

Message from Chairman

Dear friends from all walks of life,

In 2019, we celebrated the 70th anniversary of the founding of the People's Republic of China. Over the past year, guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era and the spirit of the 19th National Congress of the Communist Party of China (CPC), we at Shanghai International Port (Group) Co., Ltd. (SIPG) have been enterprising and hardworking in advancing the international shipping center initiative and making Shanghai Port stronger, paying tribute to the 70th birthday of the People's Republic of China with an excellent performance.

In 2019, our business operation sustained stable growth. The annual home port cargo throughput amounted to 538 million tons; home port container throughput reached 43.303 million TEUs, ranking first in the world for ten consecutive years. The operating revenue of the year was 36.102 billion yuan, and the net profit attributable to parent company reached 9.602 billion yuan. We have been focused on shareholder returns and implemented a proactive and prudent dividend policy, planning to maintain a high proportion of cash dividends for the year 2019.

During the year, we continued our corporate development strategy. We advanced cooperation with port groups in Zhejiang, Jiangsu and Anhui, as part of our efforts to implement the national strategy of integrated development of the Yangtze River Delta, and promote the “synergistic development with the north and south”. To sustain growth and expansion of the Yangtze River market, we completed the acquisition of equity interests in terminal companies along the Yangtze River, including Yongjia of Zhangjiagang, Yuanyang of Yangzhou and Longtan of Nanjing. Meanwhile, we made breakthroughs in the development of Yangtze River feeder platforms, basically completing the integration of the TOPS systems of invested terminals along the Yangtze River, digitizing equipment interchange receipts at Jiujiang Port, and launching the electronic documentation in Wuhu, Taicang, Wuhan, Yibin and other places, which resulted in enhanced efficiency of port services.

During the year, we continued to improve the capacity and efficiency of technological innovation. We always put technological innovation as the primary driver of corporate development and focused on the “Four Ports” initiative. We pushed forward the research in blockchain and artificial intelligence and concentrated on key technologies, implementing 58 technological innovation projects and completing 29 science and technology projects throughout the year. We pushed forward port automation and continued to promote system optimization of Yangshan Port (phase IV) and application of smart core modules at terminals in line with the goal of “great reliability, high efficiency and world class”, keeping breaking records of day and night work hours, average platform hours and average ship hours, among

other indicators. We also effectively promoted development of standards and standardization via ICT applications.

During the year, we continued with energy conservation and emission reduction. We focused on shore-based power supply projects and RTG hybrid power transformation projects, with 90% application rate of LNG for infield truck tractors and 87% proportion of green-power RTGs.

During the year, we remained solid in Party building in the company. We held high the great banner of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, seriously carried out the education campaign of “never forget why we started and stay committed to our missions”, and subjected ourselves to the “political check-up” by the municipal CPC committee inspection team. We held the second Party Congress of the company and elected the new leadership, which led the entire company in practicing the “four consciousnesses”, the “four confidences” and the “two safeguards” in everything we did.

The beginning of the year 2020 saw a sudden outbreak of a new coronavirus epidemic. To resolutely carry out the plan of the CPC Central Committee and the State Council, we set up at the first time an emergency response leadership group for COVID-19 mitigation, and led all SIPG people in rigorously implementing all prevention and control measures. The SIPG people carried forward the spirit of hard work, gave up their holidays, held fast to their posts, and did their best to prevent and control the virus, ensuring smooth, orderly and uninterrupted port operation. We collaborated with the port of Wuhan to ship such supplies as masks, protective gowns, goggles, etc., helping each other to overcome the difficulties, which fully demonstrates SIPG’s responsibility and commitment.

Brave the hardships and cross the river together! The year 2020 is the time China accomplishes building a moderately prosperous society in all aspects and the last year of the 13th Five-Year Plan period, as well as the year when the Shanghai International Shipping Center is basically built. In this year full of challenges, we will always keep in mind the expectation of General Secretary Xi Jinping to “build, manage and develop Shanghai port well”, and unswervingly embrace the new vision of innovative, coordinated, green, open and shared development. With a stronger commitment, greater actions, as well as firm determination and courage to overcome the adversity, we will grasp opportunities offered by the national strategies, maintain our strategic focus, elevate SIPG’s high-quality development to a new level, and strive to be the main force and forerunner for the basic completion of the Shanghai International Shipping Center!

GU Jinshan
Party Secretary and Chairman of Board, SIPG

| key performance in the last five years

KPI	2015	2016	2017	2018	2019
Home port container throughput (mn TEUs)	36.537	37.133	40.233	42.010	43.303
Home port container water-to-water transshipment (%)	45.0	46.5	46.7	46.8	48.3
Total assets (bn yuan)	98.515	116.785	141.235	144.367	142.177
Owners' equity (bn yuan)	59.605	60.724	69.484	75.548	82.057
Net profit attributable to parent company (bn yuan)	6.573	6.939	11.536	10.276	9.062
Tax paid (bn yuan)	3.208	2.787	3.679	3.454	4.573
Comprehensive energy consumption (10K tons of standard coal)	40.60	40.53	41.7	43.0	42
Throughput energy intensity (ton standard coal per 10K tons)	5.16	5.16	5.00	5.15	5.14
No. of employees	18,338	18,183	17,213	16,366	14,650
Shareholder dividends (bn yuan)	3.569	3.615	3.986	3.569	3.360
Social contribution per share (yuan)	0.7157	0.7255	0.9820	0.9744	0.9342
No. patents applied	13	28	26	32	20

1.3 Corporate governance

1.3.1 Governance structure

Adhering to the rule of law in strict accordance with the requirements of the Company Law of the People's Republic of China, the Securities Law of the People's Republic of China, the Code of Governance of Listed Companies and relevant laws and regulations of the China Securities Regulatory Commission (CSRC), we constantly improve the governance structure and carry out operation rigorously. A sound legal person governance structure and a corporate governance system have been established based on full and transparent information disclosure, interactive investor relations, a strict and effective internal control system and honest operation. The Articles of Association clearly articulates the functions of the General Meeting of Shareholders, the Board of Directors, the Board of Supervisors and the management team. They constitute a governance structure of “three meetings and one team”, operating independently and effectively in accordance with the Articles of Association.

General Meeting of Shareholders

As the power organ of the SPIG, the General Meeting of Shareholders exercises its powers according to law. The Company convenes and hosts the General Meetings of Shareholders in strict accordance with the Articles of Association, the Rules of Procedure of the General Meeting of Shareholders of SIPG and relevant laws and regulations. All shareholders registered on the date of equity registration have the right to speak, question and vote at the General Meeting of Shareholders in accordance with law. The General Meeting of Shareholders arranges the shareholders to speak according to the registration of shareholders, and the management of the Company will answer the questions raised by shareholders in a targeted manner. The Company have hired lawyers to issue legal opinions on the legality of the shareholders' meeting to ensure that all shareholders, especially small and medium-sized shareholders, enjoy equal status and have the right to be informed of and participate in major matters of the Company, and to ensure that all shareholders can fully exercise their rights and ensure the validity of the shareholders' meeting. In 2019, the Company held four shareholders' meetings, reviewed and adopted 20 proposals and listened to one report.

Board of Directors

The Board of Directors is elected by and responsible to the General Meeting of Shareholder. According to the Articles of Association, the Company has eleven directors, including one employee representative director and four independent ones, and the selection and recruitment of directors, the number and composition of the Board comply with the requirements of laws, regulations and the Articles of Association. There are seven outside directors (including independent directors) on the Company's Board of Directors, accounting for more than half of the eleven members of the Board. The meetings of the Board of Directors are convened in compliance with the relevant provisions of laws and regulations with complete and faithful minutes of the meetings and timely, accurate and sufficient disclosure of relevant information. In 2019, the Company held eight meetings of the Board of Directors and adopted 39 proposals.

All directors of the Company attend the Board of Directors and shareholders' meeting in accordance with the Rules of Procedure of the Board of Directors of SIPG earnestly and conscientiously. With their wealth of knowledge, experience and good professional ethics, directors devote much time and energy in the determination of business develop strategies, the appointment of executives, the formulation of annual financial budgets and final plans, profit distribution plans, and the improvement of internal control mechanism. They perform their duties in an honest, diligent and responsible manner to maximize the interests of shareholders. The independent directors, adept in finance, management and business, perform their duties in strict accordance with the requirements of the "Working Mechanism of Independent Directors of the SIPG" and the "Working Mechanism of Independent Directors of the

SIPG on Annual Report”, and express their individual independent opinions on major decisions of the Company to ensure their soundness and impartiality. In 2019, the independent directors issued a total of 20 independent opinions.

The Board of Directors consists of a Strategy Committee, an Audit Committee, a Budget Committee and a Nomination, Remuneration and Appraisal Committee, each of which operates effectively with clearly defined functions, authority and responsibility. In 2019, special committees held a total of 14 meetings.

The Board of Supervisors

The Board of Supervisors is responsible to the General Meeting of Shareholders and has a total of five supervisors, including two employee representative supervisors. The number and composition of the Board of Supervisors is in compliance with the requirements of laws, regulations and the Articles of Association. The Board of Supervisors, in accordance with the Rules of Procedure of the Board of Supervisors of SIPG and relevant laws and regulations, conscientiously performs its duties in the spirit of being responsible for shareholders, oversees the daily operation of the Board of Directors, the Company's finances and the legality and compliance of the directors and executives in performing their duties, and expresses its opinions independently to safeguard the legitimate rights and interests of the Company and its shareholders. In 2019, a total of six Board of Supervisors meetings were convened and 13 proposals adopted.

Management team

The management team consists of executives including corporate president, vice presidents, secretary of the Board of Directors and deputy Chief Financial Officer. The company adopts the annual salary system for executives, evaluates the management through comprehensive indicators such as business performance at the end of the year, and links the salary of executives with business performance and personal performance, so as to attract talents and maintain the stability of the management. The appointment of the management team is open, transparent and in compliance with laws and regulations.

1.3.2 Amendments to the *Articles of Association*

In order to improve the corporate governance structure in accordance with the relevant provisions of the Company Law of the People's Republic of China (as amended in 2018), the Code of Governance of Listed Companies (as amended in 2018), the Decision on Amending the Guidelines on the Articles of Association of Listed Companies (CSRC Announcement [2019] No. 10), as well as the changes in the registered address and directors of the Company, SIPG amended parts of the original Articles of Association as well as I Rules of Procedure of the General Meeting of Shareholders and the Rules of Procedure of the Board of Directors and adopted the amendments in the annual General Meeting of Shareholders in 2018 and the first Extraordinary General Meeting of Shareholders in 2019.



(Photo: 1st Extraordinary General Meeting of Shareholders in 2019)

1.3.3 Strengthening investor relations management

Shareholders and investors (including potential investors) are important stakeholders of the Company, and the Company works consistently to strengthen investor relations management through various means. In 2019, we communicated with 76 investors of 21 batches through receiving research teams, visits, ports visits, and investor meetings and forums. We also attended one investor group reception day in the first half of the year and one in the second half of the year.

1.3.4 Regulating information disclosure

Information disclosure receives a high level of attention of investors. It is also the social responsibility and obligation that the Company should fulfill to the public and investors. Since its listing, the SIPG has attached great importance to information disclosure, and has formulated the Management System for Information Disclosure of SIPG, which strictly regulates information disclosure to ensure the truthfulness, timeliness, completeness, accuracy and fairness of information disclosure, and thereby creating convenient conditions for investors to understand the overall operation of the Company, and establishing a good brand image in the capital market. In 2019, the Company completed and disclosed four regular reports and 68 interim announcements without any error in information disclosure throughout the year, fulfilling the information disclosure obligations in earnest.

1.3.5 Focusing on shareholder returns and sharing fruits of development

The Company attaches great importance to shareholder returns. Underpinned by its sound and stable performance, the Company implements a high cash dividend policy that enables investors to share the fruits of its development. Since its listing in 2006, the Company has insisted on high cash dividends. For 2019, the profit distribution plan of the Company is to pay a cash dividend of RMB 1.45 for every 10 shares (tax inclusive) with a total profit distribution of RMB 3.360 billion (the profit distribution plan for 2019 has yet to be reviewed and adopted by the 2019 annual general meeting of shareholders). The amount of cash dividends for the year accounted for 37.08% of the net profit attributable to shareholders of the listed company in the consolidated financial statements.

