

ELECTRIC

SHANGHAI

上海电气

DIGITAL
INTELLIGENCE
INTEGRATION

REALIZING A LEAP IN NEW QUALITY PRODUCTIVE FORCES

SHANGHAI ELECTRIC OFFERS COMPREHENSIVE INDUSTRIAL SOFTWARE SOLUTIONS AND INTEGRATED APPLICATIONS ACROSS VARIOUS SECTORS





EMBRACE THE USER-CENTRIC AND TECH-DRIVEN STRATEGY

The recently concluded Gaokao, China's college entrance examination, marks a pivotal moment for every dedicated student, embodying the passion of youth, relentless effort, and great dreams. Similarly, in the vast business world, companies also face their own critical tests. In this intense competition, a user-centric and tech-driven strategy is essential for success.

The first challenge companies face comes from their users. In an era of information overload and increasingly sophisticated consumer expectations, user requirements have become more diverse and personalized. To excel in this competitive landscape, companies must consistently embrace a user-centric philosophy, thoroughly understand their users' real requirements, and deliver products and services that exceed expectations. Simultaneously, technology serves as the primary driving force for corporate development, especially in today's dynamic business climate. Companies must embrace new technologies, leveraging innovation to propel continuous improvements in products and services.

As a leading high-end equipment manufacturer, Shanghai Electric focuses on intelligent energy, smart manufacturing, and digital-AI integration in alignment with China's national strategic goals. The company is enhancing digital infrastructure in cloud computing, AI, industrial Internet, and data centers to foster collaboration within the digital industrial ecosystem, expanding applications for digital-AI integration.

In today's digital economy, the integration, iteration and diffusion of next-generation digital technologies like artificial intelligence, blockchain, deep learning, and the Internet of Things are revolutionizing research and development, production processes, and customer service, transforming production technologies in a holistic way, boosting industrial automation, digitization, and intelligence levels, thereby fueling the integration and rapid growth of digital and AI applications and the development of new quality productive forces.

Moving forward, Shanghai Electric is dedicated to supporting national strategies, fulfilling national goals, cultivating new quality productive forces, achieving unprecedented levels of development, advancing cutting-edge, smart, and sustainable solutions, and harnessing technology to drive high-quality industrial development in China and beyond, thereby ensuring a sustainable future and enhancing the quality of life for all.

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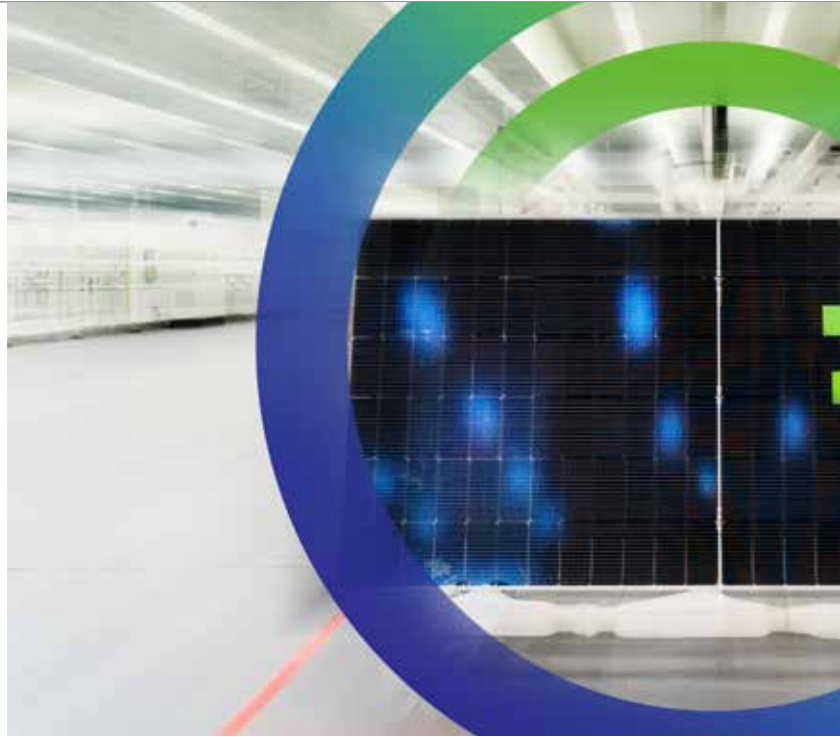
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Shanghai Mitsubishi Elevator's Solution Wins China Rail Transit Science and Technology (CRTS) Award

The 2024 China Smart Rail Transit Academic Forum, themed "Innovating for Safer, Simpler, Greener, and Smarter Rail Transit", took place in Shijiazhuang, Hebei on April 19th and 20th. At the forum, Shanghai Mitsubishi Elevator Co., Ltd.'s "LNK Smart Elevator Digital Solution" won the 2024 CRTS Award. The company showcased its smart elevator digital solution and intelligent factory, earning acclaim from industry experts in attendance.

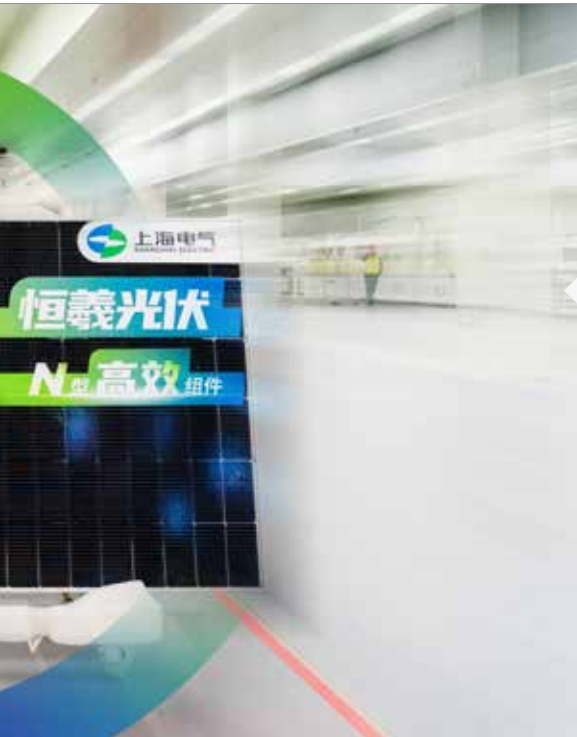


Shanghai's First Hydrogen and Fuel Cell Testing Center Completed

Recently, the SMVIC Hydrogen and Fuel Cell Testing Center, Shanghai's first third-party public service platform for hydrogen testing and research designed by the Shanghai Institute of Mechanical & Electrical Engineering, was officially completed. Several laboratories of the center has already been put into operation. The facility plays a crucial role in Shanghai and the wider Yangtze River Delta region's hydrogen infrastructure. Its successful establishment has strengthened the testing and certification procedures in the hydrogen energy value chain. Additionally, by serving as both offices and incubators for hydrogen energy companies, it has greatly expanded market services, furthering the development of the sector.

Shanghai Electric Secures Major Contracts for High-Efficiency, Low-Emission Coal-Fired Power Equipment

Recently, Shanghai Electric Power Generation Equipment's high-efficiency and low-emissions coal-fired power solution achieved another significant milestone by securing contracts for comprehensive electromechanical furnace and auxiliary equipment at the Rongsheng Jintang Power Station, the China Coal-Beijing Energy Qinhuangdao 2×660 MW coal-fired power station, and boilers with associated denitrification equipment at the China Coal Yushan 2×660 MW power station. This success highlights Shanghai Electric's excellence in ultra-supercritical units in the high-efficiency, low-emissions coal-fired technology sector, underscoring its expertise in safe and reliable operations.



