analysis software, agile emergency software, real-time positioning monitoring software, advanced alarm management software, accident analysis system and other products.

1) Production safety management software (InPlant SES)

The production safety management software is based on the management of the safety management, the development of the safety management, the operation license management, the intelligent inspection and other industrial app products, the production safety management software of the safety production standardization factor management, the enterprise risk rapid awareness, real-time monitoring, advanced warning, dynamic optimization, intelligent decision, linkage disposal, global synergy ability, and the effort to accelerate the development of the enterprise safety production supervision mode to prevent digital transformation.

The production safety management software is used to realize real-time monitoring, video monitoring, personnel positioning, equipment status, special operation and other risk data, to realize the security management foundation information, the major hazard source safety management, the double prevention mechanism, the special operation management, the intelligent patrol, the personnel location and so on the basic function of informationization, digitization, networked, intelligent. Provide data exchange function, support multiple app data interchange, and form the data exchange and transmission system of interconnection. To open up the risk data elements such as safety, environmental protection, equipment and technology, and integrate into industrial ai technology to effectively perceive the risk of production process.

It has the following value: risk control and systematization: the realization of risk to identify, analyze, evaluate, alert, handle the whole process control, systematization management; The digital technology and safety management embody the deep fusion of the digital technology and safety management, and the transformation of the enterprise is intelligent and the transformation is upgraded. Responsibility implementation manifest: clear the responsibility list of leadership, management and staff, and ensure that the safety management system requires rigid execution; Decision management intelligence: comprehensive amount of business risk data, combine large number according to algorithm analysis ability, understand the safety production law, discover the potential risk, guide the safety work priority, realize the risk advance warning and intelligent control.

2) Risk warning analysis software (InPlant RWS)

The risk warning analysis software is a core impact indicator that can reflect the education training, risk risk, emergency exercise and safety accident of enterprise production and accident characteristics, including data statistics, modeling, calculation and analysis, and quantifying the production safety status of enterprises. The system can lead to the safety production status, the information that can cause the accident, timely release the safety production warning, remind the enterprise head and the staff of the staff, make the enterprise timely and targeted to take precautions to control the development of the situation, minimize the probability of the accident and the severity of the accident.

The risk warning analysis software of the intermediate control enterprise has the following key functions: the risk warning index can be selected according to the enterprise safety production. To establish a risk model by quantifying the target value and its index weight; The early warning index diagram visualization shows the dynamic monitoring risk trend; Risk changes exceed the threshold, and the warning information is issued by level. The risk alarm is automatically generated.

It has the following value: determining the state of enterprise safety production and controlling the enterprise risk index in real time; To release safety production warning information in time, reduce the time of early warning response; Aid safety production makers have found regulatory blind areas targeting targets.

3) Agile emergency software (InPlant ECD)

According to "unified command scheduling, unified situational awareness, unified emergency communication, unified visual display and unified data application" comprehensive emergency management concept, design comprehensive emergency management platform system. Through agile emergency management software, we will strengthen the rapid perception of enterprises, real-time monitoring, advanced warning, dynamic optimization, intelligent decision making, joint disposal, system evaluation, and comprehensive cooperation. To cover emergency management prevention, preparation, response, and restore all four stages, the accurate push of the emergency disposal assistance data, the real-time update of the emergency resources, the intelligent decision of emergency rescue, the rapid connection of the emergency team and the whole record of the emergency procedure.

Function of agile emergency software: the accurate push of the emergency disposal assignment data; Emergency resources "a picture" control; The proposed artificial intelligence structured disassembly and application; The personnel's meters are accurately positioned; Emergency team rapid linkage; The entire procedure is recorded.

It has the following value: the realization of the unified platform emergency data sharing and the opening of the business integration capability; Systematic, comprehensive awareness of emergency monitoring data; Global perception of emergency situation; Emergency rescue intelligence decision; Emergency rescue and disposal of rapid coordination, effective improvement of disposal efficiency.

4) Real-time positioning monitoring software (InPlant RTPS)

The software is suitable for the monitoring of the total number of people in the area, the monitoring of the distribution of the area, the monitoring of the personnel in the workshop area, the monitoring of the inspection personnel, the monitoring of the inspection personnel, the monitoring of the personnel, and the monitoring of the accumulation of personnel, to help the enterprises in the area of regional personnel control, internal and external control, real-time risk management and the precision rescue, so that the enterprise can improve the safety production level of the enterprise.

Real-time positioning monitoring software has real-time location display function, supports the real-time location of the personnel on the 3d map, and sees the relevant statistics, and helps the manager to master the scene in time. The historical location of the recorder is able to view the historical trajectory of the personnel and the historical location of the entire personnel, and the ability to date back. Support for intrusion, absence, detachment, stranding, detention, stationary, speeding, driving deviation, etc., can be controlled by the people in the office. It is helpful for the safety of the people to support a key call function, the data monitoring of the personnel, and the monitoring of the risk warning of the people. Support with video center, safety operation, intelligent inspection and other apps to be connected, realize video linkage, the work of the guardian is monitoring, the inspection track view, etc., provide more practical tools for the field management.

It has the following value: real-time monitoring, security personnel safety: through the location and physical data of the real-time monitoring personnel, timely discovery of the whole state of the person's insecurity, the first time the response, the prevention of the accident and the safety of the personnel. Strong tools, enhanced management ability: provide rich statistics and powerful management tools for managers, and improve the efficiency and accuracy of enterprise security management. Visual display, improve enterprise image: have 3d visualization ability, enterprise can be able to display in large screen, enhance enterprise transparency and modern sense, improve enterprise image.

5) Senior alarm management software (InPlant AAS)

Senior alarm management software, help enterprise recognition and eliminate invalid alarm, strengthen operator's alarm awareness, establish unified alarm management platform, realize the police will be reported, the multi-cop will be corrected, and the police will do. The plan fully meets the national standards and the policy requirements of the emergency management department.

The advanced alarm management software can visually view the alarm and the operation of the information of the kpi. A number of statistical analysis algorithms have been built, the problem of alarm operation and the Suggestions are put forward. By rationalizing analysis, establish the alarm expert knowledge base, and guide the operator to handle the alarm correctly. Through multi-operating condition alarm, the state switching of parking and lifting load is realized, and the alarm is adaptive to avoid the flood of alarm. Key alarm such as operator is not processed, can be sent to the relevant responsible person by text message/mail/nail/nail/micro. In addition, the control aas has the functions of self-definition alarm, alarm audit, operation statistics, parameter stability and so on.

It has the following value: the control aas fully meets the emergency management management department. For different positions of enterprises, full effect. Operator: eliminate more than 90% invalid alarm, reduce operation load, and handle the key alarm in time. Engineer: provide 20 different statistical analysis algorithms, realize multi-condition alarm adaptive, help identify and eliminate invalid and disturbance alarm. Device manager: analyze the alarm performance of the device, periodic audit alarm group state, precipitation knowledge. Company management: full factory alarm kpi report, quantitative assessment and management. Improve the overall compliance level of enterprises and prevent economic losses caused by accidents.

6) Accident analysis system (InPlant SER)

The accident analysis system is a database of the alarm and operation of the sissview CCS system, which is used to collect, parse, store, and form a unified database, provide the enterprise to provide cross-system cross-platform data analysis report, and help the enterprise realize the software of rapid root analysis.

The function of the accident analysis system contains: monitor kanboard - cockpit: you can quickly check the recent alarm and events and the latest jump report. Cockpit content includes alarm type, event priority statistics, event priority trends, event classification, and latest reports. Event sequence: you can view the latest real-time data status in chronological order (ascending, descending, and custom time). The list contains data from different systems (dcs/sis/ccs, etc.) to record the data of the soe log, etc., and check the sequence of events. Monitoring scheme: real-time monitoring conditions for custom jump car reports can be provided, and when the ser software detects the event that meets the conditions, the system automatically fetuses the event data around the set of the set, and generates a jump car report.

It has the following value: it can provide a cross-platform alarm event recording and analysis report for customers, which makes the analysis of alarm and event information clearer and more accurate. Based on this, the customer can quickly locate the cause of the accident and take corresponding measures to avoid the accident of the accident due to the fault identification and improper disposition. At the same time, the accident analysis system can automatically produce accident reports according to the rules made by the customer, reduce the steps and actions of the customer management process, and improve the management efficiency.

⑧ **Energy saving & Low Carbon System (ELC)**

The energy saving and low carbon system focuses on the energy conservation and optimization control of the main installation and the main installation, and the energy optimization scheduling and the number of intelligent carbon essence management of the energy optimization scheduling and the number of intelligent energy in the factory level, including the carbon management software, the energy management software, the network simulation software, the public engineering optimization software and other software products. Based on the automation of the region, the energy supply unit (boiler - turbine network, refrigeration, circulating water and air pressure and other common facilities) and the energy unit (reduction furnace, rotary kiln, methyl chloride silicone unit) are realized by the industrial ai and the automatic control technology. Based on connectivity and comprehensive perception, through the combination of mechanism, scheduling rule, experience knowledge, large number according to technology and it technology, realize the complementary coordination optimization of multi-energy system, hydrogen and fuel gas coordinated optimization, steam system balance scheduling optimization, dynamic matching energy supply and production demand, optimize the use of energy energy. Through digital and intelligent technology, the management of energy, carbon emissions, carbon assets and carbon footprint, etc., is lean, intelligent and compliant management, avoiding energy waste and unreasonable use. In addition, the technology provides a full life cycle service from carbon check to carbon action, helping companies develop short and long-term low-carbon plans and actively address the climate crisis. At present, the low-energy and low-energy low-carbon system has achieved value in the fields of petrochemical, coal, chlorine and chlorine, refining, metallurgy, food, medicine, electricity, building materials and new energy batteries.

1) Carbon control software (InPlant CMS)

The CMS is a tool for the development of carbon tube technology by the enterprise, which covers the carbon emission management of the control, the management of the enterprise carbon, the management of the carbon footprint of the product, the prediction of carbon emission, the shortage of the quota, the management of carbon assets, the promotion of carbon peak, the management of carbon budget, etc.

The software is built with more than 100 carbon emission accounting models and more than 200 carbon emission factor database, more than 200 enterprises boundary carbon emission accounting and 10 sets of facilities boundary carbon emission accounting templates, the user can directly select the accounting model of the corresponding industry, increase and reduce the source of emissions, modify the data source, and easily build the enterprise's own carbon control system. It also USES the medium control energy management software to seamlessly integrate energy data, realize the automation of the whole process of carbon emission accounting, and also have the precision to predict the energy and carbon emissions capacity of enterprises.

It has the following value: promoting the efficiency of carbon tube technology. Carbon emission statistics improve 90%; The efficiency of carbon emission anomaly analysis improves 80%. Carbon emission measurement, statistics, analysis of data granularity to "group/day; Real-time dynamic monitoring of carbon emission flow process; To realize the carbon emission statistics and analysis of enterprises, devices, industrial segments and product dimensions; The performance cost of carbon emission is reduced and the value of carbon assets is added. The brand premium benefits of compliance and advanced carbon management; The refined carbon tube is capable of improving the energy efficiency of 2~ 5%.

2) Energy management software (InPlant EMS)

The energy management software product provides the digital management of the enterprise energy purchase, transformation, transmission and consumption of the whole life cycle through the unique index model design. Provide direction and tool support for enterprises' efficient production and energy conservation and emission reduction.

Through the construction of the enterprise energy index system, the energy statistics model is established based on the index calculation engine, which realizes the automatic measurement, balance and statistics of enterprise energy. Provide energy flow monitoring, energy consumption planning, energy report display, energy consumption analysis, device energy consumption analysis, energy efficiency analysis, device efficiency analysis and other functions, can effectively improve the enterprise energy management level.

It has the following value: implementing energy lean control; Improve energy efficiency, reduce human input, and change the capacity of the staff to more investment in energy saving. To meet the needs of the energy sector; Comprehensive energy efficiency management that meets enterprises water, electricity, steam, wind, solid fuel, etc.

3) Network simulation software (InPlant Pipe)

The simulation software is based on the dynamic model of the flow and heat transfer coupling, which is based on the b/s architecture, the integration of 2d/2.5d network modeling, and the precise beggy-s-brill multi-phase flow calculation model and the unique calibration algorithm, the steady state and dynamic precision simulation of the network. The design quality and performance evaluation of the pipe network can be evaluated, and the design of the pipe network is identified and eliminated, and the soft measurement, operation economy analysis and safety risk prediction warning of the network state parameters are realized, and the digital and intelligent degree of the network is effectively improved.

The simulation software of the control network is based on the powerful object database and the flow and flow - heat transfer coupling mechanism model, which can realize the steady state and dynamic simulation of the process of the factory and the long pipeline. The integration iapws, RKL, bwrs, rkint, bwrsof the niqaca niqacin SRK, etc., have the advantage of solving the speed. In the design, operation and renovation, all kinds can provide intelligent guidance, the safety evaluation, scheduling decision, optimization operation and optimization of the network operation.

It has the following value: in the case of diagnostic warning, online real-time simulation and state monitoring, the identification of the network anomaly, the prediction warning of the vibration, corrosion, leakage, water attack and other abnormal problems, and the warning of the fault of the design of the network. In order to optimize the design side surface, the simulation calculation of steam, water, gas, hydrogen and material network is optimized, the design is optimized, the design defect is identified in advance, the cost of the pipeline investment is reduced, the safety danger is eliminated, the economy and safety of the operation are improved. Optimization transformation: simulation calculation of municipal network network, industrial network and other typical operating conditions, analyze the bottleneck problem in the operation of the pipe network, and make reasonable optimization plan, improve operation efficiency and eliminate safety hazards. In order to optimize the scheduling, the network simulation and the production consumption equipment are combined, the optimal operation adjustment, the economy of the equipment operation, the combination of the emergency treatment plan, the model of the emergency plan, the supporting operation adjustment, the scheduling decision, and the risk of running.

4) Public engineering optimization software (InPlant Utilities)

Based on the method of production consumption, the system of public engineering is used to make the plan plan, the scheduling experience of the scheduling plan, the ability to improve the scheduling decision efficiency, the implementation of the model optimization operation, the optimization operation, the optimization operation, the scientific scheduling, the emergency command, the effective promotion scheduling and the management level, the effective promotion scheduling and the management level, the safety of the system, the effective improvement scheduling and management level, the safety of the normal operation, the control of the normal condition, the safety of the abnormal condition, the control of the public media consumption.

Using the b/s framework, we build a smart decision software based on experience and model, and through the modeling of "process + exception + plan", the collaborative scheduling of "device + network + public medium + production material" is realized, and the intelligent assignment of enterprise scheduling decision is realized.

It has the following value: the value user can use the scheduling simulation function to quickly realize the simulation and the optimization of the scheduling plan. Based on the scheduling optimization model development machine interaction, the simulation measurement of the scheduling scheme under the assumption condition of the device, the installation of the device, and the installation of the device, assist the dispatching personnel to analyze the pre-judgment, and then formulate the balance plan, the exception response plan, and improve the scientific and accuracy of the scheduling of the public engineering system. The user can implement the abnormal online recognition and scheduling plan through the decision navigation function. The current operation condition is analyzed in the case of abnormal shutdown, rapid reduction load and network pressure anomaly, and the current real-time data and preset scheduling scheme is associated with the scheduling and adjustment scheme of the new production and consumption of the public media, and the online push is given to the dispatching officer, and the dispatching personnel of the dispatching personnel are improved, and the recognition and prejudgment ability of the dispatching personnel to the abnormal condition are improved, and the scientific science of the abnormal response efficiency and scheduling decision is improved.

⑨ Supply-chain Management System (SMS) & Supply-chain Optimization System (SCO)

Supply chain management system includes supply chain management products and supply chain optimization products. Supply chain management products include tank area oil movement software, oil blending software, loading and unloading operation software, logistics management software, warehouse management software and other products. Supply chain optimization products include supply chain planning optimization software, supply chain intelligent production scheduling software, planning and scheduling optimization software and other products.

Supply chain optimization management and optimization Through the combination of AI technology and operation research optimization technology, the development of enterprise supply chain management and optimization system model, to help enterprises achieve integrated optimization of production, supply and marketing business, integrated information management, closed-loop management of production and operation process planning - production scheduling - execution - work reporting - tracking, significantly improve the plan completion rate, inventory turnover rate, order delivery rate. Production scheduling efficiency, while achieving the economic optimization strategy, minimizes the inventory cost, and fully realizes the operation and management of the supply chain field with less personnel, standardization, high efficiency and intelligence.

1) Warehouse management software (InPlant WMS)

The warehouse management software realizes the information sharing and verification of materials from ordering, entering the factory, receiving goods, storage, delivery and other links, and can track the whole process of material flow in the warehouse, so as to improve the controlability and efficiency of warehouse material management.

The software has built-in policy management functions such as warehouse location optimization, inventory, storage relocation, and validity period management to help users efficiently and intelligently complete various warehouse business operations, including unloading, inventory, and early warning.

It has the following values: intelligent algorithm control, anti-stagnation, improve inventory turnover; Production and marketing analysis, optimize inventory model, accelerate the processing of backlogs; Material information can be traced, quickly and accurately locate problems; Control the whole process of dangerous goods storage to eliminate dangers and hidden dangers.

2) **Oil online optimization and blending software (Inplant Blend)**

The oil online optimization and blending software product is oriented to the petrochemical industry, through online quality analysis and advanced process control of the "oil online optimization and blending" technology, has become a necessary technical approach for refinery construction or upgrading, but also an important means for enterprises to save energy and reduce consumption and improve economic benefits.

The software supports global formulation planning of multiple series products; The tuning and optimization controller has mature technology and stable performance. Support multiple optimization objectives of balance optimization, economic optimization and capacity optimization; Support tank bottom oil quality compensation and pipeline oil quality tracking and compensation; Support multiple quality objectives (octane number, vapor pressure) simultaneously card edge control; The tuning rules suitable for domestic component oil characteristics are optimized and controlled to reduce the commissioning time.

It has the following values: improve the operation efficiency of oil blending and the success rate of a blending; Enhance product quality level, improve product performance; Increasing product variety and quantity; Through card edge optimization, effectively improve the economic benefits of enterprises.

3) Oil mobile system management software (InPlant OMS)

Oil mobile management software products are controlled for the petrochemical industry, through monitoring the whole process data, timely find problems such as running, dripping and leakage, for enterprises to provide direction and tool support for "efficient production, energy saving and emission reduction".

The software includes tank area information management, task scheduling management, audit tracking, flow chart management, path management (optimized path algorithm, dynamic global calculation of the main bypass), report statistics, and interface management for MES system.

It has the following values: improve work efficiency, reduce labor costs, reduce more than 50% of internal operation positions; Oil movement through technical means to eliminate the "misoperation" caused by the process operation safety problem; Reduce "running oil", "string oil", "coagulation line", "pumping", "braving tank" accidents, can avoid significant economic losses; Through system data and leading algorithm calculation, the optimal mobile path and related equipment selection can be provided to optimize resource allocation, energy saving, emission reduction and consumption reduction.

4) Logistics management software (InPlant LMS)

Logistics management software provides chemical and general process industry in-plant logistics system applications, to solve logistics business order management, external logistics planning and dispatching, vehicle qualification files and evaluation management, on-site vehicle behavior constraints and rules management, inventory prediction management, in-transit monitoring, material quantity tracking and anti-cheating and other problems.

It has the following values: visual vehicle scheduling: it provides visual vehicle scheduling to help enterprises realize the automation, intelligence and optimization of vehicle scheduling and improve transportation efficiency; Automate order processing to improve the efficiency and on-time delivery of goods; Through intelligent tracking, it prevents cheating and violations in logistics operations, improves business security and reliability, and reduces transportation risks.

5) Intelligent software for loading and unloading (InPlant TAS)

The intelligent software of loading and unloading is developed to promote the intelligent process of loading and unloading of enterprises in and out of storage. Its core composition is based on single automation equipment and supported by software system, developing towards the direction of informatization, whole process and system integration and docking.

The software includes tank area information management, task scheduling management, audit tracking, flow chart management, path management (optimized path algorithm, dynamic global calculation of the main bypass), report statistics, and interface management for MES system.

It has the following values: reduce staff and increase efficiency, by software and automation equipment, repetitive judgment processing, reduce repetitive labor; Effective control, standardize the process steps in the factory, reduce human intervention, and achieve effective control of logistics settlement; Multi-terminal business system docking ability, internal logistics system epitaxial penetration, system external multi-terminal connection; The flexible configuration scheme combining software and hardware can adapt to the diverse management needs of enterprises.

6) Supply Chain Planning Optimization Software (InPlant SCP)

Supply chain planning optimization software is a tool software developed by central control technology to realize the balance of production, supply and marketing in enterprise supply chain. It can optimize the master plan of enterprise supply chain, demand forecast management, timeliness cost and profit analysis, inventory management and optimization, material mutual supply optimization, and realize the global optimization of annual, quarterly and monthly production plan through business coordination, data homology and information sharing.

The software adopts the modeling method of process configuration, multi-objective optimization strategy, multi-scene demand, capacity, inventory, financial constraints and hypothesis analysis, visual result report, carry out all-round supply chain planning optimization, realize the whole business process of supply chain planning online and multi-objective optimization, and realize the management of all major process nodes of production, supply and marketing business. From data entry, plan formulation, plan meeting, plan adjustment, plan delivery to final plan tracking, finally achieve scientific and efficient decision-making of enterprise operation.

It has the following values: the efficiency of plan making is increased by >80%; Compared with multi-scheme plan optimization, the enterprise benefit can be improved by 1 ~ 3%; Quickly respond to market changes, adjust plans in time, reduce losses.

7) Supply chain intelligent production software (InPlant APS)

The supply chain intelligent production software is a tool for the enterprise supply chain intelligent production. Based on the operation of order, inventory and equipment, the scheduling target and the dynamic generation of the scheduling target, the dynamic generation of the scheduling strategy, the intelligent algorithm and the rules engine, the automatic optimization order ordering, the production line production, the work order execution, etc., simultaneously realize the automation and the online process of the enterprise production line industry.

The software can through the management of business integration through purchasing, selling, producing and reporting the business process of the business. Integrated industrial operating system platform, break the system information island of the erpand wmsfield and the crmand, and realize the seamless integration of information integration. Have low generation code development ability, quickly realize customer customization business function development; The industry is widely used in petrochemical, chemical, refining, organic silicon, metallurgy, lithium electric, coal chemical, food, medicine and so on.

It has the following value: improving the production efficiency of the plan. Plan completion rate of 95%; Order delivery rate is 90%. Inventory turnover increases by 20%.

8) Plan scheduling optimization software (InPlant PSS)

The plan scheduling optimization software is a tool for implementing the optimization of enterprise production planning. Based on the optimization model of the industrial enterprise and the rolling scheduling production model, the most profitable and the most profitable plan and the executable scheduling and production plan are quickly generated, the optimization of raw materials, the optimization of the whole factory process, the optimization of the scheduling production, the prediction of the stock trend of the material inventory, and the great operation decision and scheduling execution tools for the enterprise are provided.