Dividends paid in the last three years					
Year of dividend payout	Date of dividend payout	Dividends as a percentage of distributable profits	Dividends per share (RMB yuan, tax inclusive)	Total cash dividends (billion RMB yuan, tax inclusive)	Percentage of net profit attributable to parent company
2017	2018-06-08	60%	0.172	3.986	34.55%
2018	2019-06-28	50%	0.154	3.569	34.73%
2019	-	50%	0.145	3.360	37.08%

2.1 The concept of sustainable development

Sustainable development, as an important element of our strategy, reflects SIPG's relentless pursuit in economic, environmental and social development. By our definition of sustainable development, the Company and its stakeholders are like parts of a sphere, sharing economic, environmental and social responsibilities, and jointly promoting the sustainable economic, environmental and social development of the whole sphere. We shall work hard to enable the sphere to operate more smoothly and sustainably, create tremendous amount of energy to achieve harmony and common prosperity. We have consistently improved sustainable development management. Under the guidance of current international and Chinese indicators and management systems, we have put in place an indicator system in line with characteristics of the industry and the Company. As a key part of our sustainable development management, we prepare and publish sustainable development reports every year to share our achievements in theory and practice and allow stakeholders to better understand SIPG.

Flow Chart of SIPG Sustainable Development Management System

We are committed to consistently improving our sustainable development system to better inform stakeholders of our actions and we welcome oversight and guidance of our work from all communities.

Survey and assessment of status quo - High-level decision-making - Improving organization - Information and indicator collection/updating - Risk assessment and decision making - management system design - implementation of risk management program - Monitoring execution - Preparation of reports - Internal and external review - Disclosure of reports



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2019 Sustainable Development Management Practices

- In January, at the A-share listed company social responsibility report summit and the 10th anniversary celebration on rating of social responsibility reports of listed companies jointly held by the third-party rating agency Rankins CSR Ratings (RKS) and SGS, the world's leading third-party certification agency, SIPG was awarded an AA rating in the 2018 RKS A-share listed company social responsibility reports, and was ranked 15th among the 851 A-share companies that released social responsibility reports. Rating Outlook: stable. (Daily briefing: No. 20)
- In May, SIPG won the Jinzhi Award for Listed Company with Outstanding CSR Performance at the JRJ.com 2019 Value Discovery Carnival, the 2nd China Corporate Value Development Forum and the Awarding Ceremony of “Jinzhi Award”.
- In June, SIPG participated in the 2019 Shanghai CSR Report Release Conference organized by the Shanghai Federation of Economic Organizations and co-organized by the Shanghai Quality Association, and received the Certificate on the Release of Social Responsibility Report with its 2018 sustainability report.
- In November, we participated in the 2019 CSR training session held by Shanghai SASAC.
- In December, at the “12th International Symposium on CSR Report in China”, SIPG’s 2018 Sustainable Development Report won the “Golden Bee 2019 Outstanding CSR Report - Environmental Responsibility Information Disclosure Award”.



Photo: Golden Bee 2019 Outstanding CSR Report Awarding Ceremony

2.2 Corporate strategy

The 13th five-year plan of SIPG (2016-2020)

Vision: World's outstanding port operator and port logistic service provider

Goals:

- * Shanghai International Shipping Centre basically established
- * Maintaining the first place in home port container throughput
- * Top three in KPIs in the industry
- * Promoting diversification and optimizing industrial layout
- * Nationwide footprint with transnational operations
- * Building smart, green, efficient and technology-driven ports
- * Strengthening Party building, cultivating a corruption-free team and fostering a harmonious corporate culture

Major indicators

	End of the 13 th Five-Year Plan	2019 Year end
Home port container throughput	42 million TEUs	43.303 million TEUs
Water-to-water ratio of home port containers	47%	48.3%
Assets	150 billion RMB <i>yuan</i>	142.177 billion RMB <i>yuan</i>
Key indicators of net assets, operating income and EBIT	Ranked among top three major terminal operators worldwide	Ranked among top three major terminal operators worldwide
Percentage of full-time heads of grass-root party organizations	Over 90%	85.4%

Number of employees	Around 16,000	14,650
During the 13th Five-Year Plan period		2016-2019
Cash dividends	Cash dividends more than 50% of distributable profits each year	Cash dividends more than 50% of distributable profits each year, 60% for 2016 and 2017
Ratio of establishment of employee congresses, signing ratio, coverage and enforcement ratio of collective bargaining and collective contracts, , and ratio of labor contracts signed	Staying at 100%	100%

3.1 Steady growth of core port business

3.1.1 Keeping No. 1 ranking in container throughput in the world

In 2019, SIPG actively expanded markets and optimized operations to ensure efficiency and service quality. Innovative practices were rolled out and coordinated efforts were made to improve port environments. Forceful measures were adopted in key areas to ensure the performance targets were met. Throughout the year, the home port of SIPG handled 538 million tons of cargo, among which 115 million tons were bulk cargo, and 43.303 million TEUs of containers, registering a year-on-year increase of 3.1% and ranking No.1 in terms of container throughput for ten consecutive years. The international transshipment throughput topped 4.658 million TEUs, growing by 26.5% year on year and accounting for 10.8% of the total container throughput. SIPG reported a RoRo throughput of 1.498 million vehicles, continuing its national lead in market share. In 2019, the container throughput of Yangshan port area reached 19.808 million TEUs.

Monthly container throughput hit a record.

The heat wave in July put the operations of the Port of Shanghai through a “scorching test”. Guided by the principles of the educational campaign on the theme of “staying true to our founding mission” and the Company’s half-year work conference, all employees braved the heat, maintained safety in operations and managed to set a new business record --- handling 3.855 million TEUs in a single month, which increased 8.5% year on year and broke the record of 3.812 million TEUs set in September 2018.



24-hour container throughput exceeded 140,000 TEUs.

In the wake of Super Typhoon Lekima in August, SIPG was determined to win the uphill battle of operation recovery. United as one, all employees beefed up morale and made concerted efforts to resume business. While putting safety first, we went full throttle on port operations and managed to achieve new success. In only one week, container terminals for both domestic and international trade



handled nearly 930,000 TEUs from 433 mainline vessels and 881 feeder vessels. The daily container throughput was nearly 133,000 TEUs. 24-hour container throughput on August 15 and 17 reached 139,531 TEUs and 144,430 TEUs respectively, breaking the record twice within three days.

On November 15, SIPG's Zhendong Container Terminal Branch celebrated its 20th anniversary and hoisted the 100 millionth TEU.

In September 1999, Zhendong Container Terminal Branch was established as the 1st dedicated container terminal of the Port of Shanghai, in line with the national strategy of building Shanghai into an international shipping center and SIPG's corporate strategy of accelerating the container business. Over 20 years of rapid development, Zhendong Branch cumulatively handled 100 million TEUs and recorded a profit of 20 billion RMB *yuan* in total. Together with other SIPG's container terminals, Zhendong Branch helped the Port of Shanghai to maintain the global leadership in container throughput and generated sound profits for the listed company.



3.1.2 Substantial improvement in efficiency and service quality


In 2019, SIPG drafted meticulous operational plans and set ambitious performance targets that were more rational, science-based and operable. Throughout the year, the Company made efforts to balance mainline and feeder traffic, make timely adjustments to vessel operation schedules, maximize the use of terminal facilities, and boost both the operational efficiency and service quality.



Despite the strikes of several super typhoons and in face of some special events like CIIE, all SIPG employees worked in a well-coordinated manner to press ahead with work on all fronts. As a result, operations were quickly resumed after temporary suspension and all the tasks were successfully fulfilled.


Major Customer Complaints Statistics in 2019

	2019
Customer Complaints	412
Invalid Complaints	327
Complaints Handled	412
Complaints Not Handled	0

 **Dushan Branch successfully hoisted and installed heavy-lift equipment.**

In January, Dushan Branch drafted a detailed process plan and contingency measures and provided on-site instructions, which ensured the successful lifting of 670 tons of heavy-lift equipment for the Xinfengming project.



 **Longwu Branch loaded heavy-lift equipment safely and efficiently.**

On March 18, Longwu Branch safely and efficiently loaded a 1,511-ton piece of heavy-lift equipment onto “Fair Partner”, setting a record in SIPG’s history and winning recognition of the partner shipping company.



3.1.3 Constantly enhanced feeder services.

In 2019, SIPG adopted multiple measures to improve feeder services, and promote the steady growth of the Yangtze River transit business for advancing the Company’s Yangtze River strategy.

* SIPG continued to use the same platform for developing and adjusting vessel schedules for both mainlines and feeder lines, ensuring adequate resources for feeder vessel operations and delivering our service commitments.

* Through partnership with port authorities, port operators and carriers along the Yangtze River, SIPG launched several feeder alliance routes, including Yangshan-Wuhu, Yangshan-Jiujiang and Yangshan-Nanjing routes. We piloted the end-to-end direct shipping service with Chongqing, regulated and expanded capacity of liner service. We also supervised the feeder vessel scheduling and loading/unloading operations, and coordinated efforts to tackle problems. Focusing on compliant operations, slot exchange, loading/unloading efficiency, transshipment connectivity and schedule assurance, SIPG promoted best practices and pursued service excellence in partnership with all stakeholders. Recognized as service benchmarks, the alliance routes delivered constant improvements in both business performance and customer experience.

* SIPG developed and implemented new operational rules for inland waterway transshipment business through express shuttle boat service, which effectively enhanced the operational efficiency and transshipment connectivity of shuttle boat service.

* SIPG developed a special meeting mechanism for Yangtze River port development to better align SIPG-invested terminals along the Yangtze River with the home port in Shanghai. Through such a mechanism, the Company extended services to more areas, achieved better economies of scale and efficiency and enhanced business communication, boosting its overall service capacity and influence on customers in the Yangtze River basin.

Shanghai-Wuhu direct alliance route was opened.

In order to implement national strategic requirements and better serve customers and port companies along the Yangtze River, the Company officially opened the direct alliance route between Shanghai and Wuhu on March 28, providing customers with express service between the two cities in 60 hours. The Shanghai-Wuhu direct alliance route is jointly operated by feeder shipping companies, and they share services by exchanging slots on vessels. The 6 feeder shipping companies have commissioned 14 vessels for the Shanghai-Wuhu service in total, providing a weekly capacity of 3,200 TEUs. Instead of operating the route all on their own, the feeder shipping companies use this new model to exchange vessel space, which help to reduce energy consumption, improve the level of services and lower costs. Customers also benefit from this fast, green and efficient logistics channel.



3.1.4 Land-to-waterway conversion continuing to make headway.


In 2019, SIPG actively drove ahead land-to-waterway conversion. On the one hand, the Company opened new routes, such as “Suzhou Wusongjiang Terminal - Waigaoqiao”, “Dushan-Waigaoqiao”, and optimized existing business, such as Dafeng route and Anji inland waterway business. On the other hand, the Company improved alignment among operations and supporting services, with a focus on enhancing intermodal connection, securing vessel slots on mainlines and strengthening communication with the Customs. Research was carried out on establishing a repositioning system of empty containers.

3.1.5 Domestic trade related business was actively promoted.

In 2019, SIPG seized opportunities to promote domestic trade related business with better services. It facilitated major shipping companies to open new routes to and from Port of Shanghai, add additional capacities to existing routes, and carry out South-North line transshipment and Yangtze River transshipment business. The Company also promoted repositioning of empty containers for domestic trade.

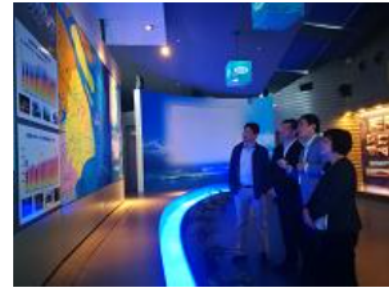
3.2 Optimizing the business environment for port of entry

In 2019, SIPG continued to work on port business environment by introducing the e-B/L for import containers, expanding the e-EIR to both import and export trade, and continuing to improve the feeder service platform and e-DOC platform for the Yangtze River.

