上 宏华集团有限公司 HONGHUA GROUP LIMITED

(incorporated in the Cayman Islands with limited liability) **Stock Code: 196**

2022 ANNUAL REPORT

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CORPORATE INFORMATION

BOARD OF DIRECTORS

EXECUTIVE DIRECTORS

Jin Liliang (Chairman, resigned with effect from 25 November 2022)

Wang Xu (Chairman, appointed with effect from 25 November 2022)

Ren Jie (*Resigned with effect from 4 July 2022*) Zhu Hua (*Appointed with effect from 4 July 2022*)

NON-EXECUTIVE DIRECTORS

Zhang Mi (*Re-designated with effect from 1 January 2022*)

Chen Wenle (*Resigned with effect from 4 July 2022*) Wang Xiuchang (*Resigned with effect from 4 July 2022*) Yang Yong (*Appointed with effect from 4 July 2022*)

INDEPENDENT NON-EXECUTIVE DIRECTORS

Chen Guoming Su Mei Chang Qing Wei Bin Zhang Shiju *(Appointed with effect from 4 July 2022)*

SECRETARY OF BOARD OF DIRECTOR

Zhuang Wenmin (*Resigned with effect from 9 January 2023*)He Bin (*Appointed with effect from 9 January 2023*)

BOARD COMMITTEES

AUDIT COMMITTEE Wei Bin (Committee Chairman) Chen Guoming Su Mei Chang Qing Zhang Shiju (Appointed with effect from 4 July 2022)

REMUNERATION COMMITTEE

Su Mei (Committee Chairman)
Zhang Mi (Resigned with effect from 4 July 2022)
Jin Liliang (Resigned with effect from 25 November 2022)
Wang Xu (Appointed with effect from 25 November 2022)
Wei Bin
Zhang Shiju (Appointed with effect from 4 July 2022)

NOMINATION COMMITTEE

Jin Liiang (Committee Chairman, resigned with effect from 25 November 2022)

Wang Xu (Committee Chairman, appointed with effect from 25 November 2022)

Chen Guoming (Resigned with effect from 4 July 2022) Chang Qing

Zhang Shiju (Appointed with effect from 4 July 2022)

STRATEGIC INVESTMENT AND RISK CONTROL COMMITTEE

Jin Liliang (Committee Chairman, resigned with effect from 25 November 2022)

Wang Xu (Committee Chairman, appointed with effect from 25 November 2022)

Zhang Mi

Zhu Hua (Appointed with effect from 4 July 2022) Ren Jie (Resigned with effect from 4 July 2022) Chang Qing

JOINT COMPANY SECRETARIES

Zhuang Wenmin (Resigned with effect from 9 January 2023)He Bin (Appointed with effect from 9 January 2023)Lee Mei Yi

LEGAL ADVISOR

AS TO HONG KONG LAW Herbert Smith Freehills (*Resigned with effect from 1 January 2023*) HAIWEN & PARTNERS LLP (*Appointed with effect from 1 January 2023*)

CORPORATE INFORMATION

PRINCIPAL BANKERS AND NON-BANK FINANCIAL INSTITUTIONS

Bank of China Limited Industrial Bank Co., Ltd. Agricultural Bank of China Limited China Citic Bank Co., Ltd. Evergrowing Bank Co., Ltd. Industrial and Commercial Bank of China Limited The Export-Import Bank of China China Development Bank Industrial and Commercial Bank of China (Asia) Limited China Citic Bank International Limited China Development Fund Co., Ltd. Shanghai Pudong Development Bank Co., Ltd. Bank of Kunlun Co., Ltd. Standard Chartered Bank (China) Limited Sichuan Bank Co., Ltd Bank of Communications Co., Ltd.

AUDITOR

PricewaterhouseCoopers (Resigned with effect from 31 October 2022) Certified Public Accountants 22nd Floor, Prince's Building Central Hong Kong

Deloitte Touche Tohmatsu (Appointed with effect from 1 November 2022) Certified Public Accountants Registered Public Interest Entity Auditors 35/F, One Pacific Place, 88 Queensway Hong Kong

REGISTERED OFFICE

Windward 3, Regatta Office Park PO Box 1350 Grand Cayman KY1-1108 Cayman Islands

HEAD OFFICE

99 East Road, Information Park Jinniu District Chengdu, Sichuan, PRC Post code: 610036

PLACE OF BUSINESS IN HONG KONG

5/F, Manulife Place, 348 Kwun Tong Road, Kowloon, Hong Kong

PRINCIPAL SHARE REGISTRAR AND TRANSFER OFFICE

Ocorian Trust (Cayman) Limited Windward 3, Regatta Office Park PO Box 1350 Grand Cayman, KY1-1108 Cayman Islands

HONG KONG BRANCH SHARE REGISTRAR AND TRANSFER OFFICE

Computershare Hong Kong Investor Services Limited Shops 1712-1716 17th Floor Hopewell Centre 183 Queen's Road East Wan Chai Hong Kong

STOCK CODE

The Stock Exchange of Hong Kong Limited: 0196

WEBSITE

http://www.hh-gltd.com

CHAIRMAN'S STATEMENT



2022 was a year of significance and importance. In the face of the combined effects of the accelerated evolution of unprecedented changes in a century, and uncertainties such as the domestic epidemic and power restrictions during hot weather, the Company quickly adjusted its business strategy after the change of its largest shareholder in the middle of the year by strengthening its marketing development, steadily promoting its internal reform, and actively pursuing all-round cooperation with Dongfang Electric Corporation. Our operating results improved significantly during the second half of the year with new orders of approximately RMB3,500 million and revenue of approximately RMB3,000 million, representing 1.75 times and 2 times respectively as compared with that for the first half of the year under the joint efforts of all employees and the strong support of shareholders and customers of the Company.

CHAIRMAN'S STATEMENT

The international energy market is still in a slow recovery stage. Oil prices are high and volatile, and a bullish outlook on oil and gas equipment and services will likely persist in the short run. Carbon peak and carbon neutrality are actively and steadily promoted in China, thus bringing more development opportunities for our shale gas exploitation equipment and services, and new energy equipment manufacturing, and also strongly justifying our low carbon and digital transformation. On the other hand, our industry layout against business cycle fluctuations caused by changes in international oil prices is not yet fully developed; our new strategic development positioning is to be continuously optimized after the change of our largest shareholder; our internal management has much scope for improvement. Development opportunities and challenges will co-exist for Honghua in the future. How to seize the opportunities to take advantage of the momentum, and think outside the box against the challenges is the key to our transformation and upgrade and our sustainable high-quality development.