The software has the following features: using the process of streamlining, modeling, and the flow of materials to be clear and clear. Plan optimization and scheduling optimization integration, production plan automatically decompress; Realize the nonlinear adjustment of gasoline; To calculate the shadow price of the whole factory. To support sensitivity analysis and multiple cases of working conditions, The optimization of raw materials (crude oil) is better than the choice; The standard report is combined with the user's custom report function, and the program optimization work report is synchronized.

It has the following value: optimize raw material (crude oil) selection, product structure, device production load, whole factory process, the benefit increase can reach 1-3%. The whole factory bottleneck study, optimized device configuration and extension plan, the benefit increases can reach 1-5%. Optimize the study of open shutdown and reduce the cost of shutdown.

⑩ **Sales Services System (SSS)**

The sales and service system provides the digital support for the customer interface for the enterprise, through the application of automation and intelligent technology, the realization of the implementation of the reduction of the enhancement effect, and the improvement of customer satisfaction.

The project management software is a digital application that implements the integration, elaboration, mobility and intelligent management of multi-project delivery, large-scale engineering delivery team.

The software package contains core functions such as total life cycle management, project management cost management, project delivery resource management, and project management of the cockpit.

It has the following value: the overall visualization of the project progress, the visualization of the entire life cycle, end-to-end execution state; The detailed control of the cost of the project, through the project's preliminary approval, from the human, purchasing and management of the various kinds of accounting subjects, can be analyzed by the project group, the individual item of the individual group, the overall and the refined business analysis, and the implementation of the project to reduce the increase of the project; Risk overall perception and control, implementation of project risk intelligence identification, proactive warning, real-time monitoring; Establish the project risk library, remind the project acceptance, project demand change, project payment delay, etc.

⑪**Support & Guarantee System (SGS)**

Support and guarantee system to improve enterprise management efficiency through digital and intelligent means; Based on the unified business digital software, the barriers to communication and collaboration between various doors, districts and each group of each group are broken, and the multi-role collaboration efficiency is improved through standardized, convenient and efficient business flow.

The unified business digital software product (inplant bd) is based on the concept of "platform + app" ", which implements the unified business application digital system of business, data, application and technology, including application center, process center, unified user management, communication record management, business journey, component center and so on. The software is beyond the traditional wisdom portal, and reintegrates the various systems inside the enterprise to be integrated into the enterprise's full process, full process, and full user's thousands of digital productivity workbench.

It has the following value: improving productivity, and users can use multiple business systems' functional menus and todos directly in a system, without the need to switch between different systems; The unified integration of data is implemented to ensure the efficient synergy of seamless docking and business flow. To visually display the business scenario in a guided way, shorten the adaptive period of the user learning system, and help them adapt to the digital system faster and more efficiently. The whole style is innovative and innovative and thousands of thousands of faces, which can carry a company's visual brand culture and the informationization level of a enterprise. It is also the ultimate embodiment of the transformation of enterprise Numbers.

(III) Main business model

1. Research and development model

The company continues to upgrade and optimize R&D management, introduce and deepen the promotion of IPD integrated product development management mode, customer-centered, market-driven, demand-oriented, product development as investment to manage, in order to improve R&D efficiency, reduce R&D costs, create competitive high-quality products and solutions, support the rapid growth of the company's performance. IPD includes managing demand, managing market, managing development and managing platform and technology to achieve "doing the right thing", "doing the right thing" and "doing what others cannot do".

Manage the demand -- deeply understand customer pain points and needs, and quickly respond to customer needs through end-to-end demand management processes such as demand collection, analysis and decision making, and demand realization.

Manage the market - by understanding and segging the market, conducting portfolio analysis, and developing product business strategies and plans (Charter Development) to drive research and development and ensure business success.

Management development - through a structured product development processes (conceptual stage, planning stage, developing stage, validation phase, release and lifecycle management phase), building to meet customer demand, competitive high quality products.

Management platform and technology, the technology system of layered and product system, to carry out technical insight and planning, building technical barriers and the innovation points, complete technical pre-research and reserve in advance, through asynchronous development mode to improve r&d efficiency, reduce the technical risk, continue to build the core competitiveness of the products.

2. Production and procurement mode

The company coordinates purchasing activities through planning and dispatching department, purchasing department and storage department; Mainly USES the independent production mode, production according to production plan and delivery time organizing project, combined with field technical service project finished products production, installation, debugging and commissioning. The company actively promotes the digitalization of procurement business, establishes the procurement business management platform SRM, relies on digital means to effectively improve the efficient coordination ability of both buyers and suppliers, standardize the whole process of procurement and the whole life cycle management of suppliers, promote the standardization of business processes, and promote the professional and efficient business management.

3. Sales model

The company mainly adopts direct sales to process industry customers to sell automation control systems, industrial software, instruments and other intelligent manufacturing products and solutions. Domestically, by building the organizational structure of "region + industry + product", the company actively creates a new one-stop industrial service model of 5S offline stores +S2B online platform with customers as the center. 5S offline stores move the company's sales forward, expand the service radius of industrial customers, get close to customers, and quickly grasp and respond to customer needs; S2B digital intelligence service platform based on an intelligent center (integration of cloud computing, artificial intelligence, Internet of Things, big data and other technologies), to build three innovative businesses "digital intelligence city", "digital intelligence solution", "digital intelligence service", to provide customers with industrial products, technologies and services in the whole life cycle of industrial production, to build an online and offline linkage digital intelligence supply chain system. To build a new model of industrial services.

At the same time, the company is actively implementing the subscription membership model, which is a major innovation of the company's customer service model. It can effectively help users improve the overall comprehensive service ability from design to operation, strengthen the stickiness with customers, meet the needs of long-term cooperation and development, and comprehensively promote the application of all kinds of advanced software, equipment and technology in industrial enterprises. In June 2024, the company and Shanghai Huayi Engineering Co., Ltd. successfully signed the first subscription membership of one million supreme members, which also marks the official implementation of the company's subscription membership model, which is of pioneering significance in the field of process industry.

Company make full implementation of the "iron triangle" formation cooperative engagement, focus marketing resources, accurate depth excavation user at different stages, different levels of demand, continued strength in the high-end market, implement multiple customer strategic cooperation and big project a complete coverage of grid management. Abroad, the company continues to increase the market layout and development in Southeast Asia, South Asia, the Middle East, Africa, Europe, Central Asia, America, Japan, South Korea, Mongolia and other overseas regions, set up subsidiaries in Singapore, Saudi Arabia, India, Malaysia, Indonesia, Japan, Kazakhstan and other countries, and vigorously promote and build overseas localized operation capacity. To provide better service for overseas users, the company has successfully promoted the application of core products to more than 50 countries.

(IV) Analysis of the company's position in the industry and its changes

(1) Leading enterprises in the field of domestic process industry automation

According to industrial statistics, in 2023, the company's core products are distributed control system (DCS) in the domestic market share reached 37.8%, domestic DCS for 13 consecutive years the market share first. In 2023, the company's DCS market share in the chemical field reached 56.3%, 1.5 percentage points higher than the market share in 2022; In 2023, the company's DCS market share in the petrochemical field will reach 49.3%, 4.5 percentage points higher than the market share in 2022; 2023 company chemical industry, petrochemical, building materials three DCS market share are ranked first, reliability, stability, availability, etc., have reached the international advanced level. According to the statistics of China Industrial Control Network, the company's core product safety instrument system (SIS) will occupy 33.7% of the domestic market share in 2023, 4.7 percentage points higher than the market share in 2022, ranking first in the domestic SIS market share for two consecutive years.

(2) The leader of intelligent manufacturing solutions for domestic process industry

The company has been selected as the intelligent manufacturing system solution supplier and demonstration enterprise of the Ministry of Industry and Information Technology for many consecutive years. It has successively undertaken the intelligent manufacturing projects of the Ministry of Industry and Information Technology, such as the new intelligent manufacturing model project of bulk API and pharmaceutical intermediates, the pilot demonstration project of petrochemical intelligent factory, the application project of the new intelligent manufacturing model of one million tons of olefin, the new intelligent manufacturing model project of high-end refining and chemical integration, and the new intelligent manufacturing model project of green chemical new material industry chain. It has laid a foundation for the comprehensive promotion and application of intelligent manufacturing technology in process industry. According to the statistics of China Industrial Control Network, the market share of several core industrial software products of the company ranks in the forefront in 2023. Among them, the domestic market share of the company's advanced control and process optimization software (APC) is

28.2%, ranking first in the domestic market share for five consecutive years. The market share of manufacturing execution system (MES) in domestic process industry is 20.7%, ranking first in domestic process industry market share for two consecutive years; Operator training simulation system (OTS) accounted for 14.0% of the domestic market share, ranking first in the domestic market share for the first time.

The company has fully applied the new "1+2+N" intelligent factory architecture, helped petrochina Jilin Petrochemical, Petrochina Guangxi Petrochemical and other large enterprise groups to transform and upgrade, and set up a model of "PA+BA" application in large-scale refining and chemical integration projects. In addition, based on the new "1+2+N" intelligent factory architecture, the company has made a number of breakthrough applications in Saudi Aramco, India's national oil Company Pertamina and other enterprises. Details of some major projects signed during the reporting period are as follows:

Industry / Region	**Project name**	**Project meaning**
Petrochemical	Petrochina Jilin Petrochemical Transformation and Upgrading Project	The I/O points to more than 170000, based on the "1 + 2 + N" smart factory new architecture, including control room integration risk management level control system DCS, SIS, multiple subsystems such as GDS
	Petrochina Guangxi Petrochemical Transformation and Upgrading Project	I/O points to more than 100000, based on the "1 + 2 + N" smart factory new architecture, including DCS, multiple subsystems such as GDS
Oil & Gas	Test rig renovation project of North Pipeline Compressor Unit Maintenance and Overhaul Center of National Pipeline Network	Breaking the barriers of key test equipment and combustion technology for imported gas turbines in domestic long-distance pipelines, the project includes multiple solutions such as unit monitoring, maintenance management, vibration monitoring and flague-gas online monitoring
Electric power	China Resources Xinjiang Heavy Energy Power Shomei 2×1 million kW coal power project	The breakthrough application of the company's industrial control system in one million units of coal power, including DCS, APS, intelligent equipment, intelligent fuel and other subsystems
Liquor	Luzhou Laojiao Intelligent Brewing Technology transformation Project	To realize the segmented measurement of AI intelligent quantity, quality and wine picking, and help the intelligent transformation and upgrading of liquor industry
Coal Chemical industry	Shahe Zhengkang Energy 4.8 million standard cubic meters/day efficient and clean gas project	The company's first "1+2+N" intelligent factory project in the coal-to-natural gas industry includes multiple subsystems such as autonomous operation, production and operation, laboratory information management, and equipment health

Overseas	Aramco Central Warehouse AMR Smart robot project	Following the cooperation with Saudi Aramco on the intelligent inspection robot Aramcobot, the company has once again cooperated and made new important breakthroughs
	Pertamina Liquefied natural Gas (LNG) tank storage project	The first large-scale project of cooperation between the two sides lays a good foundation for further expansion of the Southeast Asian market

Looking forward to the future, the company will continue to meet the digital needs of the process industry, actively explore the development path from automation, digitalization to intelligence, accelerate the construction of "1+2+N" process industry intelligent factory new architecture, continue to optimize and improve the new generation of SUPCON intelligent factory solution AiPlant based on "AI+ data", Enabling users to achieve the goal of "safety, quality, low carbon, efficiency". Adhering to the development vision of "becoming a global industrial AI leading enterprise and promoting sustainable industrial development with AI", the company will continue to provide customers with high-quality, efficient and intelligent digital transformation and industrial AI solutions, comprehensively help process industry enterprises to leapfrog from "intelligent factory" to "intelligent factory", and promote the transformative development of the industry.

II. Core technology and research and development progress

1. Core technology and its advancement and changes during the reporting period

① Use large language model and agent technology to release the potential of enterprise AI and build an industrial AI value system

The process industrial ai series model TPT is centered on the transformer framework, which is integrated with the prediction ability of the process industry data characteristics, and the unique modules of multi-dimension focus mechanism and multi-scale fusion are designed, and the process of production, process, equipment and mass measurement is based on the fusion training of different industries. TPT can be used in different devices and operating conditions with a small amount of fine-tuning or zero fine-tuning. This technique can greatly improve the modeling efficiency, reduce the expert experience dependence, the precise prediction of the key variables of the production process and the precision modeling of the steady state condition, and provide the core technical support for the analysis class, optimization class, control class and training class, and realize the goal of efficiency, stability and gain.

② AI assisted catalyst development and application technology, breakthrough process optimization limit, realize the intelligent application of catalyst

Based on the intelligent development and application technology breakthrough, the data automatic generation catalyst database based on the construction of ai+ quantitative computing is the base, the fusion process simulation technology and the advanced control technology, the intelligent management and optimization of the whole life cycle of the catalyst. Through the theoretical simulation drive, the research and development efficiency is improved, and the development threshold is reduced. Based on the ai data driven catalyst life prediction model, the catalyst is realized, the time of the catalyst is extended, the loss of catalyst is reduced, and the important innovation and development opportunities are brought to the optimization of industrial production process.

③ The equipment forecast maintenance based on data + + ai is used to improve the maintenance efficiency of equipment

Based on the OPC UA standard and the PA-DIM and other equipment information model standards, the artifacts that were dispersed in various systems were reconstructed as complete virtual device objects and were stored in the data of the device object data. Based on the simulation of the mechanism model and CNN-LSTM and other AI algorithms, the early prediction of the failure of the transformer, regulating valve, electromagnetic valve, and mobile equipment is reduced, effectively reduces the unexpected downtime in industrial production, improves the safety of production, and satisfies the efficient and intelligent maintenance requirements of modern manufacturing.

④ The optimized method of the automatic pid parameter, the realization of reliable and efficient control circuit performance optimization

The anthropomorphic PID tuning technology based on knowledge experience and feature recognition is developed to help process industry enterprises solve the problems of low automatic control rate and difficult loop tuning of basic control loop. This technology is based on the feature extraction of loop closed-loop historical trend, establishes probability graph model through Bayesian network modeling algorithm, simulates the tuning idea of experts, recommends credible and effective PID parameters, realizes the de-skill of PID tuning, reduces the influence of the tuning process on the smooth production of the device, and is suitable for enterprises of all scales to improve the loop automatic control rate. Promote the professional skill upgrade of PID tuning of process personnel.

⑤ The open automation of the general control system architecture technology, the ultra-simple new form of the DCS system

The new minimalist form of control system composed of control data center, all-optical deterministic network and intelligent devices has typical characteristics such as software definition, all-digital and cloud native. Based on NyxOS, a cloud real-time operating system specially designed for industrial real-time control, it runs cloud native real-time applications and ensures high availability and fault tolerance of the control system by relying on redundant and distributed deployment architecture. Fully supporting APL's field connection technology, the cabinet room space is reduced by 90%, the cable cost is reduced by 80%, and the construction cycle is shortened by 50%. Deep integration of AI technology, GPU-based control engine, provides automatic configuration generation, AI fusion PID and other functions, so as to realize data prediction and adaptive control, improve the efficiency of device operation, lead the new era of "artificial intelligence" in the control field, and liberate productivity.The energy efficiency dynamic ai evaluation technology, mining and identification of energy saving potential and opportunities to promote emission reduction.

⑥ The energy efficiency dynamic ai evaluation technology, mining and identification of energy saving potential and opportunities to promote emission reduction

Based on the data of different time scales, such as equipment, equipment, and factory, the data of different levels of the month and other levels are calculated, and the technology USES advanced machine learning algorithms and large Numbers according to the analysis of ai technology, and completes the various levels of energy efficiency according to the condition clustering, classification, and automatically establishes the long-term space scale energy efficiency benchmark database. The energy efficiency level of any time scale can be assessed by the dynamic corresponding and objective evaluation of the energy efficiency and operating condition (such as load adjustment, environment temperature and humidity change, card number switch), and the energy efficiency of the factory, device, process and equipment can not only fully explore and identify energy saving potential and improve the opportunity, but also solve the problem of energy efficiency, and also solve the problem of energy performance.

⑦ The intelligent quality detection closed-loop technology based on ai driven "robot +"

The technology supports the construction of the "robot +" unmanned black lamp laboratory, which helps the enterprise quality inspection to be transformed from manual detection to automatic detection. This paper analyzes the artificial intelligence technology such as the ai data audit, realizes the automatic sampling, sampling, sampling, processing, detection, collection, examination and uploading, the construction of image quality inspection and the ai quality feedback system, and the management of the retention of the retention of the enterprise while improving the efficiency of the inspection and testing of the enterprise, the inspection of standardization and the availability of data. At the same time, ensure the health and safety of the operators, optimize the work structure of the personnel, and build the new model of the industrial operation of the "people and industry".

⑧ The risk dynamic regulation and decision-making technology (DRM), implementation of smart digital risk warning and decision support

Based on the data of the analysis report, the analysis report of the bow-tie analysis report is based on the analysis of the data of the DCSB, the dcsin, and the daily hse security management dynamic data, combined with the built-in ai large number according to the model, the dynamic risk real-time monitoring and warning of various devices and the dynamic risks of various enterprises in the area, and the risk level push advice measures to different managers. Based on the ai risk dynamics, the enterprise or park can help enterprises or parks break the data islands, reduce the loss caused by risk, improve the compliance and safety management efficiency of the enterprise, and enable enterprises to achieve the maximum risk control in limited resources and improve the competitiveness of enterprises.

National Science and Technology awards awards

Name of awards	Year of award	The project name	Award level
National Science and Technology Progress Award	2012	Research on key technologies of integrated automatic control and optimization system for major refining and chemical processes	Second prize
National Technology Invention Award	2009	New generation control system High performance fieldbus EPA	Second prize
National Science and Technology Progress Award	2001	Fieldbus control system	Second prize

National specialized and special new "Little giant" enterprise, manufacturing "individual champion" identification status

Subject of identification	Title of identification	Year of	Product name

		recognition	
Zhejiang SUPCON Fluid Technology Co., LTD	National specialized and special new "little giant" enterprise	2023	/

2. Research and development results obtained during the reporting period

As of June 30, 2024, the Company has 757 patents, including 546 invention patents, 169 utility model patents, 42 appearance design patents, and 685 computer software Copyrights. From January to June 2024, the company has applied for 94 new patents (including 80 invention patents, 12 utility model patents and 2 appearance design patents), and registered 31 new software Copyrights.

List of intellectual property rights obtained during the reporting period

	Added in the current period		Cumulative quantity	
	Number of applications (number)	Number of applications received (number)	Application number (a)	Number of applications received (number)
Invention patents	80	79	1734	546
Utility model patents	12	0	219	169
Design patents	2	9	63	42
Software Copyright	31	55	726	685
Others	0	0	0	0
Total	125	143	2742	1442

3. Table of R&D investment

Unit: Yuan

	Number of current issues	Number of the same period last year	Change (%)
Expensed R&D investment	444,254,937.35	406,483,538.43	9.29
Capitalise R&D investment			
Combined r&d	444,254,937.35	406,483,538.43	9.29
R&d total revenue percentage (%)	10.45	11.16	-0.71
Proportion of R&D investment capitalized (%)			

Total R&D spending significant change on the previous year

Not applicable

The proportion of r&d capitalization of sharp movements and its rationality

Not applicable

4. In-research project

Unit:yuan

Serial number	Project name	Estimated total investment scale	Amount invested in the current period	Total investment amount	Progress or phased results	Aim to achieve a goal	Skill level	Specific application prospect
1	The key technology and application demonstration of the full life cycle intelligence of the mainframe pump system based on the industrial Internet	4,528.00	774.56	4,535.25	Steadily and continuously promote research and development	Establish the object structure model of the whole life cycle of the large machine pump, carry out research on key technologies such as online monitoring, fault diagnosis, life prediction and energy efficiency optimization of the large machine pump, and integrate the basic data of the machine pump, real-time working conditions, pump state characteristic information, maintenance records and other data systems to realize the intelligent operation and control of the whole life cycle of the large machine pump.	The object structure model of the whole life cycle of the mainframe pump is established, and the online monitoring, fault diagnosis, life prediction and energy efficiency optimization of the mainframe pump are studied to improve the accuracy of intelligent diagnosis and predictive maintenance.	Petrochemical, chemical, equipment and other industries
2	Safety integration enhances key equipment research and development and application verification	901.00	318.91	2,277.31	Steadily and continuously promote research and development	Develop the security and information security coordination enhancement design, the integration security key indicators online analysis, dynamic adaption and collaborative verification, r&d safety integration dynamic analysis and	To be responsible for the development of integrated security and interconnection enhancement devices; Be responsible for the development of the intelligent control system of security	Major equipment, process industry

						prediction enhancement device, the integrated security interconnection enhancement device for multi-system connection.	integration.	
3	The whole price chain product quality lean control intelligent analysis software	793.70	369.72	1,511.80	Steadily and continuously promote research and development	The diversified production field of process industry has the problem of the difficulty of fusion, resource and service. This paper focuses on the key technologies such as data management, operation knowledge and data fusion, cloud data aggregation analysis, resource and service unified scheduling, and realizes the quality lean control intelligent analysis system software based on the cloud edge, and supports the application of the food and beverage and rubber tire industry.	1. Study the cloud-side collaboration architecture and IT, OT and AT integration technology supporting on-site real-time response and elastic computing; 2. Develop intelligent analysis system software for product quality lean control, support function library and tool set, and reach the level of foreign similar software accuracy.	Rubber tire, food and beverage and other process industries
4	Intelligent factory operation analysis and optimization control system driven by knowledge and data fusion	2,000.00	174.66	1,493.19	Steadily and continuously promote research and development	Facing the complex and changeable production scenes in the intelligent manufacturing process, the project studies the intelligent operation analysis and optimization control system driven by knowledge and data fusion, helps manufacturing enterprises to carry out "AI for brain", greatly improves the production operation and operation level, so as to ensure the stable and safe production process,	1. Research and implement multi-dimensional fusion, cross-level interaction and heterogeneous data integration of production data, and construct physical model of production device and production process information model. 2. Study the diagnosis and optimization of analysis results	Petrochemical, chemical, building materials, pharmaceutical, electric power, new energy and other industries

						extend the service life of production equipment, and improve the product yield and quality. Reduce energy consumption and carbon dioxide emissions.	assisted by hybrid AI. Realize online early warning, independent diagnosis and dynamic decision optimization, realize product processing scheme optimization selection and automatic switching of production equipment. 3. Research machine learning combined with expert knowledge of advanced control model self-learning, system identification, process simulation, working condition recognition and other technologies.	