 On October 24, Beijing time, the World Bank released the “Doing Business 2020” report, which ranked China 31st in the world in terms of its business environment, 15 places higher than last year. With that, China, for the second year in a row, became one of the 10 economies with the greatest improvements in the business environment, and its ranking in cross-border trade rose 9 places to the 56th in the world.



✚ On April 8, Chen Xuyuan, then Party Secretary of the CPC Committee and Chairman of the Board of Directors of SIPG, accompanied Xu Kunlin, Vice Mayor of Shanghai, in the latter's visit to the Company to discuss how to optimize the business environment for trading across borders. Shang Yuying, deputy secretary-general of the Municipal People's Government and director general of the Municipal Commission of Commerce, Wu Wei, deputy director general of the Municipal Commission of Commerce and Zhang Lin, deputy director general of the Municipal Transportation Commission were also present. Xu Kunlin acknowledged SPIG's achievements, based on which he put forward new requirements to further improve the environment for cross-border trade.



✚ On 24 April, at the 2019 regular meeting with Shanghai Customs, a consensus was reached to further promote strategic cooperation between the two parties with an innovative and reform-oriented mindset. With strong mutual support and cooperation, the two sides would work together to create a safe, efficient, transparent and clean port environment.



✚ On May 9, Chen Xuyuan, then SIPG's Party Secretary and Chairman, was invited to attend and speak at an information session by the Shanghai Customs on the creation of a big data platform to facilitate cross-border trade. The meeting was also attended by Gao Rongkun, Commissioner of Shanghai Customs, and Xu Lirong, Chairman of COSCO Shipping Group. Chen Xuyuan pointed out that ports are critical nodes of cargo trade and shipping logistics, and therefore play an important role in optimizing the business environment for cross-border trade. In keeping with the national strategy, SIPG would commit itself to reform and innovation and make full use of technology innovation. By building the big data platform and facilitating the use of e-Docs as spearhead projects, SIPG would expand the application scope of such projects, explore with block-chain technologies, so as to further optimize port procedures, enhance efficiency while cutting cost, and build a world-class business environment for the port of entry. At the meeting, Shanghai Customs, SIPG, COSCO Shipping Group and Shanghai Customs Clearance Association jointly launched the "Initiative to Build Optimal Business Environment for Trading Across Borders".



3.2.1 SIPG Business Service Center

In August 2015, the SIPG One-Stop Acceptance Portal was created to replace traditional physical counters. An online one-stop acceptance facility, it was designed to provide more convenient, efficient and low-cost submission services for customers. In 2018, SIPG opened online submission for requests to modify export declaration forms, enabling customers with real-name authentication to modify their forms online such as rebooking or port change. Meanwhile, the Portal also allows e-application for pre-arrival procedures by larger import/export container vessels and e-application for such procedures by vessels calling at some of its terminals. Necessary adjustments have been made following the requirements of the Customs to make the portal more intuitive and easier to users.

The one-stop portal was further upgraded in 2019, to accept e-application for pre-arrival procedures at all terminals, e-acceptance and payment of container door adjustment and non-landing VGM weighing, as well as e-application for OOGs and DGs. Better and thorough online services give more convenient and efficient experiences to customers. The introduction of e-B/L for import containers meant that the port of Shanghai became fully paperless in container trade.

In keeping with the principle of “connecting to the future and focusing on services”, the Business Service Center continues to improve its working procedures and models, so as to improve the port business environment in Shanghai.



QR code for SIPG Business Service Center

Paperless Port Procedures

The EIR system, which had been in use for nearly 30 years in the port of Shanghai, went completely online on July 1, 2018, which marked an important milestone in the city’s efforts to become an international shipping center. By now, the e-EIR system has dealt with over 10 million containers.



In 2019, according to the requirements of the Central Government and Shanghai on cross-border trade facilitation, SIPG further optimized its port environment by improving the efficiency of customs clearance and logistics. The e-B/L went fully online on November 6, the last e-Doc launched following the e-EIR and e-loading list. Under the instruction of Shanghai Municipal Office for Port Services, SIPG started a test run for e-B/L in November 2018, and set up a task force to work with shipping companies, shipping agents, customers and other relevant parties to promote the use of this paperless document. A year from then, e-B/L had been expanded to cover all containers in the port of Shanghai.

A paperless port for container trade reduces the hazel for users by making full use of data. It increases the efficiency while reducing logistic costs, making Shanghai a better port for trading across borders.

3.2.2 Building Platforms

The feeder service platform and e-DOC platform for the Yangtze River

In 2019, SIPG optimized the feeder service platform and the e-Doc platform for the Yangtze River, and continued to expand the usage of paperless documents to ports along the Yangtze River. The Company, in accordance with the requirements of the Yangtze River Port Development Meeting, improved the functionality of the feeder service platform by actively coordinating mainline shipping companies' connection to the platform. Meanwhile, feeder operators as well as most coastal and inland terminals were also connected to the feeder platform, to improve the connectivity with their home port of Shanghai. SIPG worked closely with coastal ports and relevant government authorities to expand the use and share experiences concerning paperless documents. As a result, smooth progress was made in introducing the e-EIR to Jiujiang, Wuhu, Yibin, Taicang, Jiangyin and other ports along the river.

E-EIR Platform in the port of Shanghai

Electronic-EIR helps the port of Shanghai improve its efficiency and makes it an information hub. Information technology is used to innovate in port logistics and improve port environment. The platform operates 24 hours a day and 365 days a year, transmitting over 3 million EIR documents daily, or nearly 1.5 billion per year. It has an annual data volume of about 5TB, over 65,000 mobile phone connections and nearly 12,000 PC connections, saving over 400 million RMB *yuan* of cost and increasing the average speed of container land transportation by 24 hours.

Yangtze River Container Intermodal Transportation Service Platform

By establishing unified business processes, data standards and data interface, this platform makes full use of Internet+ technologies and new business models to bring onto one portal the fragmented stakeholders along the Yangtze River, such as ports on major trade lanes and feeder routes, feeder operators, shipping agents and freight forwarders. Through resource sharing, information sharing, business interaction, decision-making based on big data and other technologies, the intermodal platform allows efficient allocation of logistic resources, links navigation channels, hubs and nodes, rivers and the sea, and facilitates direct customs clearance and entry. In total, it connects with nearly 30 Yangtze River and inland waterway terminals, including 7 container terminals in Shanghai.

E-truck Platform

The platform employs mobile Internet to optimize container docking. A real time dashboard of the usage of docks, yards and container truck fleets, it helps terminals and fleets better arrange their machinery and transportation. Centralized scheduling of container loading space, yards, docks and fleets reduces the waste of resources, and achieve optimal allocation of resources. The service platform has more than 2,200 registered fleets with 43,000 container trucks, more than 60,000 mobile APP users, and over 10,000 active daily users. Thanks to the platform, 90% of reservation for dock resources can be fulfilled.

Core Data Center for Navigation and Port Information

An information sharing center based on unified data exchange standards, this platform connects 8 professional container terminals in Shanghai, 14 container terminals along the Yangtze River, as well as quite a few Italian and Japanese ports. It is a one-stop-shop information portal and allows the free-of-charge tracking and inquiry of information concerning ships, containers and cargos on a real time basis, with average daily hits of over one million, or over 300 million hits annually. The data center, which provides visibility into the entire journey of container traffic with a standardized format, has over 145,000 total users and can handle over 140 hits per second during peak hours.

Joint Acceptance Portal of the Port of Shanghai

The portal is a one-stop online acceptance facility for the port of Shanghai, and the first of its kind to be introduced. It can sync information across jurisdictions on a real-time basis and provide a full package of services to users. Over 97% of the service requests can be submitted online, which spares 40% visits to physical offices, 60% of labor cost and close to 90% of carbon emission. It is a role model of using Internet+ technologies to innovate in business models.

3.2.3 Time Limits for Container and Cargo Operations

In order to fulfill the requirements of the CPC Central Committee, the State Council, the CPC Shanghai Municipal Committee and the Municipal People's Government of Shanghai to further optimize the business environment, SIPG focuses on improving operational efficiency, enhancing service quality, and continuously optimizing the port environment with more convenient measures, and has formulated, the *Provisional Requirements on the Time Limits for Container/Cargo Operations*.

1. SIPG's ports operate 24 hours a day and 365 days a year.
2. Changes to the arrival/departure time of vessels caused by the port operator should not exceed 2%; delays in container liner arrival/departure caused by the port operator should not exceed 3%.
3. International transshipment should be completed within 40 hours to enhance efficiency.
4. 90% of container delivery or pickup by trucks should be completed within an hour.
5. Operations of foreign-trade containers (no more than 2,000 TEUs) must be completed within 12 hours after berthing. Operations of foreign-trade containers (no more than 4,000 TEUs) must be completed within 24 hours. Operations of foreign-trade containers (no more than 6,000 TEUs) must be completed within 36 hours. Operations of domestic-trade containers (no more than 1,000 TEUs) must be completed within 12 hours.
6. Upon receiving the approval from regulators and completing all procedures, all customers can apply for import container pickup and make bookings for such services at the SIPG One-Stop Acceptance Portal.
7. Upon receiving the notice for pending customs inspection (of GPs), all customers can make bookings for such inspections at the SIPG One-Stop Acceptance Portal.
8. Containers (of GPs) should be hoisted and moved to designated sites for customs inspection 30 minutes in advance.
9. Stuffing and unstuffing (of GPs) for the purpose of customs inspection should

be completed with a time limit of 3 hours/TEU.

10. Tugboats on-time-performance (OTP) should be over 99%.

11. Over 99% of tallying records should be sent in time.

12. Pilot boarding OTP should be 100%.

3.3 Actively supporting national strategies

3.3.1 Participating in the Belt and Road initiative



New Port Project in Haifa, Israel

Israel is a transportation hub along the “Belt and Road”. In 2015, SIPG successfully won the bid for the right to operate the new Haifa Port in Israel for 24 years and 11 months starting from 2021. The engineering work under the SIPG's responsibility started construction on schedule after the first batch of plots was acquired in July 2018. This marked the beginning of the substantive construction stage of the first overseas project whose construction and operation were entirely carried out by SIPG. In November 2019, SIPG Party Secretary and Chairman Gu Jinshan and Vice President Fang Huaijin went to the construction site of the Bayport project in Haifa, Israel and gave important instructions on project development. Gu said that Chinese enterprises should go out of Shanghai, out of China and go overseas, and should follow the concept of quality first to build projects that last a hundred years. According to the plan, the first phase of the project is scheduled to be put into operation in 2021. The Haifa new port is a landmark project as part of the Company's response to the Belt and Road initiative. It is also an important milestone in the process of achieving the goal of becoming a world-class terminal operator as well as the first port cooperation project between China and Israel. In the future, the new port in Haifa will become a modern terminal featuring advanced technologies, efficient operation and sound environmental protection, and will turn Haifa into an international cargo center.

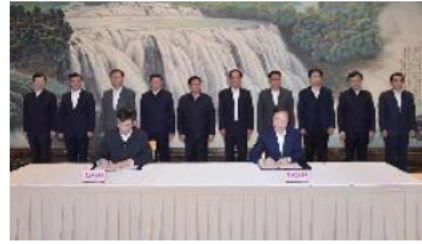


3.3.2 Integrated development of the Yangtze River Delta

Implementing the national strategy for the integrated development of the Yangtze River Delta region is one of Shanghai's three new major tasks. On May 13, the Political Bureau of the CPC Central Committee reviewed the *Outline of the Plan on Integrated Development of the Yangtze River Delta Region*, which marked that the integrated development of the Yangtze River Delta would enter a new stage of high-quality integrated development after it was elevated to a national strategy. On December 1, the CPC Central Committee and the State Council issued the *Outline of the Plan on Integrated Development of the Yangtze River Delta Region*, which clearly depicted the future integrated development of the region. The Outline proposes to focus on enhancing international competitiveness, strengthen the cooperation between Shanghai and Zhejiang in Hangzhou Bay, deepen capital cooperation on Yangshan development between Shanghai and Zhejiang, and expand and strengthen the role of the Shanghai International Shipping Center as a container hub port. The company has taken active actions to fully promote integrated development of the Yangtze River Delta with higher quality.