2023 is a year of following through for the "14th Five-Year Plan". Capitalizing on the industrial advantages of Dongfang Electric Corporation, our largest shareholder, we will further define our future development strategy to develop a layout of equipment+services+related diversified businesses. For the principal activity of oil and gas equipment, we will focus on promoting electrification, automation, information and digitization of equipment to grow the market share of our core component products, and promote carbon mitigation and emission reduction in the oil and gas equipment and service business. We will continue to improve our service segment. We will realize steady growth in drilling services, fracturing and pumping services and further grow the size of after-sales components and services by capitalizing on the advantages of integrated equipment and services. We will actively study wind, solar, hydrogen and heat storage in oil and gas fields, and integrated solutions of generation, grid, load and storage to promote green and low-carbon oil and gas exploitation. At the same time, we will steadily expand into the related diversified businesses to form a long-term cooperation business system with our largest shareholder, and enhance our turnkey engineering business capability to seize new development opportunities in offshore wind power, and further increase the market size of our offshore wind power pile foundations business.

In terms of internal management, we will continue to promote and deepen reforms to further improve corporate governance. We will optimize the internal organization and systems to continuously enhance corporate governance and management efficiency. We will carry out our in-depth work to improve quality and efficiency to step up efforts to dispose of and revitalize inefficient and ineffective assets. We will further improve our profitability by having greater control over costs. We will optimize the technological innovation mechanism and system to build a more effective technological innovation platform, develop the technological innovation ability and increase the transformation rate of the technological innovation outcomes. We will continue to strengthen the ESG management to actively fulfill our social responsibility and promote green and sustainable development.

Lastly, on behalf of the Board of Directors, I would like to express our sincere gratitude towards all shareholders, customers, partners, people from all walks of life, and all employees of Honghua Group for their care and support to our development.

Chairman of the Board Wang Xu

In 2022, the Group's revenue amounted to RMB4,476 million, representing an increase of 52.4% from RMB2,937 million for Previous Year. Gross profit was approximately RMB460 million, representing an increase of 26.7% from RMB363 million for Previous Year. The loss attributable to equity shareholders was approximately RMB634 million.

MARKET REVIEW

At present, the global energy development is in an important strategic opportunity period. The global energy supply pattern is ever-changing, and the combined effects of the pandemic, political and, economic factors, aging oil fields and environmental awareness bring challenges to the economic growth of the countries traditionally rich in oil and gas. Reducing costs and increasing efficiency, lowering oil dependence and finding new sources of economic growth have become the core strategic transformation tasks of energy-rich countries. Clean energy such as natural gas, photovoltaic, wind power and geothermal power will become the new trend, and the global energy market is in an important transition to clean energy. Under the carbon neutrality and carbon peak strategy and the policy to promote the new energy development and application, the efforts to exploit conventional oil and gas resources around the world are faced with certain challenges, which also has certain impacts on upstream drilling and production equipment and services. In the short run, shale gas exploitation is developing continuously on a global scale, natural gas is accounting for a continuously increasing proportion in energy consumption, and conventional energy is still dominating energy consumption.

2022 was the second year of China's "14th Five-Year Plan". Driven by the national energy security strategy, China continued to vigorously promote oil and gas exploration and development, promoted oil and gas reserve and production, and continuously improved the quality and security of the oil and gas resources supply. The National Development and Reform Commission and the National Energy Administration issued the 14th Five-Year Modern Energy System Plan and the Guiding Opinions on Energy Work in 2022, which proposed to "step up the efforts to explore and develop of domestic oil and gas, adhere to giving priority to onshore and offshore conventional and unconventional oil and gas exploration and development, actively expand the unconventional resources exploration and development, and accelerate the development of shale oil, shale gas and coalbed methane". "In 2022, it is necessary to strengthen the energy supply guarantee capacity, realize the national crude oil output of about 200 million tons, and the natural gas output of about 214 billion cubic meters, with ensuring the safe and stable energy supply as the primary task". With the acceleration of oil and gas production and the continuous growth of oil and gas capital expenditure, the overall demand for oil and gas equipment and oilfield technology services continued to grow, and the industry prosperity steadily increased.



In this special market environment, the drilling equipment industry faced with challenges and opportunities in many aspects. The Group adjusted its market layout and sales strategy in a timely manner to strengthen its overseas market expansion, with overseas sales growing against the overall downward trend. Domestically, the Group also reinforced obligation performance for domestic projects ensuring the stability of the supply chain and the timely delivery of orders. The Group firmly promoted its transformation in "from equipment manufacturer to comprehensive solution provider", "from equipment sales to service-driven equipment sales", and from "equipment supply" to the dual-mode service of "equipment + software" containing both software and hardware services, and made significant progress in digital transformation, new product development and new business expansion.

BUSINESS REVIEW

1. Drilling Equipment and Related Product Business Segment

In 2022, Honghua recorded the total number of 12 drilling rigs sold with an aggregate amount of approximately RMB743 million, representing an increase of RMB755 million compared with the Previous Year. Total sales of parts and components amounted to RMB2,255 million, representing an increase of 33.2% from RMB1,693 million in the corresponding period of Previous Year. Benefiting from a significant rise in energy prices, which significantly boosted market confidence and led to an increase in capital expenditure by customers, as well as rising exchange rate volatility, the international business of drilling equipment gained substantial momentum in growth. The Group's total amount of new overseas drilling equipment orders signed in the year of 2022 was RMB2,485 million, representing an increase of 53.8% over 2021.

In terms of new products, drilling and engineering companies of PetroChina and Sinopec signed orders in the domestic market, which continuously improved the market share of the Group's superior products such as automated drilling rig and five-cylinder pump, and provided a prerequisite for subsequent orders. In the international market, the sales of new products such as top drive, iron drilling devices and five-cylinder pump were successful, with a breakthrough in the sales to the Middle East market. During the Period, the sales of new products reached RMB215 million. In the field of digitalization, the Group continued to promote cooperation with Schlumberger on digital drilling – DrillOps, focusing on the application of customer K in new construction and renovation projects, kept strengthening the expansion of oil and gas information, and conducted technical cooperation research on SMART-ROS system on drilling rigs with Nabors.

Under the philosophy of onshore manufacturing of offshore equipment and with the support of the Group's offshore equipment manufacturing base, the Group set records in offshore wind power equipment manufacturing. Combined with the advantages and layout of Company's the largest shareholder, Dongfang Electric Corporation, in the wind power industry, the Group re-examined and formulated the business development plan for the offshore segment, and continued to focus on the development of offshore wind power pile foundations, and also operation and maintenance and offshore equipment business. In the second half of 2021, there was a period of pending new guidance after the wave of installation for wind power projects, new orders in the pipeline for offshore wind power projects were insufficient. In 2022, many planned projects were postponed due to sea area approval, leading to the revenue from the offshore wind power business decreasing by 68.0% year-on-year to RMB190 million in 2022.

As at 31 January 2023, the Group's backlog orders for drilling rigs and related products amounted to approximately RMB2,200 million. Specifically, the backlog orders for onshore drilling rigs amounted to approximately RMB1,558 million.

2. Fracturing Equipment and Service Business

During the Period, the Company further consolidated the market competitiveness of Honghua Group's fracturing equipment and services through digital upgrade of electric fracturing, high-efficiency pumping construction operations, in combination with gas-fired power generation solutions and special power grid electricity framework services. The equipment and engineering services provided during the Period achieved a total sales amount of approximately RMB1,059 million, representing an increase of 3.9% over the corresponding period of Previous Year.

