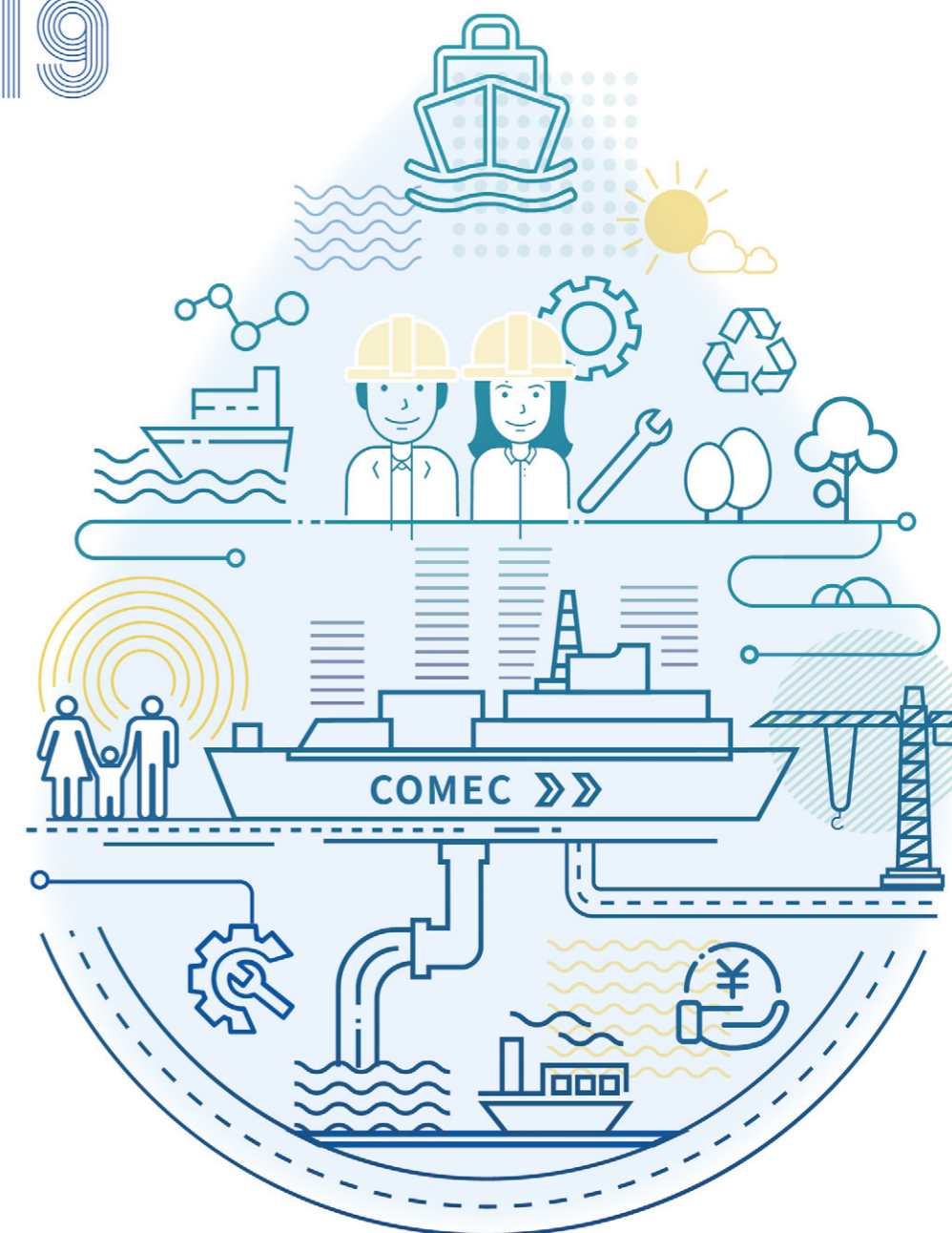


COMEC

Social Responsibility Report

2019



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ABOUT THIS REPORT

This report is the twelfth social responsibility report issued by CSSC Offshore & Marine Engineering (Group) Company Limited. This report is addressed to all stakeholders of CSSC Offshore & Marine Engineering (Group) Company Limited, and its purpose is to describe the Company's concept of sustainable development and disclose the opportunities and challenges faced by the Company in creating values together with its stakeholders, the measures adopted by the Company to achieve sustainable development and the results.

The board of directors (the "Board") is fully responsible for the Company's environmental and social strategies and reporting, and has reviewed and approved this report.

Time Frame

Unless otherwise stated, the period covered by the information and data in this report is 1 January 2019 to 31 December 2019 (the "Reporting Period"). As some statistical data are related to continuity and comparability, some contents in this report will be extended as necessary.

Scope of Report

This report provides the information and key performance on the sustainable development work of CSSC Offshore & Marine Engineering (Group) Company Limited and its subsidiaries during the reporting period, including Guangzhou Shipyard International Company Limited and CSSC Huangpu Wenchong Shipbuilding Company Limited during the Reporting Period.

Basis for Preparation

This report is prepared in accordance with the Guiding Opinions on the Performance of Social Responsibilities by Central State-Owned Enterprises issued by the State-owned Assets Supervision and Administration Commission of the State Council of the People's Republic of China, the Environmental, Social and Governance Reporting Guide (the "Environmental, Social and Governance Reporting Guide") set out in Appendix 27 to the Rules Governing the Listing of Securities (the "Main Board Listing Rules") on The Stock Exchange of Hong Kong Limited (the "Hong Kong Stock Exchange") , and the Notice on Strengthening the Fulfilment of Social Responsibilities by Listed Companies and Publishing the Guidelines on Disclosing Environmental Information of Companies Listed on the Shanghai Stock Exchange issued by the Shanghai Stock Exchange. In addition, references were also made to the Sustainability Reporting Guidelines issued by the Global Reporting Initiative (GRI Standards) and the Guidelines for Special Equipment Manufacturing Industry set out in the Guidelines for the Preparation of Social Responsibility Reports by Chinese Enterprises (CASS-CSR 3.0) issued by the Research Centre for Corporate Social Responsibility, Department of Economics, Chinese Academy of Social Sciences in the preparation of this report.

The reporting principles summarised in the Environmental, Social and Governance Reporting Guide, being materiality, quantitative, balance and consistency, have been adopted in the reporting practices of the Company. This report complies with the "comply or explain" provisions set out in the Environmental, Social and Governance Reporting Guide. For detailed cross-references of the provisions, please refer to the index to the Environmental, Social and Governance Reporting Guide set out in Appendix II to this report.

Reliability Assurance

The Company undertakes that this report contains no false statements, misleading statements or material omissions.

Abbreviations

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

"CSSC"	China State Shipbuilding Corporation Limited
"COMEC", "Company" or "we"	CSSC Offshore & Marine Engineering (Group) Company Limited
"Group"	CSSC Offshore & Marine Engineering (Group) Company Limited and its subsidiaries
"GSI"	Guangzhou Shipyard International Company Limited
"Huangpu Wenchong"	CSSC Huangpu Wenchong Shipbuilding Company Limited
"Wenchong Shipbuilding"	Guangzhou Wenchong Shipbuilding Co., Ltd.
"China" or "PRC"	the People's Republic of China

Note on Information

All information disclosed in the report is derived from official internal documents, statistical reports and annual reports of the Company. Unless otherwise specified, all amounts are expressed in Renminbi. In case of any discrepancy between the financial information disclosed in this report and those in the annual reports of the Company, those in the annual reports of the Company shall prevail.

This report is published in Chinese and English. If there are any discrepancy, the Chinese version shall prevail.

How to Access this Report

Stakeholders can access this report on the website of the Company (www.comec.cssc.net.cn) and the HKEXnews website of the Hong Kong Stock Exchange (www.hkexnews.hk).

Response to this Report

If readers have any comments and suggestions on this report or the Company's sustainable development performance, please send an email to comec@comec.cssc.net.cn.

In addition, a reader feedback questionnaire is set out on page 80 of this report. You are welcome to complete and send it to the above email address.

PERFORMANCE IN 2019

Key Performance

Total assets

RMB **52,304** million



Value of social contribution per share

RMB **3.02**



Operating income

RMB **21,829** million



Completion and delivery of ships during the year

51 ships



Completion and delivery of offshore engineering platforms during the year

3



Research and development expenses

RMB **652** million



Product quality and safety guarantee investment

RMB **197.74** million



Comprehensive energy consumption per RMB10,000 output value

0.0428 tonne of standard coal/RMB10,000



Environmental protection expenses

RMB **52,028,900**



Number of employees

15,366



Percentage of female employees

15.86%



Total number of suppliers

3,442



Targeted poverty alleviation expenses

RMB **2,434,900**



Major Honours



National Business Daily 2019 List of Chinese Listed Companies with Good Reputation



www.cnr.cn 2019 Most Trustworthy Listed Companies for Investors



China State Shipbuilding Corporation Limited Science and Technology Progress Award



Science and Technology Award issued by the Chinese Society of Naval Architects and Marine Engineers

LETTER TO STAKEHOLDERS

Dear readers,

It is my pleasure to share with you our efforts and achievements in the operation, environmental protection and social responsibility of the Company in the past year.

2019 marks the 70th anniversary of the founding of new China. As a key large shipbuilding enterprise under CSSC, we thoroughly studied and implemented the Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era and the guiding principles of the 19th National Congress of the Communist Party of China, and resolutely implemented the high-quality development strategy of CSSC. Facing the challenges brought by global economic downturn and increased risks in international trade and under the background of accelerated upgrading of the shipbuilding industry to eliminate backward production capacity, we kept our original goals and missions in mind. With “optimising structure, deepening reform and innovative development” as the main theme, we continued to build our core competitiveness of key technologies and vigorously promoted the improvement in quality and efficiency. As a result, we made steady progress in our core shipbuilding business and achieved diversified development of application industries. During the year, we recorded operating income of RMB21,829 million and successfully delivered 51 ships + 3 offshore engineering platforms/2,150,400 DWT. We secured orders in the amount of RMB31,946 million for 42 ships/1,035,000 DWT.

Over the past year, we have shouldered our economic responsibility as a state-owned enterprise and contributed to the development of China into a strong marine country. We faithfully fulfilled our responsibility of top priority to serve the military and completed all military tasks with high quality and efficiency, providing strong support for the building of a strong navy. We adhered to our original intention of building excellent ships for China and successfully fulfilled our tasks of building new 4,000KW marine rescue ship, 8,000-tonne transportation supply ship, 13,800 m³ dredger and “Ship Ocean”, and continued to strengthen our influence in the building of public service ships, dredgers and scientific exploration ships. We upheld the service tenet of satisfying customers, forged ahead and overcame difficulties. We successfully built the world’s first integrated ship for floating transportation and installation of immersed tube tunnel and the saturated diving operation support ship with the strongest supporting capability in the PRC, and delivered a large number of ships with advanced performance and excellent quality such as multi-type handy-size tankers, Ro-ro passenger ships and feeder containerships. As a result, we won the recognition from shipowners and the position of our branded ships in marine business was further consolidated.

In the past year, we resolutely fought the battle of environmental protection and practiced a low-carbon and green economy. In 2019, we continued to strengthen basic management of environment-friendly resources and improved risk management and accountability mechanism to strict control the relevant risks. We adopted green production technologies, strengthened various environmental protection management. We strived to achieve innovations in environmental protection, optimise production process, improve production efficiency and reduce our environmental impacts and resource consumption, so as to realize harmonious coexistence with nature. We also focused on green research and development to shoulder our responsibilities for environmental protection, and actively responded to national calls and international development trends. We strived to build low-carbon green ships through low-carbon ship design, shipbuilding technologies with lower carbon emission and green manufacturing process, in order to provide products and technologies that meet international leading standards and lead the sustainable development of the shipbuilding industry.

In the past year, we actively fulfilled our responsibilities as a corporate citizen and gave back to those working with us. We are fully aware that our achievements are inseparable from the hard work of our employees, the strong support from business partners and the help and care from the society. We understand that we cannot achieve benign growth without unity and win-win cooperation. We place people first and protect employees’ rights and interests to help employees develop. We care for our employees and strive to enrich their lives and further improve their sense of gain and happiness. By maintaining communication and harmonious interaction with our business partners, industry peers and other stakeholders, we promote open and transparent competition to promote the healthy development of the industry. We are actively engaged in public welfare undertakings such as targeted poverty alleviation and volunteer services in order to give back to the community with great love, build a harmonious society and share a bright future.

Great accomplishments require ambition and tireless effort. 2020 is the final year for building a moderately prosperous society and the 13th Five-Year Plan. We will actively face the still grim industry landscape by focusing on the development of principal businesses and expanding diversified business. We will continue to pursue high-quality development, slash through the waves and march forward bravely.

ABOUT US

Company Profile

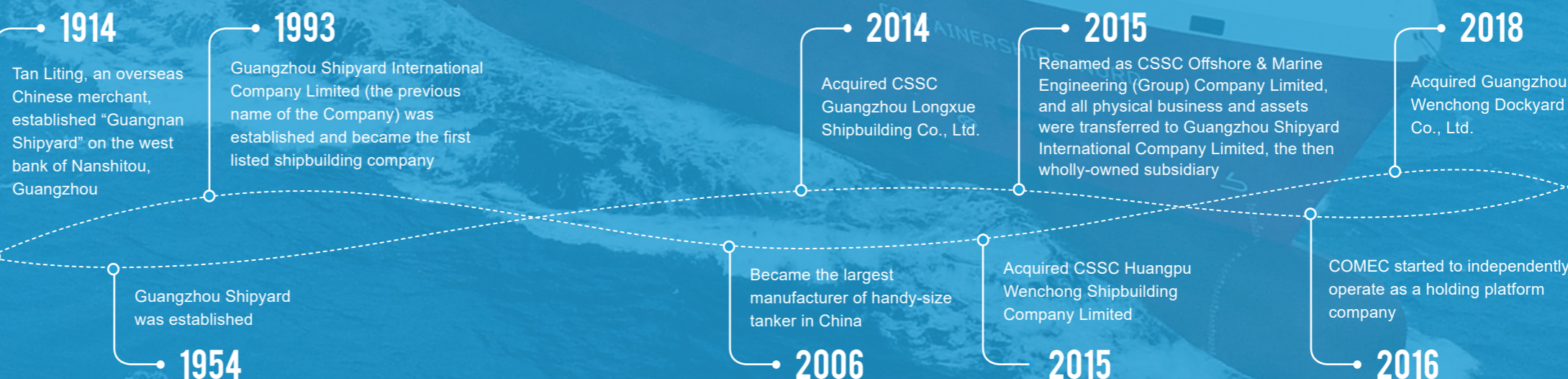
COMEC is a large key shipbuilding enterprise under China State Shipbuilding Corporation Limited and a holding platform company for capital operation of CSSC. The Company was formerly known as Guangzhou Shipyard International Company Limited. The Company became listed in Shanghai (stock code: 600685 for A shares) and Hong Kong (stock code: 00317 for H shares) in 1993 and was the first shipbuilding enterprise in the PRC with listing of both A+H shares.

Through the merger and consolidation of CSSC's high-quality shipbuilding assets in South China, COMEC was a pioneer in the overseas listing of core military assets. It has become a large comprehensive marine and defense equipment enterprise group incorporating four sectors of maritime equipment being maritime defense equipment, maritime transport equipment, maritime development equipment and maritime expedition equipment.

As a holding company, COMEC currently focuses on asset operation and investment management. Its subsidiaries conduct independent production and operation and are engaged in manufacturing and providing customers with high-quality products through research and development of ships, seeking orders and implementing customised order production. The Company is mainly at the assembly and construction link in the shipbuilding and offshore engineering industrial chain. It has extended to shipbuilding and offshore supporting products at the front end of the industrial chain and full life guarantee at the back end of the industrial chain.

History and Development

In over 100 years since the establishment of Guangnan Shipyard in 1914, COMEC experienced trials and hardships and moved forward. In the tide of reform and opening up and the development course of China's shipbuilding industry, we bravely rode the tide and actively played a leading role. We built a strong foundation with the historical mission of making China a strong marine power and manufacturing power and has an important position in the modern history of industrial development and the shipbuilding industry in the PRC.

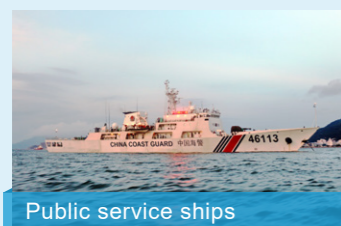


Business Coverage and Principal Products

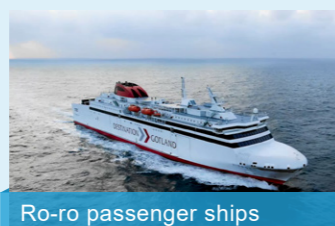
The Group actively responded to the “Belt and Road Initiative” and implemented international development strategies in order to integrate into global development and promote world connectivity. It strived to realize the transformation from low-end to high-end products in the value chain, from focusing on quantity to pursuing quality for production, and from purchasing foreign technologies from technological export to the world.

As at the end of the Reporting Period, the Group had provided products to serve more than 20 countries and regions on six continents in the world. The Group has continuously improved our worldwide recognition.

Principal products



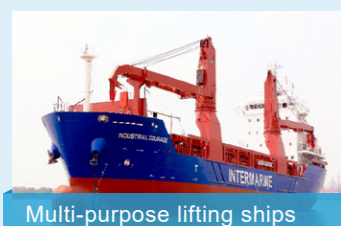
Public service ships



Ro-ro passenger ships



Feeder containerships



Multi-purpose lifting ships



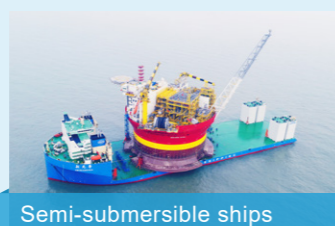
Dredgers



Oil tankers



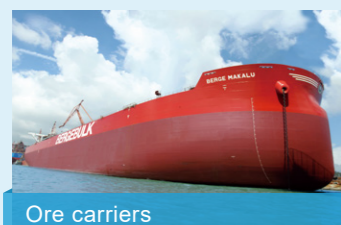
Scientific exploration ships



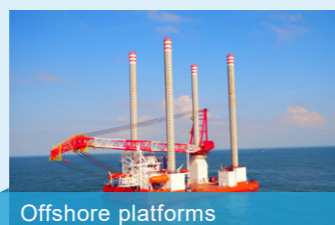
Semi-submersible ships



Polar module carriers



Ore carriers



Offshore platforms



Non-ship products including steel structures and sets of electromechanical equipment

During the Reporting Period, the Group's principal activities had not been changed.

Business coverage



Major customers



CORPORATE GOVERNANCE

Under the guidance of the Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era and the guiding principles of the 19th National Congress of the Communist Party of China, the Group complied with the requirements for regulation of state-owned assets and securities and effectively performed our duties under the Company Law of the People's Republic of China and the Articles of Association of the Company. It clarified the positioning of functions of the Board, the Supervisory Committee and senior management, facilitated efficient communication between the Board and senior management, strengthened the development of an authorization system, and optimized corporate governance structure at all levels. It promoted financing innovations in the capital market, expanded the channels for communication between minority shareholders and regulatory authorities, strengthened the building of executive power, and continued to promote the corporate governance.

In the future, we will continue to improve our governance measures for sustainable development, ensure the establishment and implementation of appropriate business supervision and management procedures and regularly review them to fulfil our responsibilities to shareholders and the society.

Company Structure

The Group strictly complied with the securities regulatory rules and requirements including the Main Board Listing Rules, implemented our governance policies, and continued to deepen and improve our "trio-governance" comprising general meetings, the Board and the Supervisory Committee and various governance policies. Through improving our governance level and standardizing our operation management, the Group ensured that all decisions are made in the principles of trust and fairness and that information is published in an open and transparent manner to protect the interests of all shareholders.