Hency Solar Ships PV Modules for Its First Overseas Project

On April 27th, Shanghai Hency Solar Technology Co., Ltd (hereinafter referred to as Hency Solar), a subsidiary of Shanghai Electric, achieved a milestone by shipping its PV modules to its first overseas project in the Middle East, signaling a major advancement in the company's international reach. Due to the distinctive climate and environmental factors at the project location, the client provided exact measurements for the PV modules. Hency Solar's project team meticulously adhered to these specifications, delivering high-quality products that have bolstered the company's position in the solar energy sector.

Shanghai Electric Contributes to the Inauguration of Hefei Metro Line 4 Southern Extension

Recently, the southern extension of Hefei Metro Line 4, constructed by Thales SEC Transport (TST) and its partners, officially started operations. Spanning 14 kilometers, the line features 3 underground stations and 5 elevated stations. Upon inauguration, this extension will enhance the core infrastructure of Hefei's rail transit system, playing a pivotal role in advancing the development of key zones.

Steam Generator Successfully Shipped for Unit 3 of the Haiyang Nuclear Power Plant

On May 7th, the steam generator for Unit 3 of the Haiyang Nuclear Power Plant, manufactured by Shanghai Electric Nuclear Power Equipment Co., Ltd., was shipped to the Haiyang NPP in Shandong. Since the latter half of 2023, the project has encountered formidable challenges due to tight schedule and numerous tasks. To fulfill delivery obligations, the company's various departments collaborated closely, surmounting numerous obstacles during the manufacturing of the steam generator to guarantee the successful delivery.





NEWS OVERVIEW

Shanghai Electric Power Transmission & Distribution Group Won A New Bid for A Supporting Project of Shanghai Pudong Airport

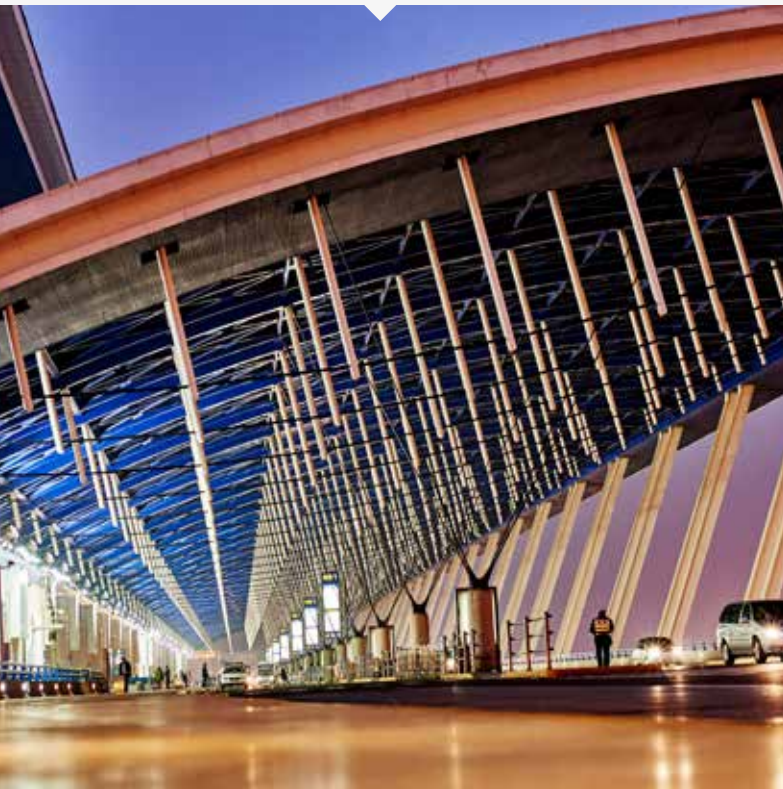
In April, Shanghai Huapu Cable Co., Ltd., a subsidiary of Shanghai Electric Power Transmission & Distribution Group, won the bid for "Shanghai Pudong Airport-Satellite Hall 400 V Outlet Cable Purchase", making a new remarkable progress. Prior to this, Shanghai Electric Power Transmission & Distribution Group won a couple of bids related with the airport, including the power EPC of its Cargo Building A, high and low voltage cabinets and cables used in its renovation and expansion, paving the way for the company to obtain more orders.

Caolu Distributed PV Power Generation Project Construction Commences

The construction of the 300.3 kWp distributed PV power generation project at the Caolu Public Transport Parking Lot, a key component of Shanghai's "PV+" initiative in the transportation sector, has recently commenced. The project is funded and developed by Shanghai Shenergy Investment Development Co., Ltd. and executed by Shanghai Electric Distributed Energy Technology Co., Ltd. Operating on a self-sufficient approach that enables selling energy back to the grid, it is projected to generate around 315,000 kWh of green electricity annually, leading to a reduction of approximately 9.45 tons of sulfur dioxide emissions, 314 tons of carbon dioxide emissions, and 4.7 tons of nitrogen oxide emissions. These efforts are set to yield substantial benefits in energy conservation and emission reduction.

More Shanghai Electric's Green and Low-carbon Units To Be Deployed in Xinjiang Again

In June, Shanghai Electric Power Generation Group won the bids for whole-set equipment (turbines, boilers, generators and auxiliary equipment) of 2×660,000 kilowatts ultra-supercritical coal-fired power units of PetroChina Xinjiang Oilfield's "new energy + coal-based power + CCUS" hybrid project, and for the main equipment of 2×660,000 kilowatts ultra-supercritical coal-fired units, a demonstration project of CHN Energy on comprehensive energy integration. It will speed up Xinjiang Uygur Autonomous Region's transformation to a greener economic structure and ensure its grid's safe operation with reliable power supply.





Shanghai Electric's Ultra-supercritical Power Units Have Topped Lists For Years

Recently, the China Electricity Council announced the results of the 2023 benchmarking of energy efficiency for thermal power units in the power industry. Shanghai Electric's ultra-supercritical units have achieved leading performance parameters across all grades, maintaining their dominance on the China Electricity Council's benchmarking list for thermal power efficiency for consecutive years. In the 5A-rated list for 1000 MW ultra-supercritical wet cooling units, Shanghai Electric's supply of main equipment, including turbines, generators, and boilers, accounted for 78.6% of the total, with a 100% share in turbines and generators. For six consecutive years, Shanghai Electric has swept all the spots on the 5A-rated list. In the 5A and 4A-rated lists for 1000 MW and 600 MW ultra-supercritical wet cooling units, Shanghai Electric's supply of main equipment represented 59.2% of the total, with a 77.8% share in turbines and generators.

Shanghai Electric's TST Facilitates Nanjing Metro Airport Line Upgrade

On May 10, the Nanjing Metro Airport Line, the first transformed line project implemented by Thales SEC Transport (TST) with ATO+ technical transformation solution, was officially put into operation. The successful application of this technology signifies that Nanjing Metro Airport Line, as the first ATO+ technical transformation and application project in China, has upgraded and entered a new era of intelligent mobility.

High-Quality Development Research Tour in Shanghai Electric by Publicity Department of the CPC Central Committee

On May 27th, "Moment of Shanghai Electric" was unveiled in Shanghai amid the "High-quality Development Field Investigation" -themed media campaign organized by the Publicity Department of the Communist Party of China (CPC) Central Committee. Approximately 40 journalists from major central and regional agencies, such as the Xinhua News Agency, People's Daily, Economic Daily, Science and Technology Daily, Workers' Daily, Kankanews, Yicai and China Youth Daily, visited Shanghai Electric's manufacturing plants in Lin-gang Special Area to gain more insights into crucial nuclear power facilities and leading technologies of controlled nuclear fusion.