5	General process simulation software	4,596.00	587.41	1,258.22	Steadily and continuously promote research and development	In order to simulate the explosive growth of the model of the model of the model of the process model from the unit level and the device level to the regional level and the whole factory stage, the process model knowledge is difficult to accumulate and the sharing is difficult. Large-scale process modeling is difficult; This paper studies large-scale sparse nonlinear optimization of efficient and stable solutions, and the method of the joint cubic process modeling method, the technology of low-generation industry app development platform, the research and development of the general process simulation software based on the open source architecture factory operating system, realizes the self-control of the software and achieves the international leading level.	1. Developed a set of general process simulation software based on intelligent factory operating system, and integrated soler, more than 12 objects, and more than 30 units operating models; Support simulation, parameter estimation, data setting and optimization of four operating modes; Develop the custom model development platform.	Energy, petrochemical, chemical, and other industries
6	Research on key technologies of multimodal big data intelligent analysis and decision making in complex industrial	1,050.00	221.93	221.93	Steadily and continuously promote research and development	This project studies the object state representation and data comprehensive management method of industrial multi-mode fusion perception, data augmented generation of knowledge cross fusion and data evaluation method of adequacy	The development of industrial multimodal large number according to the intelligent analysis decision platform, achieves the international advanced level	Refining, chemical, tobacco, food and beverage, oil and gas

	scenes					credibility, fusion modeling and iterative optimization technology, and develops industrial multi-mode big data intelligent analysis platform and high-performance edge controller.		industries, etc
7	Core technology, product research and development and industrialization promotion of new quality productivity in process industry driven by 5T fusion	4,000.00	850.82	850.82	Steadily and continuously promote research and development	Through the research and integrated application of "process technology (PT), equipment technology (ET), operation technology (OT), automation technology (AT) and information technology (IT)", break through key technologies such as industrial intelligent manufacturing, digital twin and green and low-carbon, form integrated process and integrated equipment, subvert the traditional design, construction and operation mode of process industry, solve major problems and problems in process production and management and realize industrial application, and help process industry achieve the goals of safety, low-carbon, quality improvement, efficiency and cost reduction. We will help transform and upgrade the process industry.	The formation of catalyst research and development technology based on quantitative calculation, key equipment design and amplification technology based on fluid dynamics simulation, process optimization technology based on the whole process simulation, operation optimization technology integrating AI and mechanism, through process optimization, equipment design and transformation and automation, digitalization, operation technology and other innovative integration application, break the barriers in various technical fields. To create new products and	Petrochemical, chemical, metallurgy, building materials, paper, medicine and other industries

							solutions with strong core technical capabilities and high-end market competitiveness.	
8	SUPCON Industrial AI excellent application project	4,000.00	1,343.59	1,343.59	Steadily and continuously promote research and development	The research of the process of enterprise management, intelligent and intellectual development, is based on the key technology bottleneck of industrial enterprise, forming self-controlled, based on industrial model and language model, and the dedicated ai assistant of the process industry, and the industry of refining and petrochemical, and the process industry enterprises to implement the goal of intelligent, automatic and dehumanization, and finally realize the scale promotion, and set a new standard for the development of the process industry.	In the field of industrial ai practice, industrial model data training, enterprise intelligence operation, etc., to achieve technical breakthrough, to lead the industry, and to lead the excellent application of industrial ai.	It becomes the unobtainable support software for future intelligent enterprise operation, changes the traditional use mode of enterprise software, and provides a new generation of partner operation mode
9	Intelligent running management and control system (omc) core capability to improve r&d	5,000.00	1,502.95	1,502.95	Steadily and continuously promote research and development	This project is oriented to petrochemical, chemical, electric power and other process industries. Based on the core capabilities of "E network to the end", platform +APP,	International advanced	Petrochemical, chemical, metallurgy, building

	projects					independent operation, and the core goal of "safety, stability, long, full and excellent" of industrial production equipment, the OMC intelligent operation management and control system is studied to form an industrial production data base. Focus on the field of scenery hydrogen production to carry out electrolytic cell flexible control, multi-energy coordination control and other algorithm research, continue to carry out cross-platform capability research and development, the whole platform component support cross-platform, flexible adaptation of Kirin and Windows operating system, research and development of Feiteng version of the all-domestic control system and FF all-domestic products; Research intelligent application, automatically generate SOP through AI algorithm, quickly realize the electronic production management; Facing the pain points of the chemical industry such as large scale of single device control and large amount of communication data between stations, the		materials, paper, medicine, electric power and other industries

						company has developed a new generation of high-performance controllers and batch control software to greatly improve control capacity and implementation efficiency.		
Total		26,868.70	6144.55	14995.06				

5. Research and development personnel

Unit: ten thousand yuan Currency: RMB

Basic information		
	Current period	Number of the same period last year
Number of R&D personnel in the company (person)	2242	2282
Number of R&D personnel as a percentage of total number of employees in the Company (%)	33.95	34.55
Total remuneration of R&D staff	35,842.17	33,647.80
Average salary of R&D staff	15.99	14.74

Education		
Degree in a	Quantity (person)	Proportion (%)
PhD candidates	19	0.85
Master's degree candidate	473	21.10
Undergraduate and below	1750	78.05
A combined	2242	100.00
Age structure		
Age range	Quantity (person)	Proportion (%)
Under 30 (excluding 30)	893	39.83
30-40 years old (including 30 years old, excluding 40 years old)	962	42.90
40-50 years old (including 40 years old, excluding 50 years old)	314	14.01
50-60 years old (including 50, excluding 60 years old)	65	2.90
Age 60 and older	8	0.36
Total	2242	100.00

6. Other instructions

Not applicable

III. Analysis of core competitiveness during the reporting period

(I) Analysis of CORE competitiveness

1. Technology and R&D advantages

In recent years, the company continued the deepening industrial automation field, promote scientific research and innovation ability, hosted and participated in the national key research and development plans, industrial Internet innovation and development engineering, provincial "scouts" research plan "brought wild goose" research and development, technology innovation provides a strong driving force for the company. During the reporting period, the company through the classification of intelligent manufacturing system solutions provider class rating AAA, the first batch of zhejiang province digital engineering service provider evaluation five-star digital transformation service (enterprise); Won the honor of Zhejiang Specialized and Special new small and medium-sized Enterprise, Hangzhou "Kunpeng" Enterprise and so on.

(1) Rich technical reserves

The company is committed to meeting the industrial digitalization needs of the process industry, focusing on the development of digital industrial software technology and products based on the automation control system, forming intelligent manufacturing solutions with multi-industry characteristics, and has strong research and development strength in communication technology, electronic information, software technology, artificial intelligence and other aspects, with a solid technical foundation and product development capabilities. The company has always adhered to breaking the technical barriers of multinational companies through independent innovation, continued to increase R&D investment and R&D platform construction, established three core product lines of automation control system, industrial software and instrumentation, and carried out 5T technology upgrade research and development on the basis of the three product lines. It has national enterprise technology center, national and local joint engineering laboratory, Zhejiang provincial key laboratory, provincial enterprise research institute and provincial high-tech research and development center, etc. Perfect r&d architecture research and development activity provides a good platform for the company, success has made a series of invention patent, technology award, product certification and international standards and national standards. As of June 2024, the company of formulating the international standard eight, undertake and participate in issued national standard 2, 55 industrial standards. Among them in the first half of 2024, the company involved in writing standards of the state 13, group 5.

As of June 30, 2024, the company 757 have patents, including 169 546 invention patents, utility model patents, patent of appearance design, 42, 685 computer software copyright. From January to June 2024, the company has applied for 94 new patents (including 80 invention patents, 12 utility model patents and 2 appearance design patents), and registered 31 new software Copyrights.

(2) Continuous independent research and development capability

In terms of R&D talents, the company has a high-quality R&D talent team, which has formed a talent echelon of market research, demand analysis, technology research, product development, manufacturing, product testing and system integration. As of June 2024, the company has 2242 r&d personnel, accounting for 33.95% of the total number of employees, provides the scientific innovation personnel conditions, including the core technical staff in the company for more than 15 years, high quality r&d team and talent resources are the basis of continuous casting the company independent research and development.

In terms of R&D investment, the company invested 444,254,900 yuan in research and development in the first half of 2024, a 9.29% increase over the same period of last year, accounting for 10.45% of revenue, continuous r&d innovation activities provides a strong support for the company.

In terms of research field, the company existing research area more than 17,300 square meters (office space, lab), established the control system products, instrumentation products division, the division number (number of central intelligence technology company), 5T products division, such as r&d and testing department, equipped with a large number of advanced testing equipment at home and abroad, With China council for the conformity assessment (CNAS) recognized laboratory; It has a series of professional laboratories such as reliability life laboratory, industrial communication and network laboratory, information integration and factory modeling laboratory, industrial control safety laboratory, intelligent manufacturing innovation laboratory, and has built an industrial AI big data application laboratory to carry out big model-based process industry big data analysis, verification and application.

In terms of research and development projects, in recent years, the company has presided over and participated in a number of national and provincial scientific research projects, such as national key research and development program, National major science and technology project, industrial strong base, industrial Internet innovation and development project, Zhejiang Key science and Technology project and so on. By the end of June 2024, the company is presiding over and participating in a number of research projects of the Ministry of Industry and Information Technology, the Ministry of Science and Technology and other research projects, rich scientific research projects for the company's technological innovation to provide a strong driving force.

2. Product system and client resources

Company building automation control systems, industrial software and three core product lines and intelligent instrument and meter manufacturing solutions, mainly used in oil and gas, petrochemical, chemical, electric power, pharmacy, metallurgy, building materials, paper and other process industries. Based on the "1 + 2 + N" smart factory new architecture system of perfect products, the company can meet the personalized needs of different users, downstream thus increasing the company's core competitiveness. Company also started with research, camp, sales and service in the integration of industry, the chapter mode, including white wine, new energy battery, wisdom, coal and other industries the chapter, take the customer as the center to create new industries and new track, in the shortest route service customers, the fastest speed, the optimal solution. The company continues to deepen the industry's leading "1+2+N" intelligent factory new architecture, strive to build "4 big data base +1 intelligent engine" as the core product technology system, layout humanoid robot and other emerging businesses, work with global partners to build industrial AI ecology. With the intelligent solutions of "AI+ safety", "AI+ quality", "AI+ low-carbon" and "AI+ benefit", the company explores a road of industrial AI development.

During the reporting period, the company released Universal Control System (UCS). UCS takes the lead in putting forward to the global "cloud - net - end" minimalist architecture, build the software definition, fully digital, cloud native control system, overturned thoroughly applied for nearly 50 years of traditional DCS technology architecture, breaking the traditional physical controller, I/O module and shackles of cabinet. Based on the new architecture of universal control system, the company launched the first universal control system UCS product -- Nyx. Based on the real-time cloud operating system NyxOS, Nyx deeply integrates cloud native, all-optical network technology, APL technology and AI control. Nyx is an intelligent control system for future automation, which realizes flexible on-demand defined control, data prediction and adaptive control, and sustainability of customer knowledge assets, leading a new era of "artificial intelligence" in the field of control and creating an unprecedented intelligent control world for users. AI enables the future, and the company is committed to the in-depth construction of the core capabilities of "AI+ data". During the reporting period, NYX released the first AI Time Series large model TPT (Time-series Pre-trained Transformer) in the process industry. TPT is the company independent research and development, based on the generation of AI algorithm framework, and mass production of different industries, such as technology, equipment and quality of data fusion training. It will completely subvert the problems such as scattered industrial applications and fragmented data applications, and realize the factory from the original N models corresponding to N applications to the current TPT model as the base to create a new mode of software supporting multiple application scenarios. TPT can make production device with "wisdom mind", as experts, independent thinking and communication, and supervision, and optimize the plant operation, implementation efficiency, steady running and increase yield of the target. At present, the company based on the industrial application of TPT makes has been in the alkali, thermal power, petrochemical and other device has achieved breakthrough applications. In terms of robots, the company has made every effort to deepen the investment layout in the field of "AI+ robots", and invested in Zhejiang Humanoid Robot Innovation Center Co., LTD during the reporting period. With scale constantly diversified business, in order to further satisfy the process industries for smart factory put forward the new demand of enterprise customers, the company intends to joint humanoid robotics experts and talents, foster the industry scene together under the direction of the humanoid robot, new technologies, new business to further enhance their comprehensive competitiveness and sustainable development ability. At present, the company has been active in domestic and foreign markets for project development in the field of robot, based on years of accumulated industry resources, technical resources, hatching provide strong support for the humanoid robot r&d, cutting-edge technology combined with zhejiang humanoid robot research and development ability, patent technology and product accumulation, the company with zhejiang humanoid robots will further advance innovation combination, Common in intelligent manufacturing software for traction, further study of AI technology, combined with the industrial demand, realize humanoid robot and its derivative industrialization of intelligent robot, the core of key parts, the real power process industry to build a "unmanned factory", "turn off the lights and operations".

Based on the perfect product system, the company actively explore the market, with 30 years of development, has accumulated a large number of high-quality customers, and maintain long-term stable cooperative relations, laid the company in the process industry leading position, accumulated its own core competitive advantages. By the end of June 2024, the company has covered more than 32,700 customers in the process industry, and the customer coverage rate has further increased. At the customer level, the company has deepened strategic cooperation with many leading enterprises such as petrochina, Sinopec, CNOOC, State Pipe Network, China Energy Construction, Dongming Petrochemical, Shanghai Huayi, China Resources, Wanhua Chemical, Hubei Xingfa, Huayou Cobalt, Jineng Holdings, Sinochem, Wulangye, Luzhou Laojiao, Three Gorges Group, Tianxin Pharmaceutical, etc. Through joint innovation, we provide all-round intelligent manufacturing products and solutions. At the product level, it has carried out joint development with Dongfang Cable, Jiazhi Technology and other enterprises to continuously strengthen the layout of the whole industrial chain. The company also actively expands the international ecosystem and continues to enhance the global operation capacity. During the reporting period, the company deepened its cooperation with international high-end customers such as Aramco of Saudi Arabia, BASF of Germany, Pertamina of Indonesia, Indorama of Thailand and Petronas of Malaysia. Obtained the highest CSMS grade certification of Pertamina Group and won the bid for its liquefied natural gas (LNG) tank area storage tank project, laying a good foundation for the further expansion of the Southeast Asian market; Successfully obtained AMR intelligent robot project of Saudi Aramco Central Warehouse, which is another close cooperation in the field of robotics after the cooperation between the company and Saudi Aramco in the intelligent inspection robot Aramcobot, marking a new major breakthrough in the field of robotics innovation business of the company.

3. Marketing network and brand advantages

The company has a relatively complete marketing network and service system, through the establishment of the industry group and the global 5S store two systems, to build a global marketing system of sales and service organization structure. 5S stores achieve full coverage of domestic chemical parks and overseas key areas layout, industry war group to achieve full coverage of process industry. China Control International Operation Company was established in Singapore, focusing on Southeast Asia, South Asia, Middle East, Africa, Central Asia, Europe, America, Japan, South Korea, Mongolia and other regions, and its core products have been applied to more than 50 countries and regions. During the reporting period, the company also launched subscription membership products, which can provide customers with excellent service experience and accelerate the digital transformation of enterprises. At the same time, it will strengthen customer stickiness and meet the needs of long-term cooperation and development with customers.

During the reporting period, the company continued to build a new one-stop industrial service model of "5S store +S2B platform", gave full play to the core competitiveness of "data +AI", and took "safety, quality, low carbon and efficiency" as the goal to jointly help the scientific and technological innovation and improve the quality and efficiency of various industries. By the first half of 2024, the company has built a total of 195 5S stores (including overseas), covering 663 chemical parks across the country, and established overseas 5S stores in Saudi Arabia and Thailand, and continuously expanded the scale of overseas 5S stores, further consolidated the excellent operation system of 5S stores, and fully implemented the partnership system of 5S stores. To realize independent operation, independent accounting and benefit sharing, and stimulate the operation vitality of 5S stores.

Continue to strengthen the company's brand building, with the vision of "becoming a global leading enterprise in industrial AI and promoting sustainable industrial development with AI", constantly expand the global vision and innovative spirit, successfully layout in the international market, and implement the global brand strategy. In June 2024, the company's global new product launch conference was successfully held in Singapore. Two disruptive new products, UCS, the world's first universal control system, and TPT, the first AI time series large model of process industry, were officially released, accelerating the process industry into a more intelligent, greener and more efficient new future. Its fully opened Industrial application has truly made Industrial AI a reality in the field of process industry. In addition, the company's press conferences, forums and exhibitions in Japan, Mexico, Indonesia and other international markets have blossomed, boosting the accelerated development of international business. Through the high frequency of high-end market activities such as the World Artificial Intelligence Conference and the International Software Development Conference, the company has demonstrated its deep strength and insight into the future development of the industry in the field of industrial AI, further expanding the company's brand recognition and effectively enhancing the international influence of the brand. Actively expanding overseas communication channels, the Company successfully carried out all-round promotion of core products such as AiPlant, Nyx and TPT in key regions of strategic layout such as Southeast Asia, the Middle East and South Asia, which received coverage and attention from internationally renowned media such as Reuters, Lianhe Zaobao and The Straits Times, highlighting the company's leading position in promoting industrial intelligence and technological innovation. As well as its positive contribution to promoting industrial upgrading and sustainable development of the industry.

4. Advantages of ecological cooperation

In the ever-changing global situation, the political and economic situation of different national markets is changing rapidly, and there are many kinds of industrial products and frequent iterations. If enterprises choose to fight alone, they are often unable to catch up, and they are more afraid of falling into the quagmire of resource redundancy. This makes global ecological cooperation an inevitable choice to adapt to the trend of The Times. It connects the wisdom of innovation and the broad market, so that enterprises can work deeply in the field of expertise. At the same time, through the link of cooperation, they can seamlessly connect with global resources and share the fruits of advanced technology and diversified channels. Over the years, the company has always attached great importance to global ecological cooperation, adhering to the concept of openness, cooperation and win-win, and actively carry out strategic cooperation with well-known enterprises at home and abroad, upstream and downstream enterprises of the industrial chain, and reached a series of mutually beneficial and win-win cooperation results. During the reporting period, the company's ecological cooperation has been continuously expanded and deepened. While enhancing cooperative relations with global partners, the company has signed new strategic cooperation agreements with many leading enterprises at home and abroad, such as China Fifth Ring Road, Oriental Cable, Indonesia National Gas Company, China Tianchen, Zhejiang Capital Operation, and Jiazhi Technology. By giving full play to their respective capabilities and advantages, the company has realized resource sharing and value co-creation. So as to provide customers with leading solutions and services, enabling customers to comprehensively improve the level of production and operation and management.

In June 2024, the company launched the global ecological partner "Clustar Plan" at the global New product launch conference in Singapore, opening a new model of eco-driven digital-intelligence innovation and development. This is an eco-partner recruitment and cooperation program launched by the company for the world. It aims to jointly build a green and sustainable digital-intelligence eco-alliance, work with ecological partners to help customers succeed, promote the upgrading and development of the industry, and actively assume social responsibilities to show corporate responsibility.

"Clustar Plan" is based on "three dimensions and four pillars" to escort win-win partners and ecological construction. "Three Dimensions" covers platform empowerment, value co-creation and mechanism guarantee. The company will open the technology platform, and rely on the platform to provide necessary tools and service support for co-creation. The "four pillars" represent the rights and interests protection provided by the company to its partners in the four directions of R&D, supply, sales and service. Through the "three dimensional four pillars" model, the core value and broad development prospects of the company's ecological construction can be clearly demonstrated for partners. The company looks forward to working with partners to explore a new path of win-win cooperation and create a new chapter of industrial development.

(II) Events occurred during the reporting period that seriously affected the company's core competitiveness, impact analysis and countermeasures

Not applicable

IV. Discussion and analysis of business situation

In the first half of 2024, the global economy suffered against globalization, rising inflation and geopolitical risk, such as instability, in the face of complicated international situation, domestic macroeconomic recovery, state and local governments actively introduced a series of policies to stimulate the digital economy and advanced manufacturing and modern service industry depth fusion, promote the development of artificial intelligence, encourage the development of new productivity, To promote large-scale equipment update. In the face of a new round of scientific and technological revolution and industrial transformation, the company actively insight into market opportunities, lead the technological revolution, layout the world, deeply participate in the automation, digitalization and intelligent transformation of the global advanced manufacturing industry, concentrate on mining new growth points of the industry, focus on the cultivation of products and technologies in the field of industrial AI+ data, at the same time, the company further implements fine management, Increase the intensity of authors, the efficiency of management, improve corporate competitiveness and profitability, strengthening operation robustness, internal company towards high quality development.

With the joint efforts of the management and all staff, the company's operating revenue and profit maintained rapid growth in the first half of 2024. During the reporting period, the company achieved a total operating revenue of RMB 425, 2171, 400 yuan, an increase of 16.78% compared with the same period last year; Excluding GDR exchange gains and losses, the net profit returned to parent company was RMB 519.4708 million, up 49.80% from the same period last year.

(1) Increase investment in cutting-edge technology research and development, and strive to build the core competitiveness of AI+ data

During the reporting period, the company continued to increase investment in research and development, research and development costs 44425.49 ten thousand yuan, up 9.29% from a year earlier, accounting for 10.45% of revenue. Company will be based on the core concept of "AI + data", will be a lot of industry data, knowledge, industrial model, industrial experience in-depth, comprehensive exploration in the industrial field of AI, AI technology using the latest technology of the company's products of refactorings, actively introduce domestic and foreign high-end, industrial automation control system software, artificial intelligence in the fields of research and development personnel, top Refactoring development system, product innovation for the company lay a firm foundation for the talents of the reporting period r&d staff of 2242 people, accounting for 33.95% of the total number of employees.

During the reporting period, the company made major breakthroughs in the field of automation control and industrial AI. The company has deep insight into the core needs of process industry customers, and based on profound industrial practice and technology precipitation, it strongly launched two products at the global launch conference in Singapore in June 2024: The general Control System is the world's first in the first paragraph of the UCS (Universal Control System), to build the software definition, fully digital, cloud native Control System, turning the continuation of nearly 50 years of traditional DCS technology architecture, breaking the traditional physical controller, the I/O module and cabinet group limited, Leading the revolutionary innovation of control system.

The second is the first AI Time-Series Pre-trained Transformer (TPT) in the process industry. It is a generative AI algorithm framework independently developed by the company. By collecting massive production operation, process, equipment and quality data from different industries, it integrates pre-training. It has learned the general rules of industrial device operation. By a small amount of fine-tuning or zero fine-tuning, in different working condition of equipment and reuse, show surprising across devices, working condition of cross adaptation ability, improved the efficiency of modeling, realized by a TPT model as the base to build a new mode of software to support a variety of scenarios. At present, TPT has made a breakthrough application in chlor-alkali, thermoelectric, petrochemical and other devices. Compared with traditional control, TPT can achieve system automatic control rate of more than 95%, nitrogen oxide content reduced by 5%, ton steam coal consumption reduced by more than 3.1%. TPT will crack the process industry has never been cracked industrial problems, promote the process industry to achieve efficiency revolution!

(2) Continue to deeply cultivate the process industry and dig into the structural growth opportunities of the industry

During the reporting period, the company relied on the advantages of leading enterprises and multi-product intelligent manufacturing solutions, and dug deep into the structural growth opportunities of downstream industries. From the point of product, countries actively promote changing control system equipment, industrial enterprise customer acceptance is higher in the policy, industrial automation and the boom of intelligent manufacturing related products, control system, control system and control system + instrument) total revenue of 1.725 billion yuan, up 17.65% from a year earlier. Industrial software (industrial software and control system + + other) total revenue of 1.11 billion yuan, up 3.23%; Instruments and meters achieved revenue of 353 million yuan, up 72.18% year on year. From industry, petrochemical industry, chemical industry, sustainable income growth, the boom of oil and gas, pharmaceutical, food and beverage industry is good, income continues to rapidly increase, the petrochemical industry revenue growth of 26.95%, the chemical industry revenue growth of 26.03%, the oil and gas industry revenue growth of 117.32%, the pharmaceutical industry revenue growth of 29.23%; Mainly due to the demand of advantageous industries, petrochemical and chemical, the company has dug deep into the structural demand growth opportunities of oil and gas, chlor-alkali, liquor and other key emerging industries, providing strong support for the rapid growth of the company's performance in the first half of 2024.