The Group is committed to building a management model comprising decision-making level, monitoring level and implementation level and clarifying the responsibilities and permits for decision-making, supervision and implementation to form an operational mechanism with effective checks and balances. There are four specialized committees under the Board, namely the Audit Committee, the Nomination Committee, the Remuneration and Examination Committee and the Strategy Committee. Each committee is established with written terms of reference, which clearly set out the powers and duties of each committee.

To know more details about the operation and management of the Company, please refer to the 2019 Annual Report of the Company.



During the Reporting Period

4

regular reports

78

interim announcements were published

3

general meetings

13

Board meetings

14

meetings of the Supervisory Committee were convened

Trio-governance

General meetings

The general meeting is the Company's highest authority and decides the Company's operating policies. The general meeting has (but not limited to) the following functions:

- ⦿ determining the Group's operational policies
- ⦿ electing and replacing Directors and shareholder representative Supervisors, and deciding on the remuneration of Directors and Supervisors
- ⦿ considering and approving financial budgets and profit distribution plans, etc.

Board

The Board is the chief operating decision maker of the Group and is responsible to the shareholders of COMEC. The Board has (but not limited to) the following functions:

- ⦿ to convene general meetings and report work at general meetings
- ⦿ to implement the resolutions passed at general meetings
- ⦿ to decide on the Company's business plans and investment plans
- ⦿ to formulate financial budgets and profit distribution plans, etc.
- ⦿ to determine the establishment of internal management institutions and formulating basic management systems
- ⦿ to manage information disclosure matters of the Company

As at the end of the Reporting Period, the Board comprised 11 directors, including 6 executive Directors, 1 non-executive Director and 4 independent non-executive Directors. Members of the Board have different industry backgrounds and expertise in corporate governance, finance and accounting, investment strategies, marine engineering and equipment and legal affairs.

On the diversity of Board members, the Company fully understands the benefits of diversity of Board members to our development and has adopted a Board diversity policy. The current composition of the Board reflects differentiation and diversification in various aspects such as expertise, industry experience, age, qualification and background.

All biographies of Directors are set out in the annual report of the Company.

Supervisory Committee

The Supervisory Committee comprises 5 Supervisors. The Supervisory Committee shall ensure that the information disclosed by the Company is true, accurate and complete. Supervisors shall comply with the laws, administrative regulations and the articles of association of the Company. As at the end of the Reporting Period, the Company had 5 supervisors, one of which acted as the chairman of the Supervisory Committee.

The Supervisory Committee has (but not limited to) the following functions:

- ⦿ to examine the Company's financial information;
- ⦿ to monitor the Directors, manager and other senior management members in performing their duties to the Company and to propose dismissal of Directors and senior management members who violate any laws, administrative regulations, the Articles of Association or resolutions passed at general meetings;
- ⦿ to demand rectification from a Director, manager and any other senior management members of the Company when the acts of such persons are harmful to the interests of the Company;
- ⦿ to examine the financial information such as the financial report, business report and plans for distribution of profits to be submitted by the Board to the general meetings and, should any queries arise, may engage, certified public accountants and practicing auditors to conduct re-examination;

To know more details about the "trio-governance" of the Company, please refer to the Articles of Association of the Company.

Specialized committees under the Board

Audit Committee

The principal responsibility of the Audit Committee is assisting the Board in reviewing the financial reporting procedures, the effectiveness of the internal control and risk management system, monitoring the audit procedures, making normal and transparent arrangements for maintaining proper relationship with the Company's auditor, and communicating with internal audit department and external auditors independently.

Nomination Committee

The Nomination Committee is principally responsible for selecting the candidates for Directors and senior management, determining selection criterion and procedures and making recommendations to the Board.

Remuneration and Examination Committee

The Remuneration and Examination Committee is responsible for developing assessment standards for the Directors, Supervisors and senior management, carrying out assessment and making recommendations, as well researching and reviewing the remuneration policies and programs for the Directors, Supervisors and senior management.

Strategy Committee

The Strategy Committee is responsible for the review of the strategic development of the Company. It implements the strategic planning of the Company, monitors the execution of the strategic planning, and timely adjusts the strategic and governance structure of the Company.

During the Reporting Period, the Audit Committee held

12 meetings

the Remuneration and Examination Committee held

1 meeting

the Strategy Committee held

1 meeting

Risk Management and Control

We attach great importance to risk management and control. We continue to promote the development of rule, standards and processes for internal control and management through auditing, adhere to the issue of rules and the improvement of internal control manual at the same time, and has formed an effective and sound rule management system and internal control system.

Preventing audit risk



We developed and implemented the Audit Management Rules of COMEC, improved the standardization of audit process and behaviours, and facilitated the operational compliance of the Company. We focused on the monitoring and auditing of the effectiveness of the implementation of rules and the control over key links, accounting information quality, use and management of government grants, business entertainment expenses, benefits, office expenses and other expenses.

During the Reporting Period, the Group adopted strict management in early control links in the course of business including project bidding, appointment of intermediaries and signing of contracts, effectively managing implementation risk and consolidating accounting information quality. The Group also focused on the intermediary management, strengthened and standardized financial management, and monitored the implementation of rectification measures for auditing.

Strengthening internal control



We developed and implemented the Rules for Internal Control Management of COMEC to optimise the process and behaviours in the internal control process and enhance basic management. During the Reporting Period, we urged our subsidiaries to carry out self-assessment of internal control and implement the relevant rectification measures. We also urged all of our units to establish an effective internal management system.

We strived to mitigate our risks by focusing on areas including on-site auditing, self-assessment of subsidiaries, on-site testing of internal control groups and rectification for defects.

During the Reporting Period, through effective implementation of internal control assessment, we fully examined the relevant rules, reviewed and identified the differences between day-to-day operation and internal control requirements, and improved the relevant management rules.

KPI

Legal review rate for contracts

100%

Legal review rate for rules and regulations

100%

During the Reporting Period, the Group completed the audit of key projects, including internal control assessment audit, economic responsibility audit, special gain and loss audit, rule implementation audit and construction project settlement audit. In addition, the Group conducted a systematical review and maintenance of our internal control system, and integrated the risk points, risk level and risk prevention and control measures for various business processes into the internal control process for management and business, so that risk prevention measures are widely and deeply carried out.

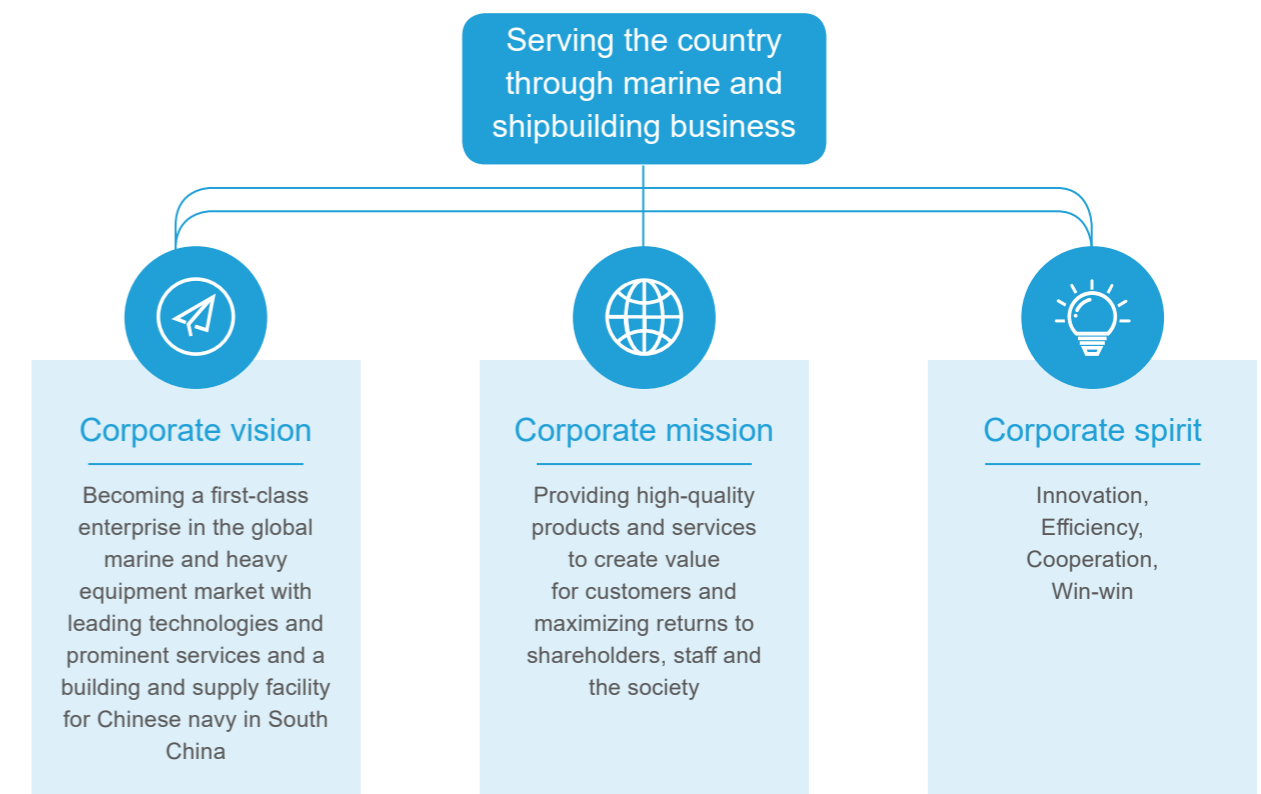
Responsibility Management

The Board believes that reliable and targeted social responsibility strategies and policies are critical to the Company.

The Group is committed to becoming an outstanding corporate citizen with global influence and strong social responsibility. We integrate our economic, environmental and social responsibilities into our daily operation and practice our social responsibilities in terms of staff development, charity and public welfare, energy saving and emission reduction, in order to realize the sustainable development of the Group and economy, society and environment and strive to become a leading value creator in the world trusted by the public.

The Group is well aware that practicing social responsibility is not just preparing a report meeting requirements, but more of a long-lasting and systematic task which should be integrated into our vision, mission and spirit.

Responsibility culture



Social responsibility management



Stakeholder Communication Practices

The Group has always maintained a harmonious and mutually beneficial cooperative relationship with stakeholders. It actively responded to the concerns of stakeholders from the perspective of stakeholders and established a smooth, standardized and characteristic stakeholder communication mechanism in order to achieve common development and win-win harmony with all stakeholders. After a comprehensive analysis of industry chains and macro-environment, the Group's stakeholders mainly comprise seven groups, being government, shareholders, customers, business partners, employees, environment, and community and the public.

Stakeholder engagement

Stakeholders	Expectations and demands	Communication methods	The Company's responses and measures
 Government	<ul style="list-style-type: none"> Serve national defense Technological innovations Value preservation and appreciation of assets Abide by the laws and regulations and pay tax in accordance with the law 	<ul style="list-style-type: none"> Meetings with regulatory bodies Accept regulatory review Regular reports 	<ul style="list-style-type: none"> Regular reports Information submission Public information disclosure
 Shareholders	<ul style="list-style-type: none"> Continuous stable returns Transparent information disclosure 	<ul style="list-style-type: none"> General meetings Information disclosure On-site visits 	<ul style="list-style-type: none"> Receive investor visits Publish 2019 annual report
 Customers	<ul style="list-style-type: none"> High-quality products and services Strictly comply with contracts Win-win cooperation 	<ul style="list-style-type: none"> Business communication Respond to customer feedback 	<ul style="list-style-type: none"> Delivery ordered products on time Provide reliable, safe and high-quality products and services Perform contracts and agreements Strengthen contract performance management
 Business partners	<ul style="list-style-type: none"> Keep promises Fair, just and open Win-win cooperation Share experiences 	<ul style="list-style-type: none"> Regular meetings High-level exchange visits Special inspections 	<ul style="list-style-type: none"> Conduct strategic cooperation Hold seminars Carry out technical exchanges
 Employees	<ul style="list-style-type: none"> Protect basic rights and interests Employee health and safety Fair promotion and development Employee care 	<ul style="list-style-type: none"> Democratic life meeting Staff congress Physical examination for employees Visit employees with financial difficulties 	<ul style="list-style-type: none"> Sound compensation system Provide a safe and healthy working environment Provide fair promotion channels Strengthen staff training Carry out employee care
 Environment	<ul style="list-style-type: none"> Energy conservation and emission reduction Waste disposal Reduce pollutant emissions Green office 	<ul style="list-style-type: none"> Strengthen environmental statistics and monitoring 	<ul style="list-style-type: none"> Research and develop green products Recycling resources Strengthen environmental protection training Public disclosure of environmental information
 Community and the public	<ul style="list-style-type: none"> Community development Poverty alleviation Community communication 	<ul style="list-style-type: none"> Donations and aids 	<ul style="list-style-type: none"> Targeted poverty alleviation Conduct volunteer service activities

Investor Relations Management

We fully performed our duties and obligations as a listed company by maintaining good relationship and communication with investors and continuously improving investor relations management and our interaction with investors. In order to ensure diversified communication channels, we maintain our communication with investors through investor hotline, E-interaction and www.p5w.net. We give detailed replies to the concerns of investors to ensure that their enquiries are answered.

In addition, we emphasized the publicity to domestic and overseas institutional investors and promoted our values by participating in large-scale strategy meetings, active external roadshows and receiving investor visits. We also paid attention to public opinions in the market on a daily basis, especially false statements about the Company, and made timely responses to maintain the Company's image in the market.

During the Reporting Period, the Group was included in the National Business Daily 2019 List of Chinese Listed Companies with Good Reputation and received www.cnr.cn 2019 Most Trustworthy Listed Companies for Investors – Innovation Pioneer Award.



VALUE CREATION

Total operating
income for the year
of RMB

21,829
million

Completion and
delivery of

51
ships during the
year

Value of social
contribution per
share of RMB

3.02

Economic performance, as well as the indirect economic impact in the development process, are an issue of top priority for the sustainable development of the Group and an important issue of continuous concern to all stakeholders. COMEC adheres to reasonable operation and sustainable development and is committed to giving back to shareholders, employees and business partners. It continues to optimise operation with its own strengths in order to facilitate the shipbuilding cause in the PRC and bring positive influence to the whole industry.

- Steady Business Growth
- Building High-quality Ships
- Independent Technological Innovations

Steady Business Growth

After experiencing the trade frictions between China and the United States, tariff fluctuations and international political and economic tensions, the Group actively faced market challenges and seized market opportunities. It strengthened the undertaking of orders in operation, continued to optimise the production management of shipbuilding and non-ship business, improved quality and efficiency, and promoted the steady business development of the Company to create more value.

Shipbuilding business

- In terms of military products, the Group is the most important production and support facility of military ships and special supporting ships of the PRC navy in southern China, the largest manufacturer of military auxiliary ships, and an important public service ship manufacturer in the PRC. Several types of ships built by it including frigate, hospital ship and carrier support ships had outstanding performance in carrying out long-distance escort and major national military exercises and won many military honours.
- For civil products, the Group enjoys great reputation. GSI is known for manufacturing ships such as handy-size tankers, semi-submerged ships and Ro-ro passenger ships, and has developed polar module carriers and polar condensate tankers based on its semi-submerged ships, which can sail through icy areas by breaking ice. Huangpu Wenchong occupies a leading position in the building of multi-purpose deep-water survey ships, feeder containerships and dredgers.



Ship maintenance business

- The Group actively explores and summarizes a new comprehensive lifetime maintenance model matching the equipment system construction and continues to facilitate the expansion and upgrading of military service and maintenance business.
- The Group also promotes the coordinated development of ship maintenance and building and develops ship maintenance, retrofitting and modification business by following market trends such as environmental protection and energy conservation.



Marine engineering equipment

- The Group has successfully built marine engineering ships including multi-function underwater operation support ships, large survey ships, scientific exploration ships, saturated submersible ships and platform supply ships, as well as marine engineering platforms including jack-up drilling platforms and wind power installation platforms, and entered the high-end field of marine equipment manufacturing.



Non-ship business

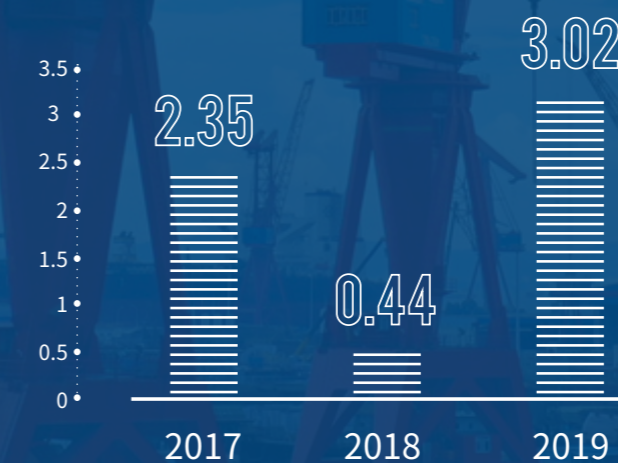
- The Group has excellent large-scale processing capability, with business covering the manufacturing and installation of port machinery and hoisting machinery as well as the manufacturing and installation of steel structures for bridges and buildings. It undertook the Shenzhen-Zhongshan Bridge project and steel structure engineering work for major projects including the Hong Kong-Zhuhai-Macau Bridge and the "City of Dreams" project in Macau, thereby enjoying a strong reputation in the industry.



KPI

	2017	2018	2019
Operating income (in RMB100 million)	223.13	192.14	218.29
Orders secured in operation (in RMB100 million)	135.54	241.29	319.46
Total profit (in RMB100 million)	1.68	-24.6	9.91
Net profit attributable to the Company (in RMB100 million)	0.88	-18.69	5.48
Equity attributable to shareholders of the Company (in RMB100 million)	104.15	97.27	101.48
Value of social contribution per share (in RMB)	2.35	0.44	3.02

Value of social contribution per share (in RMB)

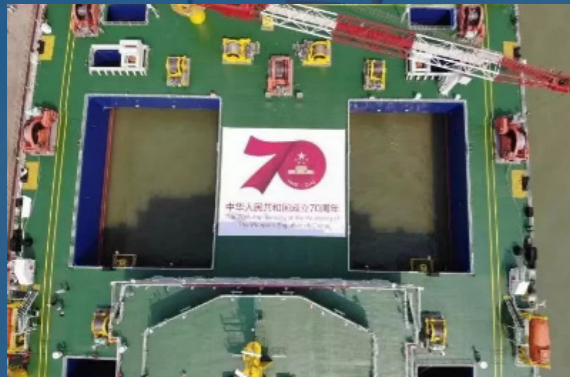


◎ Product cases

During the Reporting Period, the Group built “Yi Hang Jin An 1”, an integrated ship for self-propelled immersed tube transportation and installation and core equipment for the Shenzhen-Zhongshan Bridge project of CCCC First Harbor Engineering Co., Ltd., which is the world’s first special ship with DP dynamic positioning and tracing functions and integrating immersed tube floating, positioning, sinking and installation functions. In addition, a new function of intelligent energy efficiency monitoring system was added to “Yuan Lian Wan”, the 114,000 tonne crude oil tanker built by the Group for COSCO Marine Energy Transportation Co., Ltd., enabling it to obtain the classification symbol i-ship (E) of China Classification Society. It enables real-time energy efficiency monitoring and analysis for basis for decision-making and has intelligent energy efficiency management function.



| Case 1 | World’s first integrated ship for floating transportation and installation of immersed tube tunnel



World’s first special ship with DP dynamic positioning and tracking functions and integrating immersed tube floating, positioning, sinking and installation functions

On 26 September 2019, “Yi Hang Jin An 1”, an integrated ship for self-propelled immersed tube transportation and installation built by Huangpu Wenchong and core equipment for the Shenzhen-Zhongshan Bridge project, was successfully delivered in the Longxue Plant. It is the world’s first special ship with DP dynamic positioning and tracking functions and integrating immersed tube floating, positioning, sinking and installation functions.