The Group had a total of 16 pumping teams which completed approximately 4,400 fracturing operations during the Year, including approximately 3,200 shale gas operations and approximately 1,200 shale oil operations. In terms of market expansion, the Group's electric fracturing service business entered the shale oil block in northern Jiangsu for the first time, which was of great significance to the systematic development of the Company's future fracturing industry. In addition, the Group adopted the dual power supply mode of "gas turbine power generation + grid electricity" in the Sichuan and Chongqing areas of PetroChina and Sinopec Oilfield to help customers realize the first all-electric fracturing project with simultaneous production of gas and electricity in the block.

In respect of fracturing equipment for unconventional oil and gas development, the Group successfully achieved direct sales of electric fracturing pumps, with a sales amount of RMB226 million. In respect of the specialty power business, the Group undertook a project of overall planning of grid power service in the block of PetroChina for the first time, signed an "oil-to-electricity" technical services framework contract with the subsidiaries of PetroChina. The Group also realized for the first time the dual power supply mode of gas turbine power generation + grid electricity to provide power for electric fracturing in PetroChina's Western Chongqing Block. The Company gradually entered into the markets of Inner Mongolia, Changqing and Guizhou.

As at 31 January 2023, the Group's total contract backlog of fracturing equipment and service business amounted to approximately RMB321 million.

3. Oil and gas engineering service business

During the Period, the total sales amount of oil and gas engineering services provided by the Group amounted to approximately RMB419 million, representing an increase of 76.8% from RMB237 million in the corresponding period of Previous Year. During the Period, the overseas market continued to deepen the cooperation with internationally renowned oil services companies, with a sales amount of international oil and gas engineering services of approximately RMB276 million, representing a year-on-year increase of 32.1%. The newly signed overseas oil and gas engineering services orders amounted to approximately RMB125 million, which showed steady growth in orders. The contract backlog with the longest lead time can be executed until December 2025. The Group started drilling 50 wells and completed 32 wells for the Year, with a cumulative annual footage of 165,627 meters, setting new drilling and completion records.

BRAND MANAGEMENT AND RESEARCH & DEVELOPMENT

During the Period, the Group continued to ensure the effective operation of its quality control system and made a breakthrough in obtaining certifications for its products. We obtained new API Spec 8C power faucet and API Spec 16C Monogram Licenses for rigid throttling and pressure well pipeline, added 28 new CNAS extensions, participated in the formulation and revision of 7 national, industry, local and group standards and 1 was published; the Group firmly implemented refined quality management, and the new five-cylinder pump products were of excellent quality and praised by the users. The product system of the "one-key linkage" series maintained stable and efficient operation, placing it in a leading position in the industry. We continuously carried out "zero defect" quality activities to fulfill the development requirements of improving the quality of all staff.

In 2022, centering around the deep integration of machine, electricity and liquid, as well as the idea of automation, information and intelligence of drilling and well completion equipment and services, and combined with digitalization and low-carbon transformation, the Group achieved breakthroughs in the application of the international leading lift-type vertical transportation technology and new energy storage products, and continued to deepen the second phase of the construction of "one-button" connection machine and equipment system with the characteristics of increase in speed and efficiency, decrease in headcount and safety. The intelligent drilling rig project completed the first "made-in-China" ultra-silent automatic drilling rig. The safety diagnosis of fracturing operation and the maximum control of fracturing construction parameters for the smart fracturing system were completed, realizing "one-click fracturing". The comprehensive intelligent drilling systems achieved high tripping speed, and the online monitoring detection and pre-maintenance system for OPERA intelligent drilling system and the ground equipment were completed. Emerging industries continued to grow and the trial production of single blade spreader for wind turbine was completed. During the Period, the Group was granted 127 patents, including 67 invention patents, and had a total of 790 patents in force, including a total of 275 invention patents in force.

HUMAN RESOURCES MANAGEMENT

To better support industry transformation and upgrade and promote the achievement of high-quality development goals, the Group continued to optimize its staff structure, improved talent quality and improved average efficiency. At the end of 2022, the total headcount of the Group was 2,410, representing a decrease of 428 or 15.1% as compared with the corresponding period of Previous Year, mainly due to the further reduction and optimization of redundancy, staff with poor performance and low-skilled staff. The Group had a total of 596 R&D staff, representing an increase of 8.2% as compared with the corresponding period of Previous Year, which was mainly due to the replenishment of professional talents for emerging industries, new technologies and key business. The Group had launched a competitive selection of management cadres, further enhanced the candidate hiring mechanism that allowed for upward and downward mobility, and selected excellent members for the cadre team. The Group optimized the performance appraisal and incentive allocation mechanism which focus on value creation by linking personal performance closely with organizational performance, increasing the proportion of wage distribution to key positions and core talents, and establishing the orientation of high goals, strict assessment, strong incentive and hard constraints.

The Group attaches importance to the training and reserve of all kinds of core talents. The Group continued to improve the talents' professional ability with special training, organized 580 training sessions with an attendance of 18,879, and implemented or selected talents to participate in training programs for qualification and certification, professional ability and comprehensive quality improvement, including special projects such as improving the performance ability of Directors and supervisors, market development ability, international talent training, excellent engineer training, digital transformation talent training, and energy development trend under the "carbon peaking and carbon neutrality" background. The Group selected and recommended experts and high-skilled talents, with 10 persons chosen for provincial and municipal talent programs, and 3 provincial and municipal studios built. The Group increased the reserve of young innovative professional and technical talents in mechanical engineering, automation, software development and digitalization, and injected steady new forces into the enterprise development.

FUTURE OUTLOOK

From a global perspective, the international energy market is still in a slow recovery stage, and the geopolitical premium will gradually disappear in 2023. Due to multiple factors such as OPEC+'s reduced production for price stabilization and a ban on Russian oil exports, the crude oil market may keep its balance, and oil prices may see a high-frequency oscillation, with an upward trend in the short run, but there will be still high risk, and strong persistence and uncertainty in the next two years. Domestically, the Group's drilling equipment and service business may face opportunities for greater development by implementing the national energy security strategy, enhancing the energy supply chain stability and security, promoting domestic oil and gas reserve and production, pushing sustained and stable shale gas production forward, and improving the shale oil development scale.

In terms of business expansion, the Group will build on its existing strengths in the oil and gas industry, seize the opportunity presented by the upward trend of oil and gas industry; step up efforts to expand its business in the global drilling market, optimize its international marketing system and business layout, and expand the proportion of its international operations; promote the sales of complete equipment for fracturing which is driven by the provision of services by leveraging its advantages in fracturing service and pumping service in the premise of electric fracturing equipment industry; strengthen the market promotion and marketing for technology of new products, further increase the market share of novel products with competitive advantages such as "one-key linkage" automated machines and five-cylinder pumps; strengthen the synergy with the largest shareholder Dongfang Electric Corporation, improve the market share of the wind power business and actively expand into new areas such as new energy equipment manufacturing, wind, solar, hydrogen and heat storage in oil and gas fields and integrated solutions of generation, grid, load and storage.