Energy Experts Gather at Hannover Messe Shanghai Electric Joins Hands with the World to Build a Greener Future

From April 22th to 26th, local time, the highly anticipated Hannover Messe 2024 took place. The event attracted nearly 4,000 exhibitors from 60 countries and regions, with more than 1,150 Chinese exhibitors, prominently positioning China as a major foreign participant.

Shanghai Electric, recognized for its extensive range of smart and sustainable manufacturing solutions, wowed the crowd with a lineup of fresh products and solutions in new energy and industrial automation under the theme “ENERGIZE YOUR INDUSTRIAL AUTOMATION”, marking its return to this prestigious industrial event. Shanghai Electric presented its cutting-edge advancements in energy transformation and industrial automation, ranging from new power systems, zero-carbon industrial parks, intelligent manufacturing systems to efficient industrial drives.

At the Shanghai Electric booth, one cannot overlook the painting titled “A Panorama of a Zero-Carbon World”, depicting white wind turbines and blue PV arrays amidst the clear waters and green mountains. The Chinese-style artwork highlights Shanghai Electric’s cutting-edge energy and manufacturing solutions, harmoniously blending traditional Chinese art with industrial aesthetics. It serves as a cultural bridge between East and West, vividly illustrating a vision of humans coexisting harmoniously with nature and fostering unity beyond boundaries.

Under this overarching theme, Shanghai Electric is strategically emphasizing digital and AI transformation, driving optimal energy mix to propel green transition for global sustainability.

At this exhibition, Shanghai Electric exhibited a diverse range of new products and solutions in renewable energy, serving as a testament to its unwavering commitment.

For example, the 16 MW+ floating offshore wind turbine is custom-designed to cater to the needs of the deep-sea offshore wind energy market. This turbine stands out as the global leader in single-unit capacity and rotor diameter for offshore wind turbines. With more than 40 essential adaptive technological upgrades over fixed offshore wind turbines, it ensures reliable and efficient operation in diverse and demanding conditions.

Another notable highlight at the event is the Dubai 950 MW CSP+PV hybrid power generation project, distinguished as the largest single-unit concentrated solar power project worldwide and the leading thermal storage station in terms of single-unit capacity, capable of generating 100% renewable energy for 24/7 stably. As a globally acclaimed supplier of comprehensive PV and CSP equipment and a primary contractor for CSP station turnkey projects.

In addition to offering intelligent energy solutions, Shanghai Electric is committed to driving the AI-enabled transformation of the manufacturing industry. Leveraging best practices and robust value chain integration capabilities, the company is developing diverse and comprehensive intelligent manufacturing solutions to accelerate the development of new quality productive forces through digital tools, continuously fostering the global industrial sector’s high-quality development. **D**

Shanghai Electric Showcases Four Energy Innovations at the 2024 Shanghai International Carbon Neutrality Expo

The 2024 Shanghai International Carbon Neutrality Expo in Technologies, Products and Achievements was officially held at the Shanghai New International Expo Center (SNIEC) from June 5 - 8, 2024.

On June 7, Gong Zheng, Deputy Secretary of the CPC Shanghai Municipal Committee and Mayor of Shanghai, along with Liu Zhenmin, China's Special Envoy for Climate Change, Huang Zhen, Academician of the Chinese Academy of Engineering and Chairman of the Yangtze River Delta Carbon Neutrality Industry-Academia-Research Alliance, and Yuan Da, Deputy Secretary-General of the National Development and Reform Commission, inspected the Expo and visited the Shanghai Electric booth, where they debriefed on how Shanghai Electric is supporting national strategies, meeting national needs, and actively advancing initiatives related to carbon peaking and carbon neutrality. Wu Lei, Secretary of the Party Committee and Chairman of Shanghai Electric Group, accompanied them.

As a provider of comprehensive green and smart solutions for the manufacturing sector, Shanghai Electric showcased its commitment to "Forging New Pathways to Net Zero" at the Expo. The company highlighted its efforts in supporting national strategies through three major application scenarios: wind and solar power installations in desert and Gobi regions, offshore energy

bases, and zero-carbon industrial parks. These initiatives aim to pioneer a new comprehensive energy utilization paradigm on the journey towards carbon neutrality.

Later that morning, Shanghai Electric held a New Product Launch, unveiling four innovative products for "Wind-Storage-Hydrogen-Grid" integration: the 16MW low-frequency offshore wind turbine, the 500kW/2MWh vanadium-iron redox flow battery, the QQSD-Z alkaline electrolyzer and comprehensive testing platform, and the 25Mvar high-inertia flywheel-condenser combination integrated equipment. **D**





SEC-KSB's Assembly Team Awarded the "National Worker Pioneer" Title

On April 28th, 2024, the ceremony celebrating International Workers' Day and recognizing the National May 1st Labor Award and National Worker Pioneer took place at the Great Hall of the People in Beijing. The assembly team of SEC-KSB Nuclear Pumps & Valves Co., Ltd. was awarded the prestigious National Worker Pioneer title.

The team comprises 22 members with an average age of 40, including one chief technician of Shanghai and four senior technicians. Faced with the demanding requirements of the nuclear power main pump assembly process, the team has fostered a culture centered on benchmarking, continuous learning, efficiency enhancement, and self-improvement. They have consistently embraced values such as exemplary work ethics, dedication, and craftsmanship, manifested by model worker Li Bin. By learning and innovating, they successfully completed the domestic production and assembly tasks for pumps used in Generation I, II and III nuclear power plants, achieving a flawless 100% qualification rate for pump disassembly and assembly.

This year, the All-China Federation of Trade Unions awarded 255 National May 1st Labor Certificates, 1,088 National May 1st Labor Medals, and 1,034 National Worker Pioneer titles. The selection takes grassroots, frontline, and ordinary workers as candidates, with a specific emphasis on industrial workers and key sectors within the modern industrial system. **D**



HUALONG I

Zhangzhou Unit 1 Completes Non-Nuclear Steam Flushing

At 6:41 on May 16th, the turbine generator of Unit 1 at Zhangzhou Nuclear Power Plant, supplied by Shanghai Electric, successfully reached a speed of 1,500 rpm for the first time and operated steadily. Following thorough main control and on-site inspections, it was confirmed that the turbine generator ran well during non-nuclear steam runup, displaying satisfactory overall temperature and vibration data. All parameter readings met the required acceptance criteria, signifying the successful completion of non-nuclear steam runup for Zhangzhou Unit 1.

Zhangzhou Unit 1 represents the inaugural unit in the mass application of China National Nuclear Corporation's third-generation nuclear reactor known as "Hualong I". Additionally, it stands as the first nuclear turbine generator with a 1,200 MW rated power output supplied by Shanghai Electric. The overarching project aims to erect six nuclear power units, with Shanghai Electric responsible for designing and supplying turbine generator for Units 1-4. While Unit 1 has successfully completed the non-nuclear steam runup, Units 2-4 are currently in active construction phases.

The non-nuclear steam runup serves as a critical milestone in nuclear power projects, evaluating the operational quality of turbine generator and conventional generator island systems in advance. By utilizing a "non-nuclear" method to run the turbine using steam at specific parameters, the test verifies the alignment and critical speeds of various bearing vibration amplitudes

and phases during safe operation and acceleration of the turbine generator. This process validates the functionality of the control and protection equipment within the turbine generator, underscoring the test's vital role in the overall commissioning process. **D**





10 MW Grid-Forming Wind Turbine Accelerates Progress at a Major Facility

On May 10th, Shanghai Electric Wind Power Group Co., Ltd. (the Wind Power Group), wrapped up the manufacturing of the world's largest 10 MW grid-forming wind turbine at its Dongtai facility.