SIPG and Zhejiang Seaport Group signed a cooperation agreement on comprehensive development of the Xiaoyangshan Port Area

On February 19, SIPG and Zhejiang Seaport Group signed a cooperation agreement on comprehensive development of the Xiaoyangshan Port Area. In order to better support the national strategy and promote the integrated development with higher quality in the Yangtze River Delta, SIPG and Zhejiang Seaport Group have carried out equity cooperation and jointly promoted the comprehensive development of Xiaoyangshan. Li Qiang, Member of the Political Bureau of the CPC Central Committee and Party Secretary of the CPC Shanghai Municipal Committee, Ying Yong, then Deputy Party Secretary of the CPC Shanghai Municipal Committee and Mayor of Shanghai, Che Jun, Party Secretary of the CPC Zhejiang Provincial Committee and Chairman of the Standing Committee of the Zhejiang Provincial People's Congress, and Yuan Jiajun, Deputy Party Secretary of the CPC Zhejiang Provincial Committee and Governor of Zhejiang, and other leaders from Shanghai and Zhejiang witnessed the signing together. Chen Xuyuan, then Party Secretary and Chairman of SIPG, and Mao Jianhong, Party Secretary and Chairman of Zhejiang Seaport Group, signed the agreement on behalf of each side.



International trade container transfer from Dushan Port to Yangshan Port was officially launched.

On July 1, international trade container transfer from Dushan Port to Yangshan Port was officially launched. SIPG Vice President Wang Haijian and Vice Mayor Sheng Quansheng of Jiaxing attended the launch ceremony. The start of the transfer business has realized the localization of customs clearance procedures, greatly reduced logistics costs of businesses, shortened the customs clearance time and tax rebate cycle, enabled diversification of logistics channels, and provided convenience for the transportation of goods in northern Zhejiang and the entire Yangtze River Delta region. On the other hand, it will further optimize the business model of Dushan Branch, enhance its service capacity and comprehensive competitiveness, promote the development of container business with the help of the SIPG brand, and play an active role in advancing the integrated development of the Yangtze River Delta.



Photo: International trade container transfer from Dushan Port to Yangshan Port was officially launched.

Signing ceremony of equity transfer agreement between SIPG and COSCO SHIPPING Ports

On September 18, Gu Jinshan, Party Secretary and Chairman of SIPG, and Yan Jun, Deputy Party Secretary and President of SIPG, attended the signing ceremony of the equity transfer agreement between SIPG and COSCO SHIPPING Ports. Xu Lirong, Party Secretary and Chairman of COSCO SHIPPING, and Fu Gangfeng, Deputy Party Secretary and General Manager of COSCO Shipping attended the ceremony. Ding Xiangming, Vice President of SIPG, and Zhang Dayu, Managing Director of COSCO SHIPPING Ports, on behalf of the each side, signed an agreement on the transfer of equity in some of the Yangtze River terminal assets held by COSCO SHIPPING Ports. This equity acquisition is an important measure for the two parties to continue to deepen the cooperation between port and shipping companies. It is also of great importance to deepening SIPG's Yangtze River strategy, optimizing SIPG's strategic planning along the Yangtze River, promoting development of the Shanghai International Shipping Center, actively implementing the national strategy of integrated development of the Yangtze River Delta, and enhancing regional cooperation in the Yangtze River Delta.



On October 10, Ding Xiangming, Vice President of SIPG, attended the “Focusing on Integration and High Quality, and Supporting the Yangtze River Delta with Finance” event organized by Industrial and Commercial Bank of China, and signed a strategic cooperation agreement on behalf of SIPG. At the event, Ding, on behalf of SIPG, signed the “Strategic Cooperation Agreement on Promoting Integrated Development of the Yangtze River Delta” with ICBC Shanghai Branch to jointly contribute to the high-quality integrated development of the Yangtze River Delta.



Cooperation Agreement on Promoting Integrated Development of the Yangtze River Delta

On November 6, Yan Jun, Deputy Party Secretary and President of SIPG, received a delegation led by Cao Jiazhong, Member of the Standing Committee of the CPC Changzhou Municipal Committee and Executive Vice Mayor of Changzhou. The two sides conducted in-depth communication and exchanges on further implementing the national strategy of integrated development of the Yangtze River Delta and promoting high-quality development of Changzhou. In 2019, on top of road transportation and shipping, Changzhou also focused on sea-rail intermodal transportation of international trade connected to Yangshan Port, providing international trade companies with a variety of transportation options while significantly reducing logistics costs



3.3.3 Development of sea-rail intermodal transportation

In 2019, SIPG together with the subsidiaries of COSCO SHIPPING Group, China Railway Shanghai Bureau and China Railway Container Transport Co., Ltd. established an equity joint venture, Shanghai Port Sea-Rail Intermodal Transport Co., Ltd. to vigorously expand the sea-rail intermodal transport business. Throughout the year, the container throughput of sea-rail intermodal transport of the port of Shanghai exceeded 147,000 TEUs, an increase of 86.1% year on year.

Yan Jun, Deputy Party Secretary and President of SIPG, attended the first shareholder meeting of the JV in 2019 on October 10, spoke on behalf of the shareholder, and put forward requirements regarding the establishment of the new company and work in the next stage. First, the establishment of the JV is an important measure of the four shareholders to actively respond to the nation's call to "win the battle to defend the blue sky" and fulfill the important requirements of the CPC Shanghai Municipal Committee and the Shanghai Municipal Government. After a period of active consultation and careful preparation, agreement was reached thanks to the hard work and expectations of all parties. Second, we must have a deep understanding of the important responsibility on our shoulders, fully integrate the fine resources of each shareholder, make every effort to complete the tasks and objectives set by the shareholder meeting and the board of directors. The third is that the management team must focus on national interests and the overall situation, work together with solidarity, contribute wisdom and strength to the JV's development, and ensure its prosperous growth. Fourth, the JV must develop with speed, give full play to its advantages, have bold ideas, grow the brand, make full use of modern technologies to achieve business model innovation and leadership, and strive to become an industry leader and achieve leapfrog development in the shortest time.

3.3.4 Shanghai International Shipping Center Development

The 13th Five-Year Plan period is the sprint period for the development of the Shanghai International Shipping Center initiative. In order to achieve the national strategic goal of basically turning Shanghai into an international shipping center by 2020 and effectively enhance Shanghai's core competitiveness, the municipal government has formulated the *Three-year Action Plan (2018-2020) for Shanghai International Shipping Center Development*. The action plan puts forward the development goals of Shanghai Port till 2020: Shanghai must basically become an international shipping center with a high concentration of shipping resources, sound shipping services, a good shipping market environment, efficient modern logistics services, and the ability to allocate global shipping resources. The action plan also puts forward six measures: to build a world-class sea and aviation hub, improve the collection and distribution system of the hub, promote green, safe and efficient shipping development, comprehensively upgrade modern shipping services, strengthen coordinated regional port and shipping development, and strengthen support for the shipping center initiative.

3.4 Effective development of business diversification

3.4.1 Financial sector

Bank of Shanghai

We have actively developed diversified businesses and strengthened cooperation with Bank of Shanghai. In 2013 and 2015, we subscribed twice for the private placement of Bank of Shanghai. In November 2016, Bank of Shanghai went listed on the Shanghai Stock Exchange. Since then, we have continued to buy its shares. As of the end of 2019, we directly held 1.179 billion shares of Bank of Shanghai, or 8.30% of the total shares, which makes us the second largest shareholder. Investing in Bank of Shanghai is in line with SIPG's development philosophy of combining port business with financial business, and provides a broader prospect for the common development of and win-win cooperation between both port and financial companies. It is also conducive to promoting the comprehensive strategic cooperation between the two parties, giving play to their respective resource advantages, exploring the establishment of a strategic cooperation mechanism, enabling the strong combination of local port and financial resources, and promoting the coordinated and sustainable development of Shanghai International Shipping Center and International Financial Center initiatives.

Postal Savings Bank of China

In September 2016, we participated in the H-share initial public offering of Postal Savings Bank of China (PSBC) as a keystone investor through Shanghai International Port Group (HK) Co., Ltd. and subscribed for 3.349 billion shares, becoming the fourth largest shareholder. PSBC went listed on the Hong Kong Stock Exchange on September 28, 2016, and afterwards on the Shanghai Stock Exchange on December 10, 2019. We continued to increase holdings of PSBC shares. As of the end of 2019, SIPG directly held 113 million shares of PSBC and indirectly held 3.349 billion shares of PSBC through its wholly-owned overseas subsidiary. The investment in PSBC has a significant impact on the future of the Company. On the one hand, the investment in PSBC brings us considerable and stable financial returns; on the other hand, this investment is in line with the Company's strategic goal of business diversification in recent years, which is conducive to the integration of industrial capital and financial capital, and achieving synergy.



(Photo: IPO of PSBC)

3.4.2 Commercial Real Estate

In order to realize the restructuring of SIPG and further promote the Shanghai International Shipping Center initiative, in 2011, we carried out the overall transformation of "SIPG Zone 14". The project was developed by our subsidiary

Ruitai Development Co., Ltd. and is named “Long Beach Shanghai”. The project covers an area of 55 hectares and has a total floor area of approximately 1,471,600 square meters. It is positioned as an ecological riverfront super complex integrating green space, modern business, leisure, residence and comprehensive supporting services for cruises and yachts. It is also the flagship of the overall upgrading and transformation of Baoshan riverfront. In 2017 and 2018, two real estates of Long Beach Shanghai, namely Shengdongyuan and Guandongyuan were put on the market for sale. In 2019, subscription of the 1,193 Mingdongyuan apartments of the project was officially launched.



3.4.3 Cruise Economy

The Company actively develops the cruise economy, and its water tourism and riverfront commerce re-enforce each other and enjoy joint development. Cruise City has become one of the commercial landmarks of the North Bund. In 2019, 360 cruise ships berthed at the port of Shanghai, with a total number of 1,906,729 inbound, outbound and inland river cruise passengers. Among them, 120 ships of various types berthed at the International Cruise Terminal in 2019, with a total number of 35,295 passengers.

On September 19, the 2019 Shanghai Cruise and Yacht Tourism Festival hosted by the International Cruise Terminal opened at the Cruise Terminal. Gu Jinshan, Party Secretary and Board Chairman of SIPG, attended and addressed the opening ceremony. Gu pointed out that with the support of colleagues in the industry, the Shanghai Cruise and Yacht Tourism Festival had been held for seven consecutive times and had become an important part of the Shanghai Tourism Festival. Through the International Cruise Terminal, SIPG continuously promotes water tourism and derivative businesses to deliver world-class waterfront tourism. SIPG will continue to follow its brand spirit of service, innovation and professionalism, and contribute to the development of Shanghai's aquatic tourism industry and a new waterfront landmark.



4.1 Yangshan Port Phase IV Automated Terminal

On December 10, 2017, the world's largest automated container terminal “Shanghai International Shipping Center Yangshan Deepwater Port Phase IV Project” opened for trial operation. Compared with traditional container terminals, the biggest feature of Yangshan Port Phase IV is the intelligent and unmanned operation during the whole process of terminal handling, horizontal transportation, and stacking yard handling, which is of great significance to reducing terminal operating costs, improving operating efficiency and safety, and realizing green and low

carbon terminal development. The completion and entry into operation of Yangshan Phase IV marks a milestone upgrade of China's port industry in terms of operation mode and technology application. On December 25, 2018, Yangshan Phase IV project passed the national completion acceptance, with an approved berthing capacity of 150,000 tons. The official entry into operation of Yangshan Phase IV plays an active role in expanding opening-up in all respects, promoting the development of Shanghai International Shipping Center, facilitating the implementation of the "Belt and Road" Initiative, as well as serving the Yangtze River Economic Belt and the integrated development of the Yangtze River Delta.