In terms of internal management, the Group will comprehensively promote and deepen reforms to enhance the enterprise management efficiency. First, the Group will optimize the organizational structure and control system, strengthen the construction of the board of directors of subsidiaries, carry out special work to improve quality and efficiency, build a complete and efficient supply chain system, and promote the improvement of governance efficiency and management efficiency. Second, the Group will optimize the industrial layout and structural adjustment, solidly promote the exit of inefficient production capacity, advance the market layout optimization, carry out professional industrial integration, continuously improve the capital structure, facilitate the resources optimal allocation to core businesses, and develop the value creation ability. Third, the Group will strengthen the technological innovation mechanism and system, improve the technological innovation management system, advance the external coordination mechanism, create a new technological innovation platform, and develop the technological innovation ability. Fourth, the Group will deepen the market-oriented operating mechanism, build a contractual system, strengthen the performance appraisal of subsidiaries, deepen the labor and employment system reform, intensify the income distribution system reform, and ensure talents introduction and cultivation. Meanwhile, the Company will continue to strengthen the requirements in the fields of labor, occupational health and environmental protection to ensure sustainable development.

In terms of development direction, the Group will focus on promoting digital transformation and low-carbon transformation. For digital transformation, the Group will focus on promoting electrification, automation, information and digitization of key components, and advance the commercialization of data, software services and other digital products. For low-carbon transformation, the Group will actively promote the low-carbon transformation of oil and gas equipment, realize the clean and low-carbon goal of oilfield block exploitation through equipment electrification and power grid cleaning, so as to promote the environmental friendly development of the industry. Combining with the strategic needs of oil and gas companies on new energy and low-carbon transformation, the Group are committed to providing comprehensive energy integration solutions for global oilfield customers, and makes continuous efforts to promote Honghua Group to become a global leading enterprise in high-end oil and gas equipment.

FINANCIAL REVIEW

During the Year, the Group's gross profit and loss attributable to shareholders of the Company amounted to approximately RMB460 million and RMB634 million respectively, and gross margin and net loss margin amounted to 10.3% and 14.2% respectively. In the Previous Year, the gross profit and profit attributable to shareholders of the Company amounted to approximately RMB363 million and RMB717 million respectively, and gross margin and net profit margin amounted to 12.4% and 24.4% respectively. Due to the impact of the Russia-Ukraine conflict on the Group's business in Ukraine and Russia and the settlement of price reductions by customers in the drilling engineering services segment, the Group made a large impairment provision, resulting in a net loss to the Company's shareholders.

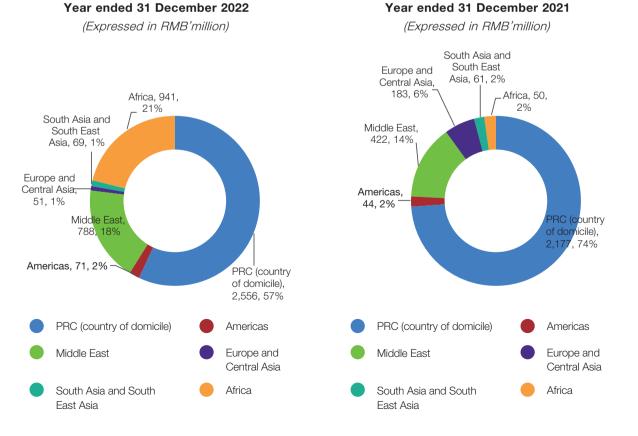
Turnover

During the Year, the Group's revenue amounted to approximately RMB4,476 million, representing an increase of RMB1,539 million or 52.4% from RMB2,937 million for Previous Year. The Group adjust the market layout and sales strategy,the Group's revenues from land drilling rigs, parts and components have increased significantly, especially overseas orders for drilling rigs increased compared with the Previous Year.

(i) Revenue by geographical locations

The Group's revenue by geographical segment during the Year: (1) revenue generated from the PRC amounted to approximately RMB2,556 million, accounting for approximately 57.1% of the total revenue, representing an increase of RMB379 million as compared to Previous Year; (2) The Group's export revenue amounted to approximately RMB1,920 million, accounting for approximately 42.9% of the total revenue, representing an increase of RMB1,160 million as compared to Previous Year.

The regional distribution of the Group's sales revenue is influenced by the changes of oil and gas exploitation activities in various regions of the world. Facing market shocks in the oil industry, the Group continues to adhere to technological innovations, improves the quality of products and services and strictly controls operating costs. At the same time, the Group adjusts the market layout and sales strategy, strengthens overseas market development, continues to explore the domestic market, and strengthens project implementation.



Revenue by geographical locations

(ii) Revenue by operating segments

The Group's business are divided into four segments, namely, land drilling rigs, parts and components and others, drilling engineering service business and fracturing business.

During the Year, external revenue from land drilling rigs amounted to approximately RMB743 million, representing an increase of RMB755 million as compared with Previous Year.

During the Year, external revenue from parts and components and others amounted to approximately RMB2,255 million, representing an increase of RMB562 million or 33.2% from approximately RMB1,693 million for Previous Year.

During the Year, external revenue from drilling engineering service business amounted to approximately RMB419 million, representing an increase of RMB182 million or 76.8% from approximately RMB237 million for Previous Year.

During the Year, external revenue from fracturing business amounted to approximately RMB1,059 million, representing an increase of RMB40 million or 3.9% from approximately RMB1,019 million for Previous Year.

Cost of Sales

During the Year, the Group's cost of sales amounted to approximately RMB4,016 million, representing an increase of RMB1,442 million or approximately 56.0% from RMB2,574 million for Previous Year. Mainly affected by the increase of sales scale, the cost of sales of each sector also increased.

Gross Profit and Gross Margin

During the Year, the Group's gross profit amounted to approximately RMB460 million, representing an increase of RMB97 million or 26.7% from RMB363 million for Previous Year.

During the Year, the Group's overall gross margin was 10.3%, representing a decrease of 2.1 percentage points from 12.4% for Previous Year. This was mainly due to the substantial asset impairment in the drilling engineering services segment.

Expenses in the Year

During the Year, the Group's distribution expenses amounted to approximately RMB215 million, representing an increase of RMB53 million or 32.7% from RMB162 million for Previous Year. This was mainly due to the increase in related project expenses affected by increase in sales revenues.

During the Year, the Group's administrative expenses amounted to approximately RMB356 million, representing an increase of RMB21 million or 6.3% from RMB335 million for Previous Year. This was mainly due to the increase in depreciation and amortization of assets brought about by the Group's recovery of the Offshore Segment.

During the Year, the Group's research and development expenses amounted to approximately RMB124 million, representing a decrease of RMB22 million or 15.1% from RMB146 million for Previous Year.

During the Year, the Group's net finance expenses amounted to approximately RMB189 million, representing an increase of RMB56 million or 42.1% from approximately RMB133 million for Previous Year. This was mainly due to the substantial increase in the foreign exchange loss from foreign currency borrowings held as affected by the fluctuation of RMB exchange rate.