(3) Smooth progress in international business and rapid breakthrough in performance

In the first half of 2024, the company constantly improve and deepen the internationalization strategy, overseas business has entered a new stage of development. Company's overseas business income is 343 million yuan, up 188.22%, accounting for about 8.11% of total revenue in the company. ① The global operation capacity has been continuously enhanced. The company's international marketing system focuses on the deployment of Southeast Asia, the Middle East, Central Asia, Europe, America, Japan and other regions, the company's overseas team of nearly 300 people, in Singapore, Saudi Arabia, Kazakhstan and other countries set up 6 subsidiaries, overseas localization operation ability has been greatly improved. ② Breakthrough in overseas market. During the reporting period, the company signed 500 million yuan of new overseas contracts. The company's cooperation with international high-end customers such as Aramco of Saudi Arabia, BASF of Germany, Pertamina of Indonesia, Indorama of Thailand and Petronas of Malaysia is deepening day by day. The past group CSMS highest level level certification and won the liquefied natural gas (LNG) tank farm tank project; Successful Saudi aramco Central Warehouse AMR intelligent robot project, this is the company and the Saudi aramco inspection robot in the smart Aramcobot reached cooperation, the two sides once again close cooperation in the field of robot. Company is actively seeking high-end product and technology suppliers, global industry expands the ecosystem of internationalization and globalization layout operation ability.

(4) Comprehensively upgrade the marketing service system and understand customer needs

① Operation of 5S stores

During the reporting period, the company in the domestic market marketing performance is good, the company further improve market share, as of June 2024, the company has covered process industries more than 3.27 customers, customer coverage to rise further. Company accumulated construction completed 195 5S shops (including foreign), in-depth 643 chemical industrial park, covering the whole country continued to deepen the excellence of 5 s shop capacity system, during the reporting period, the company continues to break through the high-end strategy cooperation clients, major projects, the size of the market steady growth, Companies with the national network, the construction of China's energy, dongming petrochemical, China resources, wanhua chemical, hubei xingfa, huayou cobalt, jin can holdings, China sinochem, wuliangye, luzhou laojiao (a kind of daqu liquor), the three gorges group, day of the new drug, and many other enterprises to deepen strategic cooperation. To provide customers with "safe, efficient and convenient" professional services in the industrial field.

② Operation of S2B online platform

S2B business, the company fully deployed in whole life cycle of online and offline services, build online linkage of knowledge supply chain system, the further expansion of the logistics network construction, and the process of fine management of large-scale promotion, more than 500 in 2024 to continue fed large customers for cooperation, seamless customer purchasing system, help customers purchasing digital transformation.

③ Comprehensively promote the subscription system + membership system

In the reporting period, the industrial software industry is gradually transforming into a model of periodic internal circulation fees, which is designed to provide excellent service experience for users, accelerate the deployment efficiency of industrial software in the transformation of enterprise Numbers, provide continuous value services for users, and subscribe to the model to help the company produce long-term and stable subscription revenue and stable predictable cash flow.

In order to continue the development of the software product, the company has launched the annual fee subscription system of the software product, and the customer is open to the high price value package combination, and provides the different selection of the high price value for the customer, which can be the important value for the customer to realize "the cost of software investment greatly reduced, the software is zero cost, the software upgrade unlimited, the product of the plan is free". This innovation model aims to strengthen the viscosity between customers and meet the needs of long-term cooperation development, promote the application of all kinds of software in industrial enterprises, and further comprehensively realize the high quality and sustainable development of "safety, quality, low-carbon and efficiency" in the process industry.

(5) Cultivate emerging business opportunities and build an ecological integration development circle together

(1) The emerging business opportunities

Relying on the advantages accumulated in the field of digitalization and intelligence for a long time, the company takes customers as the center to open up new industries and new tracks, and serves customers with the shortest route, the fastest speed and the best solution. During the reporting period, the company has developed new business areas such as robotics, scenery hydrogen production, smart laboratory, smart coal mine, smart park and liquor. Through the integration and cultivation of internal and external resources, the new track business has achieved rapid growth, and some businesses have rapidly entered the high-speed growth stage from the incubation stage. In the first half of 2024, the smart coal mine business achieved a breakthrough from 0 to 1, and cooperated with Shanxi Jinneng Section Wang Coal Industry and Pengfei Group to create a breakthrough benchmark application in the industry; The robot business developed from a high starting point, and successfully obtained orders from global high-end users such as CNOOC, Huayi Group and Saudi Aramco, with huge development potential. The company has increased its strategic investment in the field of "humanoid robot" and invested in Zhejiang Humanoid Robot Innovation Center as the largest shareholder. The company will deeply integrate AI technology to realize the industrialization of humanoid robot and its derivative intelligent robot and core key components, and cultivate new business and new technology in the direction of humanoid robot in the whole industry scene. To help the process industry to build a new future of "unmanned factory".

② Ecological cooperation

The company has launched the ecological partner "CLUSTAR• Galaxy Plan" to the world, centering on product technology ecology, global channel ecology, new service ecology, global supply chain ecology, university and research institute ecology, inviting global partners to create the future and build a "digital industrial ecological alliance". During the reporting period, the company's ecological cooperation has been continuously expanded and deepened. While enhancing cooperative relations with global partners, the company has signed new strategic cooperation agreements with many leading enterprises at home and abroad, such as China Fifth Ring Road, Oriental Cable, Indonesia National Gas Company, China Tianchen, Zhejiang Capital Operation, and Jiazhu Technology. By giving full play to their respective capabilities, the company has realized resource sharing and value co-creation. So as to provide customers with leading solutions and services, enabling customers to comprehensively improve the level of production and operation and management.

(6) Build digital operation capabilities in an all-round way to achieve high-quality development

In the first half of 2024, the Company will continue to comprehensively promote digital transformation and reform, centering on the goal of "unlocking the fog of operation and unlocking the fog of market", build digital organization and process, build digital-intelligent SUPCON, deliver 18 digital projects including marketing, research and development, supply chain, engineering services, operation, finance and manpower as scheduled, and comprehensively improve business capabilities. The company's operation and management capabilities continued to deepen, management efficiency continued to improve, management expense ratio was 4.48%, down 1.12 percentage points year on year, sales expense ratio was 8.11%, down 1.20 percentage points year on year, inventory turnover rate was 0.75, achieving high-quality development.

In 2024, the company will continue to meet the digital needs of the process industry, actively explore the development path from automation, digitalization to intelligence, accelerate the creation of "1+2+N" process industry intelligent factory new architecture, continue to optimize and improve the new generation of SUPCON intelligent factory solutions based on "AI+ data", Can assign users to realize "safety, quality, low carbon, benefit" goal. The company will adhere to the development vision of "becoming a global industrial AI leading enterprise, promoting the sustainable development of industry with AI", and comprehensively help the process industry enterprises to leap from "intelligent factory" to "intelligent factory" transformational development.

Major changes in the company's operating conditions during the reporting period, as well as events occurring during the reporting period that have a significant impact on the company's operating conditions and are expected to have a significant impact in the future

Not applicable

V. Risk factors

1. Risk of technology upgrade and product update iteration

Rich technical reserve and continuous independent research and development ability are the core competitive advantages of the company, but the key technologies in the fields of automation control system, industrial software and instrumentation will also be constantly upgraded and iterated with the intelligent transformation and upgrading of the process industry. In order to maintain the advanced technology and product advantages of the company, the company must continue to promote technological innovation and new product development. In order to adapt to the continuous development of market demand. If the company cannot accurately judge the new market demand for technology and products in the future, or fail to grasp the new key technologies in time, it may lead to the decline of the competitiveness of the company's products.

2. Risk that research and development progress is not as expected

The company's research and development direction is "industry 3.0+4.0 for process industry" intelligent manufacturing solutions, software and hardware development need to be parallel, with high research and development technical difficulty, interlinked, if the company can not timely launch to meet the needs of customers and market new products, or research and development progress is not as expected, will have a negative impact on the company's market share and operation.

3. Risk of infringement and disclosure of intellectual property rights

Patents, software Copyrights and other intellectual property rights owned by the company are an important part of the company's core competitiveness. If the company's intellectual property rights are infringes or disclosed due to the mobility of core technical personnel and poor intellectual property protection, it will weaken the company's technological advantages to a certain extent and adversely affect the company's competitiveness.

4. Risk of loss of core talents

Company's business continued development needs a number of stable development and technical personnel and management personnel, etc., and need to constantly attract high-quality research and development, product, marketing and management personnel. Although the company through internal training and external introduction and gradually build a batch of hard working and stable core talent team, and through the implementation of equity incentive, offer a competitive salary treatment, constantly optimize the performance appraisal system, shaping corporate culture, provide a good working environment and perfect the talent management system, but is still likely to be the core risk of brain drain, To bring company technology research and development and sustainable development.

5. Risk of market competition

After years of development, the company is in a leading position in the field of intelligent manufacturing and industrial automation in China. The company's distributed control system (DCS) market share has been leading for many years in a row, and has established a reliable brand image in the market. But in the industrial automation industry, large multinational companies manufacturers and the concentration of large domestic enterprises manufacturers, and shows the tendency of further concentration. Company is faced with dual pressure of competition of the multinational and local firms, multinational companies capital is abundant, comprehensive technical strength strong.

6. Operating risks in overseas markets

The company has been actively expanding overseas markets for many years, and its core products and solutions have covered more than 50 countries and regions. Due to the global economic and political situation is complicated, doing business in different countries may involve a series of specific risks, such as political risk, financial risk, sovereign risk, etc., this is likely to be the uncertainty effects in a local company. The company will focus on overseas country political and economic environment changes, to strengthen the anticipation of risks, improve the ability of risk prevention, guarantees the realization of business objectives.

7. Industry risks

The risk of cyclical fluctuations in downstream industries. The intelligence of the company's main manufacturing solutions services mainly in chemical, petrochemical, electric power, such as pillar industry of national economy, the company operating performance with the downstream industry is closely related to the development, prosperity degree, chemical, petrochemical, electric power industries affected by the national macroeconomic situation and policy is large, volatile if the downstream industry development, tighter or industry policy, Will cause adverse effect to the company industry, which may affect the company's future performance.

8. Macro environmental risks

Global economic slowdown, inflation pressure, the strength and sustainability of the global economic recovery in trade there is greater uncertainty. With the continuous expansion of international trade, global trade frictions also occur frequently. In view of the fact that the industrial automation industry chain involves global division of labor and cooperation, if the global trade frictions are further upgraded in the future, it may cause the increase of transaction costs in the upstream and downstream of the industrial chain, thus adversely affecting the company's operation. In addition, the company for many years deep in overseas markets, and geopolitical conflict intensified, specific bilateral or multilateral relations between countries, regions, may also affect the company's business development. In the face of uncertain macro environment, the company will rely on its own advantages, find and create new profit growth points, pay close attention to changes in macroeconomic risks, and actively adjust its development strategy.

The company has overseas procurement and overseas sales, and the settlement is made in US dollars. Since the company to sign the contract of sale and purchase contract consignments has certain cycle. With the continuous expansion of company business, if the company fails to accurately determine currency movements, or failed to achieve debt collection and settlement of exchange, exchange loss may be produced, for the company's financial position and operating results.

VI. Main business conditions during the reporting period

Companies in the first half of 2024 to achieve revenue 425,217.14 ten thousand yuan, up 16.78% from a year earlier. To achieve net profit attributable to shareholders of listed companies 51,662.91 ten thousand yuan, up 1.16% from a year earlier. Implement deducting non-recurring gains and losses attributable to shareholders of listed companies net profit of 47,222.30 ten thousand yuan, up 11.41% from a year earlier.

(I) Analysis of main business

1. Analysis table of changes of related items in financial statements

Unit: RMB currency, the yuan

Subjects	Current period	Number of the same period last year	Percentage change (%)
Operating income	4,252,171,379.80	3,641,206,964.84	16.78
Operating costs	2,838,978,369.10	2,458,646,909.42	15.47
Cost of sales	344,704,311.46	338,815,835.95	1.74
Overhead expenses	190,586,373.49	203,820,481.80	-6.49
Finance fees	- 68,379,625.10	- 203,754,431.78	Not applicable
Research and development expenses	444,254,937.35	406,483,538.43	9.29
Net cash flows from operating activities	- 419,927,510	- 983,409,229.13	Not applicable
Net investment activities generated cash flow	- 1,248,240,651.93	960,583,575.17	-229.95
The net cash flow generated by financing activities	- 495,198,901.48	3,470,984,254.43	114.27

Finance charges change reason: the main is due to this exchange earnings fell.

The reasons for the change in net cash flow from operating activities are explained as follows: it is mainly caused by the optimization of the terms of the company's sales contract and purchase contract.

Net investment activities generated cash flow fluctuation reasons: main system during the reporting period to buy financial products, to increased foreign equity investment.

The net cash flow generated by financing activities, change reason: money raised through issuance of GDR received major department in the same period of last year the company.

2. The company business types, profits or profit source details of major change

Not applicable

(II) Explanation on significant changes in profit caused by non-principal business

Not applicable

(III) Analysis of assets and liabilities

1. Assets and liabilities

Unit: RMB

Name of project	This period the final number	Percentage of total assets as at the end of the period (%)	Number at the end of the previous year	Percentage of total assets as at the end of the previous year (%)	This final amount from the change ratio (%)	Fact Sheet
Monetary funds	3,307,853,743.53	19.00	5,472,691,631.34	30.61	-39.56	Main foreign equity investment company, to increased pay bonuses, distributing dividends
Transactional financial assets	2,175,000,000.00	12.49	1,650,000,000.00	9.23	31.82	Mainly due to the increase in the purchase of financial products
Receivables financing	91,093,398.33	0.52	183,711,330.47	1.03	-50.41	Mainly due to the increase in acceptance bills paid for the increase in purchases
Prepayments	371,396,792.16	2.13	285,016,190.20	1.59	30.31	Mainly due to the increase in prepayment for purchases in the current period
Other liquid assets	33,032,993.82	0.19	142,244,915.14	0.80	-76.78	Main is due to company financial product reducing
Long-term equity investment	36,113,692.31	0.21	26,113,692.31	0.15	38.29	It is mainly caused by the company's new foreign equity investment in this period
Other equity instrument investment	710,880,000.00	4.08			Not applicable	It is mainly caused by the company's new external equity investment in the current period
Right to use assets	20,118,499.45	0.12	32,957,898.12	0.18	-38.96	This is mainly caused by the reduction of use-right assets caused by the disposal of subsidiaries in the current period
Other non-current assets	68,293,571.50	0.39	41,895,913.39	0.23	63.01	The main advance engineering equipments in current increases
Short-term loans	307,204,692.55	1.76	207,964,553.66	1.16	47.72	Main is due to this issue to obtain short-term bank borrowing
Payment in advance	1,790,596.55	0.01	528,076.48	0.00	239.08	Mainly due to the increase in rent received in advance for the current period
Employee compensation payable	162,705,313.04	0.93	448,846,194.25	2.51	-63.75	Main series of amount contained in the disadvantages caused by the year 2023, the company annual award

Taxes payable	290,277,817.42	1.67	198,949,646.83	1.11	45.91	Mainly due to the VAT payable in the current period
Non-current liabilities due within one year	308,456,507.49	1.77	13,509,742.32	0.08	2,183.22	The main long-term loan expires next year heavy classification to non-current liabilities due within one year
Other current liabilities	310,008,466.27	1.78	508,589,530.97	2.84	-39.05	Main system notes receivable due this final endorsement, which have not been reduced
Long-term borrowings			300,247,500.00	1.68	-100.00	Mainly is the current long-term loans next year due to heavy classification to non-current liabilities due within one year
Lease liabilities	13,348,923.63	0.08	21,214,303.17	0.12	-37.08	This is mainly due to the reduction of lease liabilities caused by the disposal of subsidiaries in the current period
Other comprehensive income	-77,276.28		5,519,085.46	0.03	-101.40	Mainly due to the decrease in translation of foreign currency statements
Minority shareholders' equity	71,492,092.27	0.41	113,977,878.44	0.64	-37.28	Main is due to disposal of subsidiary rights and interests of minority shareholders to reduce

Other instructions
None

2. **Information on overseas assets**

(1) **Size of assets**

Among them: 323837.79 overseas assets (unit: ten thousand yuan Currency: RMB), accounting for the proportion of the total assets of 18.60%.

(2) **Relevant explanation of the relatively high proportion of overseas assets**

Not applicable

Other instructions
None

3. **Major asset restrictions as at the end of the reporting period**

Items	Closing book balance	Ending book value	Reason for restriction
Monetary funds	14,340.00	14,340.00	Note deposit
	40,779,478.92	40,779,478.92	Guarantee deposit
Notes receivable	182,598,472.06	182,598,472.06	Pledge of bills

Receivables financing	684,236,345.43	684,236,345.43	Pledge of bills
Total	907,628,636.41	907,628,636.41	

4. **Other Notes**

Not applicable

(IV) Analysis of investment status

Overall analysis of external equity investment

Unit: Yuan Currency: RMB

During the reporting period investment (RMB)	Investment in the same period of last year (RMB)	The movement
806,612,759.00	258,226,066.18	212.37%

Note: In the half-year of 2024, the subscribed amount of the company's external equity investment is 806,612,759.00 yuan, and the actual investment has been 806,652,259.00 yuan.

1. Significant equity investment

Not applicable

2. Major of equity investment

Not applicable

3. Financial assets measured at fair value

Unit: Yuan Currency: RMB

Asset Class	Ending balance	Gains or losses from changes in fair value for the current period	Included in the cumulative changes in the fair value of the rights and interests	Impairment accrued in the current period	Amount purchased in the current period	Amount sold/redeemed in the current period	Other changes	Final count
Bank financial products	1,650,000,000.00				2,635,000,000.00	2,110,000,000.00		2,175,000,000.00

Receivables financing	183,711,330.47						- 92,617,932.14	91,093,398.33
Investment in other equity instruments	26,113,692.31				20,000,000.00		- 10,000,000.00	36,113,692.31
Other non-current financial assets					710,880,000.00			710,880,000.00
Total	1,859,825,022.78				3,365,880,000.00	2,110,000,000.00	-102,617,932.14	3,013,087,090.64

Securities investment situation
Not applicable

Derivative investments
Not applicable

4. **Private equity investment fund investment situation**

Name of private equity	When the investment agreement is signed	Purpose of investment	Total investment	Investment amount during the reporting	Amount invested by the end of the reporting	Identity of participation	Proportion of capital contribution at the end	Whether to control the fund or exert significa	Accounting items	Whether there is a correlation	Fund underlying assets	Report period profit impact	Cumulative profit impact

				period	period		of the reporting period (%)	nt influence					
Skyline Automation Technologies L.P.	December 13, 2023	Industrial investment	10,000	10,000	10,000	Limited Partners	100	No	Other non-liquid Financial assets	No	/	0.00	0.00
Total	/	/	10,000	10,000	10,000	/	100	/	/	/	/	0.00	0.00

Other instructions

The proportion of capital contribution at the end of the reporting period is the proportion of the actual capital contribution of the company to the amount subscribed by the Company.

(V) Significant asset and equity sales

Not applicable

(VI) Analysis of major holding and shareholding companies

Unit: ten thousand yuan; Currency: RMB

Company name	Main business	The registered capital	Percentage of shareholding (%)	Total assets	Net assets	Net profit
Zhejiang SUPCON System Engineering Co. LTD	Mainly engaged in online industrial product sales and solution promotion	5000.00	100.00	78786.18	5882.00	- 2297.15
Zhejiang SUPCON Automation Instrument Co. LTD	Mainly engaged in sales of industrial products, expansion of solution and the localization service operations	5002.00	100.00	Of 63447	39916.95	4711.32
Zhejiang SUPCON fluid technology co., LTD	Mainly engaged in online industrial product sales and solution promotion	10000.00	98.27	74253.28	37812.35	1492.57
Zhejiang SUPCON software technology co., LTD	Mainly engaged in online industrial product sales and solution promotion	4000.00	100.00	20136.11	3691.05	89.17
SUPCON Technology (HK) Co., LTD	It is mainly engaged in the sales of industrial products, the promotion of solutions and localized operation and maintenance services	Hk $18 million	100.00	6427.97	3051.69	-153.75
SUPINCO AUTOMATION PRIVATE LIMITED	Mainly engaged in the Indian market business development, in line with the parent company's main business	Rs 210,000.00 million	81.68	$5956.70	- 1456.96	-74.72
SUPCON (Xi An) co., LTD	It is mainly engaged in the sales of industrial products, the promotion of solutions and localized operation and	5000.00	100.00	5989.06	5323.74	-2.20

	maintenance services					
SUPCON (Fu Yang) co., LTD	Mainly engaged in sales of industrial products, expansion of solution and the localization service operations	60000.00	100.00	77961.90	60673.49	293.51
Ningbo SUPCON AUTOMATION Technology Co. LTD	Mainly engaged in including investment consulting, enterprise management consulting and other related business	1000.00	100.00	1865.50	-172.85	-59.72
Hangzhou Baojie Investment Consulting Co. LTD	Mainly engaged in including investment consulting, enterprise management consulting and other related business	1232.00	100.00	5019.06	801.48	-216.45
Zhejiang SUPCON Intelligent Technology Industry Development Co. LTD	It is mainly engaged in the sales of industrial products, the promotion of solutions and localized operation and maintenance services	5000.00	100.00	7183.78	$3126.70	-380.00
Zhejiang Gongzi Instrument Holding Co., LTD	Mainly engaged in online industrial product sales and solution promotion	40000.00	100.00	251463.32	37585.34	-906.67
Zhejiang SUPCON Park Intelligent Butler Technology Co. LTD	It is mainly engaged in the sales of industrial products, the promotion of solutions and localized operation and maintenance services	8000.00	100.00	15526.60	12232.05	2075.29
Sinocontrol Innovation (Beijing) Energy Technology Co. LTD	It is mainly engaged in the automation, informatization and intelligentization of oil and gas long-distance pipelines	2600.00	66.00	20001.24	End at 7975.71	819.41
Zhejiang SUPCON Huiji Technology Co., LTD	Mainly engaged in online industrial product sales and solution promotion	3000.00	78.00	4086.87	1654.53	-243.71

SUPCON INTERNATIONAL HOLDING PTE. LTD.	It is mainly engaged in investment consulting, enterprise management consulting and other related businesses	$500.00 million	100.00	192551.51	169914.84	757.77
Shanghai Zhiying Technology Co., LTD	Mainly engaged in technical services, technical consulting and other related business	1000.00	100.00	3027.50	20.81	-4.28
Zhejiang SUPCON Well Oil & Gas Technology Co. LTD	It is principally engaged in the sales of industrial products and the promotion of solutions in the oil and gas industry	5000.00	100.00	14921.67	3091.03	713.68
SUPCON Hengdian Wind Energy Control Technology (Beijing) Co., LTD	It is mainly engaged in the sales of industrial products and the promotion of solutions in the wind power industry	1000.00	67.00	336.38	83.30	-48.19
SUPCON (Hangzhou) Venture Capital Co., LTD	It is mainly engaged in venture capital, private equity investment fund management and venture capital fund management services	3000.00	100.00	1285.04	1268.02.	-79.76
SUPCON Quanshi Technology (Hangzhou) Co. LTD	It is mainly engaged in the sales of industrial products, the promotion of solutions and localized operation and maintenance services	6300.00	57.40	11055.77	5118.61	- 1343.11
Zhejiang Zhihuiyuan Digital Technology Co. LTD	Mainly engaged in online industrial product sales and solution promotion	3000.00	80.00	7313.90	2086.01	54.48
Zhejiang SUPCON Digital Intelligence Technology Co., LTD	It is mainly engaged in technical services, technical consulting and other related businesses	10000.00	100.00	7651.51	7424.71	-75.29

(Ⅶ) Situation of structured subjects controlled by the company

Not applicable

VII. Other disclosures

Not applicable

Section4 Corporate Governance

I、 Brief introduction of the general meeting

Sessions of the meeting	Date of convening	The query index of the designated website where the resolution was published	Disclosure date on which the resolution was published	Meeting resolutions
The first extraordinary general meeting of 2024	February 20, 2024	Announcement No. : 2024-014 on the website of Shanghai Stock Exchange (www.sse.com.cn)	Dated February 21, 2024	All motions were considered and passed, and no motions were vetoed.
The second extraordinary general meeting in 2024	25 March 2024	Shanghai Stock Exchange website (www.sse.com.cn) Announcement No. : 2024-019	Dated March 26, 2024	All motions were considered and passed, and no motions were vetoed.
2023 Annual General Meeting	April 29, 2024	Announcement No. : 2024-030 on the website of Shanghai Stock Exchange (www.sse.com.cn)	Dated April 30, 2024	All motions were considered and passed, and no motions were vetoed.
The third extraordinary general meeting in 2024	27 June 2024	Shanghai Stock Exchange website (www.sse.com.cn) Announcement No. : 2024-045	Dated June 28, 2024	All motions were considered and passed, and no motions were vetoed.