As of the end of 2019, the Yangshan Phase IV terminal had 16 quay cranes, 88 Automated rail-mounted gantry cranes, and 80 automated guided vehicles, with an annual throughput capacity of 4 million TEUs. In the long term, it will be expanded to have 26 quay cranes, 120 RMG cranes, and 130 AGVs, with an annual throughput capacity of 6.3 million TEUs. The Yangshan Phase IV project has a total land area of 2.23 million square meters, with 7 container berths and a total quay length of 2,350 meters for the container terminal. It is currently the world's largest automated container terminal with fully independent intellectual property rights that is completed in a single time period, a model of smart, green, efficient and science and technology empowered port built by SIPG.



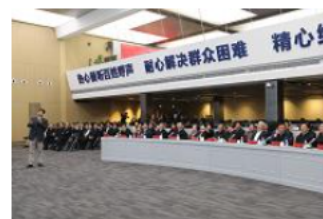
Shangdong Branch achieved a good start to the New Year

In January 2019, Shangdong Branch obtained the port business license formally issued by the Shanghai Municipal Transportation Commission, which marked the terminal's formal entry into the production stage. Shangdong Branch handled a total container throughput of 311,000 TEUs in January, setting a new high since the opening of the port and realizing a good start to the New Year.



Video call with Yangshan Phase IV

On November 20, Ying Yong, then Deputy Party Secretary and Mayor of Shanghai, accompanied a delegation from Tianjin led by Li Hongzhong, Party Secretary of Tianjin, and Zhang Guoqing, Deputy Party Secretary and Mayor of Tianjin, to have a video call with Yangshan Phase IV from the Pudong New Area Urban Operation Comprehensive Management Center. Yin Yicui, Chairwoman of the Standing Committee of the Shanghai Municipal People's Congress, as well as Zhuge Yujie, Secretary-General of the CPC Shanghai Municipal Committee, were also present at the video call, while Yan Jun, Deputy Party Secretary and President of SIPG, gave a presentation on the project. The Tianjin delegation watched the overall production layout, the automated operation procedures and the central control tower of Yangshan Phase IV, and listened to the presentation on the further implementation of General Secretary Xi Jinping's instructions, the construction and operation of Yangshan Phase IV, and the overall business development of SIPG.



4.2 Science and innovation-driven development

SIPG always sticks to science and innovation as the No.1 driving force for its development. Science and technological innovations of SIPG revolve around the actual needs of core business growth. By continuously exploring and delivering innovation projects, the Company keeps upgrading its equipment, effectively addresses technical problems and security issues of cargo-handling facilities and therefore lays a solid technical foundation for the modernization of production. In 2019, with a view to creating a smart, green, hi-tech and efficient port, SIPG went all out to conduct research on blockchain and AI, doubling down on key technologies. Throughout the year, 58 innovation projects were implemented and 29 had been concluded.



Port+Technology: SIPG and Huawei jointly build smart ports

On November 4, Gu Jinshan, Party Secretary and Chairman of SIPG, received Liang Hua, Chairman of Huawei, and held a signing ceremony of Agreement on Strategic Cooperation. According to the Agreement, SIPG and Huawei will form a stable mechanism of cooperation to fully leverage the both parties' competitive edges and influence in their own sector, to explore the application and replication of such technologies as IoT, 5G, C-V2X, AI, cybersecurity, big data and cloud computing in port and shipping businesses, in particular, in the construction of a smart port, and to facilitate the development of shipping businesses and Shanghai's position as an international shipping center through sustained innovation.

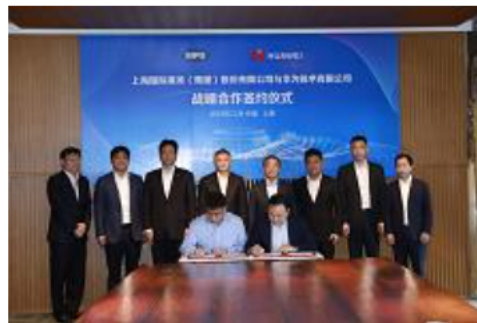


Photo:SIPGHomeland November 7

SIPG wins 6 gold medals at the 3rd China (Shanghai) International Technology Fair.

The 3rd CSITF was concluded in April at Shanghai World Expo Exhibition and Convention Center. Through online pre-elimination and expert assessment on-site, 12 SIPG innovation projects were shortlisted, winning 6 gold medals, 3 silver medals and 3 bronze medals. CSITF gold medals are seen as the highest honor for the contestants. The 6 gold medals fully illustrate the great achievements of SIPG's science and innovation-empowered development strategy.



SIPG wins 6 gold medals at the 3rd CSITF.

4.2.1 Development of a platform for innovations in science and technology

Aiming to constantly improve capabilities in innovation, SIPG stresses the role of tech-center as a mainstay for incubating various platforms of innovation in science and technology (IST) so as to foster a sophisticated innovation system that is people-centric, market-oriented and IURA-involved.

4.2.2 Prioritized IST projects

SIPG accelerates the construction of a green and smart port through prioritized projects. In 2019, the Company participated in seven national and municipal major science and technology projects and completed the initiation work of two projects within the National Key R&D Plan and the Shanghai STI Action Plan frameworks as the lead organization. SIPG, SAIC and Shanghai Mobile jointly launched a demonstration project on operation of smart heavy-duty trucks in Yangshan Port that was listed as a key project of the strengthened partnership between SASAC and Shanghai government to jointly promote national strategies. The project was released and presented at WAIC in late August and at the 2nd CIIE in early November. This was the first project of its kind to realize smart operation of heavy-duty trucks in port areas in a 5G environment, which lays a solid foundation for the further transformation and upgrading towards automated and smart ports.



Gu Jinshan, Party Secretary and Chairman of SIPG, attends the Signing Ceremony of the Framework Agreement on a Strengthened Partnership between SASAC and Shanghai Municipality to Jointly Promote National Strategies.

On September 5, Gu Jinshan, Party Secretary and Chairman of SIPG attends the Signing Ceremony of the Framework Agreement on a Strengthened Partnership between SASAC and Shanghai Municipality to Jointly Promote National Strategies. Li Qiang, Member of the Political Bureau of the CPC Central Committee, Party Secretary of Shanghai addressed the ceremony. Hao Peng, Party Secretary and Minister of SASAC made remarks at the ceremony, and signed the agreement with Ying Yong, then Deputy Party Secretary and Mayor of Shanghai. The ceremony was hosted by Chen Yin, Member of the Standing Committee of the CPC Shanghai Municipal Committee and Executive Vice Mayor of Shanghai. Heads of national and municipal state-owned enterprises (SOEs), officials of municipal departments and district authorities were also present at the ceremony. The Agreement on Strategic Cooperation on the Demonstration Project of Smart Heavy-duty Trucks Operation in Yangshan Deepwater Port was signed by SIPG, SAIC and Shanghai Mobile, which spoke of the commitment of central and local SOEs to national strategies, and to rolling out first the commercialization of 5G-based automated heavy-duty trucks in Yangshan Port for the accelerated development of a world leading smart port.



The world's first demonstration operation of "5G+L4 smart heavy-duty trucks automated driving" kicks off at Yangshan Port.

At 2nd CIIE on November 9, SIPG, SAIC and Shanghai Mobile jointly announced the launch of the world's first demo operation of "5G+L4 smart heavy-duty trucks automated driving" and released its latest development. The project aims to enhance the operation efficiency, cargo throughput, eco-friendliness and security level of the port area, to create outstanding commercial and social value, and to facilitate the transformation and upgrading towards automated and smart ports.





Three platforms for the demonstration project of river-sea intermodal smart logistics

Convergence platform for ports-based river-sea intermodal service

The platform puts together all the information regarding supervision, port logistics and shipping services, covering both regulatory procedures (customs clearance) and logistics services. With information on ships, containers and trucks converged on the platform, we can make the container shipping along the Yangtze River transparent and share information at different points. All participants in the logistics chain, from cargo owners, logistics and shipping companies, freight forwarders and shipping agents, customs staff members to clients, have access to the information system. The river-sea intermodal service convergence platform makes the scheduling and status of containers accessible, dynamic container tracking efficient, container operations more controllable in river-sea intermodal shipping. Therefore, the container terminals and supply chain will become more efficient, and the Yangtze River-sea intermodal service level of Port of Shanghai will improve in an all-round way thanks to the collaborative management throughout the entire process.

Convergence platform for port-city cargo transportation

Innovations have been introduced to the land distribution and transportation system of the port. Dispatching mode switched from “first come, first served” to a reservation-based one that significantly improved congestions in the vicinity of the port area and spared the drivers of the burden to constantly follow the updates of vehicles. With electronic EIRs, drivers can scan the QR-code to get a pass for automated identification and processing from gate-in and loading to gate-out. The system also provides such reservation details as the approximate time of arrival of the truck, as well as the location and amount of cargoes to be loaded, so that port authorities can improve the efficiency of staffing by a large margin. Meanwhile, the transportation management department can also oversee the transportation sector and notify the public of congestions to ease the city’s transport system with the help of the information on registered vehicles and road conditions near the port gathered by the platform.

Smart comprehensive river-sea intermodal service platform for containers

Equipped with progressive concept and advanced technologies of “Internet+port service”, the one-stop service center offers comprehensive services related to international trade containers through Port of Shanghai. Online application and payment are available 24/7 to cater to the clients’ demand for services during nighttime. The new service mode has effectively consolidated resources and become a widely accepted work mode, changing the work time and habits of clients. Waiting time has shortened from half an hour to 3 minutes. At the same time, online application has helped streamline manual work by 40% and labor expense by 60%. Apart from the time and manpower, the online system has also helped cut carbon emissions for transport to and from the port as well as the logistics cost for enterprises.

Smart service is constantly upgraded and optimized to offer a one-stop service center for various parts of the industrial chain, connecting the Port of Shanghai with other ports of entry, terminals, cargo owners and logistics agents, ensuring seamless data connection and sharing, and forging an integrated network for comprehensive services that features online application, reservation, inquiry and payment. With swifter, more convenient and higher quality one-stop services, the platform will contribute to the improvement of the “Doing Business” environment of Port of Shanghai.

4.2.3 IST serving production

SIPG continues to push forward the commercialization and standardization of R&D. In 2019, 31 science and technology projects of 20 affiliates were selected and an outcome report on the latest round of IST work was compiled and published on this basis. Among the projects, one got the 3rd Prize of Shanghai Municipal Award for Progress in Science and Technology, four were granted Science and Technology Award by China Ports and Harbours Association (CPHA). Noteworthy, “Key Technologies and Application of the Smart System and Equipment of the Automated

Container Terminal of Yangshan Deepwater Port Phase IV” won the Grand Prize of CPHA. SIPG also rolled out the drafting or amendments of 3 national standards, 2 industry standards, 3 local standards, 3 association standards and 8 corporate standards.

“Testing ground” for smart yard bears fruit.

In pursuit of the overall SIPG goal to build a green, smart, hi-tech and efficient port, Zhendong Branch proactively explored new driving forces for the development of smart ports and set up a flagship project to showcase its commitment to energy saving and environmental protection. The project “Key Technologies and Engineering Applications of Smart Bilateral-Cantilever ARMG of Large Container Terminals” fulfills the goal of transforming traditional container terminals into automated and smart ones that allows a single staff member to control

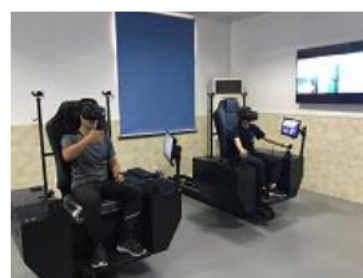


operation of multiple ARMGs, thanks to the design of automated container yards of a port, introduction of smart management and control technologies, as well as smart identification.

After a year since its launch, the ARMG has proved 80% more efficient than a traditional mobile gantry crane on average and actual annual operation volume of the rail-mounted yard is more than twice of the designed yearly throughput, which gives rise to new horizons for enhancing SIPG efficiency. The project has already taken out three new utility patents, namely, collision avoidance devices for ARMG, Flag-based positioning system for heavy-duty ARMG vehicles, and illumination system for ARMG truck lanes.