Loss before Income Tax

During the Year, the Group's loss before income tax amounted to approximately RMB625 million, representing a decrease of RMB120 million or 16.1% from RMB745 million for Previous Year.

Income Tax Expense/Credit

During the Year, the Group's income tax expense amounted to approximately RMB0.3 million, compared with the income tax credit of approximately RMB11 million for Previous Year.

Loss for the Year

During the Year, the loss for the Year amounted to approximately RMB625 million compared with approximately RMB734 million for Previous Year. Specifically, loss attributable to equity shareholders of the Company was approximately RMB634 million, and the profit attributable to non-controlling interests was approximately RMB9 million. During the Year, the net loss margin was 14.0%, compared with a net loss margin of 25.0% for Previous Year.

Earnings before Interest, Taxes, Depreciation and Amortization ("EBITDA") and EBITDA Margin

During the Year, EBITDA amounted to approximately RMB-102 million, compared with approximately RMB-430 million for Previous Year. This was mainly attributable to the increase in oversea orders and sales revenues of drilling rigs. The EBITDA margin was -2.3%, compared with -14.6% for Previous Year.

Dividends

The Board does not recommend distribution of annual dividends for the year ended 31 December 2022.

Source of Capital and Borrowings

The Group's principal sources of capital include cash from operations and bank borrowings.

As at 31 December 2022, the Group's borrowings amounted to approximately RMB4,948 million, representing a decrease of RMB198 million as compared to the amount as at 31 December 2021. Specifically, borrowings repayable within one year amounted to approximately RMB4,324 million, representing a decrease of RMB822 million or 16.0%, as compared to 31 December 2021.

Deposits and Cash Flow

As at 31 December 2022, the Group's cash and cash equivalents amounted to approximately RMB601 million, representing a decrease of approximately RMB102 million as compared to 31 December 2021.

During the Year, the Group's net cash outflow from operating activities amounted to approximately RMB226 million; net cash inflow from investing activities amounted to approximately RMB71 million; and net cash inflow from financing activities amounted to approximately RMB25 million.

Assets Structure and Changes

As at 31 December 2022, the Group's total assets amounted to approximately RMB12,322 million. Particularly, current assets amounted to approximately RMB7,886 million, accounting for 64.0% of total assets, representing an increase of RMB1,137 million as compared to the amount as at 31 December 2021. This was mainly due to the increase in contract assets, trade receivables and other receivables. Non-current assets amounted to approximately RMB4,436 million, accounting for 36.0% of total assets, representing a decrease of approximately RMB562 million as compared to the amount as at 31 December 2021. This was mainly due to the decrease in long-term receivables, real estates, plant and equipment in the Offshore Segment.

Liabilities

As at 31 December 2022, the Group's total liabilities amounted to approximately RMB9,128 million. Specifically, current liabilities amounted to approximately RMB8,377 million, accounting for approximately 91.8% of total liabilities, representing an increase of approximately RMB584 million as compared to 31 December 2021. And non-current liabilities amounted to approximately RMB751 million, accounting for approximately 8.2% of total liabilities, representing an increase of approximately RMB543 million as compared to 31 December 2021. As at 31 December 2022, the Group's total liabilities/total assets ratio was 74.1%, representing an increase of 6 percentage points as compared to 31 December 2021.

Equity

As at 31 December 2022, the total equity amounted to approximately RMB3,194 million, representing a decrease of RMB552 million as compared to 31 December 2021. The total equity attributable to equity shareholders of the Company amounted to approximately RMB2,964 million, representing a decrease of RMB574 million as compared to 31 December 2021. Non-controlling interests amounted to approximately RMB230 million, representing an increase of RMB21 million as compared to 31 December 2021. During the Period, the Group's basic loss per share was approximately RMB11.98 cent, and diluted loss per share was RMB11.98 cent.

Capital Expenditure, Major Investment and Capital Commitments

During the Year, capital expenditure of the Group on infrastructure and technical improvements amounted to approximately RMB118 million, representing a decrease of approximately RMB33 million as compared to Previous Year.

As at 31 December 2022, the capital commitment of the Group amounted to approximately RMB6 million, which was used to optimize and adjust the Group's business and production capacity.

Principal Risks and Uncertainties

The Group provides development equipment and engineering services of oil and gas fields, the main market risk and uncertainties come from the fluctuation of oil and gas price and oil and gas development activities. The Board of the Company pays close attention to the market conditions and will change the Group's market strategy in a timely manner according to the market changes to ensure a stable business development of the Group. The Group also faces the risks of international operation, market competition, strategic management and technology research and development. Through formulating strategic development objectives, increasing R&D investment, establishing core brand image, improving product price and delivery advantage, the Group aims to enhance the market competitiveness of the company and reduce the impact of risks on the company's operation.

Meanwhile, The Group's activities expose to a variety of financial risks: market risk (including foreign exchange risk, cash flow and fair value interest rate risk), credit risk and liquidity risk. The Group's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimize potential adverse effects on the Group's financial performance. Details of these financial risks are set out in note 36.3 to the notes to the financial statements for the year ended 31 December 2022.

EXECUTIVE DIRECTORS

Mr. Jin Liliang (金立亮先生), aged 56, has been an Executive Director of the Company and Chairman of the Board since 24 August 2018 to 25 November 2022. Mr. Jin joined in China Aerospace Science and Industry Corporation Limited ("CASIC") in 1993. He was a Vice President of a subsidiary of CASIC. Mr. Jin has rich experience of corporate operation and management. He holds a Master's Degree of Engineering from Harbin Institute of Technology. Positions held by Mr. Jin in the Company's subsidiaries were set forth below.

Subsidiary	Position	Term of Office
Honghua Holdings Limited	Chairman	Since 29 December 2018 to
		16 December 2022
Honghua (China) Investment Co., Ltd.	Chairman	Since 10 October 2018 to
		16 December 2022

Mr. Ren Jie (任杰先生), aged 56, has been an Executive Director of the Company since 18 January 2008 to 4 July 2022. He has been the senior Vice President of the Company since 1 January 2016. In 1990, Mr. Ren earned a Bachelor's Degree in mining machinery from Southwest Petroleum University, located in Sichuan Province, specializing in petroleum and natural gas. In 1995, Mr. Ren obtained an engineering qualification, granted by the China National Petroleum Corp., Sichuan Petroleum Administration. In November 2007, he also became a member of the 5th Edition Committee of the Oil Field Equipment Journal, and in 2012, he earned a Doctor's Degree in Mechanical Design and Theory from Southwest Petroleum University. Positions held by Mr. Ren in the Company's subsidiaries were set forth below.