Leveraging extensive technical expertise and experience in wind energy, the 10MW grid-forming wind turbine from the Wind Power Group has gone through repeated testing and optimization. Engineered with proficiency in double-fed technology, it features rapid inertial response and improved frequency support. Moreover, it offers various advantages like seamless grid-forming/grid-following mode switching, black start capability, and islanded operation. In the event of AC grid fluctuations, this turbine can emulate voltage source behavior, actively reinforcing the grid with voltage support through system awareness. This effectively addresses stability challenges encountered by traditional grid-following wind turbines in weak grid conditions, meeting the requirements of new energy generation systems.

Tailored for the medium to high wind speeds prevalent in deserts and wildernesses, this turbine is designed to meet the demand for high-capacity

models. Its specialized design for these arid environments offers premium, cost-efficient solutions that align with China's national energy strategy, facilitating the establishment of large-scale renewable energy hubs.

The blade leading edge is engineered to resist corrosion caused by sand and rain, with a special surface coating that combats sand erosion and delays UV-induced aging.

The groundbreaking "sand removal cooling module" features labyrinth seals or brush seals at connections to prevent sand ingress, complemented by dustproof nets and filter cotton at heat dissipation points for comprehensive protection against sand and debris.

The electrical components are designed with anti-condensation feature to ensure optimal performance and reliability in the challenging conditions of deserts and wildernesses.

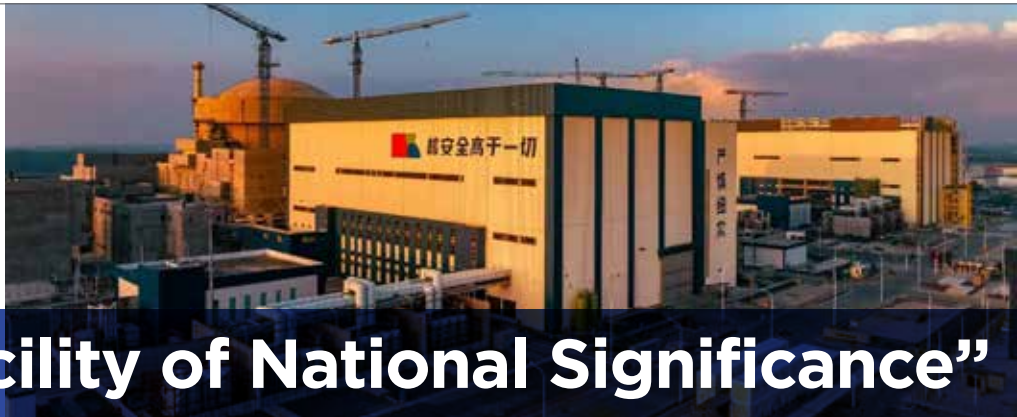
In operation, the advanced smart platform integrates state-of-the-art control algorithms, multidimensional digital sensing, AI, big data analytics, and IoT technologies, enhancing the digital infrastructure and enabling full visualization of the entire turbine system. This innovation empowers streamlined wind farm management and operations through enhanced efficiency.

Moreover, the onshore 10 MW wind turbines developed by the Wind Power Group will infuse green energy into the development of the mega green energy base across various sites, including Ar Horqin Banner in Chifeng City, Sonid Right Banner in Xilingol League, the southeastern region of Ganqimaodu Town in Inner Mongolia, and Ruoqiang County in Bayingol Mongolian Autonomous Prefecture, Xinjiang. These cutting-edge facilities will help expedite the achievement of China's carbon peaking and carbon neutrality goals. **D**

Innovative FB2 Medium-Pressure Rotor Material for a 660 MW Ultra-Supercritical Unit Fills a Crucial Domestic Technology Gap

On April 29th, the first FB2 IP rotor material for the 660 MW ultra-supercritical unit, made in China by Shanghai Electric Power Generation Group and China Erzhong (Deyang) Heavy Equipment, was manufactured successfully. This is a big step forward for Shanghai Electric in making high-quality materials for advanced equipment. The rotor is a crucial component in ultra-supercritical steam turbines, where FB2 serves as a pivotal advanced material. The absence of FB2 material manufacturing technology had previously presented a major technological challenge in China's efforts to develop low-carbon energy generation equipment. The first domestic IP rotor will be integrated into a steam turbine for Qinghai Province Investment Group's 3X660 MW Thermal Power Plant. The successful production of the rotor using FB2 material fills a critical gap in China's ultra-supercritical coal-fired power unit, underscoring China's capability of manufacturing FB2 material for IP rotor, laying a solid foundation for advancing self-reliance throughout the nuclear value chain. This achievement not only ensures energy security but also propels the development of China's power industry. **D**





“Facility of National Significance”

Fangchenggang Nuclear Power Plant's Unit 4 Starts Operation

On May 25th, the Unit 4 of Fangchenggang Nuclear Power Plant accomplished its 168-hour test run, indicating it is ready for commercial operation and the completion of Phase II of the nuclear power plant. Previously, on March 25th, 2023, Unit 3 was put into operation.

The operation of Unit 4 shows Shanghai Electric's technological competitiveness and high product quality alongside with its professional and reliable performance in the nuclear power sector. Shanghai Electric supplies the conventional island turbine generator (TG) package including the steam turbine, generator and auxiliary equipment, and nuclear island main facilities, such as the reactor's internal components and control rod drive mechanism. Among them,

a number of specialized technologies and services from Shanghai Electric Power Generation Group play a key role for the plant's successful commercial operation, including the Hualong I low pressure-welded rotor technology, independently developed TCS system and on-site service center.

According to the plan, the nuclear power plant consists of 3 phases and 6 nuclear power units with a capacity of one million kilowatts. Phase I's two units were put into operation in 2016, and have generated clean power of over 100 billion kWh connected to the grid. The two units of phase II adopt the Hualong I technology, with an annual power generation capacity of nearly 10 billion kWh per unit. The annual power generation capacity of the Fangchenggang Nuclear Power Project is expected to exceed 34.5 billion kWh after the completion and commissioning of phase I and phase II, which can meet the annual electricity demand of 5.87 million people, reduce the consumption of standard coal by more than 10.4 million tons per year and reduce carbon dioxide emissions by about 28.56 million tons, with environmental benefits equivalent to planting 78,000 hectares of forests. **D**





First Low Pressure-welded Rotor of Unit 7 of Tianwan Nuclear Power Plant Delivered

On May 24th, a ceremony was held at the factory of Shanghai Electric Power Generation Equipment Co., Ltd. Turbine Plant (hereinafter as "Shanghai Turbine Plant") in Lin-gang Special Area for the delivery of Unit 7's first low pressure-welded rotor. The unit is designed and manufactured by Shanghai Turbine Plant for Tianwan Nuclear Power Plant, and is China's first 1300 MW VVER steam turbine unit for nuclear plants. As one of the most crucial devices for Tianwan's steam turbine, the low pressure-welded rotor, with a weight of nearly 300 tons and a length over 13 meters, requires 8 forge pieces and 7 welding beads to be welded together, which creates many challenges in forging and welding processes

and takes a long time. Since it undertook the task in May 2021, Shanghai Turbine Plant has improved personnel arrangement and production plan, managing to manufacture the rotor as scheduled.