VR technology for mobile gantry crane operation

The VR simulation system for rubber-tired gantry crane operation was developed by Shanghai Harbor e-Logistics Software Co. Ltd. and was put into use at the education and training center in October. Operators used the VR-enabled system to polish their operational skills and to familiarize themselves with varied scenarios so that machines are better operated and safety awareness is reinforced.



New patents and software copyrights

Taking actual needs of port operations into account, we have advanced innovations in science and technology and accomplished new results. In 2019, we applied for 20 national patents (including 11 inventions and 9 utility models), obtained 6 patents (1 invention and 5 utility models) and 17 software copyright registrations that involved 16 affiliates.

4.3.3 International credit rating

In 2014, SIPG hired Standard & Poor’s and Moody’s to carry out international credit rating. In 2019, Moody’s assigned ‘A1’ to SIPG and the rating outlook is stable, whereas Standard & Poor’s gave ‘A+’ to SIPG with a stable rating outlook.

5.1 Management System

SIPG makes work safety the top priority in its development and operation, and constantly improves the safety management system. In 2019, SIPG strictly followed

the principles of “the CPC committee and the executive leaders sharing the responsibility, one post with dual responsibilities, the CPC committee and the executive leaders jointly taking charge, holding people accountable for dereliction of duty” and “heads of industry, business and production must all be responsible for safety”. Adopting the problem-solving approach and strengthening the safety net for work safety, SIPG focused on the annual work safety objectives and tasks, constantly strengthened the corporate responsibility for work safety and the work safety accountability system covering all employees, and prioritized risk prevention and control and hidden danger detection and management, ensuring smooth and orderly production, and improving work safety management of all affiliates.




(SIPG Homeland May 1)

5.1.1 Standardization of Work Safety

In 2019, SIPG revised and released 16 corporate standards such as the *Container Yard Safety Code* and the *Safe Operating Procedures for Mooring Workers*, adjusted and compiled emergency response plans, and continued to make development of the work safety system a long-term and fundamental work. As regards the implementation of work safety standards, SIPG conducted inspection, supervision and guidance of the implementation of standards in each and every affiliate every six months, reinforcing the foundation for safety management. Each grass-root company continued to strengthen the implementation of work safety standards. By decomposing 16 elements of work safety standardization and implementing them one by one, and incorporating them into their own situation, all grass-root companies established and maintained the work safety standardization system. In this context, the number of affiliates obtaining the work safety standardization certificate continued to rise. As of the end of the year, 34 affiliates were level-1 standardization companies, 9 were level-2 and 4 were level-3. With the development and implementation of work safety standards, the company's safety management system has been strengthened, and the safety management capacity of affiliates continues to improve.

5.1.2 Work Safety Accountability System

In 2019, the SIPG's Safety Committee signed an annual safe production and fire-fighting responsibility protocol with all departments and affiliates to clarify their work safety goals and tasks, and through them with every employee at every level, putting in place the corporate accountability system by assigning work safety responsibility to each post and each employee. At the same time, SIPG formulated and issued the *Implementation Details of the Work Safety Responsibility System for the SIPG CPC Committee and Executive Leaders*, including the scope of work safety responsibility, job description, evaluation and inspection, rewards and accountability for the CPC committee and executive leaders at all levels. SIPG also issued the *Notice of SIPG on Further Strengthening Leaders' Role During Duty Period* to further regulate the requirements for leaders.

 In order to strengthen safety management, fully implement the work safety responsibility system at all levels, and further incentivize employees to be aware of and perform safety responsibilities, Longwu Branch signed the work safety responsibility protocol and a letter of commitment in April with all 929 employees.

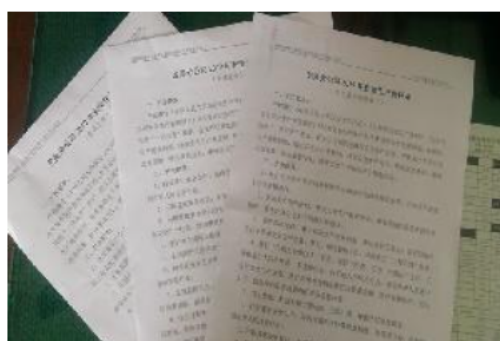



Photo: work safety responsibility protocol and letter of commitment

5.2 Operation Safety

We uphold a people-oriented philosophy, improve the management systems, implement work safety management measures across the board, and continuously enhance supervision to put in place a long-term safety supervision mechanism and create a sound work safety environment for the Company.

 On the afternoon of February 1, SIPG held the first meeting of the Safety Committee in 2019. Chen Xuyuan, then Party Secretary and Chairman of SIPG, presided over the meeting and made an important speech. He pointed out that SIPG must not slacken its efforts in safety work for a moment, and it is a process of continuous practice, comprehension, more practice, and further comprehension in understanding safety work laws. It is imperative that leaders must inspect and implement the safety work on the front line, constantly study, identify and practice objective laws of safety work, so as to greatly improve safety management.



5.2.1 Management and control measures for key dangerous nodes

In 2019, in accordance with the requirements of management and control of work safety risks by levels and hidden danger detection and management, and based on SIPG's 27 management and control measures for key dangerous nodes, all affiliates continued to review their key dangerous nodes, and took strict control measures covering production process, on-site organization, supervision and control. These measures were implemented down to the most basic-level teams and management personnel of relevant departments such as production, technology and safety supervision. Emphasis was laid on the analysis before on-site operations, control during operation and review after operation to prevent recurrent accidents.

5.2.2 Safety technology application

SIPG always regards the upgrade of prevention technologies as an important means of safety management and control, and by increasing the investment in work safety technologies, SIPG improves the safety and prevention technologies and guarantees the safety of production and operation.

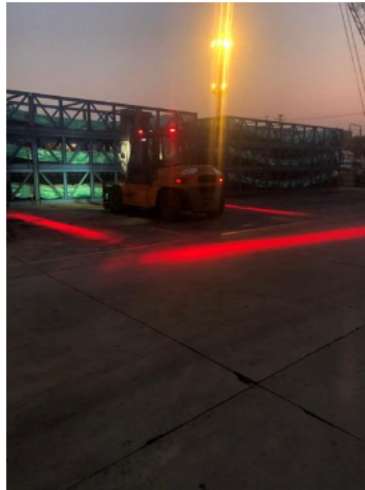
In 2019, projects involving safety technologies included: the installment of additional video monitoring systems for all international passenger and freight terminals, the large-scale forklift perimeter warning project at Zhanghuabang Wharf, the development and application of the safety management system of Zhendong Branch, and the anti-drone intrusion system of Gangcheng Branch, Hudong Branch's forty-foot box for leaky dangerous goods, etc. These projects have improved the Company's safety management and control capabilities in various aspects such as vehicle injury prevention at operation sites, on-site safety management and control, improvement of security capabilities, and emergency handling of dangerous goods containers. In order to prevent the risk of falling from height, SIPG instructed ships with such risks to take temporary prevention measures, and required shipping companies engaged in container transportation to improve the safety of all fixed guardrails and lashing channels when arranging repair of ships so as to completely eliminate the risk of falling from height during the loading, unloading and lashing of containers. In terms of the safety hazards of falling from height and human-machine hybrid operations that require workers to place stack cones and twist locks on top of container barges, SIPG conducted research and proposed to place the lock on the side of the vehicle by using self-hanging bottom-mounted safety stack cones and semi-automatic twist locks. The method will be promoted after the experiment.



(DDG-A30 UAV Spectrum Detection System, DDG-M20B Fixed Anti-drone System)



(Box for Leaky Dangerous Goods)



(Large Forklift Perimeter Warning)



(Installing additional video monitoring systems at all international passenger and freight terminals)



(Information Platform of Zhendong Branch)

9. Information platform boosts safety management efficiency

The work safety information management platform of Luojing Branch was launched on a pilot basis in January. It accesses on-site management data from mobile phones and computers, and monitors the trajectory and speed of machinery in the port in real time. It can remind and intervene in improper operation of drivers to ensure that the road safety in the port is better under control. Compared with the same period last year (without using the management platform), 23% more on-site safety inspection points are checked with a 43% increase of efficiency in safety hazard detection.

(Photo: Information platform boosting safety management efficiency)



Photo provided by Luojing Branch: Information platform boosting safety management efficiency

5.2.3 Seasonal work safety Typhoon and flood prevention

In accordance with the requirements of the *Notice on Typhoon and Floods Prevention in 2019*, all production units of SIPG earnestly fulfilled their

responsibilities and took various typhoon and floods prevention measures.

Fight against Typhoon Lekima

The super Typhoon Lekima landed in Wenling, Zhejiang Province on the early morning of August 10. The Shanghai area was affected with heavy storms and rain for several days. Under the unified leadership and deployment of SIPG, major port areas and production units attached great importance to it, and all employees were united and calmly responded. Production and operation remained stable and orderly as a result of various anti-typhoon measures.

>> Overall Planning



>> Port-wide Action



▲ SGICT rubber- tired gantry crane



▲ Container warehouse-winding ropes for all blocks



▲ Puyuan Branch-checking and reinforcing large equipment



▲ Longwu Branch-reinforcing gantry crane

>> Resumption of work



▲SMCT-removing anchoring device after typhoon left



▲The commando working on the frontline

5.2.4 Management and control of dangerous goods and key dangerous operations

In 2019, the port handled a total of 800,684 TEUs of dangerous goods, accounting for 1.8% of total container throughput of the year and a decrease of 4% year on year. Fireworks and firecrackers were 49,286 TEUs, representing 6.2% of the dangerous cargo containers, a decrease of 4.5% from the previous year. In 2018, the Safety Committee Office of SIPG sorted out the relevant safety management specifications and standards for dangerous goods containers and compiled them into a red book -- the *Safety Management and Operation Manual for Dangerous Goods Containers*.

In 2019, all relevant affiliates engaged in dangerous goods operations earnestly followed the requirements of the *Safety Management and Operation Manual for Dangerous Goods Containers*, strictly implemented the policies and safety measures in every link of their operations, and kept the safety of dangerous goods operations under control.

5.2.5 Ship safety management

All ship-owning SIPG affiliates strictly followed the requirements of the ship safety management system and port security rules, earnestly implemented the *SIPG Ship Safety Management Regulation*, practiced the captain accountability system, strengthened safety training and emergency drills of crews, and conducted safety inspections of ship machinery and fire fighting facilities, ship pollution prevention, ship emergency response facilities, and personnel embarkation and disembarkation. Efforts were made to formulate and implement plans for safe navigation on key routes and ships involving key operations, step up communication between the shore and ships, and implement the daily ship location reporting system, with 4 times of location reporting for key ships. SIPG also continuously strengthened the dynamic monitoring of operations including narrow waterway navigation, heavy-lifts transportation on the sea, ocean towing, large ship un-docking, and floating crane operations.

SIPG's Marine Supervision Office tracked and monitored 35 key and difficult ship operations, including the return of SIPG Logistics' vessel "Logistic Pioneer" from Abu Dhabi, assistance performed by Yangtze River Branch's "Jihai Yongqiang" vessel in the rescue operation of the "Venus Kobe" vessel at the Lyuhuashan anchorage and the Yuanyuansha anchorage, fire-fighting operation of ship "Shengtai" assisted by the Fuxing Branch's tugboat in the Lyuhuashan Port Area, towing of the SIPG Logistics' Gongqing Branch's "Xiangyang No. 8" to the Qidong Dockyard in Jiangsu Province for emergency repair, and towing of "Tianshan No. 1" large dock by Fuxing Branch's "Haigang 21", "Haigang 42" and "Haigang 56". SIPG's Marine Supervision Office carried out 43 safety inspections of ship-owning affiliates with 107 vessels inspected. The inspections focused on emergency drills, fire fighting, pollution prevention, machinery and equipment, safety facilities, crew safety training, and implementation of seasonal safety measures. The results were generally good.


 In June, the Shanghai Maritime Safety Administration conducted an annual DOC review of the documents and implementation of the ship safety management system (SMS) of Fuxing Branch, which was granted the approval to keep its Document of Compliance (DOC). With high standards and strict requirements, Fuxing Branch has continuously improved the management level of the ship safety system, and has played an active role in promoting and regulating tugboat towing operations, major operations and rescue operations.