Recovery of preferred stock shareholders to request for an interim shareholders' meeting

Not applicable

Description of the shareholders' general meeting

During the reporting period, the company held one annual general meeting of shareholders and three extraordinary general meetings of shareholders, without any rejection of the motion. The convening and holding of the general meeting of shareholders met the requirements of the Company Law, the Articles of association and other relevant provisions.

II、 Changes of directors, supervisors, senior managers and core technical personnel of the company

Name	The position held	Changes in position
Chen Xin	Independent Director	Leaving
Chen Wenqiang	Independent Director	Election

Explanation on the changes of directors, supervisors, senior management and core technical personnel of the Company

On January 27, 2024, the company website (http://www.sse.com.cn) in Shanghai stock exchange to disclose the "SUPCON technology co., LTD. Announcement on independent directors to resign, Mr. Chen Xin resigned from the position of independent director of the sixth Board of Directors, member and chairman of the audit Committee of the sixth Board of Directors due to personal reasons. Following his resignation, Mr. Chen Xin will no longer hold any position in the Company.

On 9 March 2024, the Company disclosed on the website of the Shanghai Stock Exchange (http://www.sse.com.cn) the Announcement of SUPCON Technology Co., Ltd. on By-election of Independent Directors of the Company and Adjustment of Members of the Audit Committee of the Board of Directors, Agreed to nominate Mr. Chen Wenqiang as an independent director candidate for the sixth session of the Board of Directors of SUPCON Technology Co., LTD., and elect him to serve as a member and chairman of the audit Committee of the Board of Directors. The term of office shall start from the date of approval of the second extraordinary general meeting of shareholders in 2024 to the date of expiration of the term of office of the sixth session of the Board of Directors of the Company.

Held on March 25, 2024, the company in 2024 for the second time the extraordinary shareholders' general meeting, the review by the sixth session of the board of directors of the board of directors on the by-election of bill, agreed to by Mr Chen Wenqiang as the sixth session of the board of directors of the board of directors, audit committee and director of the committee.

Description of the identification of the company's core technical personnel

Not applicable

III、 Profit distribution or capital reserve fund to increase plan

Semi-annual profit distribution plan and reserve fund to increase capital stock plan

Whether to distribute or increase	No
Number of red shares for every 10 shares (shares)	0
Number of dividends per 10 shares (RMB) (tax	0

inclusive)	
Increment for every 10 shares (shares)	0
Description of profit distribution or capital reserve fund conversion plan	
None	

IV、 The Company's equity incentive plan, employee stock ownership plan or other employee incentive measures and their impact

(I) The relevant equity incentive items have been disclosed in the interim announcement and there is no progress or change in the subsequent implementation

Item overview	Query index
On January 5, 2024, the Company completed the exercise registration for the fourth exercise period of the 2019 stock option Incentive Plan, with a total of 204 persons exercising the rights and the number of exercised shares being 3,90,412.	For details, please refer to the Announcement on the Exercise Results and Share Changes of the Fourth Exercise Period of the 2019 Stock Option Incentive Plan of China Control Technology Co., LTD. (Announcement No. : 2024-003) disclosed by the Company on the website of Shanghai Stock Exchange (www.sse.com.cn) on January 9, 2024.
On January 8, 2024, the company listed and circulated the authorized shares of the first exercise period of the 2019 stock option Incentive Plan. The number of restricted shares in circulation is 4,051,301 shares, accounting for 0.52% of the total share capital of the company on the disclosure date of the announcement. The limited sale period is three years from the date of the right.	For details, please refer to the Notice of Listing and Circulation of Shares under the First Exercise Period of 2019 Stock Option Incentive Plan of China Control Technology Co., LTD. (Notice No. : 2023-091) published on the website of Shanghai Stock Exchange (www.sse.com.cn) on December 28, 2023.
Considering that the duration of the first phase of the Company's ESOP is about to expire, based on the confidence in the company's future sustainable and stable development and the judgment of the company's stock value, and in order to safeguard the interests of the holders of the ESOP, the company will hold the fourth meeting of the Management Committee of the ESOP and the sixth Board of Directors on March 20, 2024 and April 7, 2024. Deliberated and passed the Motion on the Extension of the Phase I ESOP, and agreed to extend the duration of the Phase I ESOP for 12 months, i.e., until May 29, 2025.	For details, please refer to the Announcement of China Control Technology Co., Ltd. on the Extension of the First Phase of the ESOP disclosed by the Company on the website of Shanghai Stock Exchange (www.sse.com.cn) on April 9, 2024 (Announcement No. : 2024-025).
As the vesting conditions for the second vesting period of the 2021 restricted stock incentive plan of the Company have been achieved, the Board of Directors and the Board of Supervisors agree that	For details, please refer to the Announcement of China Control Technology Co., Ltd. on the Achievement of the Vesting Conditions for the Second Vesting Period of the 2021 Restricted Stock

the Company will grant 676,168 restricted stock shares to 878 incentive objects that meet the vesting conditions in accordance with relevant regulations.	Incentive Plan (Announcement No. : 2024-032) disclosed by the Company on the website of Shanghai Stock Exchange (www.sse.com.cn) on June 12, 2024.
Given the company's 2023 annual interest assignment has been completed, according to the company's 2021 restricted stock incentive plan (draft) "relevant provision, the company adjusted accordingly on restricted stock grant price awarded price changed from 26.47586 yuan/share to 25.78 yuan/share.	For details, please refer to the Notice of China Control Technology Co., Ltd. on adjusting the Grant Price of the 2021 Restricted Stock Incentive Plan (Notice No. : 2024-033) disclosed by the Company on the website of Shanghai Stock Exchange (www.sse.com.cn) on June 12, 2024.
In view of the 57 incentive objects granted in the 2021 restricted stock incentive plan of the Company, such as resignation, voluntary abandonment of ownership, and change of control of subsidiaries, the original restricted stock incentive objects will be adjusted from 949 to 892, and the number of restricted stock granted but not vested will be adjusted from 3,341.96 million to 3,144.18 million. Invalid 197780 shares. At the same time, according to the performance appraisal results of the company in 2023, all or part of the restricted shares belonging to the plan of some incentive objects in the assessment year shall be cancelled and become invalid, and 109,877 restricted shares that have been granted but have not yet been vested shall be cancelled.	For details, please refer to the Notice of China Control Technology Co., Ltd. on the cancelled portion of 2021 Restricted Stock Incentive Plan Shares granted but not yet vested disclosed by the Company on the website of Shanghai Stock Exchange (www.sse.com.cn) on June 12, 2024 (Notice No. : 2024-034).
April 25 2024 solstice on June 20, 2024, the company held by the second phase of the employee stock ownership plan in 2019.00 1740 shares of the company stock has passed the big deals all manner of the centralized bidding and the secondary market to sell out, accounting for 2.20% of the company report the final total equity.	For details, please refer to the Notice of China Control Technology Co., LTD. (2024-044) on the Completion of the Reduction of the Second Phase of the 2019 Employee Stock Ownership Plan disclosed by the Company on the website of Shanghai Stock Exchange (www.sse.com.cn) on June 21, 2024.

(II) The incentive information of contingent subsequent progress is not disclosed in the interim announcement

Equity incentives

Not applicable

Other Notes

Not applicable

Employee stock ownership plan situation

1. Phase I employee stock ownership plan of the Company

In April 2019, when the company implemented the first phase of the employee stock ownership plan, a total of 382 employees participated, all of whom were employees of the Company or its holding subsidiaries/branches, holding a total of 20,436,563 shares of the employee stock ownership plan, and each share of the employee stock ownership plan corresponds to one share of the company. All employees who participated in the ESOP paid the subscription payment in full in currency. Company during the duration of the first phase of the employee stock ownership plan for 11 employees leave in accordance with the provisions, exit the employee stock ownership plan, exit 722500 share, share 540000 allocated by the employee stock ownership plan management committee in accordance with the authority to 38 employees, the remaining 182,500 shares to be distributed.

In June 2023, due to the implementation of the 2022 annual equity allocation plan, the total number of shares in the first phase of the company's employee stock ownership plan was changed to 29.633,016 million shares by converting 0.45 shares to all shareholders with capital provident fund.

During the reporting period, the company has a majority stake in the first phase of the employee stock ownership plan has passed the big deals and centralized price bidding in a secondary market for sale. By the reporting period, the company the first phase of the employee stock ownership plan total holdings of 6.696274 million shares, accounting for the company report the final 0.85% of total equity.

2. Phase II employee stock ownership plan of the Company

In September 2019, when the Company implemented the second phase of the ESOP, a total of 466 employees participated, all of whom were employees of the Company or its holding subsidiaries/branches, holding 12.00 million shares of the ESOP in total, and each share of the ESOP corresponds to one share of the company. All employees participating in the ESOP paid the subscription payment in full in currency. During the term of the second phase of the company's ESOP, 16 employees withdrew from the ESOP due to their resignation. Of the 350,000 shares withdrawn, 190,000 shares were distributed to 14 employees by the Management Committee of the ESOP according to authority, and the remaining 160,000 shares were to be distributed.

In June 2023, because of the company's implementation of the 2022 annual interest dispatch scheme, to all the shareholders with capital accumulation fund turn add 0.45 per share, the second phase of the total number of employee stock ownership plan shares changed to 1740.00 thousands of stocks.

From April 25, 2024 to June 20, 2024, 17.40.00 million shares of the Company held by the second phase of the Company's employee stock ownership plan have been sold through block trading and centralized bidding in the secondary market, accounting for 2.20% of the company's total share capital at the end of the reporting period. Specific content can be found in the company on June 21, 2024 in Shanghai stock exchange website (www.sse.com.cn) disclosure of "central technology co., LTD. On the second phase of the employee stock ownership plan is underweight in 2019 after the announcement (number: 2024-044).

Other incentives

In 2019, Chu Jian, the actual controller of the company, transferred 39.5 million shares of the company to Hangzhou Yuancheng Enterprise Management Partnership (limited partnership), which he controlled, for the purpose of motivating the senior executives and core personnel. Incentive object capital contribution subscribed deqing jia fu enterprise management partnership (limited partnership) share of the limited partnership, deqing jia fu enterprise management partnership (limited partnership) capital contribution subscribed for hangzhou yuan import enterprise management partnership (limited partnership) share of the limited partnership, The incentive object indirectly holds the company's shares through Deqing Jiafu Enterprise Management Partnership (limited partnership) and Hangzhou Yuancheng Enterprise Management Partnership (limited partnership).

By the end of the report period, 41 incentive objects of the company are limited partners of Deqing Jiefu Enterprise Management Partnership (limited partnership), with a total capital contribution of 26.5788 million yuan.

Section 5 Environmental and social responsibility

I、 Environmental Information Situation

Whether to establish relevant mechanisms for environmental protection	Yes
Investment in environmental protection during the reporting period (Unit: Ten thousand yuan)	47.52

(I) Description of the environmental protection situation of the companies and their major subsidiaries that are key pollutant discharging units announced by the environmental protection authorities

Not applicable

The main business of the company is to provide intelligent manufacturing products and solutions based on automation control system, covering industrial software, instrumentation and operation and maintenance services for industrial enterprises mainly in process industry. The main business of the company does not belong to the heavy pollution industry stipulated by the state, and its production and operation activities do not involve environmental pollution, related environmental pollutants and treatment facilities.

(II) Description of environmental protection of companies other than key pollutant-discharging units

1. **Any administrative penalties imposed due to environmental problems**

Not applicable

2. Disclose other environmental information with reference to key pollutant discharging units

The Company does not belong to the key pollutant discharging unit. According to relevant laws and regulations on environmental protection, the company handles environmental impact assessment and sewage discharge registration and filing, etc. In addition, the company set up the environmental protection department, continuously improve the environmental protection system and through GB/T24001 / IS014001 environmental management system certification, environmental inspection regularly, formulate special emergency environmental accidents emergency plan, and organize regular chemical leak emergency environmental accidents such as drill, strengthening emergency team construction, truly nip in the bud, Build a solid defense line of ecological environmental protection. The company regularly organizes the identification and classification of environmental impacts generated in the process of production and operation, and makes targeted treatment measures to reduce the impact on the environment and resolutely build a green ecological barrier. Specific measures are as follows:

(1) : waste gas treatment production waste gas mainly for the total hydrocarbon, tin methane and its compounds, particulate matter, etc., exhaust gas with water spray + dry filter + adsorption concentration + catalytic combustion process or high discharge after activated carbon adsorption process. Comprehensive emissions to the air pollutants emission standards "(GB16297-1996). The lampblack exhaust gas of the canteen is discharged after the lampblack purification processor. The emission concentration meets the requirements of "lampblack Emission Standard for Catering Industry" (GB18483-2001).

(2) Wastewater treatment: the use of rain and sewage diversion, sewage diversion, sewage diversion, production wastewater multi-stage filtration system recycling, finally through the regulation pool, wastewater treatment device, the use of air flotation + coagulation precipitation + biochemical process treatment into the municipal sewage pipe network; Domestic wastewater is treated by sewage pipe, oil trap (canteen) and septic tank, and discharged into the municipal sewage pipe network. The discharged sewage shall meet the level 3 discharge limit standard of GB8978-1996 Comprehensive Sewage Discharge Standard.

(3) Noise management: reduce the impact of noise by taking measures such as sound insulation, muffling and vibration reduction. Reach of noise at boundary of the emission of environmental noise within the boundary of industrial enterprises "(GB12348-2008) standards.

(4) Solid waste: hazardous waste (waste activated carbon, waste packaging barrels, waste cutting fluid, etc.) is entrusted to a qualified third party unit for disposal; General industrial solid wastes such as tin slag and metal scraps are acquired by waste materials recycling companies; After the household garbage is sorted and collected, the sanitation department is entrusted to clean and transport it regularly.

In the reporting period, the company not seen in environmental violations, nor by any administrative punishment for environmental problems.

3. Reasons for not disclosing other environmental information

Not applicable

(III) During the reporting period subsequent progress of the content of the disclosure of environmental information or changes

Not applicable

(IV) Conducive to protect the ecological environment responsibility, prevent and control pollution, implementation of the relevant information

The company pays attention to ecological environmental protection in the process of production and operation. The company has an environmental protection and energy management team, and regularly carries out environmental protection inspection, effectively supervises and manages the ecological environmental protection behavior in the daily operation process. The company continues to improve the environmental protection system and has passed the ISO 14000 certification. Company on a regular basis to carry out the "three wastes" detection, ensure pollutant emissions compliance. Continuously optimize the production process to reduce the use of harmful substances. Taking advantage of opportunities such as Energy Conservation Publicity Week and World Environment Day, we will hold various energy conservation and environmental protection publicity activities, organize and carry out circular market activities, and vigorously promote the concept of circular economy.

Company based on its own development, actively respond to climate change, the science formulation double carbon targets, strive to realize own operating carbon neutral by 2035. By implementing the clean energy use, energy efficiency, digital measures such as energy management and building low-carbon scene, practice double carbon responsibility target. At the same time, the company is more committed to create green value for customers and society, focusing on the number of intellectualization transformation, technological change, continue to lead industry customers hand in hand for continuous contribution to the development of industry and social value.

(V) In the reporting period to reduce its carbon emissions and the measures taken by the effect

Whether the carbon reduction measures	Yes
To reduce emissions of carbon dioxide equivalent (unit: tons)	760
Types of carbon reduction measures (such as the use of clean energy power generation, in the process of production using carbon reduction technology, research and development production to help in the carbon reduction of new products, etc.)	Use clean energy generation: in the first half of 2024 rooftop photovoltaic generating capacity of about 700000 degrees, is equivalent to reduce emissions of carbon dioxide equivalent of 399 tons of carbon reduction techniques used in the production process: the product structure optimization, improve equipment efficiency, measures such as digital management platform, to achieve energy conservation and emissions reduction of about 361 tons of carbon dioxide equivalent research and development production to help in the carbon reduction of new product: Launched company, TPT and other new technology products, compared with the

	traditional control system to further promote the energy conservation and emissions reduction benefits of the product produced.

Specific instructions

Company is committed to promoting green production process, harmless, and actively advocate green low carbon office life, comprehensive build green production operation new pattern. In 2024, the company won the honorary title of "Excellent Practitioner of Green Development in Petroleum and Chemical Industry" issued by China Chemical Environmental Protection Association. The project of "Equipment Mechanism Modeling and Low-carbon Operation System Application of Cold Source Machine Room in SUPCON Science Park" was selected into "Excellent Case Compilation of Carbon Peak Related Work in Hangzhou Construction in 2023". Social responsibility in zhejiang province was awarded the 2023 benchmarking enterprises.

We will actively adjust the energy structure and continuously increase the use of clean energy. Companies in the first phase of the original 11000 square meters of photovoltaic roof projects on the basis of about 16000 square meters of new photovoltaic roof project, and in June 2024 formally connected to the grid. After the completion of the project, the SUPCON Technology Industrial Park located in Fuyang District of Hangzhou has achieved full coverage of rooftop photovoltaic, which will achieve an annual total of 3.45 million KWH of renewable energy power generation in the future, equivalent to the annual greenhouse gas emission reduction of about 1,968 tons of carbon dioxide equivalent.

Around the key link of the product life cycle, continue to implement energy saving carbon reduction measures of reformation. Product design stage, through continuous optimization of product structure, to achieve reduction, raw and auxiliary materials and reduce the energy consumption of products in use process produce. Manufacturing stage, through the PCB puzzle optimization, a digital control flow, aging process optimization, production area such as improving the production efficiency, reduce production energy consumption level. At the same time, the active adoption of resonant technology, configuration, UV curing oven, change the galvanized parts to spray parts, the introduction of new environmental protection equipment and other measures, to reduce pollutants in the production process. In the logistics and transportation link, the implementation of product with module delivery and the use of automatic packaging machine, to achieve a significant reduction in the use of packaging materials, and the use of reusable packaging materials, the implementation of packaging materials recycling.

Building a green office park wisdom, control of science and technology to build lightweight energy-saving reform application scenario, the number of intellectualization realize intellectualization energy management, further enhance the management level of energy efficiency, and actively implement a number of energy-saving renovation project, including LED bulbs batch replacement, lighting energy-saving optimization control system, frequency conversion unit, new air conditioning energy saving renovation of refrigerator, such as replacing old air conditioning Continue to reduce office process energy consumption.

Create a full participation of the low carbon life new fashion, positive practice "green office, low carbon life". Abundant energy saving propaganda and training activities, calling for the personnel involved in the green movement, the common practice of low carbon environmental protection concept, build lasting effective green culture, improve the full awareness of energy conservation and carbon reduction.