Subsidiary	Position	Term of Office
Honghua Holdings Limited	Director	Since 18 August 2006 to
		14 September 2022
Sichuan Honghua Petroleum Equipment Co.,Ltd.	Director	Since 31 December 1997 to
		10 February 2023
	Chairman	Since 1 January 2018 to
		17 August 2022
	Deputy General Manager	Since 17 August 2022
Honghua International Co., Ltd.	Director	Since 13 January 2004
Honghua (China) Investment Co., Ltd.	Director	Since 19 October 2009 to
		14 September 2022
Honghua America, LLC.	Director	Since 10 October 2008

Mr. Wang Xu (王旭先生**)**, aged 49, has been the Executive Director of the Company since 25 November 2022. Mr. Wang joined Dongfang Electric Corporation ("Dongfang Electric"/"DEC") in 1995 and is currently an employee director of Dongfang Electric. Previously, he served as the head of the partymasses work department of Dongfang Electric and the head of the corporate culture department of Dongfang Electric Corporation Limited, the deputy secretary of the party committee and the secretary of the discipline inspection committee of Dongfang Electric Wind Power Co., Ltd. and the manager of the Coil Branch Factory of Dongfang Electric, as well as the secretary of the joint party branch of the production management department and the warehouse management center of DongFang Electric Machinery Corporation Limited. Mr. Wang has extensive experience in production management and enterprise management. Mr. Wang received his Bachelor's degree in Engineering from Chongqing University in 1995. Positions held by Mr. Wang in the Company's subsidiaries are set forth below.

Subsidiary	Position	Term of Office
Honghua Holdings Limited	Chairman	Since 16 December 2022
Honghua (China) Investment Co., Ltd.	Chairman	Since 16 December 2022
	Secretary of the Party Committee	Since 21 November 2022
Sichuan Honghua Petroleum Equipment Co., Ltd.	Chairman	Since 16 December 2022

Mr. Zhu Hua (朱驊先生), aged 39, has been the Executive Director of the Company since 4 July 2022. Mr. Zhu joined the DEC in 2009 and once served as a director, general manager and party secretary of MHI Power Dongfang Boiler Co., Ltd., a subsidiary of DEC. He once served as the deputy director of the boiler technology department, the deputy director of the product project management department, the director of the marketing center and the director of the thermal power marketing department of Dongfang Boiler Co., Ltd. Mr. Zhu has extensive experience in technology and corporate management. Mr. Zhu obtained a Bachelor's Degree in Thermal and Power Engineering from Zhejiang University in 2006, a Master's Degree in Mechanical Engineering from the Hong Kong University of Science and Technology in 2008, and a Doctorate Degree in Power Engineering and Engineering Thermophysics from Xi'an Jiaotong University in 2020. Positions held by Mr. Zhu in the Company's subsidiaries are set forth below.

Subsidiary	Position	Term of Office
Honghua Holdings Limited	Director	Since 14 September 2022 to
		10 February 2023
Honghua (China) Investment Co., Ltd.	Director	Since 14 September 2022 to
		10 February 2023
Sichuan Honghua Petroleum Equipment Co., Ltd.	General Manager	Since 17 August 2022
	Director	Since 17 August 2022

NON-EXECUTIVE DIRECTORS

Mr. Zhang Mi (張弭先生), aged 66, has been re-designated from Executive Director to the Non-Executive Director of the Company and resigned as the President of the Company and vice Chairman of the Board on 1 January 2022. He was the Executive Director from June 2007 to December 2021, the Chairman of the Board from June 2007 to March 2017 and the vice Chairman of the Board from March 2017 to December 2021. Mr. Zhang graduated from the Sichuan Petroleum Administration Vocational University in 1982, with a diploma in machinery manufacture, design and equipment. He graduated from the Party Institute of Sichuan Provincial Committee Correspondence College in 1998, with a Degree in Economics and Management. In 2004, he then obtained a senior engineer qualification granted by the Committee for Evaluation of Senior Technical Positions of the China National Petroleum Corp. He has been receiving special subsidies granted by the State Council of the PRC government since February 2007, for his significant contribution to the development of machinery engineering in the PRC. Positions held by Mr. Zhang in the Company's subsidiaries are set forth below.

Subsidiary	Position	Term of Office
	Director	Cinco 10 August 0000 to
Honghua Holdings Limited	Director	Since 18 August 2006 to 14 September 2022
Sichuan Honghua Petroleum Equipment Co., Ltd.	Director	Since 31 December 1997 to 17 August 2022
Honghua International Co., Ltd.	Director	Since 13 January 2004 to 2 September 2022
Honghua (China) Investment Co., Ltd.	Director	Since 19 October 2009 to 14 September 2022
Honghua Oil & Gas Engineering Services Co., Ltd.	Director	Since 14 April 2009 to 14 September 2022
Honghua America, LLC.	Chairman	Since 11 October 2004 to 30 May 2022

Mr. Chen Wenle (陳文樂先生), aged 43, has been a Non-executive Director of the Company since 29 March 2017 to 4 July 2022. Mr. Chen is currently the vice general manager of Shenzhen Aerospace Industry Technology Research Institute Co., Ltd. Mr. Chen has worked in Shum Yip Group Limited and joined in CASIC in 2011. Mr. Chen obtained Bachelor of Finance Degree from Shandong University in 2003 and Master of Economics Degree from Shanghai University of Finance and Economics in 2006.

Mr. Wang Xiuchang (王秀昌先生), aged 59, has been the Non-executive Director of the Company since 28 October 2022 to 4 July 2022. Mr. Wang is currently the senior specialist of China Volant Industry Co., Ltd.. He obtained a Bachelor of Engineering Degree from the Harbin Institute of Technology in 1987. He was the director and president of China Volant Industry Co., Ltd. and the vice chairman and general manager of China Aerospace Automobile Co., Ltd..

Mr. Yang Yong (楊永先生), aged 49, has been the Non-executive Director of the Company since 4 July 2022. Mr. Yang joined the DEC in 1998, and served as the Chairman and Party Secretary of DEC (Chengdu) Hydrogen Fuel Cell Technology Co., Ltd., the vice president of Central Research Institute of DEC and Deputy General Manager of DEC Academy of Science and Technology Co., Ltd. Mr. Yang has extensive experience in corporate management. Mr. Yang obtained a Bachelor's Degree from the School of materials Science and Engineering of Xi'an University of Technology specializing in casting in 1998, and completed a Doctoral Program in Management jointly organized by the University of Electronic Science and Technology of China and the University of Lisbon, Portugal in 2012 where he obtained a Doctorate in Management. Mr. Yang is currently the Deputy Secretary of the Party Committee and Chairman of the Trade Union of Honghua (China) Investment Co., Ltd. He is also a Director and Chairman of the Trade Union Petroleum Equipment Co.,Ltd..