The main hull of the ship is designed as a catamaran. The ship is 190.4 metres long, 75 metres wide and 14.7 metres deep. Its deck area is equivalent to that of two standard football fields. Each of the left and right blades is equipped with

a 9,280 KW propulsion main engine. Carrying 80,000 tons of immersed tubes, its speed in deep and still water can reach 5 knots. Each blade is equipped with 4 side thrusters to meet the dynamic positioning requirements of DP. It has tracking and deviation correction functions and can sail in strict accordance with the set width without the assistance of other ships. Compared with the traditional pipe joint floating installation method, the ship can greatly reduce the dredging volume of the floating channel. In addition, the ship is equipped with a sinking tube attitude control system and realize precise sinking of the immersed tube 50 metres underwater and docking with millimetre level.

As a tailor-made special ship for the Shenzhen-Zhongshan Bridge project, “Yi Hang Jin An 1” has the advantages of high degree of system integration, automation, safety control performance and construction precision. It can effectively overcome unfavourable construction conditions such as busy and complicated air route, long-distance horizontal towing of foundation trench, deep water sinking and releasing, complicated wind and wave current. The ship not only greatly enhances the floating and installation capability of the immersed tube to ensures the construction safety, but also significantly improves construction precision and efficiency.



| Case 2 | 114,000-ton crude oil tanker “Yuan Lian Wan”



Economical

Energy-conservation

Environmental protection performance

On 13 December 2019, GSI's 114,000-tonne crude oil tanker “Yuan Lian Wan” was officially delivered.

The ship has a total length of 250 metres, a width of 44 metres, a depth of 21.5 metres and a design draft of 13.7 metres. It has a carrying capacity of approximately 114,000 tonnes, service speed of 14.52 knots and endurance of approximately 20,000 nautical miles.

It is equipped with Win G&D 6×62 main engines, the world’s first ship equipped with such engines. Such main engine adopts de-rating technology, which has higher efficiency and better fuel economy than similar main engines.

In terms of hull design, the ship also adds a hull auxiliary equipment to enhance the efficiency: vortex fin and energy saving device. Through line optimisation and building technology control, the ship realizes the increase in service speed of 0.02 knots, making actual speed reach 14.52 knots, with main scale substantially unchanged.

A new function of intelligent energy efficiency monitoring system was added to the ship, enabling it to obtain the classification symbol i-ship (E) of China Classification Society. It enables real-time energy efficiency monitoring and analysis for basis for decision-making and has intelligent energy efficiency management function. The ship can monitor the ship navigation state and energy consumption online, automatically collect relevant data, and assess ship energy efficiency, navigation and loading status. Big data analysis, numerical analysis and optimization technologies provide the ship with data evaluation and analysis results and recommendations to support decision-making and enables real-time monitoring, intelligent evaluation and optimization of ship energy efficiency.

The ship meets the latest HCSR, PSPC, i-ship (E), TIER II and green ship I specifications. Through the optimised structural form, general layout, line type and main engine selection and the research of energy-conservation device mechanism, the ship realizes the comprehensive optimisation of economical, energy-conservation and environmental protection performance, with high technology content and first-class quality.

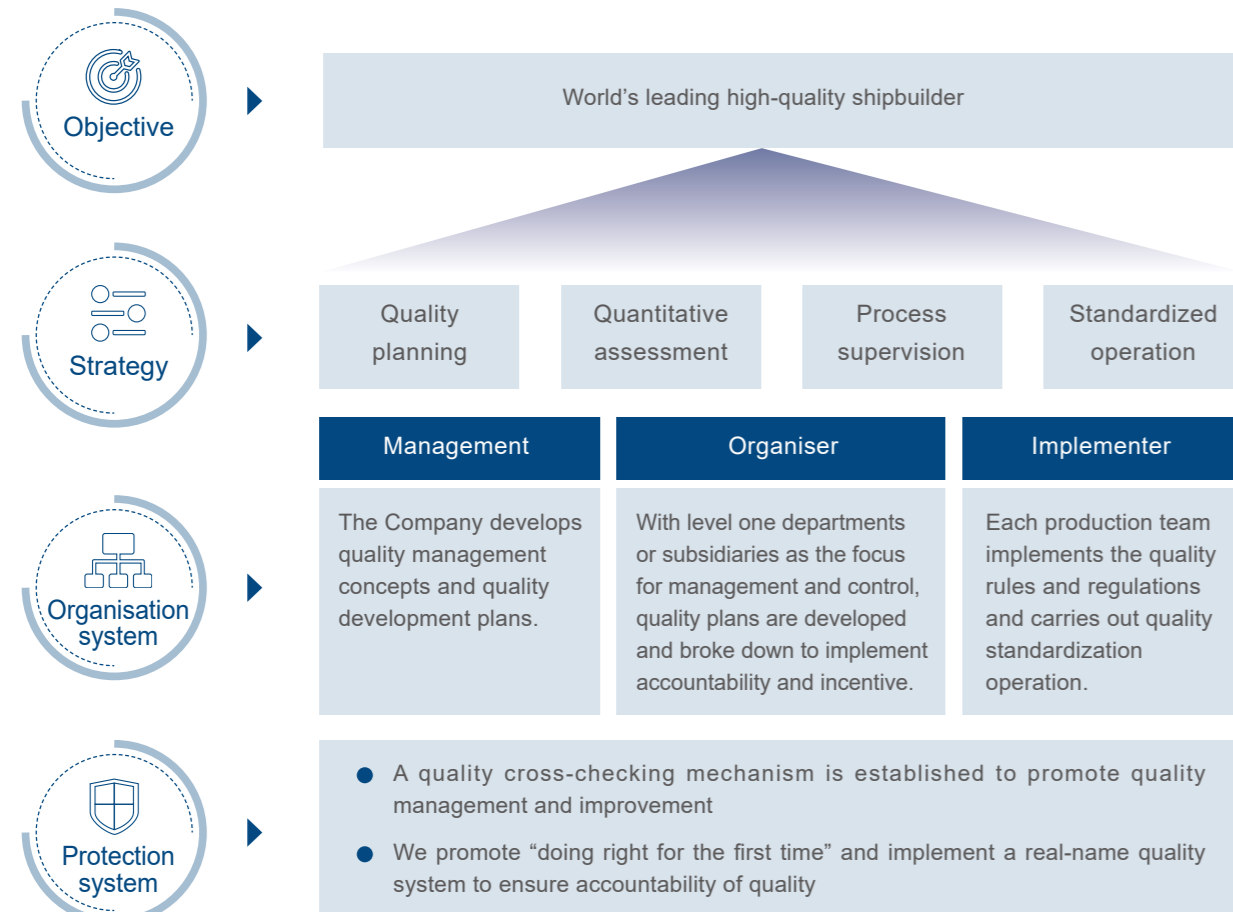
Building High-quality Ships

The Group has always focused on developing quality and efficiency and continues to carry out quality management system work. It has established a full life cycle quality management system covering design, production, supply chain and services and strives to build an industry-leading quality management system. The Group has established a quality management system covering multiple levels from corporate headquarters to production teams to carry out dynamic control of quality risks. It strictly implements full-process control in accordance with the requirements of military standards, national standard and quality management systems and performs process flow quality inspection in order to ensure the quality of production process and continuously improve customers' confidence in the products and services of the Group.

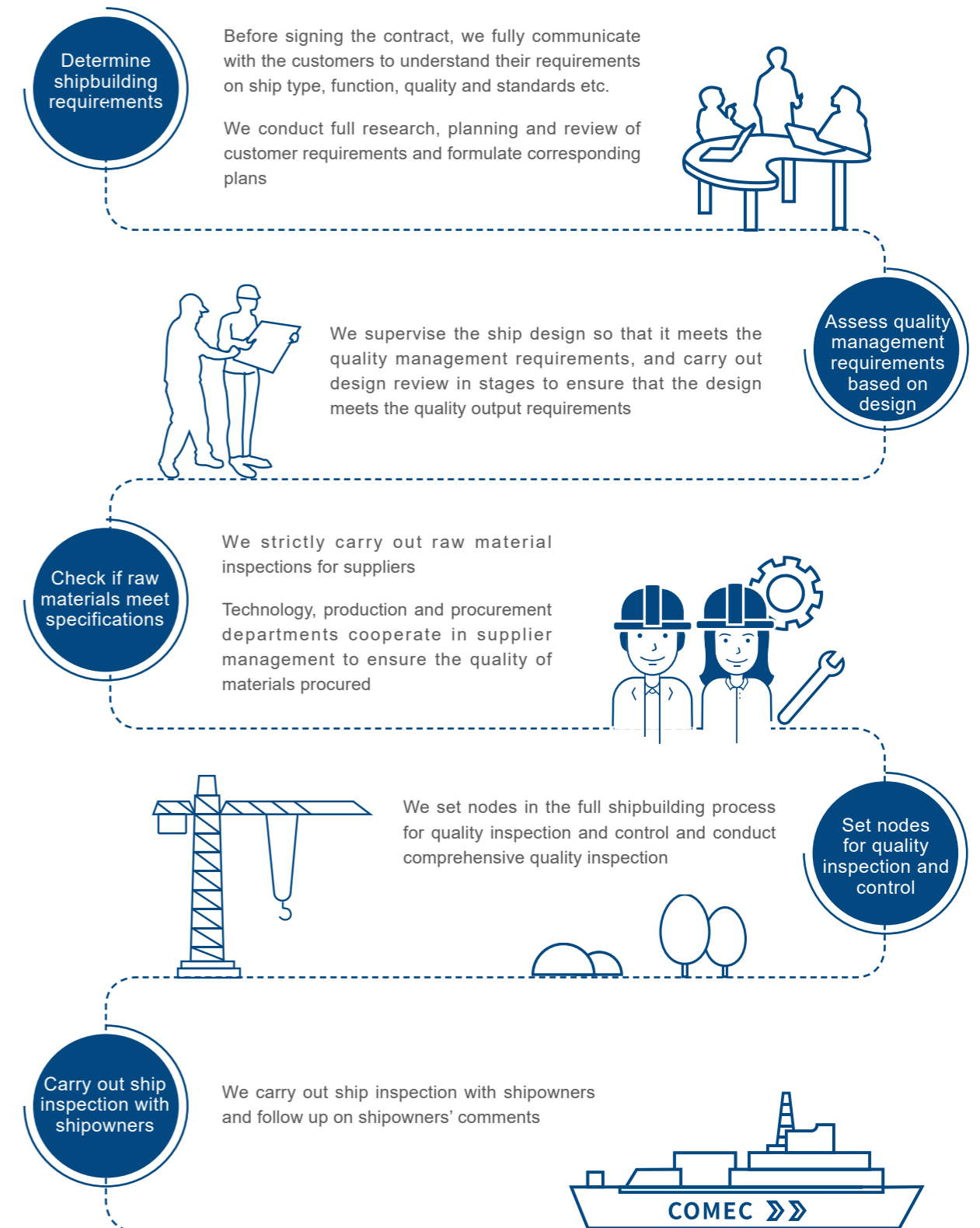
The Group strictly abides by the laws and regulations related to quality and quality management and has prepared a quality system management regulation (manual) in accordance with GB/T 19001-2016 / ISO9001:2015 "Quality Management System Requirements" and GJB 9001C-2017 "Quality Management System Requirements". The manual is a guiding document for entities to establish, implement, maintain and continuously improve the quality management system. It sets for the quality policies and quality objectives, provides for leadership, planning, support, operation, performance evaluation and improvement, and is an action guideline for carrying out various quality activities. Through the effective operation of the quality management system, we have ensured our steady provision of products and services that meet customer requirements and applicable laws and regulations.

During the Reporting Period, the Group produced and supplied products in strict accordance with the laws and regulations relating to quality management where it operates and customers' requirements, and there was no product recall which had a material impact on the Group.

Quality management system



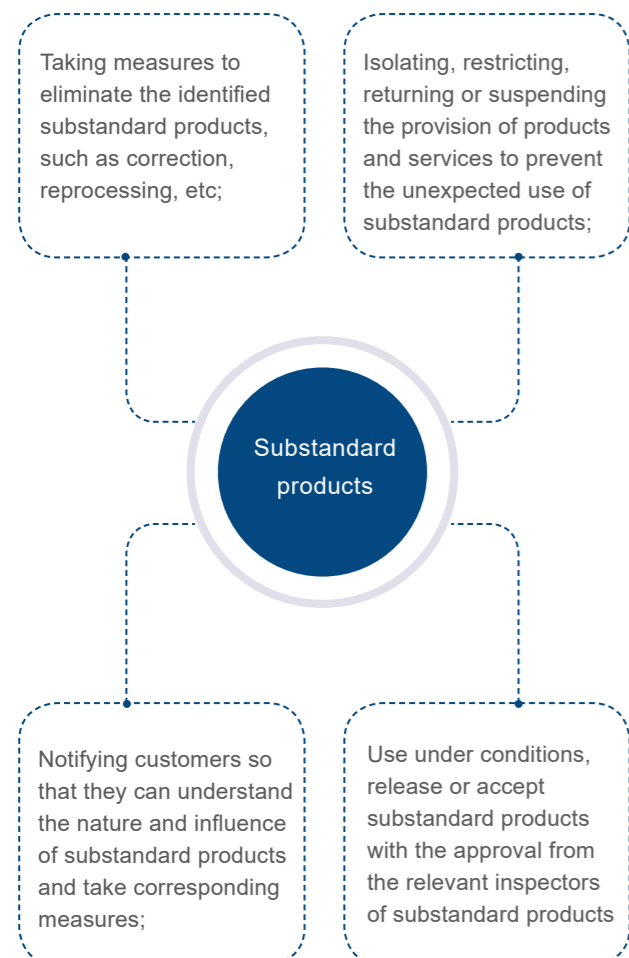
Quality control practices



◎ Quality management and control

In addition, all entities have developed and implemented the "Administrative Rules for Quality Issues and Accountability", which set out the requirements for the duties and permits regarding the control and treatment of substandard products and the isolation, identification, recording, review and treatment of substandard products, in order to ensure that substandard products and services are identified and under control to prevent the unexpected use or delivery.

Substandard products are treated in the following manners:



If a product is found substandard after it is delivered for use, the service department of the entity shall adopt measures corresponding to the level of impact or potential impact of the substandard product.

First pass rate of hull welding X-ray film

95.70%

First pass rate of process

98.43%

First pass rate at external delivery

99.06%

First pass rate of parts procured from external suppliers

99.00%

Product quality and safety guarantee investment

19,773.73 RMB in ten thousand

National excellent quality teams

3 Unit

Outstanding QC teams in Guangdong Province

9 Unit

Participation in training for quality management

11,382 Person-times

Increase in the participation in training for quality management compared to last year

30.54%

Quality and technology innovation forum

Huangpu Wenchong held a quality innovation forum in 2019, in which 94 achievements were summarized and 35 excellent papers were selected. A collection of theses on the 2019 quality innovation forum of Huangpu Wenchong was compiled and distributed for exchange and study by units.



Application of special technologies for enhancing equipment quality

On 19 September 2019, the researchers and senior engineers of the quality and reliability centre of China State Shipbuilding Corporation Limited were invited by Huangpu Wenchong to its plant to provide training for quality risk management and general quality characteristics of equipment. A total of 82 managers and employees from several departments of Huangpu Wenchong attended the training.

The experts gave speeches on five topics, including the "Risk Management Requirements for Ship Construction Process and Implementation Thereof", the "Technical Status Management Requirements and Practices for Shipbuilding Process", the "General Quality and Characteristics Implementation Technologies and Implementation for Shipbuilding", the "Application of and Engineering Practices for Error Prevention Technologies in Shipbuilding Process", and the "Zero Quality Issue Management Method and Implementation Thereof". Through practical experiences and case analysis, the trainees' professional knowledge of general quality characteristics, error prevention, risk management, technical status management and zero quality problem issue management were enhanced, and their thinking was broadened, which helped improve the management of Huangpu Wenchong.



◎ National excellent quality teams

The class 3, workshop 2, electric installation section, general assembly division 1 of GSI, and the tube processing class 2, supporting department, shipbuilding division 1 and the electronic engineering class 1, post-construction operation area, military support department, shipbuilding division 1 of Huangpu Wenchong were recognised as national excellent quality teams.



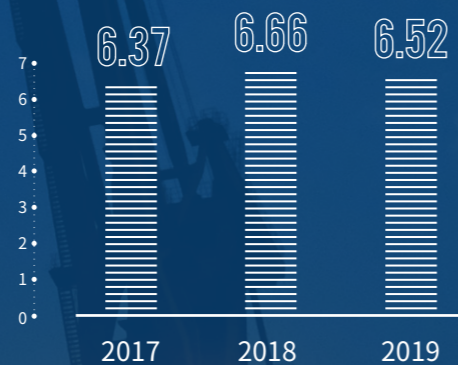
Independent Technological Innovations

The Group adheres to the core values of "pioneering innovation" and regards technological innovation as the way of our survival and development. Through strengthening capital investment and research and development team building, we continued to develop and improve a scientific and technological innovation system, facilitated patent research and development and the industrial application of relevant results, and improved intellectual property right protection and management, in order to bring driving forces to the sustainable development of the Group and the industry with innovations.

In accordance with the new demands of China and the industry for technological innovations as well as our own needs, the Group accelerated the implementation of driving development with technical innovations and conducted coordinated planning, optimisation and consolidation of our technical resources. It continued to improve the market-oriented joint technical research, with enterprises as the principal, projects as the carrier, national enterprise technical centres as the support and key laboratories as the backbone.

KPI

Research and development expense in RMB 100 million



Research and development expense as a percentage of operating income(%)



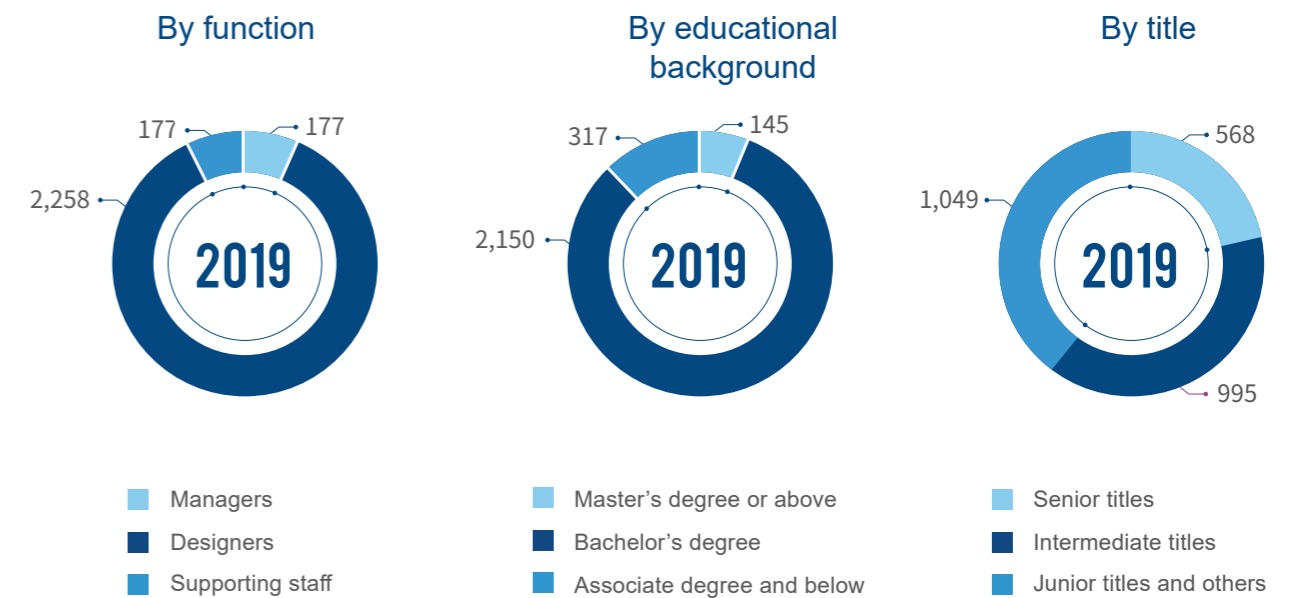
Research and development teams and platforms

The Group values and respects talents and actively carries out the development of technical talent teams. Through the standardization of design process, the preparation of design manual, the optimisation and design division and the training of new employees by existing employees, we cultivated professional and technical talents and versatile talents. We built a multi-level talent echelon, continued to promote the development of a talent cultivation system to provide personnel support for technical innovations. In addition, we strived to build a multi-level technical innovation platform system to provide strong support for research and development innovations.