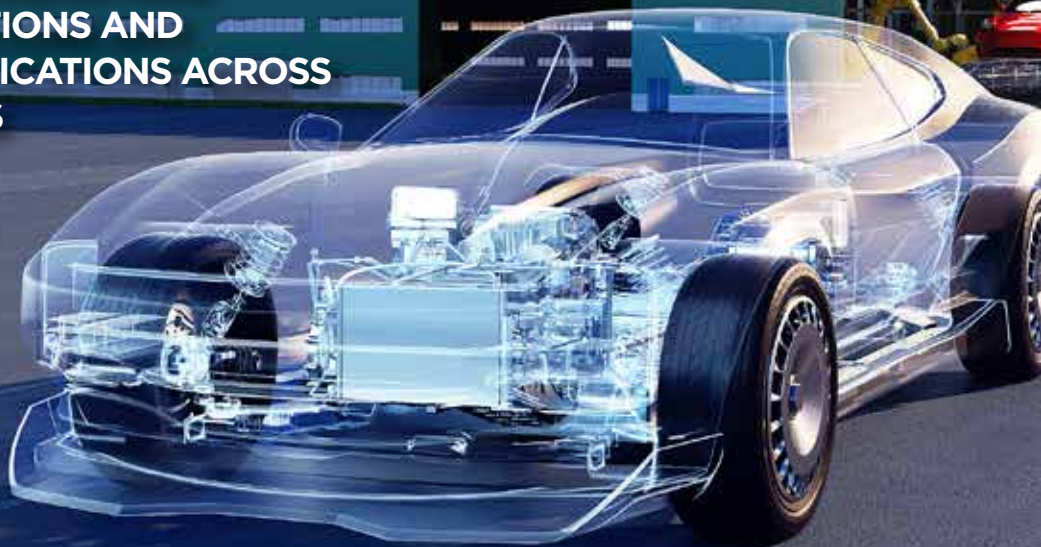
It is reported that Tianwan's Unit 7 and Unit 8 are critical in optimization of the national energy matrix, which, after commercial operation, will make Tianwan plant's total installed capacity the largest in China and the world. Shanghai Electric Power Generation Group is the turbine generator (TG) package supplier who is responsible for the steam turbine, generator condenser, MSR and low-pressure heater. Previously, Unit 7's condenser capsule and generator stator were delivered on October 9th, 2023 and January 10th, 2024, respectively. **D**

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The Central Economic Work Conference highlights the importance of developing new quality productive forces by leveraging digital, AI and green technologies, as well as embracing disruptive and cutting-edge innovations to stimulate the development of new industries, models, and driving forces.

In today's digital economy, the integration, iteration and diffusion of next-generation digital technologies like artificial intelligence, blockchain, deep learning, and the Internet of Things are revolutionizing research and development, production processes, and customer service, transforming production technologies in a holistic way, boosting industrial automation, digitization, and intelligence levels, thereby fueling the integration and rapid growth of digital and AI applications and the development of new quality productive forces.

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01

SHANGHAI ELECTRIC'S SEUNICLOUD INDUSTRIAL INTERNET PLATFORM

Shanghai Electric's SEunicloud industrial internet platform provides customers with comprehensive industrial software solutions, offering lightweight deployment options to accommodate diverse user needs. **This platform caters to industry-leading companies with a valuation in the hundred-billion-yuan range, offering all-in-one services and pioneering business models.**

The SEunicloud platform serves as a generic technology infrastructure for Shanghai Electric Group, offering capabilities for swift cloud migration, rapid access for devices, comprehensive system integration, algorithms, and agile development and presentation for industrial digital transformation. In 2023, the Ministry of Industry and Information Technology recognized the SEunicloud platform as a national leading industrial Internet platform.

The SEunicloud Industrial Internet platform provides users with modular technical tools, including PaaS container platform, IoT platform, data management platform, AI platform, BI platform for data visualization, low-code CI platform, and cloud-based digital twin platform. Focusing on the energy and manufacturing sectors, the platform empowers businesses throughout the data lifecycle, covering collection, storage, processing, transmission, exchange, and disposal. It introduces innovative data standards for physical models, supporting comprehensive applications like data collection, transmission, governance, development, visualization, analysis, mining, and asset-based applications for energy and industrial equipment.



Building on Shanghai Electric's expertise and experience gained through digital transformation with the SEunicloud platform, the company has developed a lightweight version to meet the private deployment requirements of energy and industrial enterprises. In contrast to traditional custom development approaches, solutions for intelligent energy and smart manufacturing developed on this agile platform not only cater to current business requirements but also offer sufficient scalability for future growth. This lightweight platform enables horizontal scaling of computing resources, facilitates asset-driven data management, reduces technical barriers to data analysis, and accelerates the development of industrial applications. It provides integrated platform services and data lifecycle management services to streamline enterprises' digital transformation, enabling centralized



management of computing resources, user permissions, data elements, and platform operations and maintenance.

By leveraging the SEunicloud platform as a technological infrastructure and offering innovative products and financial services, Shanghai Electric provides a range of service models, including cloud-based platforms and private clouds, to meet customer needs in different types, scales, and business scopes. Partnering with leading industry players, the SEunicloud platform offers a wide range of services encompassing consulting, planning, scheme design, and project implementation, guaranteeing customer satisfaction and trust.

Current statistics show that the SEunicloud platform has connected nearly 500,000 devices, with a total value exceeding 200 billion yuan, serving over 400 companies and 15,000 users.

Project Case

State Grid Jibei Zero-Carbon Integrated Power Inspection, Storage and Distribution Base

In response to China's carbon peaking and neutrality goals, Shanghai Electric utilized the lightweight SEunicloud platform to develop a dual-control platform for carbon reduction, currently deployed at the State Grid Jibei Zero-Carbon Integrated Power Inspection, Storage and Distribution Base.

Shanghai Electric has introduced an innovative zero-carbon system centered around the concept of a "zero-carbon warehouse", enabling the base to implement various carbon reduction measures leveraging green energy, improved efficiency, environmental protection, and intelligent control. The solution aims to achieve an annual production of 1.2 million kWh of clean energy and reduce carbon dioxide emissions by over a thousand tons, serving as a model case for State Grid's "green energy value chain" initiative.

02


LARGE PASSENGER AIRCRAFT INDUSTRIAL CHAIN

Leveraging profound expertise and extensive experience in project implementation within the aviation sector, Shanghai Electric provides comprehensive services. These services span from fundamental aircraft components such as bearings, fasteners, engine blades, and sensors to advanced offerings like aircraft instruments, control systems, and integrated equipment services across diverse steps of aircraft production. **The company is capable of delivering aircraft manufacturing services that cater to the entire lifecycle, from initial conceptualization to ongoing support,** ensuring alignment with both current and future requirements. Leveraging profound expertise and extensive experience in project implementation within the aviation sector, Shanghai Electric provides comprehensive services. These services span from fundamental aircraft components such as bearings, fasteners, engine blades, and sensors to advanced offerings like aircraft instruments, control systems, and integrated equipment services across diverse steps of aircraft production. The company is capable of delivering aircraft manufacturing services that cater to the entire lifecycle, from initial conceptualization to ongoing support, ensuring alignment with both current and future requirements.

With a history spanning more than 40 years in the aviation sector, Shanghai Electric is globally recognized as a premier integrator of automated assembly lines for aerospace applications. The company demonstrates excellence across multiple facets of aircraft manufacturing, encompassing automatic drilling and riveting machines, robotics, digital flexible docking systems for large components, turnkey solutions tailored for aircraft assembly lines, as well as equipment for the production of carbon fiber composite materials and automated fiber placement (AFP). With a global presence, Shanghai Electric has forged strong partnerships with numerous prominent aircraft manufacturers.

The company maintains professional teams dedicated to design, research and development, manufacturing, project management, sales, and technical services, which evaluate customer needs to deliver tailored solutions. Furthermore, by integrating production line control with cutting-edge digital technologies, Shanghai Electric's digital production line management solutions provide extensive





supervision of the entire production workflow. This integration significantly enhances efficiency, minimizes time constraints, and streamlines production management procedures.

Shanghai Electric's drilling and riveting systems can be classified into fuselage panel assembly units and robotic systems. The fuselage panel assembly units are tailored for assembling intricate large components and are distinguished by their exceptional flexibility.