INDEPENDENT NON-EXECUTIVE DIRECTORS

Mr. Chen Guoming (陳國明先生), aged 60, has been an Independent Non-executive Director of the Company since 18 January 2008. Mr. Chen is now a Professor, a Ph.D. candidate supervisor, a member of the Academic Committee, the Chief officer of Research Centre of Security technique of the Offshore Oil & Gas Equipment, the Chief officer of Professor Committee in the Department of Mechanical and Electrical Engineering of China University of Petroleum. Mr. Chen is Currently the Chief officer of Shandong Key Laboratory of Petroleum Mechanical Engineering; a member of the Quality & Reliability Committee of the China Petroleum Society, the Offshore Engineering Committee of China Naval Architects and Marine Engineers' Society and China Mechanical Engineering Society. He has been receiving special subsidies granted by the State Council of the PRC government (政府特殊津 貼) since August 2005. In 1982, Mr. Chen graduated from the Mechanical Department of the East China Petroleum Institute with a Bachelor's Degree. He earned his Master's Degree in 1986, from the Beijing Graduate School of East China Petroleum Institute. He obtained his Ph.D. Degree in 1999, and was promoted to Ph.D. candidate supervisor in 2000.

Ms. Su Mei (蘇梅女士), aged 54, has been an Independent Non-executive Director of the Company since 29 March 2017. Ms. Su is currently the chief executive officer of Beijing YaMeiHeZhong Consultanting Co., Ltd.. Ms. Su once had leaderships in Discipline Inspection Commission of Sichuan Province and Sichuan Development and Reform Commission and State-owned Assets Supervision and Administration Commission of State Council, worked as the vice-president in Sichuan Provincial Investment Group, the chairman of Sichuan Chuantou Water Group and vice president of Joneson Group. Ms. Su obtained Doctor's Degree in Finance from Sichuan University in 2013, and obtained Bachelor's Degree of Chinese from Shandong University in 1991.

Mr. Chang Qing (常清先生), aged 66, has been an Independent Non-executive Director of the Company since 15 June 2017. Mr. Chang is currently the chairman of Jinpeng International Futures Co., Ltd. and a professor of College of Economics and Management of China Agricultural University. Mr. Chang is now acting as an independent non-executive director of Kangda International Environmental Company Limited and China Chengtong Development Group Limited. Mr. Chang graduated from the Chinese Academy of Social Sciences with a Doctorate Degree in Agricultural Economics and Management in 2001, graduated from Jilin University with both a Master's Degree in national economics in 1985 and a Bachelor's Degree in Economics in 1982.

Mr. Wei Bin (魏斌先生), aged 53, has been an Independent Non-executive Director of the Company since 29 August 2019. Mr. Wei is currently the asset management senior partner of CDH Investments Management (Hong Kong) Limited and executive director of OCI International Holdings Limited. Mr. Wei was the chief accountant and the chief financial officer of the China Resources (Holdings) Company Limited. Mr. Wei holds a Bachelor's Degree in Auditing from Zhongnan University of Economics in China and a Master's Degree in Finance from Jinan University in China, and is a Senior Accountant and a Senior Auditor in China. He is also a non-practicing member of the Chinese Institute of Certified Public Accountants.

Mr. Zhang Shiju (張士學先生), aged 45, has been an Independent Non-executive Director of the Company since 4 July 2022. Mr. Zhang is currently a Senior Counsel of AllBright Law Firm Shanghai Office. Mr. Zhang holds a Master's Degree in Economic Law from Nanjing University. He is an external expert of the Shanghai Technology Exchange Expert Think Tank, and a management consulting service expert of the Management Consulting Professional Committee of the China Enterprise Confederation. Mr. Zhang served as a senior partner of Beijing Yingke Law Firm Shanghai Office, the Deputy Secretary-General of Shanghai Youth Entrepreneurship and Employment Foundation, a co-tutor for graduate students of Tsinghua University and Shanghai Jiaotong University Law School, and an adjunct professor of Jilin University Business School. Mr. Zhang has extensive experience in legal services such as investment and mergers and acquisitions, IPO listing, corporate governance, and industrial funds.

SENIOR MANAGEMENT

Mr. Jiang Fuhao (姜福灝先生), aged 46, has been the President of the Company since 1 January 2022 to 4 July 2022. Mr. Jiang had been the General Manager of Honghua (China) Investment Co., Ltd., a wholly-owned subsidiary of the Company since October 2021 to 30 June 2022. Mr. Jiang obtained a Master's Degree in Engineering from the Harbin Institute of Technology. Prior to joining the Company, he was the director of the institute which subordinate to China Aerospace Science and Industry Corporation Limited, the former substantial shareholder of the Company. Mr. Jiang has extensive experience in management of the project and scientific research and production.

Mr. Yang Yunqing (楊運青先生), aged 45, has been the Vice President of the Company since August 2018 to 29 July 2022. Mr. Yang had been working at the CASIC Group since 2001. Before joining the Company, Mr. Yang once served as the Deputy Director of the Development and Planning Department of the CASIC and has rich experiences in planning and operation management. Mr. Yang holds a Bachelor's Degree from Harbin Engineering University.

Mr. Dang Nan (黨楠先生), aged 58, has been the Vice President of the Company since March 2017 to 29 July 2022. Mr. Dang had been working at the CASIC Group since 1989. Before joining the Company, Mr. Dang once served as the Vice President of a subordinate unit of the CASIC. Mr. Dang holds a Master's Degree from Beihang University.

Mr. Luo Xiaoming (羅曉明先生), aged 55, has been the Vice President of the Company since 4 July 2022. Mr. Luo joined the DEC since 1992. He was the vice general manager of DEC International Cooperation Limited, Dongfang Electric Co., Ltd, International Engineering Branch and Dongfang Electric Co., Ltd., Import and Export Branch, respectively. Mr. Luo is experienced in international trade business. Mr. Luo obtained a bachelor's degree in thermal engineering from the thermal engineering department of Chongqing University in 1998 and holds a master's degree of engineering thermal physics from the power engineering department of Harbin Institute of Technology in 1992.

Ms. Xu Xiufang (許秀芳女士), aged 51, has been the Chief Financial Officer of the Company since March 2017 to 25 November 2022. Ms. Xu had been working at the CASIC Group since August 1994 and was engaged in accounting and financing. Before joining the Company, Ms. Xu once served as the chief accountant of a subordinate unit of the CASIC. Ms. Xu holds a Master's Degree from Huazhong University of Science and Technology and a Bachelor's Degree from Beijing Forestry University.

Ms. Jin Qian (金倩女士), aged 48, has been the Chief Financial Officer of the Company since 25 December 2022.Ms Jin has been working in Dongfang Electric since 1995. Previously, she served as deputy head of finance department of Dongfang Electric and Dongfang Electric Corporation Limited, respectively, and the chairman of the board of supervisors of Dongfang Electric (Chengdu) Hydrogen Fuel Cell Technology Co., Ltd.. Ms. Jin has extensive experience in financial management. Ms. Jin holds a master's degree in industrial engineering from Southwest Jiaotong University and a bachelor's degree in accounting from Chongqing University.

Ms. Yao Yuhong (姚字紅女士), aged 54, has been the Vice President of the Company since August 2018 to 29 July 2022. Ms. Yao had been working at the CASIC since 1991. Before joining the Company, Ms. Yao once served as the Deputy Director of the Asset Operation Department of the CASIC. She has rich experiences in asset operation, investment, mergers and acquisitions and financial management. Ms. Yao holds a Master's Degree from the Business School of Renmin University of China.