As at the end of the Reporting Period, the Group had a technical team of

2,612
persons

KPI



Scientific and technological achievements

During the Reporting Period, the Group continued to improve technological capability and facilitated industrial upgrading using technical changes through the following:

- continuously facilitating the development and technical research of new green environmentally-friendly ships and ships with high technologies and added-values, strengthening product research and development, and carrying out the research and design of medium-sized luxury cruise ships, deep-sea breeding ships, Ro-ro passenger ships, polar carriers and ice-breaking survey ships
- actively cooperating with domestic and overseas well-known shipowners, classification societies and design companies to carry out cooperation projects on MR tanker optimisation and upgrading, medium-sized luxury cruise ships, dual fuel system (LNG, methanol, etc.), intelligent ships, network security, and desulfurization modification
- following national policies for promoting shipbuilding industry development, focusing on projects including special technical project “Green Pearl River, Prosperous Pearl River”, hydrogen fuel demonstration ships and multi-functional intelligent unmanned ships

Independent Research and Development and Industrialization of Large-Scale Offshore Dredging Equipment	Application and Demonstration of Intelligent Building and Coordinated Information Management for Shenzhen-Zhongshan Bridge	11 Science and Technology Progress Awards issued by China State Shipbuilding Corporation Limited	9 Science and Technology Awards issued by the Chinese Society of Naval Architects and Marine Engineers
National Science and Technology Progress Award Grand Prize issued by the State Council	Traffic BIM Engineering Innovation Award Grand Prize issued by China Highway & Transportation Society	5 first prizes 4 second prizes 2 third prizes	2 first prizes 4 second prizes 3 third prizes

Case |

At the 2019 National Science and Technology Award Conference, the project Independent Research and Development and Industrialization of Large-Scale Offshore Dredging Equipment, with Huangpu Wenchong as a participant, received the National Science and Technology Progress Award Grand Prize.



Currently there are 10 operating super-large self-propelled cutter suction dredgers in the world, all of which are designed and built by foreign companies and belong to leading enterprises in the foreign dredging industries. There is also market demand for such kind of ships in China. However, domestic dredging companies have been flinching due to the expensive import price. With the continuous upgrading of building capability, Huangpu Wenchong started to explore the building of cutter suction dredgers.

In recent years, in collaboration with universities and scientific research institutes in the PRC, Huangpu Wenchong successfully researched and developed the key technologies for building high power cutter suction dredgers and dredging system, completed the design and building of cutter suction dredgers and the development of ancillary dredging equipment, and obtained the ability to independently design and build high power cutter suction dredgers.

Through the cooperation with designers and equipment manufacturers in the PRC, Huangpu Wenchong gradually realized the application of domestic products as key core equipment.

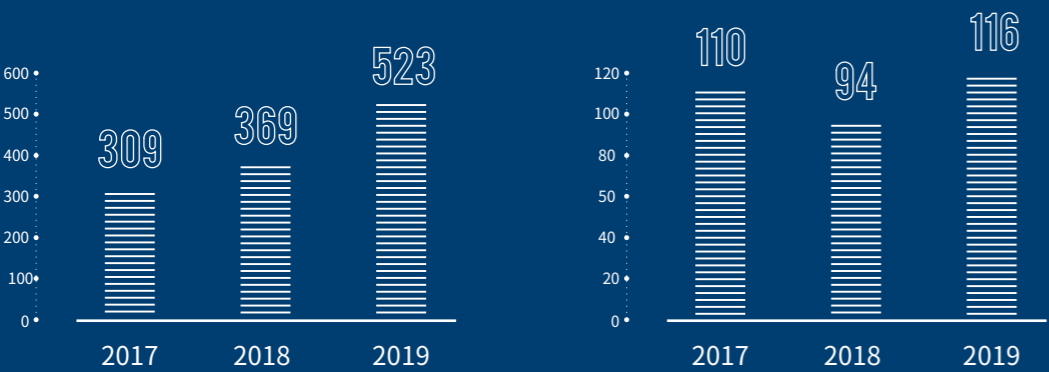
With years of technical development, Huangpu Wenchong has possessed the core technologies for designing and building cutter suction dredgers, established a complete technical system for the designing and building of cutter suction dredgers, which have become industry standards. Huangpu Wenchong conducted in-depth research of core key technologies for cutter suction dredgers, and actively carried out extensive technical cooperation with domestic and overseas organisations to jointly build an innovative technical platform for the industry. Huangpu Wenchong has made breakthrough achievements in high-end core technologies including the design and application of flexible steel piles and the development and application of wear resistant materials, which generally promoted the continuous progress of technologies in the cutter suction dredger industry.

Since 1970s, Huangpu Wenchong has built dozens of dredgers for the country, the product quality of which are highly recognised. In particular, it delivered 11 cutter suction dredgers with production capacity ranging from 400 m³ to 6,000 m³ and largest cutter power of 7,800 kW. It accumulated rich experience in the designing and construction of dredgers.

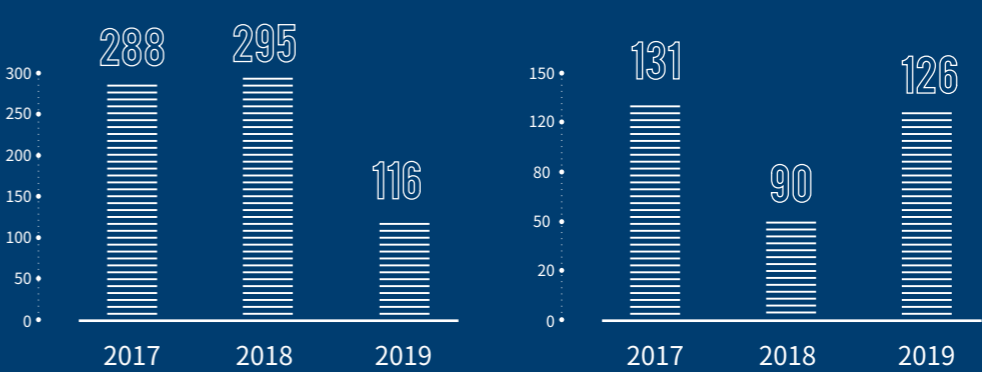
Such award to Huangpu Wenchong represents the best recognition of the research and industrialization capability of the dredging equipment team of Huangpu Wenchong.

KPI

Invention patents applied for and granted



Utility model patents applied for and granted



Invention patents obtained during the year

116

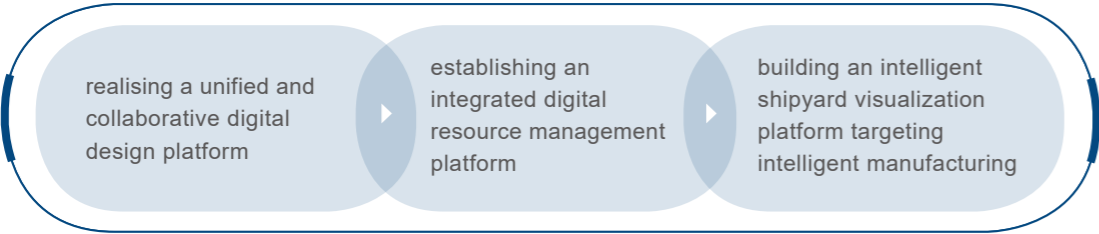
Utility model patents obtained during the year

126

Improving operational efficiency

With the upgrading of management and technological development, the amount of information in the shipbuilding process is increasing. The Group has realised that our existing management mode has bottlenecks in information collection, application and feedback. As such, we continued to promote information construction and the integration of informatization and industrialization to support our sustainable development through establishing an information application research institute. We plan to leverage our integrated resource platform to effectively coordinate resources and achieve balanced and efficient operation.

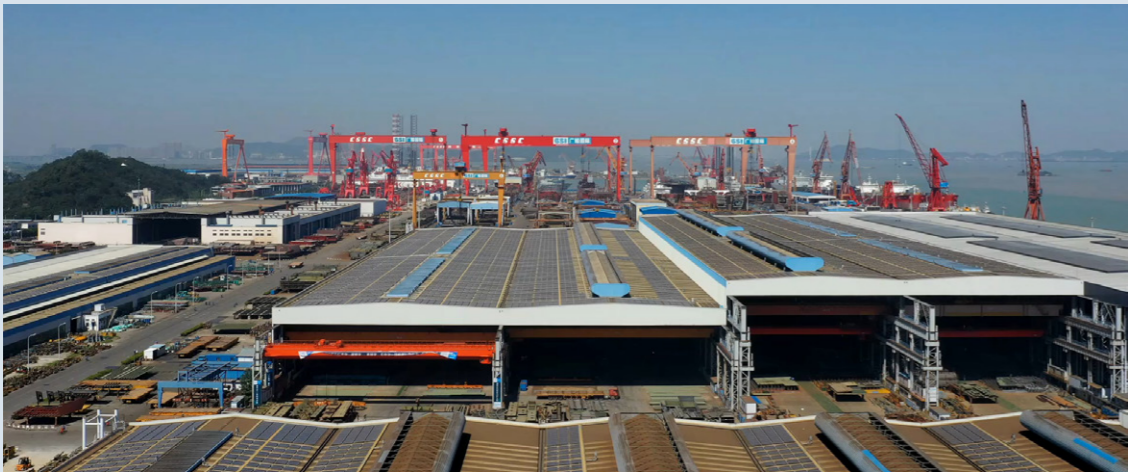
The Group strives to achieve the following objectives for information construction:



Case 1 |

Digitization is a phase of information expansion, coordination and integration. Digital transformation means an enterprise implements digital driving for the full process and areas of operation, research and development, design, production, application and management using digital technologies, so as to achieve process optimisation, efficiency improvement and efficient, high-quality development.

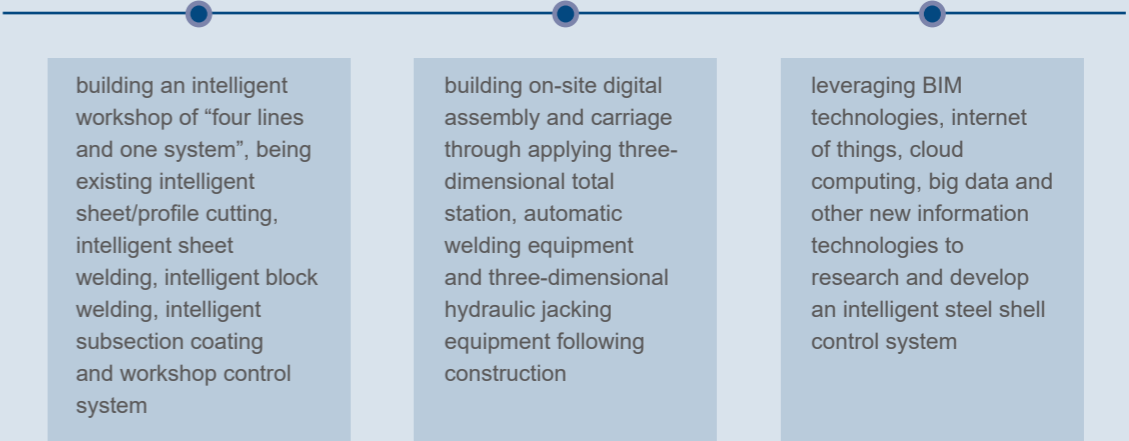
GSI utilises new technologies including industrial Internet of Things, wireless network, enterprise cloud and intelligent manufacturing to realise the interconnection, management and control of equipment and facilities. It has built digital workshops fully integrated with its resource management and control platform to enable network connection, digital and intelligent control of various production resource equipment, which has laid a solid foundation for future intelligent manufacturing and maximized the conversion of production capability into productivity. An intelligent shipyard visualization platform has functions of video monitoring, dock management, equipment management, energy monitoring, vehicle management and section management functions. It is like building a “virtual shipyard” to summarize and visualize the information from the digital platform of resource management and control, so as to let the information of the whole shipyard become visualized to realise more intuitive overall management.



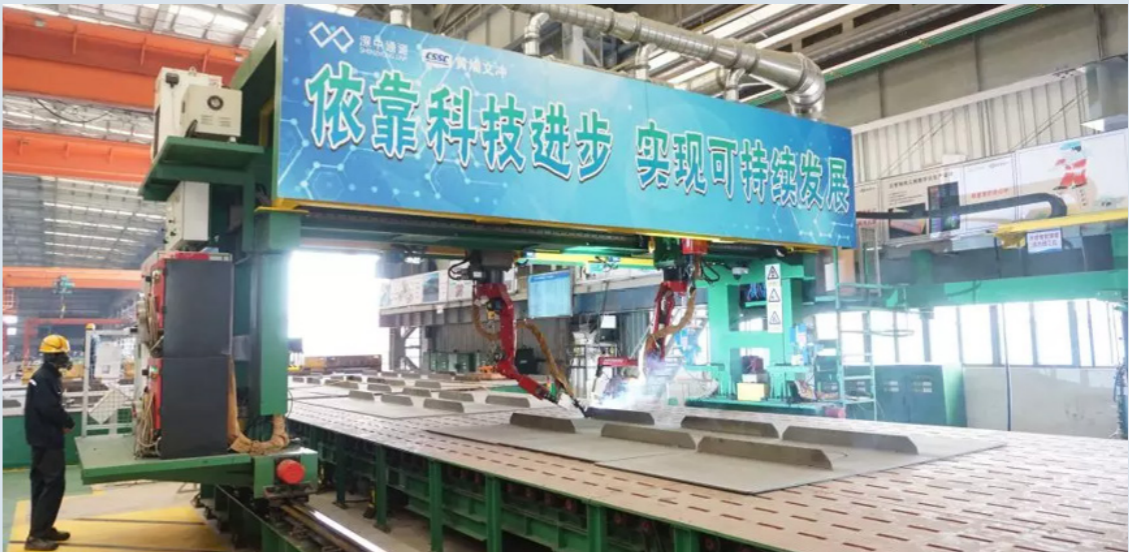
Case 2 |

The immersed tube tunnel of the Shenzhen-Zhongshan Bridge widely adopted steel shell concrete (sandwich) structure for the first time in the world, using approximately 320,000 tonnes of steel in steel shell immersed tubes. It was the first time in China and even in the world to use steel shell immersed tubes on such a large scale and in such large quantities. The immersed tube tunnel has a total length of approximately 6.8 km and is constructed according to a two-way eight-lane standard with a designed highest speed of 100 km/h. It is characterized by super-width, widening, deep burial and large silting. The key difficulties for the project are quality, precision, corrosion prevention, work efficiency and construction period control.

In order to improve the efficiency of the Shenzhen-Zhongshan Bridge project and ensure project precision, Huangpu Wenchong implemented intelligent manufacturing of steel shells through construction and upgrading in areas of intelligent plate cutting, intelligent profile cutting, intelligent chip welding robot, intelligent block welding robot, block production line, intelligent coating and MES system.



Huangpu Wenchong has realised the integration and optimisation of workshop design, process, manufacturing, management, monitoring and logistics. It adopts big data technologies to support intelligent management and decision-making, which has generally improved the steel shell construction quality and comprehensive management.





UPHOLDING INTEGRITY

- Improving Safety Management
- Strengthening Integrity Construction
- Promoting Responsible Procurement
- Maintaining Product Responsibility

Provided production
safety training for
41,582
person-times

A total of
3,442
suppliers

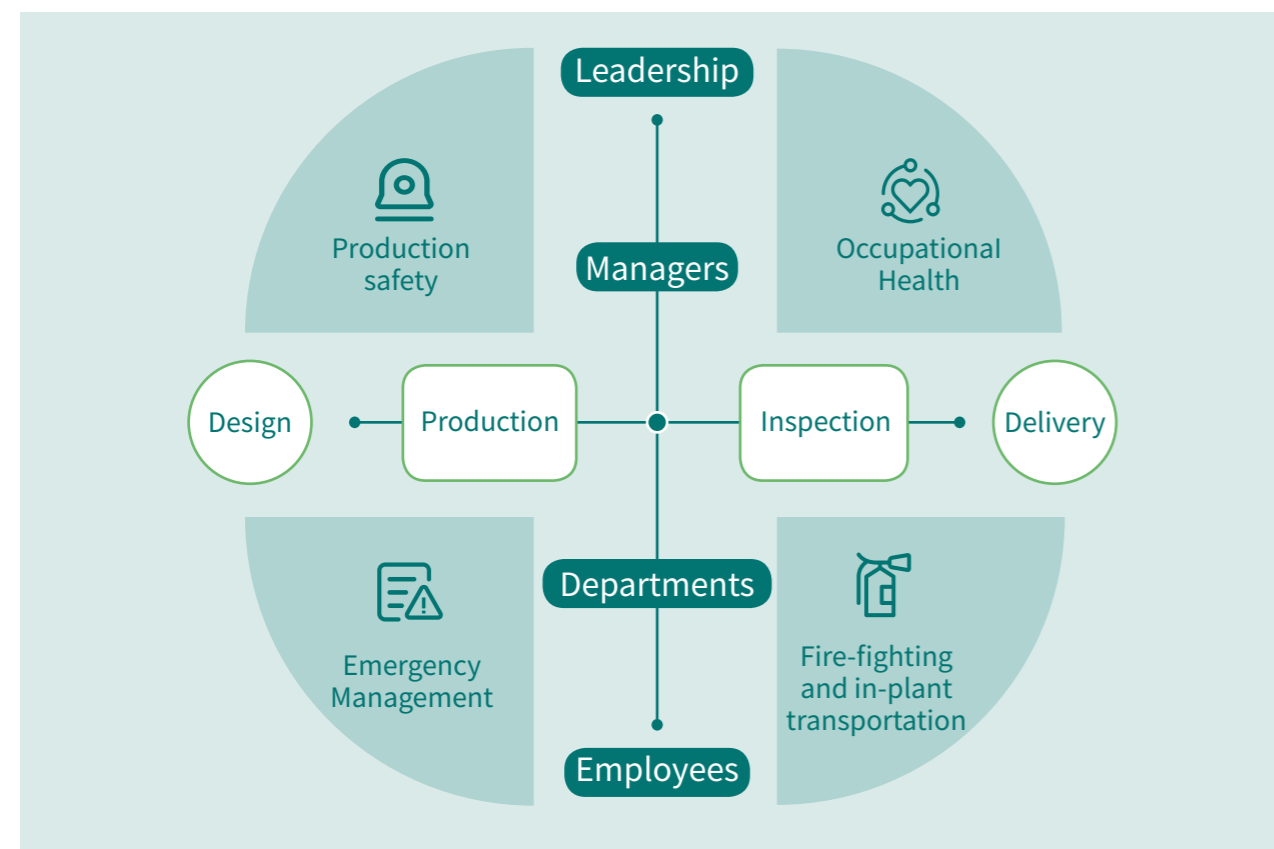
Percentage of
procurement
through public
bidding of
26.13%

With sustainable development at the core, while striving to create economic value and realise self-development, the Group also manages the impacts of our operation on stakeholders, effectively uses resources and protects the ecological environment. We adhere to the people-oriented principle and promote social harmony. The Group continues to improve and implement the health, safety and environment (HSE) management process and rules, adheres to the concept of "honesty first", upholds high standards in market practices, and requires all employees to abide by the policies and rules of the Group and business ethics in conducting business activities. We continue to improve supply chain management capability, have established long-term mutual trust and cooperation with stakeholders through enhanced cooperation with them in many ways, and fulfil social responsibilities together with business partners.