Photo: Fuxing Branch passing the SMS review

5.2.6 Building a safe transportation and fire-fighting environment

In 2019, SIPG established and improved the fire safety responsibility system, with the focus on the inspection and management of fire hazards and fire drills, and effectively performed fire safety responsibilities.

Throughout the year, the Company performed 1,355 fire safety inspections including those for 67 ships and 515 potential fire hazards of various types were detected and rectified. Door-to-door fire safety supervision and inspections were carried out in the key fire-fighting affiliates as well as those with high fire risks and sources of major hazards. 314 fire-fighting training programs were held with the participation of 17,511 people. As a result, the “four abilities” of fire safety of all affiliates have been strengthened. In addition, the full-time fire brigades of all affiliates strictly followed General Secretary Xi Jinping’s requirements of “loyalty to the Party, strict disciplines and whole-heartedness in serving the people”, and actively carried out daily training and drills, so as to continuously improve the fire fighting and emergency rescue capacities.



(Photo: Series activities 1 on the Fire-fighting Day at SMCT)

5.3.2 Safety Training

SIPG has always been committed to strengthening work safety education and skills training to prevent accidents, and creating and promoting a corporate culture of safety to improve employees’ awareness. In 2019, the Company's Safety Committee Office organized five training courses for safety department heads and safety officers, with a total attendance of 340 people. It also organized 29 safety training courses for on-site managers of SIPG’s four business units, including container, bulk cargo, logistics and storage, and shipping with a total attendance of 1,040 people. Four specific training courses on storm and flood prevention and control were organized for 104 duty managers and directors of dispatch centers. 195 new employees received pre-job safety training. 29 selected safety managers participated in a training program on “Dual Prevention Mechanism of Safety Risk Classification and Control and Hazards Review and Management (New Policies and Regulations Interpretation)” organized by the Ministry of Transport.

In June, a “Work Safety Month” campaign was rolled out companywide with the

theme of “containing risks, eliminating hazards and preventing accidents”. During the campaign, the top leaders of SIPG’s affiliates gave public lectures on work safety for their employees. The executives reached out to frontline workers and drove home to them the importance of work safety through face-to-face communication. Emergency drills on storm and flood prevention, dangerous goods leakage and fires were carried out. Case studies of accidents were disseminated for educational purpose and work safety contests were organized. Shanghai Port Pilot Administration Station, Fuxing Branch and Shangdong Branch qualified for the second round of Shanghai Work Safety Contest and Shanghai Port Pilot Administration Station won the championship of the contest.

In 2019, a total of 146,690 employees received safety training, a year-on-year increase of 39.7%.

5.3.3 Emergency Management

We constantly enhanced crisis management capabilities and risk preparedness to respond to all kinds of emergency events. In line with the Company’s Contingency Plans for Work Safety Accidents and the general requirements on emergency management, we refined the emergency management system as well as prevention and handling mechanisms. In light of the nature of operations and realities on the ground, essential emergency supplies were deployed. We focused on emergency management training and emergency response coordination among affiliates. Targeted emergency drills were carried out to help fine-tune contingency plans. In the event of extreme weather conditions, emergency duty service and reporting mechanisms ensured our timely and effective response to all kinds of emergencies.

In 2019, the major operational affiliates of SIPG carried out 472 exercises on storm and flood prevention, 135 exercises on leakage of dangerous cargo containers, and 171 anti-terrorism drills, which significantly improved our emergency management capabilities. Gangcheng Hazardous Goods Logistics Company handled the scattered dangerous goods falling from a road accident on December 5, 2018, and the leakage of dangerous goods from a collision accident on Donghai Bridge on June 20, 2019. In cooperation with relevant government authorities and organizations, Yangtze River Port and Logistics helped to cope with a fire accident that erupted in a charcoal powder container aboard “Venus Kobe” liner. Zhendong Branch successfully salvaged 42 damaged containers aboard ANL Gippsland. Shangdong Branch assisted Yangshan Public Security Bureau in handling fallen containers on Donghai Bridge on September 12.

In 2019, according to the requirements of the municipal government, the grassroots emergency management unit based in Yangshan port area coordinated the evacuation work of non-essential personnel when four typhoons hit Yangshan Islands. A total of 6,218 people were evacuated.

5.4 Occupational Health

In accordance with SIPG's *Measures for the Management of Occupational Health*, the Safety Supervision Department of the Company gives guidance to all grassroots affiliates, specifying the requirements for occupational health management and overseeing the formulation of relevant rules and regulations by each unit. Affiliates, where employees are exposed to potential risks, but the type, nature and severity of exposures have not been reviewed by professional organizations, are required to engage qualified occupational health service providers to evaluate and identify occupational hazards and develop occupational health records for exposed employees accordingly. In 2019, 16 such affiliates hired qualified occupational health service providers to conduct evaluations. Based on the evaluation reports, these affiliates closed the identified risk management loopholes and kept on file these reports for further reference.



Work Safety Accident Statistics

	2017	2018	2019
Fatalities	1	1	0
Severe injuries	1	0	0

6.1.1 Staff composition

As of December 31, 2019, SIPG had 14,650 employees (branches, internal departments, wholly-owned subsidiaries and holding and joint-stock companies whose human resources are managed by SIPG included), of which 692 were technical professionals and managerial personnel. The number of executive (from SIPG HQs and secondary affiliates) managed and appointed by the Company was 206, of which 18 are women.

【Staff composition】

Year	Number of staff	Gender		Ratio	
		Male	Female	Male	Female
2017	17,213	14,514	2,699	84%	16%
2018	16,366	13,713	2,653	84%	16%
2019	14,650	12,177	2,473	83%	17%

Educational background of employees

Educational background	Number of staff in 2017	Number of staff in 2018	Number of staff in 2019
Postgraduate and above	395	441	419
University undergraduate	5,067	5,332	4,666

Junior college	4,975	4,787	4,461
Secondary vocational education	2,819	2,633	2,397
High school and below	3,957	3,173	2,707

Specialty composition

Specialty composition	Number of staff in 2017	Number of staff in 2018	Number of staff in 2019
Engineering technicians	2,398	1,804	1,822
Accounting staff	480	441	445
Economic staff	3,893	3,919	3,812
Administrative staff	373	378	369
Other technical professionals and managerial staff	1,105	1,105	692
Operators	8,964	8,719	7,510

6.1.2 Employee recruitment

We adhere to the principles of “openness, fairness, justice”, “two-way selection, merit-based admission”, “equal employment policy with no ethnic, racial, religious, sex or age discrimination” In 2019, the Company recruited 304 new employees, of whom 206 were fresh graduates, which aimed to reserve talent for the Company's development.

We are committed to creating a sound working environment. In case an employee resigns, the Company will by no means restrict his/her choice of a new job, nor will it in any way restrict the employee's personal freedom or impose labor. In 2019, 199 employees left the Company, with a turnover rate of 1.2%.

6.1.3 Employee Shareholding Program

The Company has been actively exploring the advancement of mixed ownership for a long time, and researching employee equity incentive schemes and implementation. In June 2014, the CSRC issued the *Guidance on the Implementation of Employee Shareholding Program Pilots for Listed Companies* (hereinafter referred to as the “Guidance”). Through repeated discussion and deliberation, the Company decided to pilot the plan in accordance with the spirit of the Guidance and related regulations, actively promote and deepen the development of mixed ownership, implement the Employee Shareholding Program, and establish a long-term mechanism for employee shareholding. After the review and approval by the Board of Directors and the General Meeting of Shareholders, and with the approval of the CSRC, the Company implemented the “SIPG Employee Shareholding Program 2014” in June 2015 through private placement. The Company issued 418 million shares to employees at a price of 4.18 *yuan* per share. 16,053 employees participated, accounting for more than 70% of the total. The subscription of directors, supervisors and executives of the Company accounted for about 1% of total shares in the employee shareholding program. The program was widely applauded by employees with a high level of participation, which demonstrated employees' confidence, from management level to ordinary staff members, in the future development of the Company. Meanwhile, a closer community of shared interests has been formed

between employees and the Company, both sharing responsibilities and blazing new trails together. This also sets a benchmark for the mixed ownership reform of state-owned enterprises.

In June 2019, the Employee Shareholding Program completed a divesting of the first 50% of the Company's shares it held, with a yield of approximately 86.8% (dividends over the years included). At the same time, the Company completed its 2018 profit distribution at the end of June, with a dividend of 0.154 *yuan* per share, and the remaining 50% of the shares held by the Employees Shareholding Program brought employees a total cash dividend of 32.224 million *yuan* for the year.

6.2 Protection of rights and interests

SIPG adheres to a people-oriented approach. We respect and protect the legitimate rights and interests of employees, strictly abide by the *Labor Law*, the *Labor Contract Law* and the *Trade Union Law* of China, pursue an equity-based non-discriminative employment policy, treat employees of different ethnicities, genders, religious beliefs and cultural backgrounds in a fair and equitable manner, with no discrimination on gender, post or community, and strictly prohibit child labor, forced labor and discrimination.

6.2.1 Working mechanisms of trade unions

We respect the rights of employees to participate in trade unions and engage in collective bargaining, and all affiliates have established trade unions, with 39 level-2 trade unions under SIPG in 2019 and 100% employee participation.

During 2019, the Company focused on improving the employee congress system and further expanding the ways for employee representatives to perform their duties such as organizing employee representatives reach-out activities, soliciting proposals from employee representatives, and promoting grassroots units to hold briefings on company affairs.

| Signing of labor contracts

We subject corporate behaviors to relevant national laws and regulations, and employees sign labor contracts with Company on a voluntary basis. The Company's labor contract signing rate was 100% in 2019.

| Collective negotiation mechanism

In 2017, the Company's employee representatives signed the Collective Contract 2017-2019 and three special collective agreements on employee wages, labor safety and health and the protection of special rights and interests of female workers, which effectively protected employees' rights and interests. On January 9, the Company held a collective consultation meeting where representatives of the managerial side and the employee side had a serious consultation and heated discussion around the "2019 Special Collective Agreement on the Wages of SIPG Employees". Yan Jun and Zhuang Xiaoqing, as the chief representatives of the managerial side and the employee side respectively, elaborated on their opinions and reached an agreement. The two sides agreed to submit the amended agreement to the Third Session of the Third SIPG Employee Congress for deliberation and voting. The collective consultation fully embodies the Company's philosophy of "harmony, consultation for common growth, shared responsibility and benefits for all". The coverage rate of the Collective Contract signed between the managerial side and the employee side

reached 100%.



Yan Jun, Deputy Party Secretary and President of SIPG, and Zhuang Xiaoqing, Chairman of the Company's trade union, signed the "2019 Special Collective Agreement on Wages of SIPG Employees" at 3rd Session of 3rd SIPG Employee Congress.

6.2.2 Women employee committees

We protect the rights and interests of women employees by establishing women employees' committees, and our headquarters and second-tier affiliates have all established such committees or commissioners women employee affairs. In accordance with the *Law of the People's Republic of China on the Protection of the Rights and Interests of Women* and the *Measures for the Labor Protection of Female Employees in Shanghai*, the Company has been implementing special collective contracts for female employees since 2008 to ensure the safety and health of female employees. In 2019, the Company continued to implement agreements to effectively safeguard their legitimate rights, interests and special interests.

We care for women's health and have a 100% gynecological screening rate. The Company's headquarters and affiliates actively organize activities suitable for female employees, giving them special care and assistance.

6.2.3 Contracting workers

We fully respect the position and role of contracting workers in the process of value creation. We effectively improved and protected their legitimate rights and fundamental interests, and provided them with real care and assistance by analyzing their needs at different development stages.

At the end of 2019, there were 16,587 contracting workers who undertook a portion of the Company's production work and made important contributions to the construction and development of the Port of Shanghai.



(Photo: SMCT serving soup dumplings to contracting workers at the Lantern Festival)



(Photo: SGICT organizing health checkups for project contractors in 2019)

6.3 Democratic management

We support collective consultation by employees on rules and regulations or major matters of immediate interest to them, such as workplace disciplines, insurance benefits, leaves and holidays, and take appropriate risk assessment measures in all business activities to support these rights. The Company has established a system of trade union and employees' congress at all levels, and adheres to and improves democratic management systems at grassroots level such as employee congress and disclosure of information on factory affairs.