The PowerRACe robotic system, renowned for its ability to execute precise tasks like drilling and riveting under heavy loads with remarkable flexibility, can reduce drilling time by up to 50% and boost overall performance by 40%.

Shanghai Electric offers the STAXX series for manufacturing components with composite material. These cutting-edge AFP systems are engineered with cutting-edge technology to deliver automated solutions for producing simple or intricate composite components of different sizes and material compositions. Among these systems, the STAXX COMPACT stands out with its sturdy

independent 16-line fiber placement system tailored for large-scale industrial production.

The EcoPositioner system is designed to meet the high-precision positioning requirements in aircraft manufacturing process. This system, featuring modular and configurable positioning technology, guarantees exceptional flexibility and product quality in aircraft assembly. It is applicable to various assembly scenarios, including fuselage assembly and structural junctions like wing-body and tail-body connections. Shanghai Electric also provides the FastPlant conveyor system for aircraft engine assembly, which offers increased efficiency for assembly lines using either a pulsating line or assembly line configuration.

Moreover, the company offers assembly stations handling complex and large components, as well as integrated services covering panel assembly line, VTP assembly line, fuselage assembly line, and final assembly line. As an integrator, Shanghai Electric manages production processes and equipment, designs assembly lines, and delivers effective and sustainable turnkey manufacturing solutions for various aircraft types.



Project Case

Advanced Automated Drilling and Riveting System for Airbus A220 Regional Jet

The fuselage panel riveting equipment provided by Shanghai Electric now stands out as a top-tier gantry-type multi-panel automatic drilling and riveting system globally. The equipment is utilized for the assembly of the front, middle, and rear fuselage sections as well as the doors of the Airbus A220 regional jet.

The project incorporates fully electric-driven riveting system, intelligent fastener conveyors, flexible fixtures, and other state-of-the-art manufacturing technologies to ensure the swift and precise assembly of fuselage panels.

03

CONTEMPORARY MARITIME INDUSTRY CHAIN

Shanghai Marine Crankshaft Co., Ltd., a Shanghai Electric subsidiary, has a long-standing focus on crankshaft manufacturing, culminating in the development of internationally advanced manufacturing technologies with independent IP. **The company specializes in crankshaft manufacturing, excelling in technological capabilities, and addressing a national need.**

Aligned with the mission of “supporting the advancement of China’s shipbuilding prowess”, Shanghai Marine Crankshaft Co., Ltd. has been focusing on crankshaft manufacturing and tackled several critical challenges, including non-standard part processing, interference fit assembly, and the overall precision machining of crankshafts. Through these efforts, the company has established a comprehensive suite of globally advanced core manufacturing technologies with independent IP. By addressing the key challenges in China’s shipbuilding sector, Shanghai Marine Crankshaft has successfully broken the historical foreign dominance in the crankshaft market, realizing the dreams of generations of Chinese shipbuilders.

During the “14th Five-Year Plan” period, the company adeptly navigated the new phase of development, actively embraced fresh development ideologies, and consistently advanced high-quality growth, achieving remarkable milestones in the realm of ultra-large crankshafts. The W12X92DF crankshaft currently stands as the largest marine low-speed crankshaft globally, predominantly utilized in ultra-large container ships. Through pioneering technological strides, the company conducted specialized research in critical areas such as interference fit assembly of ultra-large crankshaft, adjustment of large spliced crankshafts, and splicing technology, surmounting challenges like processing minute splicing apertures in confined spaces, culminating in the successful creation of the large spliced crankshaft W12X92DF. By achieving the first global delivery of this product, the company has successfully filled the technological gap in China’s ultra-large crankshaft manufacturing sector.

The success of this endeavor not only lays an essential foundation and provides technical support for international projects involving large container ships but also breaks the longstanding dependence of China’s shipbuilding industry on external suppliers for ultra-large marine crankshafts. This achievement significantly enhances China’s capabilities in supporting marine low-speed high-power diesel engines and establishes a secure and self-reliant shipbuilding value chain domestically.



Project Case

W12X92DF Large Spliced Crankshaft Bridges Technological Divide in China

Shanghai Marine Crankshaft has successfully introduced the W12X92DF large spliced crankshaft, the world's largest marine low-speed diesel engine crankshaft tailored for ultra-large container ships. By achieving the first global delivery of this product, the company has successfully filled the technological gap in China's ultra-large crankshaft manufacturing sector.

Specializing in crankshaft production, the company has effectively tackled critical challenges in marine crankshaft manufacturing, including processing non-standard components, interference fit assembly, and ensuring the overall precision machining of crankshafts. Aligned with the mission of "supporting the advancement of China's shipbuilding prowess", Shanghai Marine Crankshaft has mastered complete cutting-edge crankshaft manufacturing technologies with independent IP, thereby laying a solid foundation for China's self-reliant shipbuilding value chain.



04

NEV INDUSTRIAL CHAIN

Shanghai Electric's Highly Group stands as an industry trailblazer with its thermal management system designed for new energy vehicle cabins and batteries. The system features streamlined system and lightweight design. **The system features modular services with industry-leading w/g ratio and eco-friendly refrigerants.**

Highly's thermal management system operates on the principle of the reverse Carnot heat engine, leveraging electric compressors to transfer external heat to the vehicle cabin and battery PACKs using refrigerants as the heat transfer medium. In comparison to conventional PTC heater, heat pump systems demonstrate superior efficiency and energy conservation, ultimately extending the driving range of new energy vehicles.

This innovative system offers 18 modes, catering to various seasonal requirements such as cabin temperature control, dehumidification, defogging, and battery temperature regulation. Furthermore, Highly holds significant technical proficiency in next-generation heat pump refrigerants such as CO₂ and R290, facilitating the delivery of customized modular thermal management solutions that leverage software-hardware integration for NEVs.

For vehicle thermal management,



Highly offers integrated modular components, software-hardware control mechanisms, and calibration services to deliver comprehensive thermal management solutions for NEVs. The heat pump system serves as the foundation of the vehicle's thermal management infrastructure, and Highly's solutions are positioned as industry leaders.

Highly's heat exchanger boasts an industry-leading W/G ratio, and its fan motor and drive actuators demonstrate superior efficiency and lightweight. Furthermore, Highly maintains significant technical capabilities in next-generation refrigerants like CO₂ and R290.



Project Case

Highly's Solution for MPV with Dual-Power High-End Native Electric Architecture

Highly has developed a groundbreaking indirect heat pump system with multiple unique patented attributes for the world's first multi-purpose vehicle (MPV) utilizing dual-power high-end native electric architecture. This system plays a crucial role in significantly reducing energy consumption for heating new energy vehicles during winter.

Furthermore, the battery thermal management system and the thermal management of the e-powertrain has been seamlessly integrated to optimize the overall thermal management. It not only ensures cabin comfort, but also greatly enhances the safety of the battery system and e-powertrain, while simultaneously reducing the EV's energy consumption.

GREATER SCI-TECH SELF-RELIANCE THROUGH EXPANDING INTEGRATION OF DIGITALIZATION AND INTELLIGENCE

Experts point out that digitalization and intelligence is a great revolution and a giant leap for manufacturing, and intelligence integration is a bold innovation and a transcendent achievement.

At present, the Internet, digitization and intelligence have become the global trend, and digital intelligence as a huge engine of national social development is accelerating modernization across China. Shanghai Electric has practiced "Integration of Digitalization and Intelligence" to realize the digitalization of equipment manufacturing, and the integrated solutions of "wind, solar, storage and regulation" innovatively explore the "zero carbon" development trend.

With decades of experience and technological innovation in the energy industry, Shanghai Electric has built the "Management System of Carbon Emission" on the SEunicloud industrial Internet platform. It enables the transition from being an "energy expert" to an "intelligent carbon manager."