Improving Safety Management

In compliance with the laws and regulations on production safety, the Group improved management in accordance with military production safety standards and HSE management system, and strengthened the research, promotion and implementation of safety technologies. The Group continues to strengthen potential risk management and implements hazard source management and risk control. We have realized the standardization of basic production safety management, workplace management, equipment and facilities management and operation behaviour management to contain the occurrence of production safety accidents from the source.

All of our subsidiaries have formulated, implemented and updated the relevant management systems, rules, standards and indicators as required. The safety management of our subsidiaries covers production safety, occupational health, emergency management, fire-fighting and in-plant transportation. A safety management network is established in accordance with the principle of “vertical to bottom, horizontal to edge” to cover leadership, managers, employees and departments at all levels.



The Group adheres to the concept of “life first, strict compliance with regulations”, and gradually reduces man-made accidents through continuously cultivating employees’ safety awareness. We provide targeted internal and external training including production safety management capability training for managers and special training for special operation personnel to ensure that employees have advanced awareness of production safety and relevant expertise. All of our subsidiaries carry out education and promotion activities on production safety and prevention and control of occupational diseases in different months/weeks. In addition, through the activity “Everyone is a safety supervisor”, all of our subsidiaries accept reports from employees on violations of safety regulations and encourage employees to examine the implementation of safety rules. All of our subsidiaries also actively organised fun activities including “Safety Risk Knowledge Quiz” through convenient communication platforms such as official WeChat accounts to improve employee’s ability to identify potential hazards on site and participate in safety management.

Safety management practices

Production safety management

- We have established a production safety responsibility system of “same responsibility for the party committee and corporate management, two responsibilities for one position, joint management and accountability for dereliction of duty”. We have prepared occupational health and safety and environmental objectives and broken down the objectives for implementation and regular monitoring.

Occupational health management

- We adhere to the policy of “focusing on prevention, combining prevention with control” and implement classified management and comprehensive management. Our occupational disease prevention and control work covers leaders, managers, employees and departments at all levels of the Company.

Emergency management

- We comply with the policy of “Safety first, focusing on prevention, combining prevention with control”.
- Under the unified leadership, we implement an emergency management system of classified management and responsibility at different levels. We strictly implement a safety responsibility system at all levels, and arrange accident rescue in a fast and effective manner in order to minimize the damages of accidents and disasters.
- In view of the increasingly frequent extreme weather, we developed an emergency drill plan based on the characteristics and main risk points of our production to cope with the severe situation of typhoon and flood. During the Reporting Period, we organised a total of 107 emergency drills.

Fire-fighting and in-plant transportation

- We have implemented a firefighting policy of “prevention first, combining prevention with elimination” to prevent fires and reduce fire accidents. We integrated fire safety work into our overall work plan and earnestly implemented a fire safety responsibility system for organisations at all levels.
- We standardized traffic safety management in the plant area to ensure orderly, safe and smooth traffic.

During the Reporting Period, the Group had not received any complaints regarding occupational health and safety which had a material impact on the Group.

KPI



During the Reporting Period, the Group experienced no major accidents, and our minor injury accidents recorded a year-on-year increase of 4.5%.

Occupational health management

In order to provide maximum protection for the health and safety of employees, the Group adheres to the policy of “focusing on prevention, combining prevention with control” and implements classified management and comprehensive management. Our occupational disease prevention and control work covers leaders, managers, employees and departments at all levels of the Company. The Group has formulated and improved the relevant occupational health management rules, which cover responsibility system for prevention and control of occupational diseases and health examination of employees, occupational health records, publicity, education and training of occupational disease prevention and control, disposal and report of occupational hazard accidents, and monitoring and evaluation of occupational hazards



KPI

	Unit	
Staff health record coverage ratio	%	100
Labour supplies expenses	RMB in ten thousand	2,228.93
Improper wearing of labour protection equipment dealt with	case	1,559
Lost days due to work injuries	day	1,265

Production safety training

41,582 person-times

Emergency supply expenses

RMB **624,300**

Strengthening Integrity Construction

For integrity construction and anti-corruption work, the Group adhered to the guiding principles of the 19th National Congress of the Communist Party of China in analysing and arranging discipline inspection and supervision work for 2019. We continued to promote Party conduct and integrity construction and fight corruption and facilitated the in-depth development of comprehensive and strict governance of the Party. The Group strictly abides by the relevant laws and regulations and adheres to operating in compliance with laws and regulations. We strengthened honesty and self-discipline operation and improved our internal control mechanism and comprehensive risk management system to ensure orderly and stable operation of the Group.

Through petitions and reports to discipline inspection and supervision departments, inspections, disciplinary reviews, economic responsibility or special audits, internal control evaluation, as well as a number of special methods for review and supervision including compliance management, anti-fraud, overseas asset supervision and integrity risk prevention and control, the Group strengthened the integrity risk prevention and control education, supervision and accountability for key areas, links or positions prone to corruption including enterprise reorganisation, property ownership transaction, investments, mergers and acquisitions, bidding, project subcontracting, material procurement, international operation and human resources development, which has effectively prevented corruption.

We promoted the relevant anti-corruption management in compliance with the three major principles of “should not, dare not, do not want to”, and required all of our subsidiaries to formulate, implement and update the relevant management systems, rules, standards and indicators.



During the Reporting Period, the Group continued to improve system construction. All of our subsidiaries completed the revision of the rules for Party conduct and integrity construction and supervision and discipline enforcement practices, conscientiously implemented the inspection guidance of the Party organisation of CSSC, established special inspection organisations to standardize inspection procedures, and earnestly implemented various work rules. Each of the management of the Group at various levels has signed a letter of undertaking for Party conduct and integrity construction, which sets out detailed responsibilities and the method of accountability.

The Group has not received any notice regarding any violation of laws and regulations relating to the prevention of bribery, extortion, fraud and money laundering which has a material effect on the Group, nor has it received any notice of any litigation cases against its employees regarding bribery, extortion and money laundering.

Supplier integrity management

We also attach special importance to the anti-corruption management of suppliers. Through our anti-corruption management framework, we require our subsidiaries to include suppliers in their management scopes to ensure that their suppliers operate business in compliance with regulations and maintain integrity and self-discipline in the industry.

The Group enters into an Integrity Agreement with long-term suppliers each year. The Integrity Agreement serves as an appendix to contracts, in which the parties agree to strictly implement the contract terms in the course of business and comply with the provisions in the Integrity Agreement. If any supplier is found to be in breach of the Integrity Agreement, our subsidiaries shall have the right to terminate the contract. Any resulting damages shall be borne by the supplier, which will also be added to the blacklist. Those who have breached the law will be held responsible under the law.

Case |

In April 2019, Huangpu Wenchong combated “micro-corruption” with heavy blows. For the eight issues such as “seeking personal gains through shipbuilding”, “dereliction of duty, omission and bad behaviours”, it screened managers and team and group leaders at all levels and gave warnings to those suspected of violating integrity disciplines. It also carried out on-site evaluation of integrity risk sources, risk points and prevent and control measures at all units, and, following evaluation, proposed 24 requirements and measures for risk prevention and control including improving employee selection and employment, salary distribution, waste material disposal and reserve fund management.



During the Reporting Period, Huangpu Wenchong completed 35 special rectification projects as determined in the phase 1 themed education of “Keeping original goals and missions in mind”, 20 rectification projects for leadership democratic life meetings and 212 rectification projects for Party branch life meetings, with a total completion ratio of 90%.

In February 2019, GSI held the 2019 Party conduct and integrity construction and anti-corruption work meeting, at which the Party conduct and integrity construction and anti-corruption work of GSI for 2018 was summarized and the key tasks for 2019 were set. The secretary of discipline inspection committee of GSI made a Party conduct and integrity construction and anti-corruption report titled “Sticking to Strict Supervision, Strengthening Supervision Responsibility to Promote the Implementation of High-Quality Development Strategic Plans of the Company”.



Promoting Responsible Procurement

As the international community concerns more about supply chain management, the Group is well aware that sustainable development is not only a strategic objective, we also should pay more attention to the importance of business partners in achieving such objective. As a large shipbuilding enterprise, the Group pays attention to the impacts of supply chain on society, economy and environment. The Group is concerned about the legal compliance of our suppliers, and works with suppliers to create a clean, fair, just and open supply chain environment through legal and compliant procurement.

The Group adheres to the principle of open and transparent procurement and advocates survival of the fittest and fair competition. Through multi-dimensional assessment of suppliers including their qualifications, capabilities, equipment, operation and certification system, the Group strengthened supplier access management to gradually improve suppliers' ability to provide supply.

All of our subsidiaries have formulated, implemented and updated the relevant management systems, rules and standards as required. All of our subsidiaries have formulated and implemented the relevant regulations for supplier management and detailed implementation rules as the criteria for supplier selection, as well as the relevant implementation and supervision measures to standardize and dynamically manage suppliers.

Supplier admission

We have in place a process for adding interim suppliers and carry out standardized review for supplier admission, including qualification certification, product and service quality, design and process technology, production acceptance period and other factors.

Daily supplier supervision and management

Through problem information collection and collation, interviews with suppliers, problem rectification evaluation and supplier accountability, we carried out real-time collection, collation, evaluation and accountability for the problems in suppliers' product quality, product price, supply capacity, technical reliability, service level and contract performance, and conducted statistics and analysis of different suppliers for use as basis for annual review.

Annual evaluation of suppliers

We check and comprehensively evaluate the qualifications, supply quality and service attitude of suppliers at least once a year.

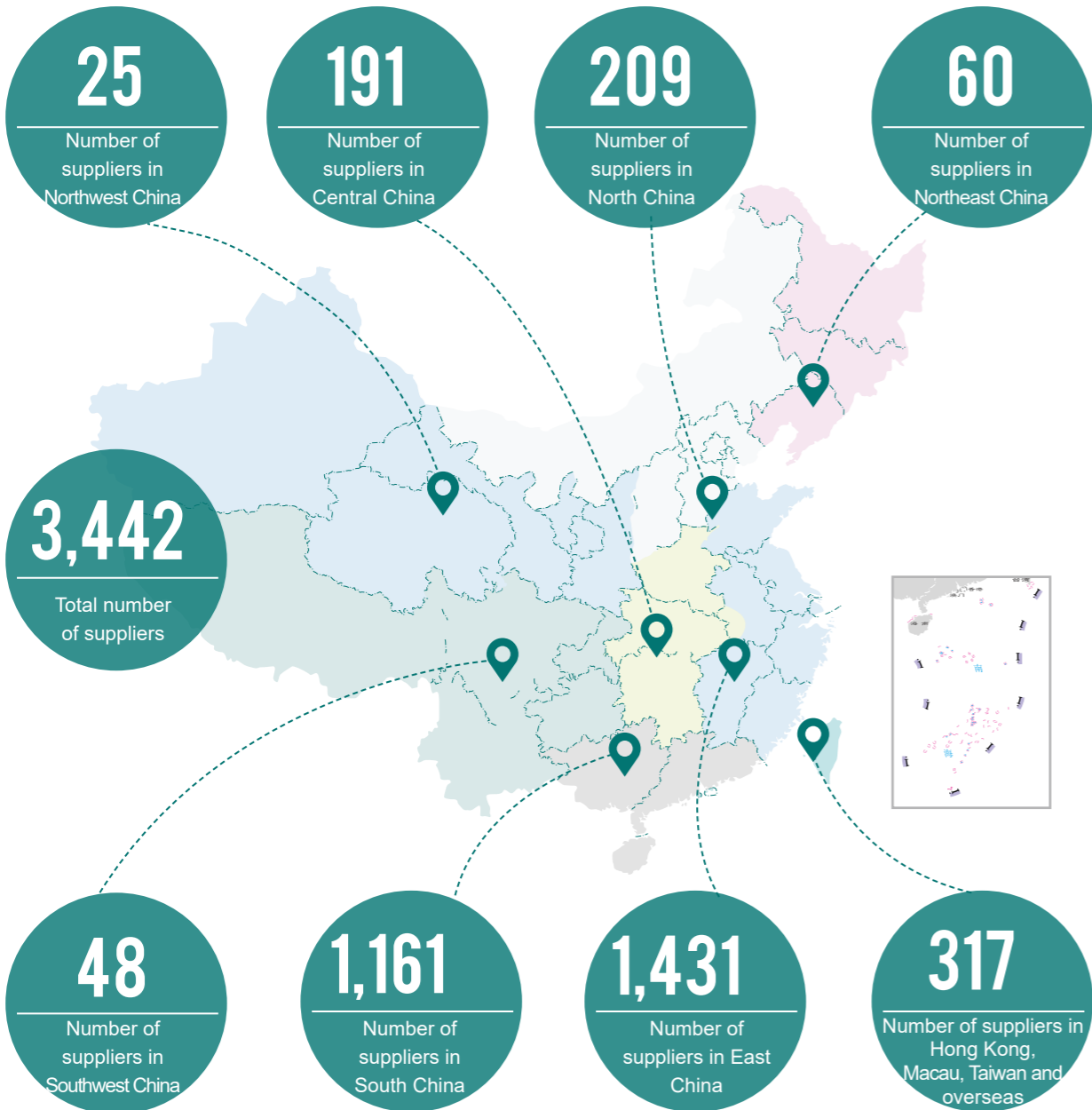
Removal of suppliers

According to the severity of the suppliers' problems, we have a list of suppliers “under watch”. We suspend further cooperation with them, require them to carry out rectification within the specified period, or we will cancel their qualified supplier qualifications and include them in the blacklist. For example, if a supplier's products have major quality problems or major safety and environmental hazards, we will terminate our cooperation with it, cancel its qualified supplier qualification and include it in the blacklist.

The above practices are applicable to the management of our suppliers of materials, including marine business materials, non-ship business materials, auxiliary production materials and labour protection supplies.

In addition, we actively promoted supplier management information construction and further strengthened the refined management of suppliers to improve their overall efficiency. While adopting a materials procurement supplier registration system and supplier performance assessment management module, our subsidiaries also made full use of materials procurement information platform and online shopping malls to gradually advance online procurement.

During the Reporting Period, the Group carried out an annual supplier review in terms of product quality, service and financial position and selected a total of 1,887 qualified civil product suppliers and 915 qualified military product suppliers. We strictly managed suppliers through issuing warning letters, interviews and quality claims, and organised annual supplier meetings to urge suppliers to improve their product supply quality.



Ratio of procurement through public bidding by the Company for the year of

26.13%



Percentage of local procurement of

41.87%



Percentage of suppliers passing quality, environmental and occupational health and safety management system certifications of

49.55%



Maintaining Product Responsibility


We deeply understand the importance of product responsibility including labels and traceability. We strive to improve the relevant management and carry out management and standardization in terms of product labels, product traceability, customer satisfaction, privacy matters and advertising. We are committed to maintaining product quality and protecting the rights and interests of customers.

All of our subsidiaries have formulated, implemented and updated the relevant management systems, rules and standards as required. During the Reporting Period, the Group was not aware of any violation of any laws and regulations relating to the provision and use of products and services of the Group (covering product and service message and labels, privacy, marketing (including advertising, promotion and sponsorship) and ownership (including intellectual property rights)) which has had a material effect on the Group.

● Product identification and product traceability

All of our subsidiaries have developed and implemented product identification and traceability control related procedures to provide for product identification, product status identification, product traceability identification and the contents, methods and control requirements for batch management to regulate effective management and product traceability.

The regulations mainly include the following:

-  Hanging or sticking labels or tags, or directly marking on the product with steel seal or paint or marking on its accompanying parts shall be adopted for product identification.
-  For products requiring traceability, they shall be uniquely identified and recorded.
-  Product status identification shall be carried out through hanging or sticking qualification cards, direct handwriting or marking on the record accompanied with products. Product status identification on production site shall also include labels for areas of products to be inspected, qualified, unqualified or to be determined.

● Customer satisfaction and privacy

In order to ensure that the Group effectively fulfils product responsibilities, all of our subsidiaries have developed and implemented the relevant management rules as required covering after-sales services and product repair, and carry out control and management for the service and technical support following product delivery to generally improve customer satisfaction.

Furthermore, to effectively understand customers' satisfaction of the services and products of the Group, all of our subsidiaries have developed and implemented the Customer Satisfaction Management Rules, which provide for the collection, statistics and measurement, analysis and utilisation of information on customer satisfaction. The sources of information on customer satisfaction mainly include direct communication with customers, information obtained from customer examination in product realisation, customer complaints, customer praises, customer survey, customer visits and after-sales feedback.

The business department is responsible for collecting information on customer satisfaction including customers' feelings in the production process and after-sales service process and quality issues raised by customers and passing the information on satisfaction to the quality department. The operation department is responsible for collecting from ship owners, government authorities and fleet detachments information on the satisfaction of the products of the Company, asking for customers' opinions and suggestions and passing the information on satisfaction to the quality department. The quality department is responsible for collecting information on customer satisfaction during the product inspection and test process.

The relevant departments will timely analyse customer satisfaction and deal with the issues reported or pass them to the relevant responsible departments for handling. The quality department summarizes the information on customer satisfaction collected. The military product department or the quality department organises the relevant departments to analyse the reasons for customer complaints and formulate rectification measures for improvement, identifies the departments responsible for the issues, supervises the responsible departments for timely handling and notifies customers of the handling results.

The Group also attaches great importance to protecting customers' privacy in the course of business. The Group has developed and implemented the Customer Properties Control and Management Measures to protect customer properties including their intellectual property rights and personal information. It maintains confidentiality control for intellectual property rights or personal information of customers or external suppliers which requires confidentiality, such as product specifications, design drawings, management or trade secrets of patented technologies.

● Marketing and promotion

The Group strictly abides by the relevant laws and regulations and has developed and strictly implemented management rules on marketing and promotion. Information on marketing and promotion, such as the advertisements or product publicity materials of all of our subsidiaries, shall not be put into use until approvals from different levels have been obtained. The Group strictly controls the legitimacy, authenticity, science and accuracy of contents of publicity materials and prohibits any deceptive or misleading information to effectively protect the lawful interests of customers.



ENVIRONMENTAL PROTECTION

- Green Production Management
- Strengthening Resource Utilisation
- Strict Emission Control
- Other Environment Management

Environmental protection expenses of RMB
52,028,900

Environmental protection training participants of
27,352
person-times

Major environment violations during the year
0

The Group adheres to the philosophy that lucid waters and lush mountains are invaluable assets. We unswervingly take the road of ecology first and green development and strictly comply with the requirements of national ecological environmental protection laws, regulations and standards. We continue to strengthen ecological protection and pollution prevention, take upon ourselves to cope with climate change and implement energy conservation and emission reduction. We integrate green, low-carbon emission and sustainable development concepts into the whole process of our operation and management in order to build a green enterprise.

Green Production Management

The Group actively undertakes the responsibility of environmental protection, and always adheres to the philosophy of “green manufacturing” and the principle of “protection and prevention first, comprehensive management, public participation, accountability”. In accordance with the requirements of international conventions, laws and regulations, we continue to improve our environment management system with reference to the ISO14001:2015 management system and integrates ecological environmental protection into corporate decision-making to promote the coordinated development of economy and ecological environment.