Employees' congress

The Company implements the powers and functions of the employees' congress in strict accordance with the *Regulations of the Shanghai Municipality on Employees' Congress*, and guarantees that important matters of immediate interests to employees shall be deliberated and approved by the employees' congress before they are determined, thus safeguarding the employees' rights to information, participation, expression and supervision, and effectively protecting their democratic rights.



Employee representatives participate in the discussion and make suggestions for the development of the Company.



Recognition of the Company's outstanding individuals and teams, excellent contracting workers and model units for 2018.



Employee representatives vote on meeting documents.

6.4 Education and training

We regard talent as the core competitiveness of the Company, and insist on strengthening development of the employee education and training system. The Company makes annual plans for employee education and training, and uses earmark funds in accordance with relevant regulations. In 2019, the Company invested 12.4 million *yuan* in training, with a total of 74,148 people trained.

	2017	2018	2019
Total investment in employee training (Million <i>yuan</i>)	12.43	11.77	12.40
Total number of employees trained (number of person)	72,032	61,532	74,148

In 2019, the Company continued to promote the education and training of employees. It firmly stuck to the principle of "be pragmatic and adapt to real situations", matching the needs of organizations, positions and individuals and delivering targeted training programs. We effectively resolved the conflicts between the production needs of grassroots units and education and training programs through a variety of training forms such as centralized classes, joint classes and door-to-door

teaching.

SIPG Education and Training Center is the main entity in charge of employee training, with 20 internal lecturers and 102 external ones. It held 633 training sessions of all kinds throughout the year, with 24,013 attendances, as well as two orientation programs for new recruits of 2019, with more than 200 people trained.

Resource category	Consumption		
	2017	2018	2019
Diesel fuel (tons)	94,507	88,873	86,556
Fuel oil (tons)	66,879	74,100	55,296
Electricity (MWh)	406,210	410,220	473,960
Water (1,000 m3)	4,490	4,550	4,540

7.1. Energy conservation and emission reduction

Survey indicators	2017	2018	2019
Direct energy consumption (tons of standard coal) (Fossil fuels, such as coal, oil, gas, etc.)	299,290	307,711	278,833
Indirect energy consumption (tons of standard coal) (Electricity, steam, etc. purchased)	117,598	118,520	136,886


	2017	2018	2019
Combined energy consumption (1,000 tons of standard coal)	417.0	430.0	420.0

The formulation and implementation of energy conservation and emission reduction measures is a solid foundation for the Company to always maintain low-carbon management. In 2019, the Company accomplished its annual targets in energy conservation and emission reduction. Major projects included launch of the construction of shore-based power supply, the research and application of oil-electricity hybrid power train technology on 39 tire cranes, and the completion of expanded green LED lighting application. By the end of the year, LNG had been used on 90% of the Company's infield container truck tractors, and the proportion of hybrid power train RTG reached 87%.

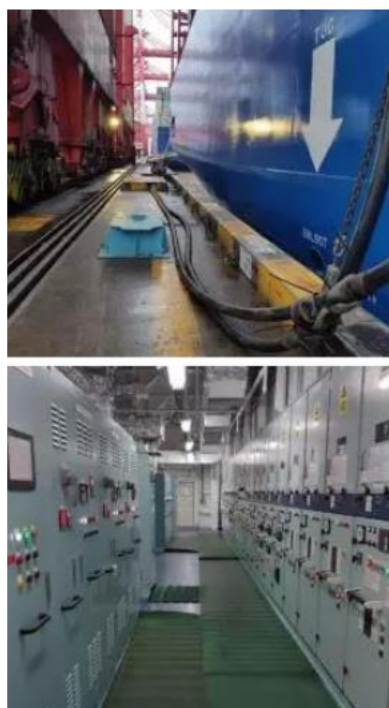
In 2019, SIPG-led national key R&D projects, namely "Technology and Demonstration of Air Pollution Emission Control of Ships" and "Application Research and Demonstration of Shore Power", successfully completed all research tasks and passed the mid-term implementation inspection and evaluation organized by the Ministry of Science and Technology. Acceptance of the projects will be implemented in the future.

Pursuant to the *Shore Power Development Plan of the Port of Shanghai*, the

Company rolled out its shore power projects in a centralized manner. Development plans of such subsidiaries as Pudong, Zhendong, SECT, SMCT, SSICT, SGICT and Haitong had completed the filing procedures, and all projects would have been finished by the end of 2020.

 **Shanghai Guandong International Container Terminal succeeded in charging a 20,000-TEU ultra-large container ship with shore power, a first in the world.**

In January, Guandong successfully supplied shore power to “COSCO Sagittarius”, a 20,000-TEU ultra-large container ship, and the charging lasted for 6 hours with a total of 13,200 KWh. It was the first time in the world that this class of ultra-large container ships was successfully charged with shore power, which indicated Guandong’s world class technology and engineering support capabilities in connecting high-voltage variable frequency shore power to vessels, and demonstrated the Company’s technological achievements in transformation of port facilities. SIPG has made positive contributions to China’s development of green ports and promotion of energy conservation and emission reduction.



(Photo: SGICT successfully connects shore power to ultra large container ships first in the world.)

8.1 Commitment to charity

Our vision about giving back to society has shifted from obligation to “active responsibility”. We encourage our employees to participate in various charity activities of the Company as volunteers, so that commitment to charity is translated into each and every employee’s actions and becomes a fine tradition of the Company. At the same time, this sense of corporate social responsibility is gradually transformed into our employees’ sense of citizenship, and this kind of enthusiasm and love is expanding to more places.

Staying true to our initial aspiration and filling SIPG with love

The year 2019 marks the 22nd anniversary of SIPG’s “8.15” Love Foundation and SIPG’s 23rd “8.15” charity event. All employees of the Company embraced the vision of “developing themselves and giving back



to society”, and in a warm atmosphere of passing love to those in need and building harmony, they actively demonstrated their love with generosity.

In 2019, the Company had 45 entities and 29,112 employees (including 13,789 contract workers) participating in the donation to raise a total of 4,985,200 *yuan*. In 2019, the “8.15” Love Foundation disbursed a total of 6,129,700 *yuan*, including 262,000 *yuan* for 59 students, 824,500 *yuan* for 1,101 people covered by the “targeted poverty relief” program, 4,955,600 *yuan* of one-time assistance for 1,634 people, and 87,600 *yuan* for teachers and students in 4 paired elementary schools in Guizhou and Yunnan provinces for participating in the program “ONE-DAY TOUR IN THE HARBOR”.

| Targeted poverty alleviation

We actively adhere to and serve the national strategy of “resolutely winning the fight against poverty”, implement the work plan of “a hundred enterprises helping a hundred villages” by Shanghai municipal government and the State-owned Assets Supervision and Administration Commission, and work in an orderly manner to help our paired poverty alleviation villages: Buka village of Kuangshan town and Banpo village of Malu township, Huize County, Qujing City, Yunnan Province. The Company has solidly set three assistance goals: first, to earnestly fulfill the social responsibilities of a state-owned enterprise and strive to make positive contribution to the implementation of the national strategy; second, to focus on the poverty alleviation goal and strive to achieve full poverty alleviation in the paired regions; third, to promote continuously growth of the paired regions and improve the quality of their development.

On December 27, 2018, SIPG signed the “village-enterprise pairing framework agreement” and the “village-enterprise pairing project plan” with Buka village of Kuangshan town and Banpo village of Malu township, Huize County, Qujing City, Yunnan Province respectively, to establish the pairing partnership and carry out targeted paired assistance actions.

In 2019, a series of assistance actions were carried out in an orderly manner. In January, the first assistance program “warm the mountain villages with love” was launched. Winter clothes and cotton shoes prepared by the Company were distributed to poverty-stricken students of villagers’ primary schools, allowing 215 students to put on new clothes and shoes to pass the winter in warmth. In February, the two elementary schools in Banpo and Buka villages in Huize County started to benefit from our nutritious breakfast project which provided their 190 students with warm breakfast including milk and eggs every morning. In May, according to the 2019 assistance project proposal for Malu township and Kuangshan town provided by the Huize County Poverty Alleviation Office, the Company’s poverty alleviation project team discussed and agreed to implement an assistance project for Malu township: to build a boarding building for Buka’s primary school and a village-level clinic; as well as an assistance project for Kuangshan town: to build five units of cement concrete pavements for village roads. In July, we gave Banpo’s primary school teaching facilities and equipment such as all-in-one computers, electronic whiteboards, a campus broadcasting system, reading room tables and chairs, laboratory cabinets and instrument racks. In August, 17 outstanding students and teachers from Tongsun Hope Primary School in Changshun County and Shuili Hope Primary School in Libo County, Guizhou Province, as well as from Banpo Primary School and Buka Primary School in Huize County, Yunnan Province, were invited by the Company to visit Yangshan Deepwater Port, Shanghai Port History Museum, North Bund Greenspace, Shanghai Museum and Shanghai Children’s Library, watch the SIPG football club’s home match, participate in a charity get-together, and play in the Magic Jungle with children of SIPG employees, enjoying a happy and fulfilling holiday .



SIPG cadres went to Yunnan Province for poverty alleviation work in villages

According to Shanghai Municipality’s “double hundred” village-enterprise pairing targeted poverty alleviation work plan and SIPG’s established roadmap and timetable, in 2019, two cadres of the Company, Mei Xiaodong and Shi Yan, stationed respectively in two poverty-stricken villages, namely Banpo village of Malu township and Buka village of Kuangshan town under the jurisdiction of Huize County, to carry out targeted poverty alleviation coordination and ensure the high-quality completion of various poverty alleviation projects, so as to help impoverished people in the paired regions to achieve a well-off society together with the whole country by 2020.



Residences and roads of local villagers



Banpo pupils put on a red scarf for Mei Xiaodong, a cadre stationed in the village.



Buka pupils hold certificates of merit and are eager to take a photo with their elder brother Shi Yan.



Pupils hold the warm breakfast provided by SIPG and bloom with happy smiles.



According to the construction assistance plan, this classroom will be built into a multimedia classroom, so that children in the mountains can see the “outside world” more easily.



The village pavements construction project in Banpo, which directly benefits the transportation of production materials and everyday travel of the villagers, was successfully completed during the year, improving greatly the road facilities in the village and optimizing effectively the living environment of the mountain village. The project, featuring a total length of 5.96 kilometers, an average width of 3.55 meters, 107 sections of roads giving direct access to households, and an investment of 1,142,900 *yuan* from the Company, was completed and put into use on schedule. All the villagers used the word “happy” to express their high recognition and praise for the implementation of the project.

(SIPG Homeland November 29)

Pavements before and after the project implementation



8.2 Social activities

| SIPG football team

We pay attention to the development of urban sports and actively participate in various sports events and activities organized by Shanghai. SIPG completed the overall acquisition of Shanghai East Asia Football Club in 2014 and began to get involved in the football business. This is not only a part of SIPG's endeavors to develop itself, give back to society, actively fulfill its social responsibilities, and participate in Shanghai's urban construction and sports development, but also an important attempt to further engage in the sports industry in the context of China's accelerated development of sports industries, especially the football industry. SIPG is fully responsible for the management and operation of the club, and will focus on long-term development, with an aim to transfer the management experience of SIPG group to the club, and after several years of steady development, to explore the club's profit model and build it into a football club featuring first-class sports performance and a positive image. In the 2019 season, SIPG F.C. overcame numerous difficulties and won the Super Cup and the third place in the Chinese Super League, showcasing a good spirit.

In the future, SIPG will always firmly cultivate the football culture of SIPG F.C., pass on the positive energy of Shanghai, and assume its social responsibility towards Shanghai's development. As the motto of the club goes, "positive energy in Shanghai embracing infinite future", looking forward, SIPG will strive to bring more glory for the city of Shanghai!

2019 CFA Super Cup champion

On February 23, SIPG football team won the 2019 Chinese Football Association Super Cup with a 2-0 victory over its opponent, marking the second trophy of top-level tournaments won by the first team in the club's history.