Management System of Carbon Emission prioritizes meeting the general and individual green and low-carbon needs of different customers, catering to the area, enterprises and customers in parks,

factories, warehouses and schools. The solution orients towards the whole life cycle of planning, construction and operation, deeply integrating equipment technology and information technology to build a new model of green and low-carbon services for Shanghai Electric and to empower the transformation to green and low-carbon development.

In the field of automation equipment and integration services, Shanghai Electric has a wealth of experience and technological advantages to provide customer with intelligent manufacturing solutions, covering basic components, intelligent equipment, industrial software, system integration and services. Shanghai Electric, a pioneer in the new energy lithium battery, urban rail transit, industrial machine tool and other industries, owns intelligent factory line solutions for lithium battery, rail transit automation control system, large-scale precision grinding machines, and medium and high-end CNC machine tools and other comprehensive solutions. With the intelligent equipment, it connects with users and creates sustainable value for them through the industrial Internet and intelligent supply chain.





At present, Shanghai Electric has formed the industrial cluster for vehicles, aviation and shipbuilding, becoming an important high-end manufacturer in China and the world. In the field of new energy vehicles, Shanghai Electric provides services for the entire industry chain, covering low-carbon industrial plant design, intelligent production line for vehicle and battery pack assembly, and parts and components such as power battery and thermal management system for new energy vehicles. For the aviation industry, Shanghai Electric can provide automated drilling and riveting systems, assembly lines and other key products and integration services, as well as aircraft instrumentation and control systems, aviation fasteners, engine blades and other key subsystems and components. For the shipbuilding industry, Shanghai Electric has a proven track record, a strong industrial base and great development potential in large castings and forgings, large marine crankshafts, marine ballast water devices, marine power systems and auxiliary equipment.

In the future, Shanghai Electric will adhere to the principle of "all for the national strategy" and shoulder the national mission of becoming "a major manufacturer of China" with key products and key technology, solve national bottlenecks, fill the gaps in key components of national key equipment, actively expand intelligence integration, and enhance the independent capability of national high-end equipment manufacturing. **D**



DREAMS COME TRUE IN NANCHANG

**TO YU CHONG, A RECIPIENT OF JIANGXI
PROVINCIAL MAY 1ST MEDAL, FROM NANCHANG
HIGHLY ELECTRICAL APPLIANCES**

There is an instagrammable place inside the park of Nanchang Highly Electrical Appliances Co., Ltd. (hereinafter as "Nanchang Highly"), where a curvy blue plastic runway leads to the east gate with lawns on both sides, and the guideboard showing "I'm waiting for you at Highly" adds to the vibe. During the break, many employees would come here, take pictures and post them on Douyin (Chinese version of TikTok) and WeChat Moments, proudly showing that "I am working in an awesome company".

Nanchang Highly is awesome in many ways. It is a modern smart manufacturing factory at No.88, Meilin Avenue, Nanchang Economic and Technological Development Zone. It covers an area of more than 518 mu (34.53 hectares) with about 4,000 employees. In 2023, it for the first time produced more than 20 million AC compressors and was rated a top 20 taxpayer in Nanchang City. Mr. Yu Chong, its general manager, has been honored "Best Entrepreneur of Nanchang" and Nanchang Municipal May 1st Labor Medal for his excellent achievements in boosting company development and corporate responsibility fulfillment. In early May this year, he was awarded Jiangxi Provincial May 1st Medal.

Tracing his steps, let us uncover how he, a man from Shanghai, intertwines his life, career and dream with Nanchang Highly.

CHASING DREAMS

Born in Shanghai in 1976, Yu Chong is a CPC member and a senior engineer with a master's degree. Tall and gentle, he looks quite young except for strands of grey hair on the temples that are testament to the passage of time. He joined Shanghai Highly Electrical Appliances Co., Ltd. (hereinafter as "Shanghai Highly") after graduating from the university. From then on, he has been part of the company. "I came to Nanchang in 2009. During my 25 years at Shanghai Highly, I worked in other cities outside Shanghai for 15 years if those days in Mianyang Highly were taken into account." The simple words demonstrate his commitment and ambition. He has given his best years to Nanchang.

After rounds of in-depth analysis, Shanghai Highly took its first move to expand its market share by setting up a subsidiary in Nanchang despite that it is about 700 km away from Shanghai. Nanchang, the capital of Jiangxi Province, sits in the heart of Central China and boasts a strategically advantageous location, enabling it to effectively reach out to customer bases in neighboring regions including South China, North China, and other parts of Central China. Nanchang has incomparable advantages in labor, land and logistics costs over other cities.

"Nanchang Highly comes No.1 in terms of investment and production capacity among all Shanghai Highly's subsidiaries. It takes us years to relocate AC compressor production lines from Shanghai to here. By highlighting and improving supply chain localization, we have enormously strengthened the industrial cluster development in Nanchang." Till today, Yu Chong has always had full admiration for Shanghai Highly's management team at that time who made visionary and accurate decisions in their resolve. It enables Nanchang Highly to rise above fierce competition and become a leader in the industry.



Yu Chong will never forget the day — January 18th, 2008. It is just a cold day in winter for others, but for Yu Chong, it is when the groundbreaking ceremony for Nanchang Highly was held. He and his colleagues took the long-distance bus to Nanchang on January 17th. “16 years ago, ways of transportation were far less convenient than they are today, let alone direct bullet trains. Dozens of managers, technicians and I took the bus to go there. We even needed to stay over in Yiwu City. Nanchang is 700 km away. What a remote place!”

As people began to refill the pit with shovels in the ceremony, the glorious journey of Nanchang Highly kicked off. Yu Chong was officially dispatched to Nanchang Highly 12 months later to take charge of project construction and oversee subsequent production operations. At that time, he never thought that in the next 15 years, he would travel by train that frequently.

COMMITMENT TO CAREER

The groundbreaking ceremony in the beginning of 2008 appears to have happened just yesterday, but today’s Nanchang Highly is totally upgraded from what it was. Nanchang Highly’s chronicle reveals how fast it grows. Phase I was put into operation in 2009, and Phase II, III and IV in the following 3 years. As of 2013, it was able to produce 6.5 million air conditioning compressors every year. In Yu Chong’s opinion, these figures only show how fast, but not how difficult.

After he came here in 2009, Yu Chong first worked at the quality department and was responsible for product quality and tests. A lot of difficulties awaited him and the company. “We built the factory from scratch, and were only able to buy high precision test equipment one by one.” Yu Chong recalled what it was like 15 years ago. “To guarantee the accuracy of product tests, my colleagues and I have sequentially introduced a range of facilities including Zeiss’ coordinate measuring machines and Taylor Hobson’s profilometers for roughness and cylindricity. To keep up with the increase of production capacity, we spared no effort to ensure production process quality, and our AC compressors were recognized by clients for their excellent quality.”

Test methods and equipment developed in lockstep with compressor technologies. In 2014, we began to upgrade the production line of the home AC compressor G series from model HCFC-22 into the refrigerant model HC-290. One can certainly imagine how difficult it was to carry out technological improvement for existing equipment in order to match with the new model. It is because we need to ensure facility precision, and moreover, to buy new measurement instruments and test devices. Yu Chong took the improvement project seriously and formulated detailed plans. After tackling challenges occurring during the implementation, he managed to conclude the project by setting up the HC-290 flameproof and explosion-proof lab that passed the evaluation by national authorities.