The Group vigorously promotes clean production strategies, develops circular economy, and integrates environmental protection into the whole production and operation process. All of our subsidiaries have formulated, implemented and updated the relevant management systems, rules and standards as required. In addition, the Group strives to establish a long-term environmental protection mechanism and promote green, low-carbon and sustainable development. The Group has developed environmental protection management regulations and related management rules, through which we carry out strict management in terms of responsibility system for prevention and control, environmental protection organisations and staffing, pollution prevention, general solid waste and hazardous waste management, environment monitoring, environmental risks and opportunities, pollution statistics and pollution accidents. The policies for the management of the above areas include:

Implementation Rules for Safety and Environmental Protection Assessment

Administrative Regulations on Prevention and Control of Environmental Pollution

Administrative Regulations on Waste Separation

Administrative Regulations on Hazardous Waste

Administrative Regulations on Hazardous Waste Storage Rooms

Emergency Rescue Plan for Environmental Pollution Accidents

Currently, the Group requires the implementation of the environmental impact assessment system and the “Three Simultaneousness” system for construction projects, pursuant to which the environmental protection facilities of new construction, renovation and expansion projects must be designed, constructed and put into use simultaneously with the main projects.

Moreover, the Group carries out a wide range of publicity and education on environmental protection and strives to explain to all employees about the relevant environmental protection laws, regulations and policies, in order to strengthen their environmental protection awareness and promote the sustainable development of the Group.

Environment management organisation system

Environmental Protection Committee

- Supreme command and coordination body for safety and environmental protection management
- General manager and the Chairman act as director and deputy director, respectively, with department heads as key members

Energy Conservation and Emission Reduction Leading Group and Working Group

- General manager and the deputy general manager in charge of energy conservation and emission reduction act as the leader and deputy leader, respectively, with department heads as key members

Environmental Protection Work Leading Team

- The decision-maker at subsidiary level for major policies for environmental protection, responsible for safety and environmental protection at subsidiary level
- Guide and coordinate environmental protection work

Environmental Protection Management Work Team

- Responsible for following, coordinating and implementing the decisions of the Environmental Protection Work Leading Team
- Urging departments to follow and implement the decisions of the Environmental Protection Work Leading Team, and examining the relevant implementation and environmental protection work arrangements
- Summarizing information on environmental management, analysing environmental situations, and proposing suggestions and measures for improvement
- Reviewing, assessing and appraising the environmental protection management work of departments and subsidiaries, including labour services companies

Safety and Environmental Protection Department

- Responsible for guiding, supervising, examining and managing environmental protection work of departments and subsidiaries

Production Support Department

- Responsible for the day-to-day management of energy conservation and emission reduction including coordination, guiding, inspection, statistics and assessment

Other departments

- Arranging full-time or part-time safety and environmental protection management personnel
- As an independent management department for environmental protection, each department cooperates with daily environmental protection management

During the Reporting Period, the Group had not violated any laws or regulations relating to waste gas and greenhouse gas emission, sewage and land emissions and generation and disposal of waste which had a material impact on the Group.

KPI

Comprehensive energy consumption per RMB10,000 output of

0.0428

tonne of standard coal/RMB10,000

Electricity consumption per RMB10,000 output of

197.91

kWh/RMB10,000

Environmental protection expenses of the Company of RMB

52,028,900

Environmental protection training participants of

27,352

person-times

Major environment violations during the year:

0


Strict Emission Control

Greenhouse gas management

The Group closely monitors the climate change trends, fully implements national and local requirements, and strictly abides by the relevant international conventions. Currently the Group achieves direct and indirect reduction of greenhouse gas mainly through adopting energy conservation strategies and the increase in energy utilisation efficiency. The Group also strengthened the operation management of photovoltaic power generation system, and our plant roof photovoltaic power generation volume for the year reached 8,457,300 KWh. The Group advanced the wharf shore power reconstruction project and realised the replacement of oil with electricity for landing ships.

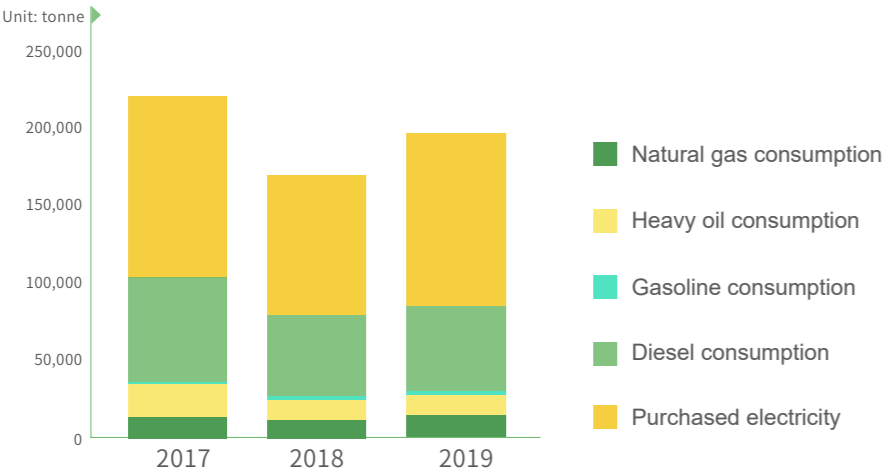
In addition, the Group actively carried out greenhouse gas emission quantification, and conducted statistics and quantification for greenhouse gas emissions for scope 1 and scope 2 in accordance with the relevant national guidelines. Scope 1 represents the direct emissions from the shipbuilding production activities of the Group, mainly greenhouse gases emitted from the use of fossil fuels. Scope 2 mainly comes from indirect emissions generated by electricity consumption of the Group, mainly including electricity consumption in production, office electricity consumption (including electricity consumption in offices and public lighting in the plant areas) and domestic electricity consumption (including electricity consumption in staff dormitories and canteens).

During the Reporting Period, the Group's greenhouse gas emissions amounted to 196,090.13 tonnes of carbon dioxide equivalent, representing an increase of 16.22% compared to 2018.

● **KPI**

Greenhouse gas emissions ¹				
Unit: tonne of carbon dioxide equivalent				
		2017	2018	2019
Scope 1	Natural gas consumption	11,024.11	9,926.72	12,666.29
	Heavy oil consumption	22,413.09	13,747.82	14,860.42
	Gasoline consumption	980.00	928.39	840.92
	Diesel consumption	67,849.73	53,080.37	56,197.29
Scope 2	Purchased electricity	116,801.66	91,033.16	111,525.21
Total		219,068.59	168,716.46	196,090.13

¹The scope of greenhouse gas calculation includes the consumption of fuel and purchased electricity of GSI and Huangpu Wenchong.



Greenhouse gas

Emission intensity

0.11

tonne of carbon dioxide equivalent/per RMB10,000 output

Waste gas management

The Group generates different types of waste gas in our production, mainly including dust waste gas, VOC (organic waste gas) and welding dust waste gas. In order to ensure that emissions meet requirements, our subsidiaries adopted activated carbon adsorption, cartridge filtration and catalytic combustion treatment technologies to treat waste gas, regularly maintained environmental protection equipment, and sampled and monitored waste gas emissions from the plants.

During the Reporting Period, the Group focused on VOC and dust exhaust gas treatment by installing additional waste gas collection devices in certain workshops and installing VOC online monitoring systems. We set up supporting cyclone filter cartridge type dust collectors, activated carbon adsorption and catalytic combustion purification treatment devices in the relevant production links and places (including steel plate pre-treatment lines, painting rooms and sandblasting rooms), adopted mobile welding flue gas purifiers to treat welding fume in hull workshops, welding fume treatment system in tube workshops to filter welding fume, and activated carbon adsorption devices in electromechanical general workshops to purify and treat VOC generated during paint dipping and drying.

● **KPI**

Total waste gas emissions ¹		
Unit: 10,000 standard cubic metres		
2017	2018	2019
134,460	187,409	285,032

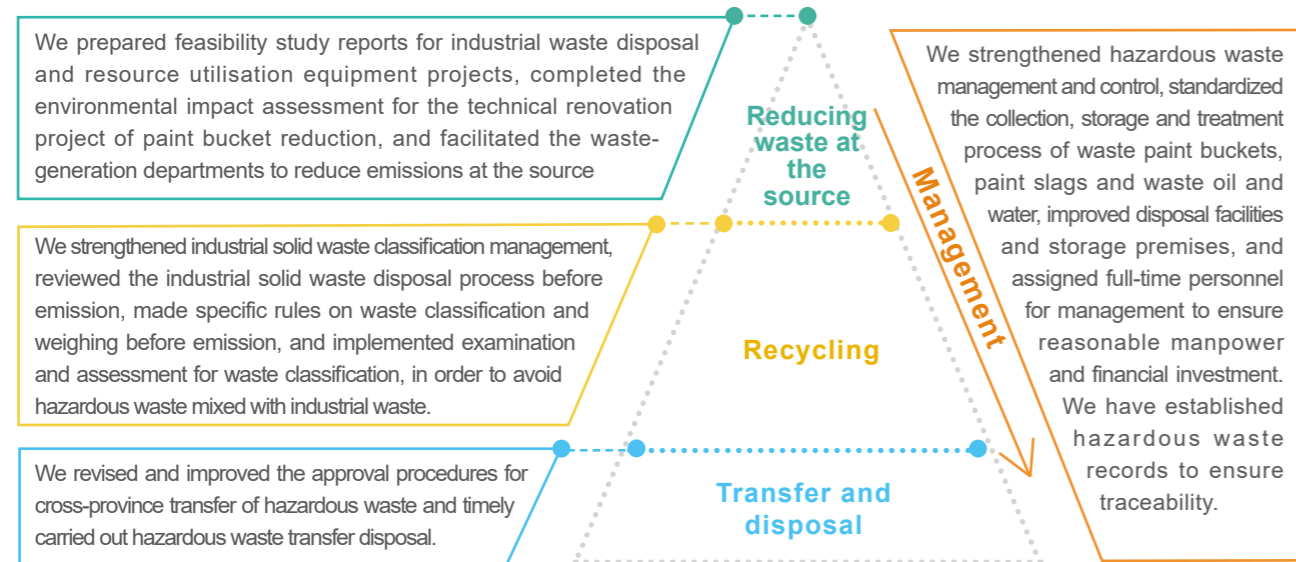
¹The scope includes total waste gas emissions of GSI and Huangpu Wenchong.


Waste gas emission intensity of **1,529.27** standard cubic metres/RMB10,000 output

				GSI		Huangpu Wenchong		
				Steel plate pre-treatment line	Segmental coating	Steel plate pre-treatment line	Segmental coating	
Emission method				—	Intermittent	Intermittent	Intermittent	Intermittent
Vent height				metre	25	25	20	25
Type of waste	Particulate matter	Emission concentration	mg/m³	<20	<20	7.3	7.6	
		Emission rate	kg/h	/	/	0.062	0.042	
	Toluene	Emission concentration	mg/m³	0.04	0.06	0.292	0.415	
		Emission rate	kg/h	5.29x10 ⁻⁴	1.95x10 ⁻³	0.0072	0.021	
	Xylene	Emission concentration	mg/m³	0.19	6.68	0.778	1.05	
		Emission rate	kg/h	2.51x10 ⁻³	0.218	0.019	0.054	
	VOCs	Emission concentration	mg/m³	15.83	5.57	18.6	5.13	
		Emission rate	kg/h	0.209	0.181	0.46	0.27	

Waste management

The waste generated in the operation and production of the Group include hazardous waste, industrial solid waste, domestic waste and construction waste, etc. The Group focuses on reducing the generation of waste at the source and is committed to reduce their impacts on the environment. We strive to reduce waste disposal and realise recycling of resources through improving waste classification management and comprehensive utilisation efficiency.



During the Reporting Period, our waste generation increased from last year, mainly due to the inclusion of waste data of Wenchong Shipbuilding as GSI merged Wenchong Shipbuilding in 2019. Details are as follows: Wenchong Shipbuilding generated hazardous solid waste of 2,389 tonnes and non-hazardous solid waste of 72,760 tonnes, recycled 63,910 tonnes of non-hazardous solid waste, and generated hazardous liquid waste of 62.609 tonnes.

Waste disposal and effectiveness

Type	Disposal method	Environmental effectiveness
Recyclable waste Recyclable industrial waste (e.g. metal scraps and wood packaging materials), hazardous waste such as waste mineral oil, and recyclable domestic waste	Recycled depending on classification and sold to qualified buyers for disposal	Preventing industrial waste from flowing into the natural environment and realising harmless disposal
Non-recyclable industrial waste Dust, waste insulation materials, etc.	Delivered to qualified institutions for disposal	Preventing industrial waste from flowing into the natural environment and realising harmless disposal
Hazardous waste Mainly oily waste, coating waste, waste activated carbon, etc.	Delivered to qualified institutions for disposal	Preventing hazardous substance from flowing into the natural environment and realising harmless disposal
Domestic waste Mainly domestic waste generated in offices and living areas	Recycled depending on classification and sold to qualified logistics service providers for disposal	Preventing domestic waste from flowing into the natural environment
Construction waste Waste earthwork, waste reinforced cement, waste bricks generated in civil engineering projects	Timely cleaned by engineering contractors	Preventing construction waste from flowing into the natural environment

KPI

	Solid waste (tonne)				Liquid waste (tonne)	
	Hazardous solid waste		Non-hazardous solid waste		Hazardous liquid	
	Volume generated	Volume recycled	Volume generated	Volume recycled	Volume generated	Volume recycled
2019	5,792	1,419	136,036	100,969	1,864	1,239
2018	1,890	0	37,725	12,787	1,593	201
2017	369	11	45,780	33,400	403	54

Hazardous solid waste	Generation intensity 0.0031 tonne/per RMB10,000 output	Non-hazardous solid waste	Generation intensity 0.0730 tonne/per RMB10,000 output	Hazardous liquid	Generation intensity 0.0010 tonne/per RMB10,000 output
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Wastewater management

The Group generates production wastewater and domestic sewage in the process of production and operation, of which production wastewater mainly comes from oily wastewater from mooring experiment and pipeline flushing process of ship terminal. The Group adopts comprehensive prevention and control measures for wastewater in accordance with national and industry standards to increase water reuse rate and reduce wastewater emission. In addition, the Group adopts effective measures to collect and treat all wastewater generated, including carried out standard collection and transportation of oily sewage and using online monitoring facilities to dynamically monitor wastewater disposal process to prevent environmental pollution. All sewage treated by sewage treatment facilities shall not be discharged before it can meet the standard.

KPI

	Wastewater emissions (Unit: 10,000 tonnes)			Pollution emissions (Unit: tonne)	
	Discharged into rivers	Discharged into municipal pipe network	Total	COD	Ammonia nitrogen
2019	42.92	75.34	118.26	27.11	1.77
2018	48.20	78.88	127.07	41.08	3.45
2017	38.49	197.91	236.40	23.35	2.583

Wastewater emission intensity
0.63

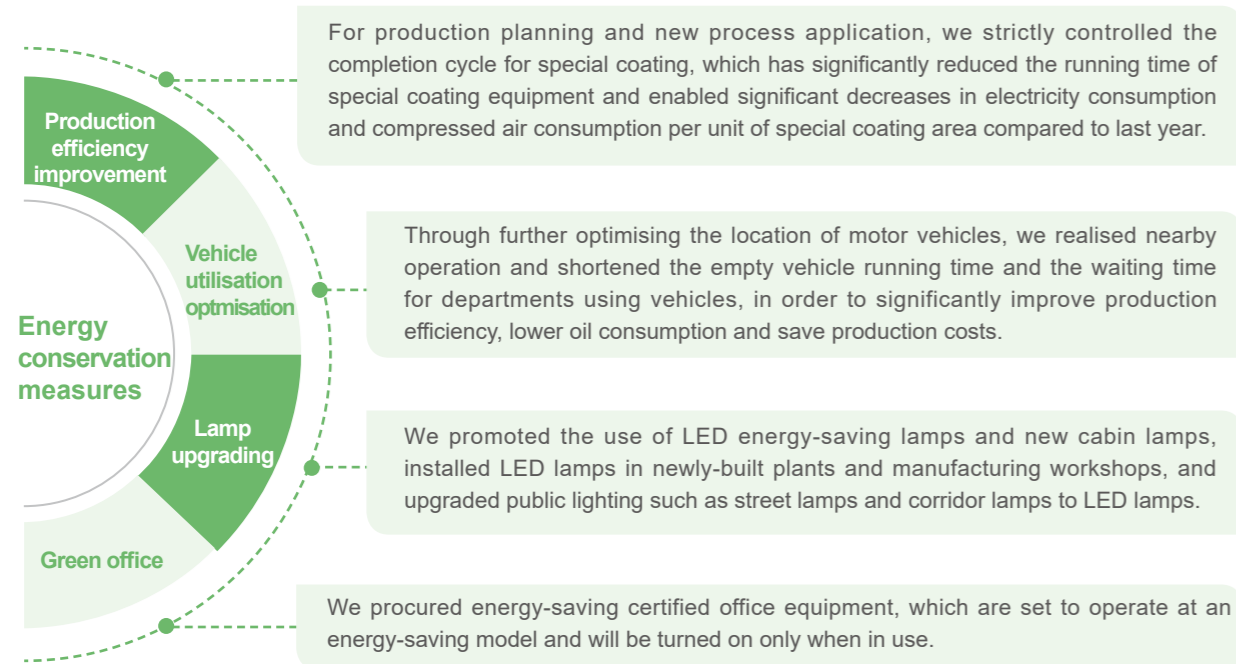
tonne/per RMB10,000 output¹

¹ In previous years, we calculated wastewater emission intensity using wastewater emission per 10,000 DWT of shipbuilding and ship maintenance business. In order to more comprehensively reflect total water consumption of the Company, we adopted wastewater emission per RMB10,000 output for the calculation of intensity this year.

Strengthening Resource Utilisation

Energy conservation management

The Group has always taken energy management seriously, gives priority to adopting energy conservation strategy, and continues to improve energy utilisation efficiency. We actively carry out energy conservation technology upgrading, optimise energy structure, and promote the improvement in dynamic energy monitoring system. Currently all plants of the Group have obtained energy management system certification and our energy management has been systematically improved



KPI

	2017	2018	2019
Natural gas con-sumption (Unit: 10,000 cubic metres)	336.94	303.40	387.14
Fuel consumption ¹ (Unit: tonne)	25,987.62	18,976.84	11,020.07
Purchased electricity (Unit: 10,000 kWh)	38,179.69	29,637.00	36,888.08
Photovoltaic power generation (Unit: 10,000 kWh)	Not disclosed ²		845.73
Total energy con-sumption (Unit: tonne of standard coal) ³	88,031.07	68,002.45	79,711.43

¹ Fuel consumption includes total consumption of heavy oil, gasoline and diesel.

² In order to better reflect the effectiveness of our application of clean energy and energy consumption reduction, we disclosed a new indicator of photovoltaic power generation in the report for this year.

³ Total energy consumption includes the consumption of natural gas, fuel and purchased electricity and excludes photovoltaic power generation.

Comprehensive energy consumption per RMB10,000 output of	0.0428	Electricity consumption per RMB10,000 output of	197.91
	tonne of standard coal/RMB10,000		kWh/RMB10,000

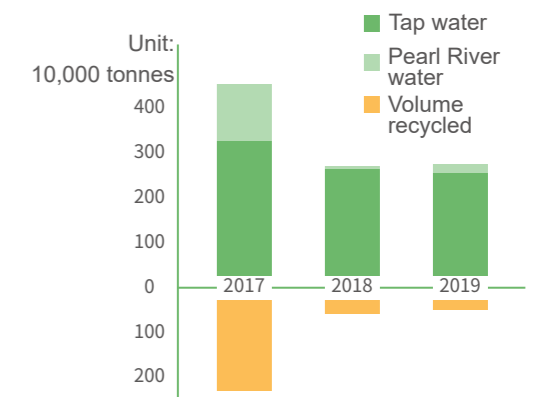
Water conservation management

The Group attaches great importance to water resource conservation. By sticking to our rules of “Water conservation, planned use of water, comprehensive utilisation and improving efficiency”, we have developed a water conservation plan to strengthen water use management. The Group strictly monitors water consumption in the production to ensure that water consumption is maintained at a reasonable level. We avoided the waste of water resources by adjusting water consumption structure and improving water consumption methods.