II、We will consolidate and expand our achievements in poverty alleviation and rural revitalization

Not applicable

Section6 Important issues

I、 Commitments to fulfill

(I) Company, shareholders, actual controllers related parties, the buyer and the company promised to related parties in the reporting period, or continued to commitments during the reporting period

Commitment to background	Commitment Type	Promisee	Commitment Content	Time commitment	Whether there is a performance time limit	Commitment period	Timely and strictly fulfilled	If the performance fails to be performed in time, the specific reasons for the failure shall be explained	In case of failure to perform in time, the next step shall be stated
Commitments related to the initial public offering	Restricted sale of shares	The company controlling shareholders, actual controllers: ChuJian	Note 1	On February 28, 2020	yes	Holdings limited sales as of the date of the expiration of two years	yes	Not applicable	Not applicable
	Shares restricted for sale	The controlling shareholder and actual controller of the company: Chu Jian	Note 2	On February 28, 2020	no	Long term	yes	Not applicable	Not applicable

	Shares restricted for sale	Joint action person of the controlling shareholder and actual controller of the company: Hangzhou Yuan Cheng	Note 3	February 28, 2020	yes	Since the date of expiration of restricted shares held by the two years	yes	Not applicable	Not applicable
	Shares restricted for sale	Joint action person of the controlling shareholder and actual controller of the company: Hangzhou Yuan Cheng	Note 4	On February 28, 2020	no	Long term	yes	Not applicable	Not applicable
	Shares restricted for sale	Outgoing director: ChuMin	Note 5	February 28, 2020	yes	Since the date of expiration of restricted shares held by the two years	yes	Not applicable	Not applicable
	Shares restricted for sale	Outgoing director: ChuMin	Note 6	February 28, 2020	no	Long term	yes	Not applicable	Not applicable
	Shares	Directors and	Note 7	On February	yes	2 years from	yes	Not applicable	Not

	restricted for sale	senior Management: CUI SHAN; Senior managers: Yu HaiBin, Mo Wei, Fang Yongsheng; Outgoing director: Jin Jianxiang; Outgoing directors and senior managers: Jia Xunhui; Outgoing Senior managers: Xie Min, Li Hongbo, Jiang Xiaoning, Shen Hui, Lai Jingyu		28, 2020		the date of expiration of the restriction period of the shares held			applicable
	Shares restricted for sale	Directors and senior Management: CUI SHAN; Senior managers: Yu HaiBin, Mo Wei, Fang	Note 8	On February 28, 2020	no	Long term	yes	Not applicable	Not applicable

		Yongsheng; Outgoing director: Jin Jianxiang; Outgoing directors and senior managers: Jia Xunhui; Outgoing Senior managers: Xie Min, Li Hongbo, Jiang Xiaoning, Shen Hui, Lai Jingyu							
	Shares restricted for sale	Core technical staff: Qiu Kun, Lu Weijun, Yao Jie, Chen Yu	Note 9	February 28, 2020	yes	By the end of six months after departure	yes	Not applicable	Not applicable
	Shares restricted for sale	Core technical staff: Qiu Kun, Lu Weijun, Yao Jie, Chen Yu	Remark 10	28 February 2020	yes	4 years from the date of expiration of the restriction period of the shares held	yes	Not applicable	Not applicable
	Restricted shares	Core technical staff: Qiu Kun,	Note 11	On February 28, 2020	no	Long term	yes	Not applicable	Not applicable

		Lu Weijun, Yao Jie, Chen Yu							
	Shares restricted for sale	Public offering shares more than 5% of shareholders: chint electric appliance	Note 12	February 28, 2020	no	Long term	yes	Not applicable	Not applicable
	Shares restricted for sale	A period of 6 months to take larger shares in the company shareholders: sinopec in the capital, nuclear fund	Note 13	On February 28, 2020	no	Long term	yes	Not applicable	Not applicable
	Shares restricted for sale	Shareholders who have acquired all their shares within 6 months through the transfer of shares of the controlling shareholder: Lenovo Beijing	Note 14	28 February 2020	no	Long term	yes	Not applicable	Not applicable
	Shares	Part of the stake	Note 15	On February	no	Long term	yes	Not applicable	Not

	restricted for sale	in 6 months by accepting shares of controlling shareholders: Shanghai TanYing, lanxi CDH		28, 2020					applicable
	Shares restricted for sale	Employee-owned asset management plan administrator: shen wan hongyuan securities co., LTD., citic securities co., LTD	Note 16	28 February 2020	no	Long term	yes	Not applicable	Not applicable
	Shares restricted for sale	Intel R&D, Xizi Fuxin and other 14 other legal person shareholders	Note 17	28 February 2020	no	Long term	yes	Not applicable	Not applicable
	Shares restricted for sale	You-xian sun, QiuFeng 82 other natural person shareholder	Note 18	On February 28, 2020	no	Long term	yes	Not applicable	Not applicable
	Others	Public offering	Note 19	On February	no	Long term	yes	Not applicable	Not

		shares more than 5% of shareholders: ChuJian, hangzhou yuan import, chint electric appliance		28, 2020					applicable
	Others	Chu Jian, the company's controlling shareholder and actual controller, and Hangzhou Yuancheng, the person acting in concert	Note 20	On February 28, 2020	no	Long term	yes	Not applicable	Not applicable
	Others	Chu Jian, the controlling shareholder and actual controller of the company, Hangzhou Yuancheng, the director and senior management of the company	Note 21	On February 28, 2020	no	Long term	yes	Not applicable	Not applicable

	To solve the competition	ChuJian company controlling shareholder, actual controller, the concerted action person hangzhou yuan import	Note 22	28 February 2020	no	Long term	yes	Not applicable	Not applicable
	To solve the related party transactions	ChuJian company controlling shareholder, actual controller, the concerted action person hangzhou yuan import	Note 23	On February 28, 2020	no	Long term	yes	Not applicable	Not applicable
	Others	SUPCON technology	Remark 24	On February 28, 2020	no	Long term	yes	Not applicable	Not applicable
	Others	ChuJian company controlling shareholder, actual controller, the concerted action person	Note 25	28 February 2020	no	Long term	yes	Not applicable	Not applicable

		hangzhou yuan import							
	Others	Shareholders holding more than 5% of the company	Note 26	On February 28, 2020	no	Long term	yes	Not applicable	Not applicable
	Others	Directors (independent directors), supervisors and senior management personnel	Note 27	On February 28, 2020	no	Long term	yes	Not applicable	Not applicable
Commitments related to equity incentives	Others	SUPCON technology	Note 28	December 16, 2021	yes	The period of validity of 2021 restricted stock incentive plan	yes	Not applicable	Not applicable
	Others	2021 Restricted stock incentive Plan incentive recipients	Note 29	On December 16, 2021	yes	The validity period of the 2021 restricted stock incentive plan	yes	Not applicable	Not applicable

Note 1: If I reduce my holdings of the company's shares within 2 years after the expiration of the lock-up period, the price of the shares reduction shall not be lower than the issue price of the company's initial public offering (in case of dividend payment, share offering, capital reserve conversion into share capital and other ex-dividend matters during the period, the issue price shall be adjusted accordingly).

Note 2: (1) if you do not fulfill the above commitments, I will be in the company general meeting of shareholders and China Securities Regulatory Commission designated newspapers openly the concrete reason fails to fulfill its commitments and apologize to the company's other shareholders and the social public investors. In case of violation of the above commitments, the proceeds shall belong to the Company. If you do not fulfill the above commitments, leaving investors in securities trading losses, I will compensate for the investors in accordance with the law; (2) during I stake, if shares locked and reduce its laws, regulations and regulatory documents, policies and securities regulatory requirements changes, the am willing to change automatically apply the laws, regulations and normative documents, policies and the requirements of the securities regulator.

Note 3: If the company's shares held by the enterprise are reduced within 2 years after the expiration of the lock-up period, the price of the shares reduced shall not be lower than the issue price of the company's initial public offering (in case of dividend payment, share offering, capital reserve conversion into share capital and other ex-rights and ex-interest matters during the period, the issue price shall be adjusted accordingly).

Note 4: (1) if you do not fulfill the above commitments, our enterprise will be specified in the company's general meeting of shareholders and China Securities Regulatory Commission (CSRC) newspaper publicly stated the concrete reason fails to fulfill its commitments and apologize to the company's other shareholders and the social public investors. Such as violation of the above commitments, proceeds shall be owned by the company. If you do not fulfill the above commitments, leaving investors in securities trading losses, the company will compensate for the investors in accordance with the law; (2) During the shareholding period of the Company, if the laws, regulations, normative documents, policies and requirements of the securities regulatory authority of the lock-up and reduction of shares change, the Company is willing to automatically apply the changed laws, regulations, normative documents, policies and requirements of the securities regulatory authority.

Note 5: If the company's shares held by me are reduced within 2 years after the expiration of the lock-up period, the price of the shares reduced shall not be lower than the issue price of the company's initial public offering (if the company's shares are paid dividends, shares are given away, capital reserve is converted into share capital and other ex-rights and ex-interest matters occur during this period, the issue price shall be adjusted accordingly).

Note 6: (1) the shares after a lock-up period expired, with himself as a publisher during the director/supervisor/senior management personnel, on the premise of shares locked promise, every year I transfer directly or indirectly held by the issuer shares does not exceed himself directly or indirectly, 25% of the total number of shares held by the issuer; (2) If I leave office before the expiration of my term of office, I shall comply with the following restrictions during the term of office determined upon my appointment and within 6 months after the expiration of my term of office: ① The number of shares transferred each year shall not exceed 25% of the total number of shares of the issuer held directly or indirectly by me; (2) left in the second half, not transfer my way, directly or indirectly held by the issuer; (3) During the period of serving as a director/supervisor/senior manager of the issuer, I will strictly abide by the relevant provisions of laws, regulations and normative documents on the shareholding and share changes of directors, supervisors and senior managers, and standardize the good faith performance of the obligations of directors, supervisors and senior managers, Faithfully and promptly declare himself shares directly or indirectly held by the issuer and its changes. I will not refuse to perform the above commitments due to change of position, resignation or other reasons. I agree to bear and compensate for all losses caused to the Issuer and the enterprises under my control as a result of my breach of the above undertakings; (4) if you do not fulfill the above commitments, our enterprise will be specified in the company's general meeting of shareholders and China Securities Regulatory Commission (CSRC) newspaper publicly stated the concrete reason fails to fulfill its commitments and apologize to the company's other shareholders and the social public investors. In case of any violation of the above commitments, the proceeds shall belong to the Company. If the above undertakings are not fulfilled and the investors suffer losses in securities trading, the Company will compensate the investors for their losses according to law; (5) During the shareholding period of the Company, if the laws, regulations, normative documents, policies and requirements of the securities regulatory authority of the lock-up and reduction of shares change, the Company is willing to automatically apply the changed laws, regulations, normative documents, policies and requirements of the securities regulatory authority.

Note 7: If the company's shares held by me are reduced within 2 years after the expiration of the lock-up period, the price of the reduced shares shall not be lower than the issue price of the company's initial public offering (in case of dividend payment, share offering, capital reserve conversion into share capital and other ex-rights and ex-interest matters during the period, the issue price shall be adjusted accordingly).

Note 8: (1) the shares after a lock-up period expired, with himself as a company director/supervisor/senior management personnel, on the premise of shares locked promise, I each year, directly or indirectly held by the transfer of shares does not exceed himself directly or indirectly held by the company's shares up 25% of the total; (2) if I leave before the expiration of the term, is when I took office tenure and within 6 months after the expiration of the term, abide by the following restrictions: a, transfer of shares shall not be more than a year I directly or indirectly holds 25% of the total number of shares in the company; And b in the second half, not transfer my direct or indirect way of holding the shares of the company; (3) During the period of serving as a director/supervisor/senior manager of the company, I will strictly abide by the relevant provisions of laws, regulations and normative documents on the shareholding and share changes of directors, supervisors and senior managers, perform the obligations of directors, supervisors and senior managers in good faith, and truth-telling and timely reporting the shares of the company directly or indirectly held by me and the changes thereof. I will not refuse to perform the above undertakings due to changes in my position, resignation or other reasons. I agree to bear and compensate for all losses caused to the Company and the enterprises under my control as a result of my breach of the above undertakings; (4) If I fail to fulfill the above commitments, I will publicly explain the specific reasons for my failure to fulfill the commitments and apologize to other shareholders and public investors of the Company in the general meeting of shareholders of the Company and newspapers designated by CSRC. In case of violation of the above commitments, the proceeds shall belong to the Company. If the Company fails to fulfill the above commitments and causes the investor to suffer losses in securities trading, I will compensate the investor for losses according to law; (5) during the period of I stake, if shares locked and reduce its laws, regulations and regulatory documents, policies and securities regulatory requirements changes, the am willing to change automatically apply the laws, regulations and normative documents, policies and the requirements of the securities regulator.

Note 9: Within six months after my resignation, I shall not transfer or entrust others to manage the shares of the Company directly or indirectly held by me before the issuance, nor shall the Company repurchase such shares.

Note 10: Within 4 years from the expiration date of the restriction on the sale of shares held by the company, the shares transferred each year shall not exceed 25% of the total number of pre-IPO shares held by the company at the time of listing, and the reduction proportion can be used cumulated.

Note 11: (1) If I fail to fulfill the above commitments, I will publicly explain the specific reasons for the failure and apologize to other shareholders and public investors of the company in the general meeting of shareholders of the Company and newspapers designated by CSRC. In case of violation of the above commitments, the proceeds shall belong to the Company. If the Company fails to fulfill the above commitments and causes the investor to suffer losses in securities trading, I will compensate the investor for losses according to law; (2) during I stake, if shares locked and reduce its laws, regulations and regulatory documents, policies and securities regulatory requirements changes, the am willing to change automatically apply the laws, regulations and normative documents, policies and the requirements of the securities regulator.

Note 12: The Company will strictly abide by the relevant provisions of laws, regulations and normative documents on shareholders' shareholding and share changes (including shareholding reduction), and standardize the performance of shareholders' obligations in good faith. During the period of ownership, if shares locked and reduce its laws, regulations and regulatory documents, policies and securities regulatory requirements change, is this company willing to automatically apply changes after the laws, regulations and regulatory documents, policies and securities regulatory requirements.

Note 13: (1) If the Company fails to fulfill the above commitments, the Company will publicly explain the specific reasons for the failure to fulfill the commitments and apologize to other shareholders and public investors of the Company in the general meeting of shareholders of the Company and newspapers designated by CSRC. In case of any violation of the above commitments, the proceeds shall belong to the Company. If the above undertakings are not fulfilled and the investors suffer losses in securities trading, the Company will compensate the investors for their losses according to law; (2) during the period of the company shares, if the stock lock and reduce its laws, regulations and regulatory documents, policies and securities regulatory requirements change, is this company willing to automatically apply changes after the laws, regulations and regulatory documents, policies and securities regulatory requirements.

Note 14: (1) If the Company fails to fulfill the above commitments, the Company will publicly explain the specific reasons for the failure to fulfill the commitments and apologize to other shareholders and public investors of the Company in the general meeting of shareholders of the Company and newspapers designated by CSRC. In case of any violation of the above commitments, the proceeds shall belong to the Company. If you do not fulfill the above commitments, leaving investors in securities trading losses, the company will compensate for the investors in accordance with the law; (2) during the period of the company shares, if the stock lock and reduce its laws, regulations and regulatory documents, policies and securities regulatory requirements change, is this company willing to automatically apply changes after the laws, regulations and regulatory documents, policies and securities regulatory requirements.

Remark 15: (1) if you do not fulfill the above commitments, the partnership will be specified in the company's general meeting of shareholders and China Securities Regulatory Commission (CSRC) newspapers openly the concrete reason fails to fulfill its commitments and apologize to the company's other shareholders and the social public investors. Such as violation of the above commitments, proceeds shall be owned by the company. If you do not fulfill the above commitments, leaving investors in securities trading losses, the partnership will compensate for the investors in accordance with the law; (2) during the period of holding the partnership, if the stock lock and reduce its laws, regulations and regulatory documents, policies and securities regulatory requirements change, is this company willing to automatically apply changes after the laws, regulations and regulatory documents, policies and securities regulatory requirements.

Note 16: (1) If the above commitments are not fulfilled, the Manager will publicly explain the specific reasons for the failure to fulfill the commitments and apologize to other shareholders and public investors of the Company in the general meeting of shareholders of the Company and newspapers designated by CSRC. Such as violation of the above commitments, proceeds shall be owned by the company. If you do not fulfill the above commitments, leaving investors in securities trading losses, the administrator will compensate for the investors in accordance with the law; (2) during the managers manage employee stock ownership plan, if the stock lock and reduce its laws, regulations and regulatory documents, policies and securities regulatory requirements change, change after our manager would like to automatically applicable laws, regulations and regulatory documents, policies and securities regulatory requirements.

Note 17: During the shareholding period of the Company/Partnership, if there is any change in the laws, regulations, normative documents, policies and requirements of the securities regulatory authority for the lock-up and reduction of shares, the Company is willing to automatically apply the changed laws, regulations, normative documents, policies and requirements of the securities regulatory authority.

Note 18: During the period of my shareholding, I am willing to automatically apply the changed laws, regulations, normative documents, policies and requirements of securities regulatory authorities in case of any change in the laws, regulations, normative documents, policies and requirements of securities regulatory authorities in case of lock-up and reduction of shares.

Note 19: (1) If the Company/enterprise/I intends to reduce the shares held by the Company after the lock-up period expires, I will conscientiously abide by the relevant provisions of the CSRC and the stock Exchange on shareholders' shareholding reduction, and prudently formulate a stock reduction plan according to the company's needs to stabilize the stock price, carry out business and capital operation, and gradually reduce the shares after the lock-up period expires; (2) our company/this company/I reduce its holdings of shares shall comply with the provisions of the laws and regulations, the specific way including but not limited to exchange centralized competitive trading way, the prime way to trade, agreement transfer, etc.; (3) our company/this company/my company's shares held by the expiration of the lock, as of the date of transfer of the company's total shares every 12 months shall not exceed the limit of relevant laws, regulations and rules. If the company's reserve fund or undistributed profit is converted into share capital in the year of the reduction, the calculation base of the total share capital at the end of the previous year shall be adjusted accordingly; (4) Before the company/enterprise/I reduce the shares held by the Company/I, the company/I shall timely and accurately perform the information disclosure obligations in accordance with the Company Law, the Securities Law and the provisions of the regulatory authorities in force at that time; (5) If the Company/the Enterprise/I fails to perform the aforesaid intention to reduce its shareholding, the Company/the Enterprise/I will publicly explain the specific reasons for the failure to perform its undertakings at the general meeting and on the disclosure media designated by the regulatory authorities, apologise to the shareholders of the Company and public investors, and bear all legal liabilities arising therefrom.

Note 20: The Company, the controlling shareholder, the actual controller and the person acting in concert have made the following commitments regarding the repurchase of the shares fraudulently issued and listed:

1. The Company has made the following commitments:

"(1) Ensure that there is no fraudulent issuance of the company's shares in this public offering and listing on the Science and Technology Innovation Board.

(2) If the company does not meet the conditions for issuance and listing, and fraudulently obtains the registration of issuance and has been issued and listed, the Company will start the share repurchase procedure within five working days after the confirmation of the CSRC and other competent authorities to purchase back all the new shares issued by the Company."

2. Controlling shareholders, actual controllers and persons acting in concert

Chu Jian, the controlling shareholder and actual controller of the company, and Hangzhou Yuancheng, the person acting in concert, make the following commitments:

"(1) ensure the public offering and listing in kechuang board does not exist any fraud issue.

(2) if the company does not meet the requirements for the issuance, and register and have been issued listing in such a dishonest way, I/we will be in the China Securities Regulatory Commission and other departments within five working days after confirm start the share repurchase program, all the public offering of new shares to buy back company."

Note 21:1. The company's measures and commitments to fill the amortized immediate returns

"In order to reduce the impact of the diluted immediate return of this public offering, the company promises to improve asset quality and sales revenue by strengthening the management of raised funds, accelerating the investment progress of raised projects, strengthening market development efforts, strengthening investor return mechanism and other ways, so as to increase future earnings and achieve sustainable development, so as to fill the diluted immediate return. The Company undertakes to take the following specific measures:

(1) Strengthen the management of raised funds

The company has formulated the Management System for the Raised Funds of Zhejiang SUPCON Technology Co., LTD. After the raised funds are in place, they will be deposited in the special account designated by the board of Directors. Company will periodically check to raise funds usage, so as to strengthen the supervision of offering investment projects, the use of the rational, legal guarantee to raise money.

(2) speed up progress of offering investment project investment

After this offering to raise funds in place, the company will allocate internal resource, accelerate the investment projects, increasing the service efficiency of raising money, try to raise for project reaches producing at an early date and realize the expected benefits, in order to enhance company profitability. Before the raised funds are in place, in order to realize the profit of the raised project as soon as possible, the Company plans to actively raise funds through a variety of channels, actively allocate resources, carry out the preliminary preparation work of the raised project, enhance the talent and technology reserve related to the project, strive to achieve the expected income of the project as soon as possible, enhance the shareholder return in the next few years, and reduce the risk of immediate return to the newsstand thinning caused by the issue.

(3) Strengthen market development efforts

The company will improve and expand the global business layout on the basis of the existing sales and service network, and is committed to providing more customers around the world with reliable products and quality services. Company will continue to improve and perfect products, technology and service system, expand international and domestic sales channels and service network coverage, relying on first-class technology and services to promote the market development, so as to optimize company in the domestic and international market strategic layout.

(4) Strengthen the investor return mechanism

The Company implements a positive profit distribution policy, attaches importance to reasonable investment returns for investors, and maintains continuity and stability. Company has according to the China Securities Regulatory Commission and the relevant provisions of the regulatory requirements, formulate after apply the company's articles of association (draft), the detailed rules and profit distribution policy concerns public commitment, and adopted the "about listed companies of dividend distribution policy after bill, sufficient to maintain the shareholders of a company shall be entitled to enjoy the asset proceeds and other rights, improve the ability of the company's future returns.

(5) If the Company violates the aforesaid commitment, it will timely announce the fact and reason of the violation. In addition to force majeure or other reasons not attributable to the Company, it will apologize to the shareholders of the Company and the public investors, and propose supplementary or alternative commitments to the investors to protect the interests of the investors as much as possible. And implement the supplementary undertaking or alternative undertaking after deliberation and approval by the general meeting of shareholders of the Company."

2. Commitment of the controlling shareholder, actual controller and person acting in concert of the company

Chu Jian, the controlling shareholder and actual controller of the company, and Hangzhou Yuancheng, the person acting in concert, promise that:

(1) I/our company will not exceed my authority to intervene in the company's operation and management activities, and will not encroachments on the interests of the company.

(2) I/we will earnestly fulfill company set fill be diluted returns at sight measures and the company has made any commitment of fill the reward measures, if my/our enterprise in violation of the commitments and causes loss to the company or the investor, my/our enterprise is willing to be liable to the company or investor compensation in accordance with the law.
3. Commitment of all directors and senior managers of the Company
(1) I will not transfer benefits to other units or individuals for free or on unfair terms, nor will I damage the interests of the Company in other ways;
(2) to my office with constraints on consumer behavior;
(3) don't use the company's assets is engaged in investment, consumption activities that has nothing to do with my duty.
(4) the remuneration system formulated by the board of Directors or the remuneration committee shall be linked to the implementation of the company's measures to fill the diluted immediate return;
(5) the implementation of equity incentive schemes such as the future of the business, the future exercise condition of equity incentive plan will be diluted and company fill a prompt return measures are tied to the implementation of;
(6) in the China Securities Regulatory Commission or a stock exchange shall be separately released diluted prompt return commitment to fill the measures and related opinions or after implementing rules, if the relevant provisions of the company and I promise can't meet the provisions, such as I promised to immediately in accordance with the regulations issued by commitment, and actively promote the company to make the new rules, To meet the requirements of the CSRC and the stock exchange.
, one of the main responsibility as fill return measures related to violation of the above promise or refuse to fulfill the promise, I agree according to the China Securities Regulatory Commission, the Shanghai stock exchange institution according to the relevant provisions, formulate or release rules, to make the relevant punishment or related management measures.