In the beginning of 2020, Yu Chong





Nanchang Highly **Yu Chong**

was promoted to Nanchang Highly's general manager. There were only 5 cars running from Shanghai to Nanchang on the expressway when the pandemic hit the world. In the gloomy winter, he set off bravely with hopes and doubts. His hope came from the fact that he knew the people and work at Nanchang Highly well, and his determination to do a good job there. His doubts were about how the virus would impact Nanchang Highly. He was even a little bit afraid to think of it when the pandemic just began. "Thanks to the effective containment by the local government and strong support from government departments, our headquarters and all our employees, we went through the next 3 years without being interrupted." Yu Chong said with smiling.

He began to work immediately after arriving in Nanchang. By speeding up the workflow, he introduced new production lines for 4 million D-series compressors. The two newly-adopted production lines for D-series frequency conversion AC compressors would meet the needs of major AC manufacturers, such as Gree, Midea, Haier and Hisense. "The project involved more than 200 pieces of manufacturing and ancillary equipment. The logistics of Nanchang Highly's park also needed to be rearranged. To make things worse, we didn't have enough people but the deadline was close." Yu Chong said. Standing up to challenges, everyone in his team including himself worked day and night to install and commission facilities, and to boost the product's quality confirmation and prototype testing. As the general manager, he led by examples who kept track of on-site progresses, paid attention to feedback from all stakeholders, and collected first-hand information in order to have plans carried out and problems solved. Finally, the two new lines got qualified for mass production in the first half of 2020.



INNOVATIVE DEVELOPMENT

Thanks to the selfless dedication of countless workers like Yu Chong, over the past 15 years, Nanchang Highly has grown into a world-leading modern green manufacturer with cutting-edge internet, automation, information, digital and smart technologies, whose market share ranks the third in the world. However, to make business stronger is more complex than to start up. In the new era, Nanchang Highly, a top AC compressor producer, has to figure out how to strengthen new quality productive forces. From the perspective of a company leader, Yu Chong contemplates over how to develop new quality productive forces by leveraging local advantages to reinforce Jiangxi's economy and intelligent manufacturing.

"The intelligent upgrading has greatly increased the factory's production efficiency. Now, it only takes 7 seconds for a compressor to roll off the production line. In addition, we make the whole supply chain digitalized and visualized by incorporating information technologies into our production lines. The whole factory is connected to the network with over 50% of production line operation automated on ground that real-time product data are collected, used and shared on cloud platforms." Yu Chong talked confidently, gazing at production lines running in order efficiently.

Yu Chong majored in mechanics at college, but now he is more into books on management after he became a manager. Recently, he has been reading *New Quality Productive Forces*. "New quality productive forces' is a new term. As I understand it, it is a form of green productivity in essence." When it comes to green, he stresses that "Nanchang Highly is not only known for its smart level, but also for its greenness. During production, the factory utilizes natural energy and energy conservation and environmental protection technologies, including recovery of process water and production residual heat as well as the air source heat pump. By removing pollutants from its emissions and discharges, it maximizes energy efficiency and protects the environment more effectively."

It is true that a caring and socially responsible corporate will inevitably prioritize green, environment conservation and safety high above all else. Yu Chong hopes that Nanchang Highly, which has been recognized as a "National Intelligent Manufacturing Demonstration Factory", to become a company that is praised by the public for its exceptional conscience and sense of responsibility. "We are determined to become a 'green model' in Jiangxi Province by making environment better and production lines more sustainable and developing environment-friendly products." Yu Chong said confidently. **D**



Rooftop Greening



In line with the national low-carbon strategy, Shanghai Electric Group Properties Co., Ltd. joined Shanghai Electric's new green and low-carbon path, closely integrating the Group's real estate resources with the development of green and low-carbon industries. Together with Shanghai Electric Power Transmission & Distribution Group, it took Show 709 Media Park as a testing ground, built distributed photovoltaic and energy storage application scenarios, piloted low-carbon parks, and laid the foundation for the creation of Shanghai Electric's industrial real estate ecosystem.

By transforming the "fifth facade" of seven buildings and structures in the park, it installed distributed photovoltaic power generation systems on 7,400 square meters of rooftops for the Show 709 Media Park Project, with a capacity of 1,188.32 kWp and 360 kW supporting energy storage batteries, to realize the efficient use of photovoltaic energy.

The park also introduced the Power Transmission & Distribution Group's self-developed digital energy management platform, which has a layered distributed network structure to achieve reliable and real-time energy management. It realizes the precise statistical analysis and management control of each link of source, grid, storage and load to continuously improve the efficiency of comprehensive energy utilization and help the park achieve the dual-carbon goal.

It is estimated that the annual PV power generation of Show 709 Media Park can reach 1.2 million kWh, accounting for 10.5% of the park's power generation, which can reduce coal consumption by 394 tons and carbon dioxide emission by nearly 1,091 tons, which is equivalent to planting nearly 60,000 trees. The capacity of energy storage system in the park is about 360 kW/720 kWh, which is charged and discharged 330 times a year, and it can help the park to stagger the peak power consumption and better enhance the economic benefits. **D**

A Cricket Stadium for a Good Neighbor

The Thar Block Energy Integration Project in Pakistan, built by Shanghai Electric Power Generation Engineering Co., Ltd., is a key project of the Belt and Road initiative and the China-Pakistan Economic Corridor. Located in the Thar Desert in the southeastern part of Pakistan's Sindh province, the project comprises a coal mine with an annual production capacity of 7.8 million tons and two 660 MW coal-fired power plants that will provide sustainable, stable, clean and affordable electricity to 4 million Pakistani homes each year. In addition, Shanghai Electric actively fulfills its corporate social responsibility to support local infrastructure construction.

Cricket, as a cultural treasure of Pakistan, a neighborly country of China, also exudes a unique charm in the remote desert region of Thar. However, for a long time, the

lack of suitable venues has been a major problem for the local people. Shanghai Electric Power Generation Engineering, decided to revitalize the local community by renovating the Malvi Stadium (TBC).

After levelling the field, concreting the road, repairing and painting the fence, installing solar lights, maintaining the greenery around the field, and installing lighting equipment, a new and beautiful stadium was open to the residents. Now the locals play their beloved sport here at night.

The modern facilities and rich cricket activities at the Malvi Stadium (TBC) have made it a center for community gathering and communication, which not only promotes community development and cricket, facilitates local cultural exchanges, but also builds a positive corporate image for Shanghai Electric. **D**





Shanghai Electric Leaves a Green Impression on the European Market With All Its Turnkey PV Under-Construction Projects in the UK Connected to the Grid

Project background: Shanghai Electric has successfully developed, constructed, and operated its first turnkey PV project in the UK. This marks their entry into the high-end European market with renewable energy projects following the “investment and financing-construction-grid connection-electricity generation-operation” model. The turnkey project consists of eight PV projects, with the West Holcombe project being the first to connect to the grid on January 28, 2022. Subsequently, the Bishop, Outwood, Ingham, and Trowse Newton projects were connected to the grid between June and August 2022. The Sweeting Thorns project achieved full generation in April 2023, followed by the Low Farm project connecting to the grid in the same month. The last project, Fiskerton II-A, was connected to the grid in December 2023. This marks the completion of all eight

ongoing photovoltaic projects in the UK, delivering a continuous supply of green electricity to the local area.

From the iconic Big Ben to the prestigious British Museum and Buckingham Palace, these landmarks immediately come to mind when one thinks of the UK. In the past, the country was known for its foggy weather, but things have changed dramatically. Now, we are greeted with clear blue skies, well-defined clouds, towering trees lining the roads, impressive Royal Horse Guards, vintage black taxis, and vibrant flowers and plants along the pathways. Each photo taken captures the beauty of the surroundings, resembling a stunning oil painting. This tranquil and picturesque natural environment is not only the result of the implementation of green industries but also the increasing number of robust renewable energy projects established in recent years. **D**

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