During the Reporting Period, the Group reduced waste of water by emitting, dripping and leakage and saved domestic water through upgrading new shipbuilding building and outfitting building, use of reclaimed water in toilet flushing in certain platform lines and strengthening inspection of water pipelines in plant areas. We strengthened the management of use of water for landing ships by installing additional water metres in certain plant areas to monitor ship water injection. The Group has no issue in sourcing water.

KPI

Water consumption		Unit: 10,000 tonnes		
		2017	2018	2019
By water intake source	Tap water	310.73	242.25	235.46
	Pearl River wa-ter	110.29	8.49	18.55
By water use	Industrial	296.43	197.41	207.08
	Domestic	124.59	81.25	46.93
Total water consumption		421.02	278.65	254.01
Volume recycled		225.80	37.48	31.16



Industrial	2019	207.08	Domestic	2019	46.93	Water consumption intensity of	2019	1.36
		10,000 tonnes			10,000 tonnes			tonne/per RMB10,000 output ¹

¹ In previous years, we calculated water consumption intensity using water consumption per 10,000 DWT of shipbuilding business. In order to more comprehensively reflect total water consumption of the Company, we adopted water consumption per RMB10,000 output for the calculation of intensity this year.

Other Environment Management

In addition to the above waste gas, solid waste and wastewater generated and use of energy and water, the Group also generates noise, radiation and other environmental impacts in our business process. The Group manages such impacts in strict accordance with the relevant laws and regulations to minimize the impacts on the environment and community.

Noise	We control noise source first and give priority to low noise process and equipment in procurement	Radiation	We manage the use of radiation devices in strict accordance with the national requirements to avoid pollution due to loss or loss of control
	We also adopt vibration isolation, sound insulation, sound absorption and other noise reduction measures, so that the impacts of noise sources on the surrounding areas comply with the provisions of local environmental noise standards.		We have established and improved a radiation safety and protection management system, pursuant to which we implement full process management including the licensing, storage and use of radiation devices, radiation workers and site monitoring and radiation accident emergency handling.

In addition, we adhere to the principle of “people-oriented, prevention first” in managing environmental protection incidents. All of our subsidiaries strengthened the monitoring and supervision of environmental factors, established environmental factor prevention systems, improved their ability to prevent and cope with sudden environmental pollution events, enhanced training and drills, and improved risk prevention and control measures for environmental emergencies. Upon occurrence of an environmental pollution incident, our subsidiaries will launch the relevant emergency plan, establish investigation teams to investigate and rectify the incident, and prepare relevant reports.

CARING FOR EMPLOYEES



- Protecting Employees' Rights and Interests

- Focusing on Employee Care

- Supporting Staff Development

Total number of
employees of
15,366

Average number
of hours of
paid leave per
employee of
9.0
days

Average number
of hours of training
provided to each
employee of
27.66
hours

The Group always adheres to the human resource policy of "people-oriented", respects employees' rights and focuses on the cultivation of talents. We encourage employees to carry out technological innovations and strive to establish a fair, just and open working and development environment for employees.



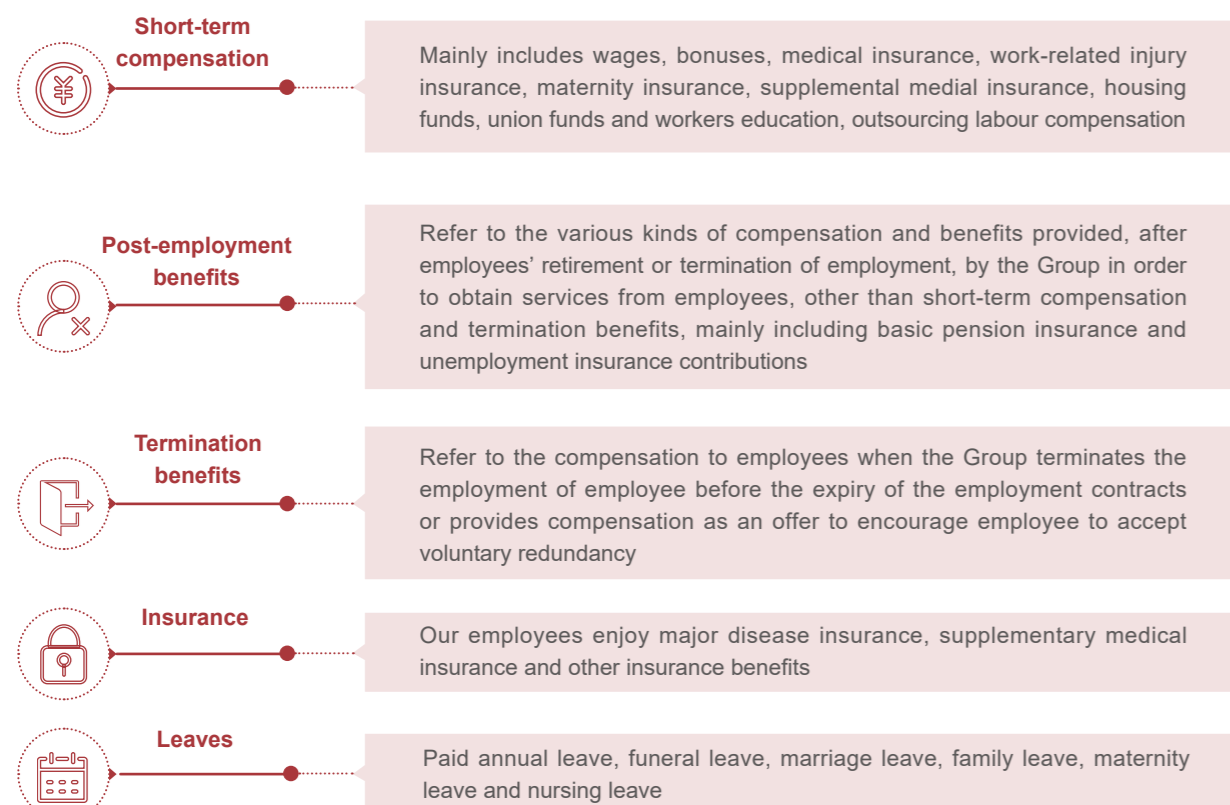
Protecting Employees' Rights and Interests

Our employees are valuable assets of the Group. The Group strictly abides by the laws and regulations relating to employment, and has developed rules and regulations to set out the requirements of the Group for remuneration, dismissal, recruitment, working hours and leaves to ensure that all employees are protected by these rules and regulations. In addition, the Group adheres to the principle of fair, just and non-discriminatory employment and does not discriminate against anyone on the grounds of gender, region, nationality, religion, age or political standing in the process of recruitment, determination of remuneration, training and promotion. The Group eliminates child labour and forced labour, respects and protects the legitimate rights and interests of all employees. All of our subsidiaries have formulated, implemented and updated the relevant management systems, rules and standards as required.

During the Reporting Period, the Group had not violated any law or regulation relating to employment which has had a material impact on the Group.

Employee compensation and benefits

The remuneration of our employees has been determined based on the complexity and responsibility of their positions and their work performance. Their remuneration includes salary, bonus and other benefit plans required by the State. The Group participates in the social insurance plans established by the government authorities, covering pension, annuity and unemployment insurance.



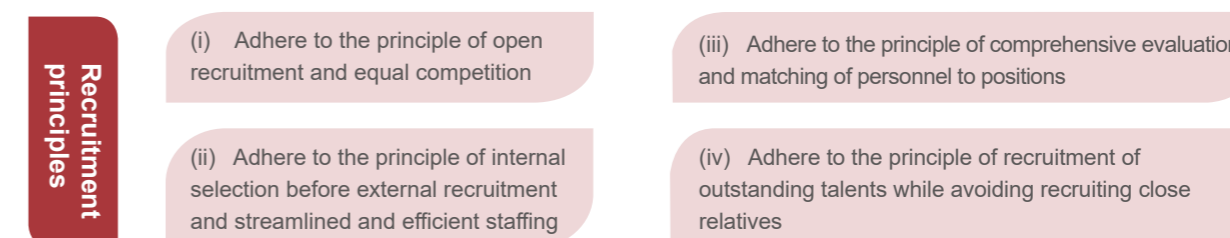
In addition, we have in place compensation incentives for specific matters, including key post talent allowance, confidentiality allowance, scientific research award, production node award, etc.



Talent recruitment

The Group regards human resources as our most valuable resources and is committed to developing talent resources in first priority, adjusting talent structure and ensuring talent investment. In addition, the Group has been striving to enrich the composition of employees and build a diversified team of employees with different ethnics, educational backgrounds, work experiences, nationalities and expertise. The Group adheres to the principle of fair and open recruitment and strictly implements the relevant regulations on recruitment management. We have established and improved a recruitment mechanism with work experience, skills and professional ethics as key indicators to ensure that all employees enjoy the rights and interests and fair and just treatment in accordance with the law. After a department puts forward the need for recruitment, the human resources department will determine the recruitment channel and implement the relevant process in accordance with the relevant requirements. Proposed employees have to undergo a physical examination and admission procedures after passing the examination. The Group takes the initiative to check applicants' identity documents to prevent child labour.

The signing and termination of employment contracts are all carried out in strict accordance with the laws and regulations where the Group operates to fully protect the rights and obligations of employees and the Group.



Recruited employees must meet the criteria set out in the recruitment announcement. The Group adheres to the principle of avoiding close relatives. If a proposed employee of a department is a close relative of the management of such department, he/she cannot be recruited to such department. The Group also has specific rules that each manager, recruiter and introducer shall not accept money, gifts, securities from the applicants or any other relevant persons.

During the Reporting Period, the Group had not experienced any case of illegal employment of child labour which has had a material impact on the Group.

KPI



● Elimination of forced labour

The Group resists any act of ignoring and trampling human rights and actively eliminates the forced labour of employees. The Group pays full attention to the labour of employees, determines employee working hours through policies, and properly arranges shifts and leaves for employees.

We have specific rules for daily working hours of employees and absolutely prohibit forced harbour

If any violation is found, the relevant department will report to the management in accordance with internal rules, carry out detailed investigation, and adopt rectification measures for the violation based on the investigation results

If it is indeed necessary for an employee to work overtime, the employee shall apply for approval, and will be compensated for through deferred holidays in the year arranged in view of the actual production and operation of the department. If no deferred holidays can be arranged, overtime allowance shall be paid by the department in accordance with the rules

During the Reporting Period, the Group had not experienced any case of forced labour which has had a material impact on the Group.

● Promoting democratic construction

The Group respects the democratic rights enjoyed by employees, continuously listens to their voices, and communicates with employees through different democratic management channels and forms in order to establish harmonious and stable labour relations with employees.

During the Reporting Period, the Group continued to promote democratic supervision, adopted democratic voting and improved democratic management.

Democratic supervision and construction

During the Reporting Period, the Group solicited 60 proposals and suggestions from employee representatives, allocated the same to respective functional departments for handling, and announced the handling results to all employees through the OA system, ensuring that employees' demands are responded to and the agreements with them are complied with.

Democratic voting

The Group organised regular staff congress meetings, at which the utilisation of benefit expenses for 2018 and the benefit budgets for 2019, the implementation rules for the enterprise annuity plan and other rules relating to the human resources management were considered and passed, which had protected the lawful interests of employees in accordance with the law. In addition, the Group arranged the signing of collective contracts, including the contracts for protecting the interests of female employees, which were also filed with local labour unions. The Group protected the lawful rights and interests of employees in strict accordance with the terms of contracts and achieved a win-win situation for the interests of the Company and employees.

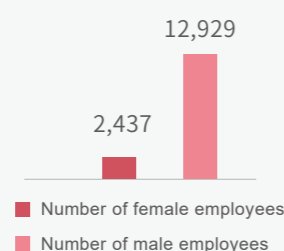
Democratic management

The Group conducted research on hot issues in labour relations, strived to establish a smooth mechanism for employees to express their claims, and did a good job in daily labour dispute mediation. The Group appointed lawyers in the relevant areas to provide labour consulting and legal assistance, to participate in the investigation and relevant compensation for work-related injury accidents, and to mitigate and resolve our conflicts with employees in accordance with laws and regulations, which has effectively safeguarded our development, implemented our rules to protect employees and promoted a harmonious relationship between the Group and our employees.

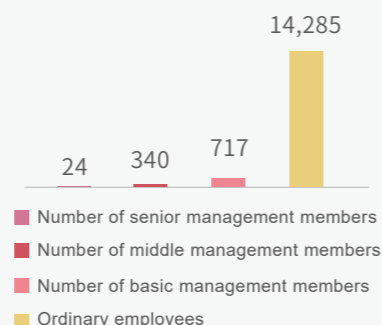
● KPI

Number of employees
15,366

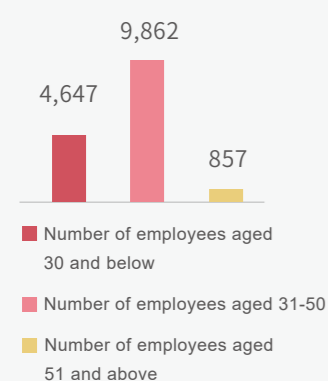
Employee gender structure



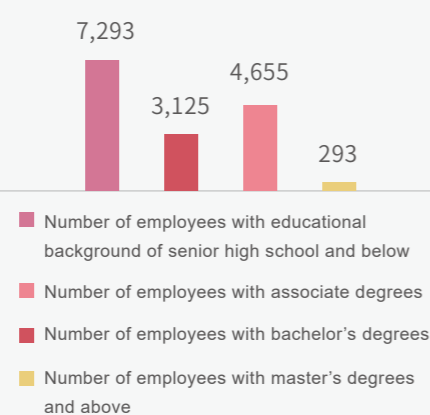
Employee rank structure



Employee age structure



Employee education structure

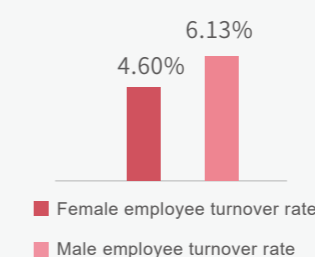


Number of employees by region

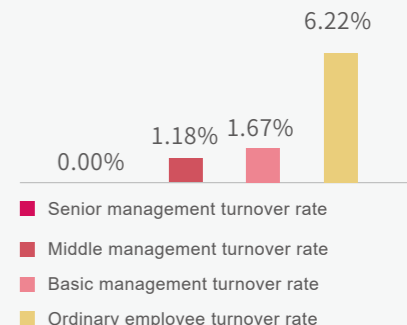


Employee turnover rate
5.88%

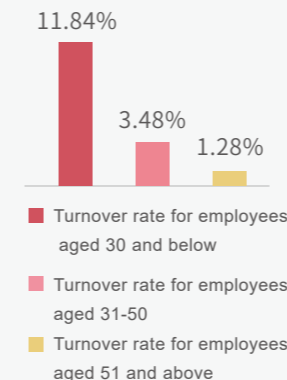
By gender



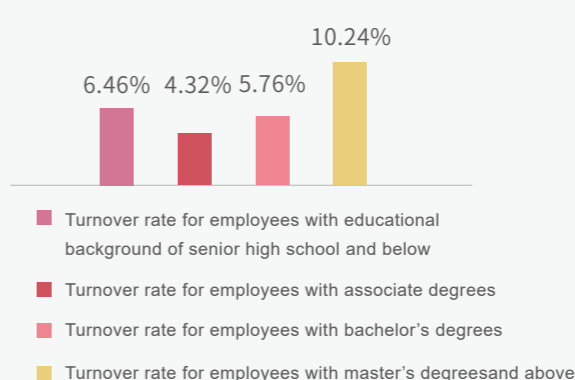
By rank



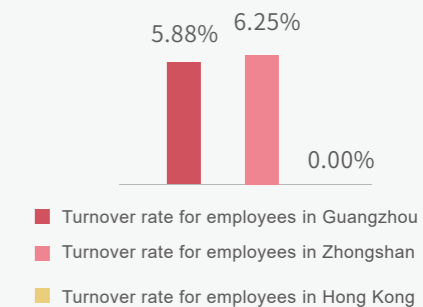
By age



By educational background



By region





Supporting Staff Development

Improving staff training system

The Group continues to provide employees with training meeting job needs and beneficial for their growth in order to improve their ability to perform duties and their general quality. We have in place internal system construction requirements and require all of our subsidiaries to develop and implement staff training management regulations, internal trainer management measures and other relevant rules.

Requirements for training contents

- Training for management: Mainly about ideological quality, management ability, leadership and execution ability, knowledge of operation, production and positions, implemented in accordance with the requirements of management hierarchy and professional requirements.
- Training for professional business and engineering technical personnel: Mainly about job skills and the relevant business knowledge, carried out by profession in accordance with the job requirements and the needs for staff growth.
- Training for employees in production positions and production supporting positions: Mainly about the knowledge required for positions (types of work). The training for and assessment of workers on vocational skills shall be carried out in accordance with the relevant requirements of the Professional Skill Appraisal Standard of the People's Republic of China.
- Training for new employees: All new employees of the Company shall receive induction training mainly about corporate profile, enterprise culture, rules and regulations, professional ethics, production safety, quality management, security, family planning and occupational adaptation.
- Training for new employees graduating from colleges or technical secondary schools: One-year position training and professional training. By attending training for and study of the production and function departments, new employees experience on-site operation environment and production process and learn about the operation of the relevant positions. Their positions will be determined after they pass the assessment. The department at which a new employee works is responsible for developing and implementing a proposal for professional position training and assigning designated mentor for him/her.

Requirements for training assessment

- Assessment of new employees: All new employees of the Company for production and operation positions must undergo induction skills assessment, and only those who pass the assessment can go through the employment procedures. New employees to engage in special operation shall also hold special operation permits.
- Position transfer assessment: Any employee who will change position due to work needs or is required to operate new equipment, shall participate in the position transfer training and assessment arranged by the Company or the employing unit. The contents of assessment depend on position requirements, and no employee shall start to hold the position until he/she passes the assessment. Those who will operate special equipment are required to possess special equipment operation certificates.
- Annual assessment: Employees whose annual assessment results are "basically competent" or "incompetent" are required to receive training for the knowledge of their positions. After passing the assessment, they can resume the position.



Case | Training course for young cadres of party school of GSI

GSI held a young cadre training course. With "action learning" as the leading principle and "missions" and "tasks" as learning objectives, it established an innovative mechanism combining "working" with "learning" to fully improve the learning ability, management ability and innovation ability of young cadres and excellent young reserve cadres of the Company.



Case | Pre-job training of Huangpu Wenchong for graduates

In order to enable new employees to adapt to its working environment and corporate culture as soon as practicable, Huangpu Wenchong provided an adaptation period training for 2019 graduates. The training included pre-job training and on-the-job training. Pre-job training was mainly conducted on a centralized basis, covering company development, management system, corporate culture, human resources system, special training, psychological counselling for new employees and collective activities. On-the-job training was mainly conducted in the form of tutoring, covering team building, drawing reading, practical operation and improvement through practice.