Note 22: (1) I/our company and other enterprises controlled by me/our company do not engage in the same or similar business with Sinocon Technology and its holding subsidiaries and have a significant adverse impact on Sinocon Technology. (2) I/the company and I/we control of other enterprises, the future will not in any way (including but not limited to set up, investment, merger and acquisition, etc.) is engaged in the same or similar and control technology and its subsidiary and constitute a major adverse effect on business. (3) I/we will be to control the current and future may other production and business operation activities of enterprise supervision and constraints. In with the company's related party does not produce under the premise of competition, such as control technology and the subsidiary company to further expand its products and business scope, I/we will perform the actual control of people and concerted action person's obligation, for my/our enterprise for other enterprises to control the subsidiary companies in technology and expand product or business competition; If possible and control technology and subsidiary products or the business before and after the competition, I/we will perform the actual control of people and concerted action person's obligation, I/we have control of other enterprises in accordance with the following way out of the competition and control technology and subsidiary: A, stop production or business operations or may compete products, business competition; B, group competition of business into the control system and subsidiary to operate; C, group competition, the business transfer to unrelated third parties; If my/our enterprise controlled by other enterprises, in accordance with the statutory procedure can't approve the above requirements, is my/our enterprise can be solved by the method of exit related share competition potential risks. (4) I/we promise not to seek for their own or others belong to control technology and subsidiary business opportunities, proprietary or in the management and control system for others and similar business subsidiary. If from any third party for business opportunities and control technology and subsidiary operations constitute or may constitute a competition, I/we will immediately notify the control technology, and should contribute to the business opportunities to control or use any other plan can be approved by regulators, To eventually eliminate the commitment of the business opportunities such as involved in the actual management, asset/equity/business operation, to avoid and control technology to form the situation of the competition. (5) in my/our enterprise does not use any way to control the normal operation and development caused or may adversely affect the business or activity, does not damage control technology and the interests of other shareholders, including but not limited to such way: use of my/our enterprise social resources and customer resources hinder or limit the independent development of control technology; In the society, customers, distribute to control adverse news or information; Using the control status of my/our enterprise influence, cause the central technical management personnel, research and development and technical personnel of abnormal changes or fluctuations and other unfavorable to the development of control technology. (6) as a result of my/our enterprise in violation of the commitments and causes loss to the control system and other shareholders, I/we corporate volunteering for the central technology and the loss caused by other shareholders.

Note23: (1) by the commitment to issue date, except in the case of has been disclosed, my/our enterprise control and I/we enterprises there is no other significant related party transactions and control technology; (2) I/we will not carry out any act that will affect the independence of SUPCON Technology, and will maintain the independence of SUPCON Technology in terms of assets, personnel, finance, business and organization; (3) I/we will try to avoid and control technology between related party transactions, or to the associated the inevitable business transaction, will be on the basis of equality, voluntary, according to the principle of fair, fair, and making compensation for equal value, and the transaction price will be determined in accordance with the reasonable price market recognized; (4) I/we will strictly abide by the control system about matters related transactions to avoid in the company's articles of association, involved in related party transactions will be carried out in accordance with the connection transaction decision-making process control technology, the legal procedures and will, in time for information disclosure matters related transactions; (5) I/the Company and the enterprises controlled by me/the Company guarantee that I/the company will not use related party transactions to transfer the profits of the Company, and will not damage the legitimate rights and interests of the Company and other shareholders by affecting the business decisions of the Company. (6) I/the company and I/we control of enterprise is not in any way illegal take control fund and illegal guarantee required control technology.

Note 24 (1) the violation of the prospectus no falsehoods, misleading statements or major omissions promises the constraints of the measures

As the company in violation of this commitment, the company will be specified in the general meeting of shareholders and China Securities Regulatory Commission has not publicly on the press to fulfill the repurchase shares and measures to compensate for the losses to the shareholders and the social public investors an apology, and compensation to investors in accordance with the law, And will be disclosed in the regular reports on the company to buy back shares, compensate for the losses of the execution of commitment, and fails to fulfill its promise of remedy and correct the situation.

(2) Restraint measures for violation of other commitments

If the company for this promise by offering other types of failure to meet, have been unable to fulfill or unable to meet its truly, the company will take the following measures: (1) the company shall timely and fully disclose promise failed to live up to, unable to fulfill or unable to meet its specific reasons and apologized to shareholders and the social public investors; (2) Provide supplementary or alternative commitments to investors to protect the legitimate rights and interests of investors as much as possible; (3) the above supplement or alternative commitment submitted to company general meeting of shareholders; (4) If the Company fails to perform the relevant undertakings and causes losses to investors, the Company shall be liable for damages according to law.

Note 25: The controlling shareholder, the actual controller and the person acting in concert of the company promise the following restraint measures for failing to fulfill the relevant commitments:

I/the company will actively fulfill all commitments made in connection with the initial public offering and listing of A-shares of China Control Technology, voluntarily accept the supervision of regulatory authorities, the public and investors, and assume corresponding responsibilities in accordance with the law. If I/we fail to fulfill the relevant commitments, I/we undertake to take the following remedial measures:

(1) I/we shall timely and fully disclose the specific reasons for my/our failure to perform, fail to perform or fail to perform on schedule at the shareholders' general meeting and the disclosure media designated by the China Securities Regulatory Commission, and apologize to the shareholders and public investors;

(2) provide supplementary or alternative undertakings to investors so as to protect the legitimate rights and interests of investors as much as possible;

(3) If I/the enterprise obtains gains as a result of failure to perform the undertakings, such gains shall belong to Sinocontrol Technology;

(4) the shares of China Control Technology directly or indirectly held by me/the Enterprise shall not be transferred until I/the Enterprise has fulfilled the relevant undertakings or made supplementary undertakings or substitute undertakings;

(5) of my/our enterprise fails to fulfill its commitments to the control system and investor losses, I/we will be liable for damages in accordance with the law.

Note: 26 shareholders holding more than 5% just fails to fulfill its commitments restraint measures of commitment is as follows:

The Company will actively fulfill all commitments made in connection with the initial public offering of A-shares and listing on the Science and Technology Innovation Board, voluntarily accept the supervision of regulatory authorities, the public and investors, and assume corresponding responsibilities according to law. If the Company fails to fulfill the relevant commitments, the Company undertakes to take the following remedial measures:

(1) The Company shall timely and fully disclose the specific reasons for the failure to perform, fail to perform or fail to perform the undertakings on schedule at the shareholders' general meeting and the disclosure media designated by the China Securities Regulatory Commission, and apologize to the shareholders and public investors;

(2) to investors make additions or alternative commitment, as much as possible to protect the lawful rights and interests of investors.
(3) if the Company obtains gains as a result of its failure to perform the undertakings, such gains shall belong to Sinocontrol Technology;
(4) the shares of China Control Technology directly or indirectly held by the Company shall not be transferred until the Company has fulfilled the relevant undertakings or made supplementary undertakings or alternative undertakings;
(5) If the Company fails to perform the relevant undertakings and causes losses to China Control Technology and Investors, the Company shall be liable for damages in accordance with the law.

Note 27: The company's directors (independent directors), supervisors and senior management did not fulfil relevant restraint measures of commitment is as follows:I will actively fulfill all commitments made in connection with this initial public offering and listing, voluntarily accept the supervision of regulatory authorities, the public and investors, and bear corresponding responsibilities according to law. If I fail to fulfill the relevant commitments, I promise to take the following remedial measures:
(1) I shall timely and fully disclose the specific reasons for my failure to perform, fail to perform or fail to perform on schedule at the general meeting of shareholders and the disclosure media designated by the China Securities Regulatory Commission, and apologize to shareholders and public investors;
(2) to investors make additions or alternative commitment, as much as possible to protect the lawful rights and interests of investors.
(3) if I obtain gains as a result of my failure to perform the undertakings, such gains shall belong to Zhongcontrol Technology;
(4) I will stop receiving remuneration, dividends or allowances from CMCC, and at the same time the shares of CMCC held directly or indirectly by me shall not be transferred until I fulfill the relevant undertakings or make supplementary undertakings or substitute undertakings;
(5) related commitments will not personally losses to control technology and investors, I will be liable for damages in accordance with the law.

Note 28: not to get the incentive object under this plan restricted stock lending as well as any other form of financial aid, including loan guarantee for it.

Note 29: if the company for information disclosure documents are false records, misleading statements or major omissions, cause is not in conformity with the grants equity or ownership arrangement, incentive object file information disclosure shall be autocorrelation is confirmed after the false records, misleading statements or major omissions, will get all the benefits return by the equity incentive plan.

II、During the reporting period the controlling shareholder or other associated party non-operating take fund

Not applicable

III、An illegal guarantee

Not applicable

IV、Audit of semi-annual report

Not applicable

V、From the annual report of non-standard audit opinion matters involving the change and processing conditions

Not applicable

VI、Matters related to bankruptcy reorganization

Not applicable

VII、Major litigation and arbitration matters

Not applicable

VIII、The listed company and its directors, supervisors, senior managers, controlling shareholders and actual controllers are suspected of violating laws and regulations, have been punished and rectified

Not applicable

IX、Explanation on the integrity status of the Company, its controlling shareholders and actual controllers during the reporting period

Not applicable

X、Material Connected transactions

(I) Related party transactions related to daily operations

1、Matters that have been disclosed in the interim announcement and there is no progress or change in subsequent implementation

Overview of matters	Query index
Company held on April 7, 2024, the sixth session of	See the company published on April 9, 2024 in

the fourth meeting of the board, the sixth session of the fourth meeting of the board of supervisors, the sixth session of the board of directors of the board of directors for the fourth time special meeting, and be held on April 29, 2024, 2023 annual general meeting of shareholders, reviewed and adopted the "about 2024 annual daily connection transaction amount of bill, The daily connection transaction is expected to amount to 178000.00 RMB ten thousand yuan	Shanghai stock exchange website (www.sse.com.cn) control technology co., LTD. About 2024 annual routine announcement of the amount of related party transactions (number: 2024-022).
Company be held on June 11, 2024, the sixth session of the 6th meeting of the board, the sixth session of the sixth meeting of the board of supervisors, the sixth session of the board of directors of the board of directors for the fifth time special meetings, reviewed and adopted the "about the amount of related transaction is expected to increase 2024 daily bill, agree to increase the daily connection transaction limit is 90500.00 RMB ten thousand.	See the company published on June 12, 2024 in Shanghai stock exchange website (www.sse.com.cn), the control technology co., LTD. About 2024 annual announcement of the amount of daily connection transaction is expected to (number: 2024-037).

2、 **Matters that have been disclosed in the interim announcement but have progress or changes in subsequent implementation**

Not applicable

3、 **Matters not disclosed in the interim announcement**

Not applicable

(II) Related party transactions arising from asset acquisition or equity acquisition or sale

1、 **The temporary announcement and subsequent implementation of no progress or change**

Overview of matters	Query index
On June 11, 2024, the company held the 6th meeting of the sixth board of directors, the board of directors of the sixth session of the sixth meeting of the board of supervisors and the sixth of the independent director fifth, specially reviewed and adopted the "about transfer of subsidiary equity and related transactions of bill, Company will hold zhejiang control system engineering co., LTD. (hereinafter referred to as the "control system engineering") 100% equity transfer to central west zhejiang science and technology co., LTD.	See the company published on June 12, 2024 in Shanghai stock exchange website (www.sse.com.cn) control technology co., LTD. About the transfer of the subsidiary equity and affiliate transaction announcement (number: 2024-036).

(hereinafter referred to as the "central west"), to 52161018.58 yuan. After completion of the transaction, the company no longer directly hold the equity of control system engineering, control systems engineering will no longer be included in the scope of consolidated company	

2、 **Been disclosed in temporary announcement, but with the progress of the follow-up implementation or change matters**

Not applicable

3、 **Matters not disclosed in the interim announcement**

Not applicable

4、 **If the performance agreement is involved, the realization of the performance during the reporting period shall be disclosed**

Not applicable

(III) Major connected transactions of joint overseas investment

1、 **Matters that have been disclosed in the interim announcement and there is no progress or change in the subsequent implementation**

Overview of matters	Query index
Company be held on January 26, 2024, the second session of the sixth session of the board of directors, the second session of the sixth session of the board of supervisors and the sixth session of the board of directors of the board of directors for the second time special meetings, reviewed and adopted the "about foreign investment together with the related party and related party transactions of bill. Company and related party ningbo YunYi enterprise management partnership (limited partnership) to zhejiang humanoid robots are increased innovation center co., LTD., among them, the company intends to own money 1448275 RMB 90000 subscribed mark to the registered capital of 1448275 yuan ($90000), after completion of the capital increase, Company will hold target 44.40% equity; Ningbo YunYi intends to subscribed 3.137931 million yuan mark to the	For details, please refer to the Announcement of China Control Technology Co., Ltd. on Joint Overseas Investment and Related Party Transactions published on the website of Shanghai Stock Exchange (www.sse.com.cn) on January 27, 2024 (Announcement No. : 2024-005).

registered capital of 3.137931 million yuan, after completion of the capital increase, ningbo YunYi owns a 9.62% stake in the underlying company; The contribution form of currency.	
Company held on April 7, 2024, the sixth session of the fourth meeting of the board, the sixth session of the fourth meeting of the board of supervisors and the sixth session of the board of directors of the board of directors for the fourth time special meetings, reviewed and adopted the "about foreign investment together with the related party and related party transactions of bill. Company intends to hangzhou capital and intelligence technology co., LTD., the company through its own capital is 20 million yuan RMB to the registered capital subscribed mark 588235.29 yuan, after completion of the capital increase, the company will hold a 1.1628% stake in the target company; The contribution form of currency.	For details, please refer to the Announcement of China Control Technology Co., Ltd. on Joint Overseas Investment and Related Party Transactions published on the website of Shanghai Stock Exchange (www.sse.com.cn) on April 9, 2024 (Announcement No. : 2024-026).
Company be held on June 11, 2024, the sixth session of the 6th meeting of the board of directors, the board of directors of the sixth session of the sixth meeting of the board of supervisors and the sixth of the independent director for the fifth time specifically, reviewed and adopted the "about to give up the pre-emption rights and related transactions of bill. Company holds a 44.3975% stake in humanoid robot innovation center, humanoid robot innovation center intends to increase from 32620690 yuan to 41420690 yuan registered capital, the new registered capital of 8.8 million yuan. Control system of humanoid robot innovation center into comprehensive consideration, the overall development plan, plans to give up the capital increase of pre-emption rights. After completion of the transaction, central holding a humanoid robot technology innovation center stake of 34.9650%. Is the shareholding company of the company	See the company published on June 12, 2024 in Shanghai stock exchange website (www.sse.com.cn) control technology co., LTD. Announcement about give up pre-emption rights and related party transactions "(number: 2024-035).

2、 Been disclosed in temporary announcement, but with the progress of the follow-up implementation or change matters

Not applicable

3、 Matters not disclosed in the interim announcement

Not applicable

(IV) Creditor's rights debt relations

1、 Is the temporary announcement and subsequent implementation of no progress or change

Not applicable

2、 Been disclosed in temporary announcement, but with the progress of the follow-up implementation or change matters

Not applicable

3、 Matters not disclosed in the interim announcement

Not applicable

(V) Financial business between the Company and related financial companies, and between the company's holding financial companies and related parties

Not applicable

(VI) Other significant related party transactions

Not applicable

(VII) Others

Not applicable

XI、 Major contract and its performance

(I)Trusteeship, contracting and leasing matters

Not applicable

(II) **The performance of the major guarantees that have not been fulfilled in the reporting period**

Unit: RMB currency, the yuan

Guaranty company (not including subsidiaries guarantees)															
Secured party	Secured party's relationship with the listed company	Secured party	Guarantee amount	Guarantee date (agreement signing date)	Guarantee The starting date	guarantee Due date	Type of guarantee	The main debts	Collateral (if any)	Whether the guarantee has been fulfilled	Whether the guarantee is overdue	Guarantee overdue amount	Counter guarantee situation	Whether it is guaranteed by related parties	associated Relationship between
SUPCON technology co., LTD	The company	Shandong jing bo petrochemical co., LTD	6000000.00	2023/8/23	2023/8/23	According to the period of guarantee under the main contract of each financing provided by creditors of the debtor points don't calculate, in terms of each financing, during the guarantee for the financing, under three years from the date of expiration of the	Joint and several liability guarantee	In order to further promote assigned to the downstream customers enhance the level of automation, digital, intelligent and deepen the company's long-term cooperation with partners in the industry of, at the same time, reduce the risk of the company accounts receivable recovery, bo petrochemical company for Beijing to zhejiang condensed state financial leasing co., LTD. (financing lease to purchase equipment to	/	no	no	0	Shandong jing bo holding group co., LTD. Provide counter-guaranty	no	There is no

						debt		provide partial guarantees, Guarantee amount not more than RMB 6 million (exclusive), actual guarantee amount will be signed by the parties to the actual contract shall prevail							

During the reporting period guarantee total amount (not including subsidiary company guarantee)	6,000,000.00
Total balance of guarantees as at the end of the reporting period (A) (excluding guarantees to subsidiaries)	3,570,230.15
Guarantees given by the Company and its subsidiaries to subsidiaries	

Guarantor	Relationship between the guarantor and the listed company	The guaranteed party	Relationship between the guaranteed party and the listed company	Amount guaranteed	Guarantee date (agreement signing date)	Guarantee the starting date	Guarantee due date	Collateral type	The guarantee is necessary	Whether the guarantee within the time limit	Guarantee overdue amount	If there is a counter guarantee

SUPCON Technology Co., LTD	Company headquarters	Zhejiang SUPCON fluid technology co., LTD	subsidiary	10000000.00	2024/5/18	2024/5/18	2025/5/18	Joint and several liability guarantee	no	no	0	no
SUPCON technology co., LTD	The company	Zhejiang SUPCON software technology co., LTD	A wholly owned subsidiary	5000000.00	2024/5/18	2024/5/18	2025/5/18	Joint liability guarantee	no	no	0	no
SUPCON Technology Co., LTD	The company	Zhejiang SUPCON automation instrument co., LTD	A wholly owned subsidiary	11000000.00	2024/5/18	2024/5/18	2025/5/18	Joint liability guarantee	no	no	0	no
SUPCON technology co., LTD	The company	Zhejiang Gongzi Instrument Network Co. LTD	A wholly owned subsidiary	50000000.00	2024/1/3	2024/1/3	2025/1/2	Joint liability guarantee	no	no	0	no

SUPCON technology co., LTD	The company	Zhejiang SUPCON fluid technology co., LTD	Holding subsidiaries	15000000 0.00	2024/2/26	2024/2/26	2025/12/31	Joint liability guarantee	no	no	0	no
SUPCON technology co., LTD	The company	Zhejiang SUPCON fluid technology co., LTD	subsidiary	10000000 0.00	2024/6/11	2024/6/11	2025/5/31	Joint liability guarantee	no	no	0	no
SUPCON Technology Co., LTD	Company headquarters	Zhejiang Gongzi Instrument Network Co. LTD	Wholly-owned subsidiary	1000000 00.00	2024/6/19	2024/6/19	2025/6/18	Joint liability guarantee	no	no	0	no
During the reporting period combined for subsidiaries guarantee amount						201,000,000.00						
Report the final balance of subsidiary company guarantee total (B)						201,000,000.00						
Total company guarantees (including subsidiaries guarantees)												
Total amount of guarantees (A+B)						204,570,230.15						
Total guarantee for proportion (%) of the company's net worth						2.09						
Among them:												
Amount of guarantees provided for shareholders, de facto controllers and their related parties (C)						-						
Directly or indirectly provide asset-liability ratio more than 70% of the guaranteed objects with the amount of debt guarantees (D)						155,000,000.00						
Guarantee total net worth of more than 50% of the amount (E)												

The above three guarantees amounted (C + D + E)	155,000,000.00
Outstanding guarantees may bear several and joint liability	None
Statement of warranties	None

(III)Other major contracts

Serial number	Signature time	Client Name	Item description	Contract amount (ten thousand yuan)
1	2024/1/1	Petrochina Jilin Petrochemical Company Limited	Jilin Petrochemical/Guangxi Petrochemical transformation and upgrading project, Jilin Petrochemical control room integration and control system hidden danger management project process control system (DCS) framework	13,879
2	2024/6/1	Ambion New Materials Group Co., LTD	Zhejiang SUPCON Intelligent Manufacturing line project (production line customization)	3,073
3	2024/3/1	Compressor unit maintenance and repair center of North Pipeline Co., LTD., National Pipe Network Group	Compressor unit maintenance branch test bench renovation project	4,058
4	2024/5/1	Jiangxi Fangyuan new material technology Co., LTD	Annual output of 150,000 tons of new aramid materials and 150,000 tons of raw materials project - instrumentation, engineering installation and control system	3,500
5	2024/3/1	Gansu Jiayi Bo Chemical Co., LTD	Gansu Jiayi Bo sulfur slag resource recycling package (control system, industrial software, instrument valves)	2,900

XII、 Raise money with instructions

(I) Raise money overall usage

Units: ten thousand yuan

Source of raised funds	To raise funds in place of time	Raise money for the total	Net funds raised after deducting issuing expenses (1)	The prospectus or to raise funds in the prospectus commitment (2) the total investment	Total amount of overraised funds (3) = (1) - (2)	The report final accumulative total investment to raise money (4)	Including: Total accumulated investment of overraised funds as of the end of the reporting period (5)	Raise money accumulated up to report the final schedule (%) (6) = (4)/(1)	Cumulative investment progress of overraised funds by the end of the reporting period (%) (7) = (5)/(3)	This year's investment amount (8)	This year's investment amount proportion (%) (9) = (8)/(1)	The purpose of fundraising amount
Initial public offering of shares	On November 17, 2020	175541.49	163732.61	160660.96	3071.65	160957.03	3071.65	98.30	100%	2523.63	1.54	0
other	April 18, 2023	388529.71	383460.39	383460.39	/	149531.56	/	39.00	/	128083.89	33.40	0
Total	/	564071.20	547193.00	544121.35	3071.65	310488.59	3071.65	/	/	130607.52	/	0

(II) Details of projects raised

1、 Details of the use of the raised funds

Units: ten thousand yuan

Source of raised funds	The project name	Nature of project	If the commitment to investment in the prospectus or prospectus projects	Whether it involves changing the investment direction	Total planned investment of raised funds (1)	Amount invested in the current year	As of the report on the final accumulative total investment to raise funds (2)	As of the report on the final cumulative investment progress (%) (3) = (2)/(1)	Date of the project to the expected conditions for use	Whether an entry has been entered	In the progress of the progress is in line with the plan	In progress, under the specific cause of plans	Benefits realized in the current year	The project has achieved benefits or research and development results	Project feasibility whether significant change, if yes, please specify details	Savings amount
Initial public offering	A new generation control system research and development and industrialization projects	Research and development	Yes	Not applicable	43558.98	-	44,601.08	102.39	In June 2023	Yes	Yes	/	/	/	no	0

Initial public offering of shares	Intelligent industrial software research and development and industrialization projects	Research and development	yes	Not applicable	26050.22	-	27110.39	104.07	In June 2023	yes	yes	/	/	/	no	0
Initial public offering of shares	Annual output of 200000 sets of high precision pressure	Production and construction	yes	Not applicable	10934.27	888.96	7961.96	72.82	June 2025	no	yes	/	/	/	no	$2972.31...

	transmitter														
Initial public offering of shares	Annual output of 100000 / set intelligent control valve project	Production and construction	yes	Not applicable	19303.83	1634.67	15525.79	80.43	In June 2025	no	yes	/	/	/	no	3778.04
Initial public offering	Automated Butler 5S one-stop service platform construction project	Operation management	yes	Not applicable	36689.20	-	38464.10	104.84	In June 2024	yes	yes	/	/	/	no	0
Initial public	Intelligent	Research and	yes	Not applicab	10124.46	-	10183.70	100.59	In Decem	yes	yes	/	/	/	no	0

offering	manufacturing frontier technology research and development project	development		le					ber 2022							
Initial public offering	Supplement working capital projects	Filling flow repayment	yes	Not applicable	14000.00	-	14038.36	100.27	Not applicable	yes	yes	/	/	/	no	0
IPO(initial public offering)	Overraised share repurchase	other	no	Not applicable	3,071.65	0	3,071.65	100%	Not applicable	/	/	/	/	/	no	0
Other	GDR	other	Not applicabl	Not applicab	383,460.39	128,083.89	149,531.56	39.00	Not applica	no	yes	/	/	/	no	233,928.83

			e	le					ble								
Total	/	/	/	/	547,193.00	130,607.52	310,488.59	/	/	/	/	/	/	/	/	240,679.18	

2. Detailed use of overraised funds

Units: ten thousand yuan

Purpose of use	Nature	Total amount of overraised funds to be invested (1)	As of the report on the final total investment exceeds the total funds raised (2)	As of the report on the final cumulative investment progress (%) (3) = (2)/(1	note
Stock repurchase	repo	3071.65	3071.65	100	/
A combined	/	3071.65	3071.65	100	/

(III) During the reporting period to raise change or termination

Not applicable

(IV) Other use of funds raised during the reporting period

1. To raise money up-front investment and replacement for the investment project

Not appliable

2. Using idle fund-raising temporarily added liquidity situation

Not appliable

3. The idle fund-raising cash management, investment related products

Units: ten thousand yuan Currency: RMB

The board of directors review date	To raise funds for the cash management effective review	Start date	End date	The final balance of cash management report	If the highest balance beyond authorization during lines
On November 22, 2023	The IPO to raise money: one hundred million yuan	Nov 22, 2023	November 21, 2024	0.00	no
On November 22, 2023	GDR raise money: $300 million yuan (or the equivalent in RMB)	On November 22, 2023	On November 21, 2024	40000.00	no

Other instructions

On November 22, 2023, the 25th meeting of the fifth Board of Directors and the 21st meeting of the fifth Board of Supervisors of the Company were held to review and pass the "Motion on Using part of the Temporarily idle raised Funds for cash Management". On the premise that it does not affect the implementation of the raised funds investment project and ensure the safety of the raised funds, the Company agrees that on the premise that it does not affect the implementation of the raised funds investment project and ensure the safety of the raised funds, Use the temporary idle proceeds of the initial public Offering of shares not exceeding RMB100 million (hereinafter referred to as the "IPO Proceeds") and the Initial Public Offering of Global Depositary Receipts not exceeding US $300 million (or the equivalent of RMB) (hereinafter referred to as the "GDR Proceeds") for cash management, It is used to buy financial products with high security and good liquidity. Valid for 12 months from the date of approval by the Board of directors. Within the above-mentioned limit and term, the funds can be used in a rolling cycle. During the reporting period, the Company did not use the idle IPO raised funds to purchase financial management, and used the idle GDR raised funds for cash management in stages, with a total amount of 90,000 yuan. As of June 30, 2024, the financial income of mature financial management was 4,215,500 yuan.

Bank name	**Name of product**	**earnings type**	**The amount of**	**start-stop Date**	**Redeemed or not**	**financial Earnings**	**Expected annualised yield (%)**
Bank of ningbo co., LTD., yuquan branch	Unit structured deposit 7202303564	Structured deposits	15000.00	2023/12/15-2024/3/18	yes	112.03	2.90
Bank of China Limited Hangzhou Binjiang Sub-branch	Contrary to structured deposits of 202342351	Structured deposits	20000.00	2023/12/21-2024/3/25	yes	163.97	3.15
Hangzhou Qianjiang Sub-branch of Industrial and Commercial Bank of China Limited	Company certificates of deposit	Certificates of deposit	30000.00	2024/3/12-2024/4/26	yes	111.39	3.01
Yuquan Sub-branch of Bank of Ningbo Co., LTD	Structured deposits of units 72024017777	Structured deposits	15000.00	2024/3/19-2024/9/18	no	/	1.5-3.00
Bank of China Limited Hangzhou Binjiang Sub-branch	Structured deposits CSDVY202406335	Structured deposits	20000.00	2024/4/25-2024/5/23	yes	33.75	2.20
China citic bank co., LTD. Hangzhou pinghai branches	16,675 tranches of structured deposits	Structured deposits	10000.00	2024/5/14-2024/8/12	no	/	1.05-2.1-2.5
China citic bank co., LTD. Hangzhou pinghai branches	Structured deposits 03503 period	Structured deposits	10000.00	2024/6/1-2024/9/2	no	/	1.05-2.54
The bank of China co., LTD. Hangzhou binjiang branch	Structured deposits CSDVY202408775	Structured deposits	5000.00	2024/6/3-2024/9/5	no	/	1.0-2.25

4. Other

Not applicable

XIII、 Notes on other significant matters

(1) Share repurchase plan

On August 23, 2023, the company at the fifth session of the board of directors meeting, 22 reviewed and adopted the "about by way of centralized competitive trading scheme of bill repurchase of shares in a company, Specific content can be found in the company in 2023 in Shanghai stock exchange on August 24, the website (www.sse.com.cn) disclosed on the announcement of a share buyback plan as a centralized price bidding transaction (number: : 2023-054), as well as of September 1, 2023 on the Shanghai stock exchange website (www.sse.com.cn) revealed "about to buy back shares by way of centralized competitive trading the buyback report" (number: 2023-057).

As of June 30, 2024, the repurchase has been completed, a total of 2261798 shares, repurchase of shares in a company of the buyback is completed the company's total equity ratio of 0.2863%, to buy back the highest price of 47.42 yuan/share, buy the lowest price of 35.18 yuan/share, the repurchase price is 44.21 yuan per share, To clinch a deal amount is 99999962 staged a yuan (excluding trading commissions and other transaction costs).

(2) Plan for the controlling shareholder and actual controller to increase the shares of the company

Chu Jian, the controlling shareholder and de facto controller of the Company, based on his confidence in the sustainable and stable development of the Company in the future and his recognition of the long-term investment value of the Company's shares, intends to increase his shareholding in the Company by means permitted by the trading system of the Shanghai Stock Exchange (including but not limited to centralized bidding, block trading, etc.) within six months from June 20, 2024, Combined to increase amount not less than RMB 10 million yuan and not more than RMB 20 million yuan.

As of June 30, 2024, Mr ChuJian is "company 7500 shares. As at the end of the Reporting Period, Mr. Chu Jian directly held 104,932,038 shares of the Company, representing a direct shareholding ratio of 13.28%.

Section 7 Shares changes and conditions

I. Changes in equity

(I) Statement of changes in share capital

1、 Shares change table

Unit: Shares

	Before this change		Increase or decrease of this change (+,-)					After this change	
	The number of	Proportion (%)	Issuing new shares	Stock giveaways	The accumulation fund turn	other	subtotal	The number of	Percentage (%)
Limited sale condition shares	12,000,199	1.53	3,990,412			- 4,051,301	- 60,889	11,939,310	1.51
1, the state ownership									
2, state-owned corporate shares									
3, other domestic capital holdings	12,000,199	1.53	3,990,412			- 4,051,301	- 60,889	11,939,310	1.51
Among them: in non-state-owned corporate shares									
Domestic natural person shareholding	12,000,199	1.53	3,990,412			- 4,051,301	- 60,889	11,939,310	1.51
4. Foreign ownership									
Among them: foreign legal person shareholding									
Foreign natural person holding									

Second, the infinite circulation shares sale conditions	773,924,477	98.47				4,051,301	4,051,301	777,975,778	98.49
1, the common stock	773,924,477	98.47				4,051,301	4,051,301	777,975,778	98.49
2. Domestically listed foreign shares									
3, foreign capital stocks listed abroad									
4, other									
Third, the total number of shares	785,924,676	100.00	3,990,412			0	3,990,412	789,915,088	100.00

2、 Stock movements

On January 8, 2024, the company in 2019, the first stock option incentive plan phase line authority sale listed circulation, the number of restricted stock shareholders of the listing for 208, restricted period for 36 months from the date of its own right, this part of restricted stock shareholder corresponding to the number of restricted shares, 4051301 shares, 0.51% of companies listed the flow of equity. For details, please refer to the Notice of Listing and Circulation of the First Exercise Period of the 2019 Stock Option Incentive Plan of China Control Technology Co., LTD. (Notice No. : 2023-091) published on the website of Shanghai Stock Exchange (www.sse.com.cn) on December 28, 2023.

As of June 30, 2024, the Company has completed the fourth exercise period of the 2019 Stock option Incentive Plan, and 3,990,412 additional shares have been exercised, which have been registered in the Shanghai Branch of China Securities Depository & Clearing Co., LTD on January 5, 2024. The company's total equity will stock change from 785924676 to 789915088 strands. See the company published on January 9, 2024 in Shanghai stock exchange website (www.sse.com.cn) control technology co., LTD. In 2019 the fourth stock option incentive plan period results of exercise and announcement of stock changes (number: 2024-003).

3、 Impact of share changes occurring during the period from the reporting period to the disclosure date of the semi-annual report on earnings per share, net assets per share and other financial indicators (if any)

Not applicable

4、 Company considers necessary or securities regulators require disclosure of other content

Not applicable

(II) Changes in restricted shares

Unit:share

Shareholder's name	Initial restricted shares	Cancel the restricted number of shares during the reporting period	Increase the restricted number of shares during the reporting period	Report the final restricted number of shares	Restricted reason	Terminate the sale date
2019 stock option incentive	12,000,199	4,051,301	3,990,412	11,939,310	Permission to sell options	On January 21, 2025, lifting limit

plan incentive object						to sell 3,971,547 shares; On February 13, 2026, remove restricted 3977351 shares; On January 5, 2027, lifting limit to sell 3990412 shares
A combined	12,000,199	4,051,301	3,990,412	11,939,310	/	/

II. Information about shareholders

(I) The total number of shareholders:

Reported by the final total number of ordinary shareholders (household)	29,209
As of the report on the final total number of preferred shareholders voting to restore (household)	0
Total number of shareholders holding special voting shares as at the end of the reporting period (accounts)	0

Number of depositary receipt holders

Not applicable

(II) Table of shareholding of the top ten shareholders and the top ten shareholders with unlimited conditions of sale as at the end of the reporting period

The top 10 shareholders at the same time by ordinary customer credit securities account and a securities company collateral securities trading account ownership

Unit: Shares

The top 10 shareholders shareholdings (excluding by refinancing loan)							
Shareholder's name (full name)	Increase or decrease	The final ownership	Percent age (%)	Holds a limited number of	Contains the number	Pledged, marked or frozen status	shareholders The nature of the

	during the reporting period			shares sold conditions	of restricted shares to refinance borrowed shares	Shares State of affairs	The number of	
ChuJian	7,500	104,932,038	13.28	0	0	no	0	Natural person within China
Hangzhou yuan import enterprise management partnership (limited partnership)	0	57,275,000	7.25	0	0	no	0	Others
HKSCC Nominees Limited	-10,445,470	44,958,674	5.69	0	0	no	0	Others
China merchants bank co., LTD. - China Shanghai kechuang plate 50 ingredients exchange-traded securities investment funds	1,496,515	37,528,842	4.75	0	0	no	0	others
China petrochemical group capital co., LTD	-7,090,773	23,545,745	2.98	0	0	no	0	State-owned legal person

The industrial and commercial bank of China co., LTD. - e Shanghai kechuang plate 50 ingredients exchange-traded securities investment funds	8,112,587	23,399,750	2.96	0	0	no	0	others
Zhejiang State-owned Capital Operation Co. LTD	22,117,700	22,117,700	2.8	0	0	no	0	State-owned legal person
Chu Min	-5,461,846	17,809,062	2.25	0	0	no	0	Within the territory of natural persons
Lanxi, one CDH investment partnership (limited partnership)	0	10,363,914	1.31	0	0	no	0	others
Huaxia Life Insurance Co., LTD. - Own funds	4,000,837	9,453,751	1.2	0	0	no	0	others

Shareholdings of the top ten shareholders with unlimited conditions of sale (excluding shares lent through refinancing)			
Shareholder's name	Hold infinite sale conditions the number of shares outstanding	Stake in species and quantity	
		Type	The number of
Chu Jian	104,932,038	RMB ordinary shares	104,932,038
Hangzhou yuan import enterprise management partnership (limited partnership)	57,275,000	The common stock	57,275,000

HKSCC Nominees Limited	44,958,674	RMB ordinary shares	44,958,674
China merchants bank co., LTD. - China Shanghai kechuang plate 50 ingredients exchange-traded securities investment funds	37,528,842	RMB ordinary shares	37,528,842
China petrochemical group capital co., LTD	23,545,745	The common stock	23,545,745
The industrial and commercial bank of China co., LTD. - e Shanghai kechuang plate 50 ingredients exchange-traded securities investment funds	23,399,750	The common stock	23,399,750
Zhejiang State-owned Capital Operation Co. LTD	22,117,700	RMB ordinary shares	22,117,700
Chu Min	1,7809,062	The common stock	17,809,062
Lanxi, one CDH investment partnership (limited partnership)	10,363,914	The common stock	10,363,914
China life insurance co., LTD. - its own funds	9,453,751	The common stock	9,453,751
Description of special accounts for repurchase among the top ten shareholders	Not applicable		
Voting rights the shareholders voting trust, the trustee of the voting rights, to give up	Not applicable		
Description of the above shareholders' connected relationship or acting in concert	As of the date of disclosure of the report, among the top ten shareholders of the company and the top ten shareholders of unlimited sale conditions, Hangzhou Yuancheng Enterprise Management Partnership (limited partnership) is an enterprise controlled by Mr. Chu Jian, the actual controller, and Mr. Chu Min is a close family member of Mr. Chu Jian. In addition, the company has not received any statement of other related relationship or concerted action agreement from the above shareholders.		
Preferred shareholders voting rights recovery and the number of holdings	Not applicable		

Holding more than 5% of the top ten shareholders of shareholders, and infinite prise top 10 shareholders take part in the lending shares refinancing

Unit: Shares

Shares lent by shareholders holding more than 5%, the top 10 shareholders and the top 10 shareholders of unlimited tradable shares participating in the refinancing business

Shareholder's name (full name)	Ordinary account and credit account at the beginning of the period		Initial refinancing loan stock and has not yet returned		At the end of the period, ordinary account and credit account hold shares		The final refinancing loan stock and has not yet returned	
	The number of total	Proportion (%)	The number of total	Percentage (%)	The number of total	Proportion (%)	The number of total	Proportion (%)
China merchants bank co., LTD. - China Shanghai kechuang plate 50 ingredients exchange-traded securities investment funds	36,032,327	4.58	984,900	0.13	37,528,842	4.75	506,700	0.06
The industrial and commercial bank of China co., LTD. - e Shanghai kechuang plate 50 ingredients exchange-traded securities investment funds	15,287,163	1.95	344,700	0.04	23,399,750	2.96	196,800	0.02

The top 10 shareholders and the top 10 shareholders of unlimited tradable shares changed from the previous period due to the loan/return of Tranfinance
Not applicable

The top 10 shareholders holdings limited sale conditions and restricted conditions

Unit: Shares

The serial number	Name of shareholder limited sale conditions	Hold the limited number of shares sold conditions	Limited conditions of sale shares can be traded on the market situation		Restricted conditions
			Can be traded on time	Number of new shares can be traded	

1	Huang Wenjun	293,625	On January 21, 2025, remove restricted 97,875 shares; On February 13, 2026, remove restricted 97,875 shares; On January 5, 2027, remove restricted 97,875 shares	97,875	Each issue exercise stock rights within three years on its own
2	Shen Hui	271,875	On January 21, 2025, remove restricted 90,625 shares; On February 13, 2026, remove restricted 90,625 shares; On January 5, 2027, remove restricted 90,625 shares	90,625	Each issue exercise stock rights within three years on its own
3	Yu HaiBin	217,500	On January 21, 2025, the restriction of 72,500 shares was lifted; On February 13, 2026, remove restricted 72500 shares; On January 5, 2027, remove restricted 72500 shares	72,500	Three years shall expire from the date of exercise of each issue
4	Mo Wei	217,500	On January 21, 2025, the restriction of 72,500 shares was lifted; On February 13, 2026, the restriction on 72,500 shares will be lifted; On January 5, 2027, remove restricted 72500 shares	72,500	Three years shall expire from the date of exercise of each issue
5	Lai Jingyu	217,500	On January 21, 2025, the restriction of 72,500 shares was lifted; On February 13, 2026, the restriction on 72,500 shares will be lifted; And 72,500 shares released on January 5, 2027	72,500	Three years shall expire from the date of exercise of each issue
6	Qiu Kun	217,500	On January 21, 2025, the restriction of 72,500 shares was lifted; On February 13, 2026, the restriction on 72,500 shares will be lifted; And 72,500 shares released on January 5, 2027	72,500	Three years shall expire from the date of exercise of each issue
7	Xie Min	188,500	On January 21, 2025, remove restricted 50750 shares; On February 13, 2026, the restriction on 65,250 shares was lifted; And 72,500 shares released on January 5, 2027	72,500	Three years shall expire from the date of exercise of each issue

8	Wu Xin	163,125	On January 21, 2025, the restriction on 54,375 shares was lifted; On February 13, 2026, 54,375 shares were released from the restriction; On January 5, 2027, remove restricted 54375 shares	54,375	Each issue exercise stock rights within three years on its own
9	Liu Zhiyong	163,125	On January 21, 2025, remove restricted 54375 shares; On February 13, 2026, remove restricted 54375 shares; On January 5, 2027, remove restricted 54375 shares	54,375	Each issue exercise stock rights within three years on its own
10	Li Hongbo	163,125	On January 21, 2025, the restriction on 54,375 shares was lifted; On February 13, 2026, remove restricted 54375 shares; On January 5, 2027, 54,375 shares were released from the restriction	54,375	Three years shall be completed from the date of exercise of each issue
11	Luo Xingming	163,125	On January 21, 2025, the restriction on 54,375 shares was lifted; On February 13, 2026, 54,375 shares were released from the restriction; On January 5, 2027, remove restricted 54375 shares	54,375	Each issue exercise stock rights within three years on its own
12	ZhangWei	163,125	On January 21, 2025, remove restricted 54375 shares; On February 13, 2026, remove restricted 54375 shares; On January 5, 2027, 54,375 shares were released from the restriction	54,375	Three years shall be completed from the date of exercise of each issue
13	Yao Hanqi	163,125	On January 21, 2025, remove restricted 54375 shares; On February 13, 2026, remove restricted 54375 shares; On January 5, 2027, 54,375 shares were released from the restriction	54,375	Each issue exercise stock rights within three years on its own
The shareholder relationship or concerted action		None			

Information table of top ten holders of domestic depositary receipts of the Company as at the end of the reporting period

Not applicable

Holding more than 5% of the depositary receipt holder, top 10 depositary receipts holders and holders of depositary receipts top infinite sale conditions in refinancing business lending shares
Not applicable

Top 10 depositary receipts holders and holders of depositary receipts top infinite sale conditions for refinancing loan/return reason lead to the change of the previous period
Not applicable

Top 10 depositary receipt holder holding limited sale conditions and restricted conditions
Not applicable

(III) As of the report on the final amount of the top ten shareholders to table

Not applicable

(IV) Strategic investors, or general legal person due to the placement of new shares or depository receipts being a top 10 shareholders

Not applicable

III. Directors, supervisors and senior management personnel and core technology

(I) The current reporting period and the outgoing directors, supervisors and senior management and the core technical personnel changes in ownership

Unit: Share

Name	Position	Initial number of shares held	The final number of shares	Changes in the increase or decrease of shares during the reporting period	Reasons for changes in increase or decrease
CUI SHAN	Chairman, President	105,125	141,375	36,250	Equity incentive exercise 36,250 shares
YuHaiBin	Senior Vice President	4,015,775	4,088,275	72,500	Equity incentive exercise 72,500 shares
Guo Biao	Senior vice President,	1,082,698	1,100,823	18,125	Stock incentive exercise 18,125 shares
Mo Wei	Senior Vice President	217,500	290,000	72,500	Equity incentive exercise of 72,500 shares
Fang Yongsheng	Vice President, secretary of the Board, head of finance	380,625	416,875	36,250	Equity incentive exercise 36,250 shares
Zhang Lei	Vice President	105,125	141,375	36,250	Equity incentive

					exercise 36250 shares
Lu Weijun	Vice President, core technical staff	305,371	323,496	18,125	Stock incentive exercise 18,125 shares
Chen Jiangyi	Vice President	76,125	101,500	25,375	Equity incentive exercise 25,375 shares
WuYucheng	Vice President	108,750	145,000	36,250	Equity incentive exercise 36,250 shares
Wu Caibao	Vice President	73,588	98,963	25,375	Equity incentive exercise 25,375 shares
Qiu Kun	The core technology personnel	84,7500	92,0000	72,500	Equity incentive exercise 72,500 shares
Yao Jie	The core technology personnel	54,375	72,500	18,125	Equity incentive exercise 18,125 shares
Chen Yu	Core technical staff	270,063	243,188	-26,875	Equity incentive exercise 18,125 shares, the secondary market holdings of 45,000 shares
Total	/	7,642,620	8,083,370	440,750	-

Other situations

Not applicable

(II) Equity incentives granted to directors, supervisors, senior managers and core technical personnel during the reporting period

1.Stock options

Unit: share

The name	position	At the beginning holds a number of stock options	Number of new stock options granted during the reporting period	Exertable shares during the reporting period	Shares in the stock option exercise during the reporting period	Number of stock options held at the end of the period
CUI SHAN	Chairman, President	36,250	0	36,250	36,250	0
YuHaiBin	Senior vice President	72,500	0	72,500	72,500	0
Guo Biao	Senior vice President	18,125	0	18,125	18,125	0
Mo Wei	Senior vice President	72,500	0	72,500	72,500	0
Fang Yongsheng	Vice President, secretary of the Board, head of finance	36,250	0	36,250	36,250	0
Zhang lei	Vice President	36,250	0	36,250	36,250	0

Lu Weijun	Vice President, core technical personnel	18,125	0	18,125	18,125	0
Chen Jiangyi	Vice President	25,375	0	25,375	25,375	0
Wu Yucheng	Vice President	36,250	0	36,250	36,250	0
Wu Caibao	Vice President	25,375	0	25,375	25,375	0
Qiu Kun	Core technical staff	72,500	0	72,500	72,500	0
Yao Jie	Core technical staff	18,125	0	18,125	18125	0
Chen Yu	Core technical staff	18,125	0	18,125	18,125	0
Total	/	485,750	0	485,750	485,750	0

2.Class I restricted stock

Not applicable

3.Type II restricted stock

Unit: share

Name	Position	The beginning was granted restricted stock quantity	Number of newly granted restricted shares during the reporting period	Attributable amount	Have already belonging	The final was granted restricted stock quantity
Lin Weiqing	Vice President	8120	0	1421	0	8120
Total	/	8120	0	1421	0	8120

(III) Other Notes

Not applicable

IV. Changes of controlling shareholders or actual controllers

Not applicable

V. Depositary receipts related arrangement in the implementation and change during the reporting period

Not applicable

VI. Special voting shares

Not applicable

Section 8 Preferred shares relevant information

Not applicable

Section 9 Bond related information

I、 Corporate bonds (including corporate bonds) and debt financing instruments of non-financial enterprises

Not applicable

II、 Convertible bond

Not applicable