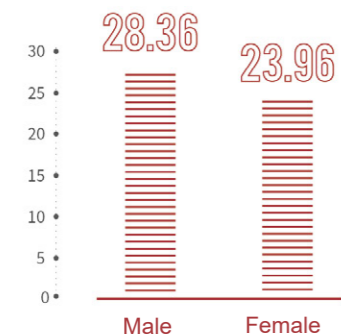
● KPI



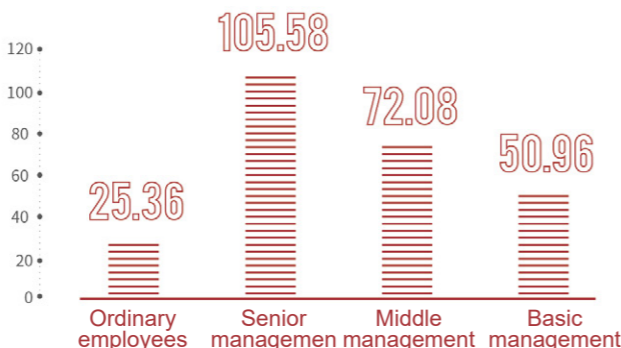
Total training hours of the Company for the year of **425,000** hours

Average number of hours of training provided to each employee of **27.66** hours

By gender
Average number of training hours
per employee (hour)



By level
Average number of training hours
per employee (hour)



Smooth career development path

The competition and development of an enterprise ultimately depend on the competition for talents. The Group attaches great importance to the cultivation and development of employees. Under our people-oriented corporate culture, we continuously and efficiently cultivate talents to maintain the sufficiency and depth of our talent supporting system, so that our employees can move forward in both work and life and facilitate the development of the Group while realising their self-worth.

The Group has established three career development paths to meet business needs: management, technical and skill. The Group provides employees with professional technologies or skills with equal status, remuneration and development opportunities to those of management.

● Introduction to career paths

Development by category	Management ladder	Technical ladder		Skill ladder
	Senior management	Chief engineer		Technical experts
		Deputy chief engineers/deputy chief designers		
	Middle management	Project managers	Principal engineers	Senior technicians
		Construction project managers	Lead engineers	Technicians
	Basic management	Project directors	Handling engineers	Senior workers
		Project officers	Engineers	
	Ordinary employees	Project managers	Assistant engineers	Intermediate workers
		Interns		Junior workers
<div><div>Managers</div><div>Technical personnel</div><div>Skilled personnel</div></div>				



Focusing on Employee Care

The Group has always attached great importance to the family life and physical conditions of our employees. We provide diversified benefits and activities to serve every employee wholeheartedly and improve their subjective well-being. By fully leveraging resources and active organisation of labour union, administrative department and human resources department, members of different departments of the Group made concerted efforts and held various activities to enrich employees' cultural lives in order to create a good working environment for employees and jointly promote the development of our corporate culture.

Caring for employees in financial difficulties and employees at the basic level

● Visiting employees

The Group has always emphasized the provision of care for employees in financial difficulties and employees at the basic level. We send warmth to employees through visits and distributing free supplies on major holidays such as the New Year's Day, the Chinese New Year, the Labour Day and the Mid-Autumn Festival. During the Reporting Period, the Group visited a total of 4,698 persons, including previous labour models (including in-service and retired labour models), family members of Anti-Japanese war soldiers, honorary soldiers and soldiers on duty and those in financial difficulties, retired employees, hospitalized employees due to injury, disabled employees due to work-related injury, widows of employees dead due to work, key production employees, employees working overtime on holidays, employees on pilot sails and dispatched employees, and distributed consolation funds and subsidies for employees in financial difficulties in the total amount of RMB2,207,300.



Visiting employees working overtime



Visiting hospitalized employees



Sending coolness in summer

● Caring for health of employees

We care for employees' physical and mental health. We actively carried out employee care programs including the Mutual Assistance Plan for Employees in Guangdong Province, the Mutual Assistance Plan for Employees in Guangzhou with Special Diseases, the Hospitalization Mutual Assistance Plan for Employees in Guangzhou, the Hospitalization Care Plan for Labour Union Members in Guangzhou, the Mutual Aids Association of the Company and the Mutual Aids Association for Employees of Project Contractors to provide important supplement to solve the difficulties of employees. We organised employee recuperation activities, with a total of over 4,300 employee participants in the year, which enabled our employees to effectively relax their bodies and minds and promoted the balance between work and rest.

● Providing employee benefits

The Group also carried out various activities to provide services to employees, such as seeking school admission opportunities for employees' children, property and vehicle purchase discounts for employees, and ordering train tickets during the Chinese New Year for cooperative workers and contract workers. We cared for employees by focusing on solving the most concerned, direct and realistic interest issues of employees.

Enriching employees' living

We are committed to enriching employees' lives, promoting corporate culture development, improving their living standards, creating a warm and happy atmosphere, enriching their spare time, and continuously improving their sense of belonging and happiness.

- We organised performance and various cultural and sports activities. During the year, we organised park tours, Learn from Lei Feng activity, tree planting, table tennis, badminton, men's basketball and other sports games, as well as featured recreational activities including film screening, thematic painting and calligraphy photography exhibition, thematic party day and National Day performance.
- We carried out various livelihood projects, including upgrading employee living areas, establishing a staff home, upgrading sports facilities, paying attention to the marriage and love issues of employees, organising single employee dating activities, and holding group weddings.

Shows and performances

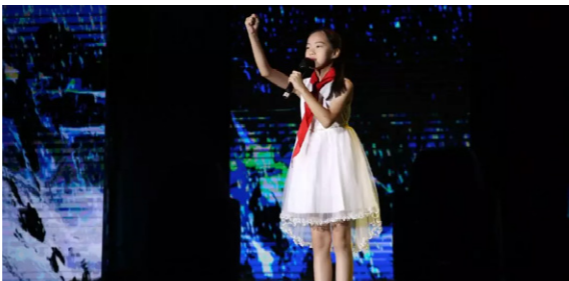
The 30th "Voice of Huangpu Wenchong" Evening Variety Show



CSSC Guangzhou Cultural and Art Performance in Celebration of the 70th Anniversary of the Founding of New China



"70 years of Grand Accomplishment, Chasing Dream for 65 Years, A New Era Ahead – Celebrating the 70th Anniversary of the Founding of New China and the 65th Anniversary of Establishment of GSI" Variety Show

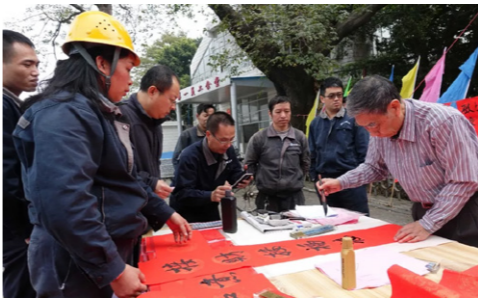


Arts Activities and Welfare Projects

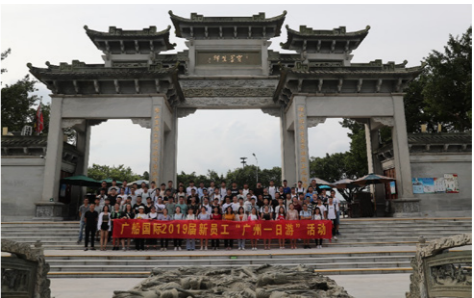
Group Weddings



Spring Couplets Giving Event



One-Day Trip for New Staff



Establishment of GSI Library for Employees



Upgrade and Modification of Huangpu Wenchong Football Court



Swimming Competition among Employees

Tug of War Competition among Employees on International Women's Day





GIVING BACK TO SOCIETY

Targeted poverty
alleviation expenses
of RMB
2,434,900

Volunteer
services
provided during
the year of more than
1,300
person-times

- **Building a Harmonious Community**

While pursuing economic growth, the Group also sticks to public welfare undertakings. The Group takes the initiative to fulfil our responsibility as a corporate citizen. In 2019, we actively participated in and organised various public welfare activities as always to help people in need and give back to the society.



Building a Harmonious Community

The Group believes that by listening and responding to the demands of the community, we can procure all parties to actively solve potential disagreements and build a sustainable development community together. As a responsible corporate citizen, the Group actively participates in the targeted poverty alleviation cause and community volunteer services, carries out commitments with practical actions, and strives to achieve a win-win situation for the common development of the Group and the community.

Targeted poverty alleviation

Poverty reduction is one of the global sustainable development goals. In China, targeted poverty alleviation is an important way to ensure that all people share development and realise common prosperity. In accordance with the strategic arrangements of the central government for targeted poverty alleviation, the Group actively made use of our own strengths in carrying out targeted poverty alleviation and fighting poverty.

Designated poverty alleviation:

We organised employees to purchase free-range chicken from Heqing County, Yunnan Province in the amount of RMB **3,020,000** in total,

shared the expense of "labour training and use" project in Heqing of RMB **9,000** funded the vocational skill training for poor students in Heqing, and further implemented targeted poverty alleviation measures.

Through financial and educational aids, we helped **90** registered poor people get out of poverty

20 poor students admitted to Guangzhou Shipyard Vocational School for training and learning.

Financial donations:

We arranged **1** poverty alleviation cadre stationed in He'an Village, Xuwen County, Guangdong Province

donated RMB **185,400** to He'an Town, Xuwen County

gave consolation funds to **35** families of RMB 300 each, totalling RMB10,500.



Targeted poverty alleviation expenses of RMB **2,434,900**

Volunteer services

To build a harmonious society, the Group made use of our professional advantages and carried out various volunteer service activities such as Learn from Leifeng in a planned and organised way, so as to fulfil our corporate social responsibility, pass on our care and show the style of COMEC.

- The Group's labour union organised "Conghua Lianma Town Public Welfare Forest" and "Huadu Second Sanatorium Public Welfare Forest" tree planting activities, and organised 110 employees to participate in voluntary blood donation activities in 2019.
- In March 2019, GSI partnered with the Youth League Committee of Guangzhou Shipyard, the Youth League Committee of Longxue Sub-district and the Youth League Committee of offshore engineering business of Huangpu Wenchong to hold Learn from Leifeng volunteer service month activities, with a total of over 500 participants.
- In March 2019, GSI independently held three activities with the theme of "CSSC Volunteers Learn from Leifeng", and also partnered with the Youth League Committee of Longxue Sub-district and the Youth League Committee of Huangchuan Ocean Engineering to hold activities with the same theme to help people. Its volunteers provided volunteer services including haircutting, bicycle repair, environmental improvement and small electrical appliance repair in the peak dormitory area, Shayuan dormitory area and Workers' New Village dormitory area. A total of 30 volunteers participated in the activities and served over 300 persons, with a total of 240 service hours.
- Huangpu Wenchong has four volunteer service teams, namely Chunfeng, Yangguang, Qingnuan and Yuanmeng. Through organising and participating in four major activities with the themes of helping people in financial difficulties, providing medical assistance, providing learning assistance and protecting rights, they further strengthened force by providing volunteer services in medical care, psychological counselling, maintenance, study counselling, legal aid, marriage and friendship, and achieved the objective of providing long-term continuous volunteer services. March, May and August are designated as the months for centralised volunteer services with the themes of "Learn from Leifeng", "Care for Employees" and "Serving Contract Workers", respectively. Basic level labour union organisations actively responded to the measures and made concerted efforts.

o KPI

Volunteer services provided during the year of more than

1,300
person-times

Volunteer services provided of over

8,240
hours

OUTLOOK FOR 2020

Looking forward into 2020, driven by our corporate mission of “Serving country through marine and shipbuilding business”, COMEC will further promote the diversified, digital and collaborative development and continue to optimise business and production activities. As an enterprise with a profound history, COMEC will continue to forge ahead and help China achieve the strategic objectives of becoming a strong marine county and technical power. We will steadily advance the integration of military and civil products, always perform our duty of serving the army in top priority, strive to become a first-class marine equipment manufacturer, fully perform our corporate social responsibilities, and contribute to China's transformation from a large shipbuilding country into a strong shipbuilding country.

With our dreams in mind, we will dare to surpass, make innovations, take on our mission and actively practice the green concept. We will carry out in-depth targeted poverty alleviation, strengthen risk prevention and compliance, and steadily fight in the three battles of preventing and resolving major risks, targeted poverty alleviation and pollution prevention.

Mission builds quality, earns respect and shapes the future. We will actively respond to the concerns of stakeholders and make greater contribution to the society.



APPENDIX I – List of Laws and Regulations

In order to ensure compliant operation, COMEC has timely carried out the identification of laws and regulations and compliance assessment, developed the relevant management rules and regulations and implemented the relevant requirements. The table below sets out the laws and regulations applicable and material to the Group. During the Reporting Period, the Group had strictly complied with the relevant laws and regulations and not violated any law or regulation.

Laws and regulations corresponding to the aspects set out in the ESG Reporting Guidelines ^{1,2}	
A. Environmental	B. Social
Aspect A1: Emissions	Aspect B2: Health and Safety
Environmental Protection Law of the People's Republic of China Environmental Protection Tax Law of the People's Republic of China Land Resources Protection Law of the People's Republic of China Soil Pollution Prevention Law of the People's Republic of China Water Pollution Prevention Law of the People's Republic of China Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste Air Pollution Prevention Law of the People's Republic of China Emergency Response Law of the People's Republic of China ^{*B2} Administrative Measures for Hazardous Waste Disposal Forms	Production Safety Law of the People's Republic of China Law of the People's Republic of China on the Prevention and Treatment of Occupational Diseases Occupational Health Examination and Management Measures Measures for the Supervision and Administration of Employers' Occupational Health Surveillance
	Aspect B4: Labour Standards
	Law of the People's Republic of China on the Protection of Minors Provisions on the Prohibition against the Use of Child Labour
	Aspect B6: Product Responsibility
	Advertising Law of the People's Republic of China Intellectual Property Law of the People's Republic of China Trademark Law of the People's Republic of China Patent Law of the People's Republic of China Tort Liability Law of the People's Republic of China Anti-Unfair Competition Law of the People's Republic of China ^{*B7} Anti-Monopoly Law of the People's Republic of China
	Aspect B7: Anti-Corruption
	Criminal Law of the People's Republic of China Anti-Money Laundering Law of the People's Republic of China Interim Provisions on Prohibiting Commercial Bribery
Aspect B1: Employment	
Labour Law of the People's Republic of China ^{*B2, B4} Labour Contract Law of the People's Republic of China Social Insurance Law of the People's Republic of China Labour Dispute Mediation and Arbitration Law of the People's Republic of China Law of the People's Republic of China on the Protection of Women's Rights and Interests Law of the People's Republic of China on the Protection of Disabled Persons	

¹ Certain laws cover several issues in the "Aspects" and are marked with asterisks and number of aspects that are covered.

² It is not an exhaustive list of all laws and regulations observed by the Group, but only the laws and regulations having major impacts on the Group are disclosed.

APPENDIX II – Environmental, Social and Governance Reporting Guidelines Index

Key scopes, aspects, general disclosure and key performance indicators			
	“Comply or explain”		Page
Environmental			
Aspect A1: Emissions	General disclosure Information on (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to exhaust and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste. Note: Waste gas emissions include nitrogen oxides, sulphur oxides and other pollutants regulated by national laws and regulations. Greenhouse gases include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride. Hazardous waste is defined in national regulations.		p.49-54,75
	Key performance indicator A1.1	The types of emissions and respective emissions data.	p.51-54
	Key performance indicator A1.2	Greenhouse gas emissions in total (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	p.51
	Key performance indicator A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	p.54
	Key performance indicator A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	p.54
	Key performance indicator A1.5	Description of measures to mitigate emissions and results achieved.	p.51-54
	Key performance indicator A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved.	p.53-54
Aspect A2: Use of Resources	General disclosure Policies on the efficient use of resources, including energy, water and other raw materials. Note: Resources can be used for production, storage, transportation, buildings, electronic equipment.		p.55-56
	Key performance indicator A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility).	p.55-56
	Key performance indicator A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	p.56
	Key performance indicator A2.3	Description of energy use efficiency initiatives and results achieved.	p.55
	Key performance indicator A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved.	p.56
	Key performance indicator A2.5	Total packaging materials used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	The Group is principally engaged in shipbuilding, which does not involve the use of packaging materials for finished products. As such, such indicator is not applicable.
Aspect A3: Environment and natural resources	General disclosure Policies on minimizing the issuer’s significant impact on the environment and natural resources.		p.56
	Key performance indicator A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	p.56

Key scopes, aspects, general disclosure and key performance indicators

	Disclosure requirements and details	Page
B. Social		
Employment and labour practices		
Aspect B1: Employment	“Comply or explain”	
	General disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.	p.59-62, 75
	Recommended disclosure	
	Key performance indicator B1.1	Total workforce by gender, employment type, age group and geographical region. p.61
	Key performance indicator B1.2	Employee turnover rate by gender, age group and geographical region. p.62
Aspect B2: Health and Safety	“Comply or explain”	
	General disclosure Information on: (a) the policies; and (b) compliance and material non-compliance with relevant standards, rules and regulations on providing a safe working environment and protecting employees from occupational hazards.	p.37-39, 75
	Recommended disclosure	
	Key performance indicator B2.2	Lost days due to work injury. p.39
	Key performance indicator B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored. p.37-39
Aspect B3: Development and training	“Comply or explain”	
	General disclosure Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities. Note: Training refers to occupational training, including internal and external courses paid for by the employer.	p.63-65
	Recommended disclosure	
	Key performance indicator B3.2	The average training hours completed per employee by gender and employee category. p.65

Key scopes, aspects, general disclosure and key performance indicators

	Disclosure requirements and details	Page
B. Social		
Employment and labour practices		
Aspect B4: Labour Standards	“Comply or explain”	
	General disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour.	p.60-61, 75
	Recommended disclosure	
	Key performance indicator B4.2	Description of steps taken to eliminate such practices when discovered. p.60-61
Operating practices		
Aspects B5: Supply chain management	“Comply or explain”	
	General disclosure Policies on managing environmental and social risks of the supply chain.	p.42-44
	Recommended disclosure	
	Key performance indicator B5.1	Number of suppliers by geographical region. p.43
Aspect B6: Product Responsibility	Key performance indicator B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored. p.41-44
	“Comply or explain”	
	General disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	p.25-28, 45-46, 75
	Recommended disclosure	
Aspect B6: Product Responsibility	Key performance indicator B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons. p.25
	Key performance indicator B6.2	Number of products and service-related complaints received and how they are dealt with. p.46
	Key performance indicator B6.4	Description of quality assurance process and recall procedures. p.25-27
	Key performance indicator B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored. p.46

Key scopes, aspects, general disclosure and key performance indicators

	Disclosure requirements and details		Page
B. Social			
Employment and labour practices			
Aspect B7: Anti-corruption	“Comply or explain”		
	General disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.		p.40-41, 75
	Recommended disclosure		
	Key performance indicator B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	p.40
	Key performance indicator B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.	p.40-41
Community			
Aspect B8: Community Investment	“Comply or explain”		
	General disclosure Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities’ interests.		p.71-72
	Recommended disclosure		
	Key performance indicator B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	p.71-72
	Key performance indicator B8.2	Resources contributed (e.g. money or time) to the focus area.	p.71-72

FEEDBACK

Dear readers,

Hello! Thanks for reading this report during your busy time. It is inevitable that there may be flaws and omissions in this report. In order to improve our report preparation, we sincerely hope to hear your opinions and suggestions. Please feel free to contact us! Your opinions and suggestions will become an important basis for us to improve our report.

Multiple-choice questions: (Please mark “√” in the corresponding box)

	Very good	Good	Fair	Bad	Very bad
Your overall impression of this report:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
You think the quality of information on social responsibility disclosed in this report is:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
You think the structure of this report is:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
You think the layout design of this report is:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
You think the readability of this report is:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Which issues disclosed in this report are you most concerned about? (Up to three items)

☐ Quality management
☐ Technological innovations
☐ Production safety
☐ Compliance operation
☐ Product responsibility
☐ Responsible procurement

☐ Green production
☐ Emission control
☐ Use of resources
☐ Staff development
☐ Targeted poverty alleviation
☐ Others (Please specify)

Open question:

What further opinions or recommendations do you have on this social responsibility report or our social responsibility performance?