Mr. He Bin (何斌先生), aged 49, has been the Vice President since August 2018 and has been appointed as the secretary of Board of Director and Joint Company Secretary of the Company on 9 January 2023. He joined the Group in 2008 and has a wealth of experience in strategic investment, corporate governance and compliance control. He holds a Bachelor's Degree from Renmin University of China and a Master's Degree in Business Administration from University of Alberta in Canada.

Mr. Di Xiaohong (狄曉宏先生), aged 59, had been the Senior Administration Director of the Company since September 2018 to 9 December 2022. Mr. Di joined the Company in January 2000 and once served as the vice general Manager of Sichuan Honghua Petroleum Equipment Co., Ltd. He has rich experiences in Corporate Management and Administration.

Ms. Zhuang Wenmin (莊文敏女士), aged 42, has been the secretary of Board and a Joint Company Secretary of the Company since August 2018 to 9 January 2023. Ms. Zhuang joined the Company in 2009, and has been the director of the Legal & Securities Department of the Company since January 2016. She is responsible for corporate governance and compliance, risk management and legal affairs of the Company. Ms. Zhuang holds a Master's Degree in Law from Southwestern University of Finance and Economics.

Ms. Lee Mei Yi (李美儀女士), aged 55, has been a Joint Company Secretary of the Company since 7 July 2015. Ms. Lee is an executive director of corporate services division of Tricor Services Limited and a fellow member of both The Hong Kong Chartered Governance Institute (formerly known as The Hong Kong Institute of Chartered Secretaries) and The Chartered Governance Institute (formerly known as The Institute of Chartered Secretaries and Administrators). Ms. Lee has over 29 years' experience in company secretarial area.

The Board is pleased to present this Corporate Governance Report in the Group's annual report for the year ended 31 December 2022.

CORPORATE GOVERNANCE PRACTICES

The Group is committed to achieving high standards of corporate governance to safeguard the interests of Shareholders and to enhancing corporate value and accountability.

The Group strives to attain and maintain high standards of corporate governance to enhance Shareholder value and safeguard Shareholder interests. The Group's corporate governance principles emphasize a quality Board, effective internal controls and accountability to Shareholders.

The Board believes that good corporate governance practices are increasingly important for maintaining and promoting Shareholder value and investor confidence.

The Company has adopted and complied with the principles and code provisions of the Corporate Governance Code (the "CG Code") contained in Appendix 14 to the Listing Rules as basis of the company's corporate governance practices.

The CG Code sets the principles of good corporate governance and two levels of corporate governance practices:

- a) code provisions, which listed issuers are expected to comply with or to give considered reasons for any deviation; and
- b) recommended best practices for guidance only, which listed issuers are encouraged to comply with or to give considered reasons for deviation.

The Company has devised its own code of corporate governance based on the principles and practices as set out in the CG Code.

In the opinion of the Directors, the Company has complied with all the code provisions as set out in the CG Code throughout the year ended 31 December 2022.

The Company reviews its corporate governance practices regularly to ensure compliance with the CG Code.

The Company is committed to enhancing its corporate governance practices appropriate to the conduct and growth of its business and to reviewing its corporate governance practices from time to time to ensure that they comply with the statutory and professional standards and align with the latest developments.

MODEL CODE FOR SECURITIES TRANSACTIONS

The Company has adopted a set of code regarding Directors' dealings in the Company's securities (the "Code for Securities Trading") with terms no less exacting than the Model Code for Securities Transactions by Directors of Listed Issuers (the "Model Code") as set out in Appendix 10 to the Listing Rules.

After the specific enquiries made by the Company, all Directors have confirmed that they have complied with the standards specified in both the Code for Securities Trading and the Model Code throughout the year ended 31 December 2022.

The Company has also established written guidelines no less exacting than the Model Code (the "Employees Written Guidelines") for securities transactions by employees who are likely to be in possession of unpublished inside information of the Company.

No incident of non-compliance of the Employees Written Guidelines by the employees was noted by the Company.

BOARD OF DIRECTORS

The Company is headed by an effective Board which assumes responsibility for its leadership and control and be collectively responsibility for promoting the Company's success by directing and supervising the Company's affairs. Directors take decisions objectively in the best interests of the Company.

The Board has a balance of skills, experience and diversity of perspectives appropriate to the requirements of the Company's business and regularly reviews the contribution required from a Director to perform his responsibilities to the Company and whether the Director is spending sufficient time performing them that are commensurate with their role and the Board responsibilities. The Board includes a balanced composition of Executive Directors and Non-executive Directors (including Independent Non-executive Directors) so that there is a strong independent element on the Board, which can effectively exercise independent judgement.

The Company has established a Mechanism (the "Mechanism") to ensure the Board has independent views and which sets out the processes and procedures to ensure a strong independent element on the Board, mainly including: (i) The Board ensures the appointment of at least one-third of its members being Independent Non-executive Directors, with at least one Independent Non-executive Director possessing appropriate professional qualifications, or accounting or related financial management expertise;(ii)the Nomination Committee is established with clear terms of reference to identify suitable candidates, including independent non-executive directors, for appointment as Directors; (iii) the independent non-executive directors affirm their independence to the company annually; (iv) the Directors are entitled to seek, at the Group's expense, independent professional advice reasonably necessary for discharging their duties as Directors; and(v) A Director who has a material interest in a contract, transaction or arrangement shall not vote or be counted in the quorum on any Board resolution approving the same.

The Board will regularly review the implementation of the Mechanism to ensure its effectiveness.

BOARD MEETINGS

Code provision C.5.1 of the CG Code stipulates that Board meetings should be held at least four times a year at approximately quarterly intervals with active participation of the majority of the Directors entitled to be present, either in person or through electronic means of communications.

BOARD COMPOSITION

The Board currently comprises nine Directors, consisting of two Executive Directors, two Non-executive Directors and five Independent Non-executive Directors.

Executive Directors Mr. Wang Xu *(Chairman)* Mr. Zhu Hua

Non-executive Directors Mr. Zhang Mi Mr. Yang Yong

Independent Non-executive Directors Mr. Chen Guoming Ms. Su Mei Mr. Chang Qing Mr. Wei Bin Mr. Zhang Shiju

The biographical information of Directors are set out under "Biographical Details of Directors and Senior Management" on pages 18 to 23 of this annual report.

None of the members of the Board is related to one another.

CHAIRMAN AND PRESIDENT

On 4 July 2022, Mr. Jiang Fuhao stepped down from the position as President of the Company. Mr. Zhu Hua has been appointed as the Executive Vice President of the Company and is in charge of the scientific research and production and the daily operation and management of the Company, with effect from 4 July 2022.

On 25 November 2022, Mr. Jin Liliang stepped down from the position as Chairman of the Board and Executive Director of the Company, and Mr. Wang Xu was appointed as Chairman of the Board and Executive Director of the Company with effect from 25 November 2022.

The position of Chairman is held by Mr. Wang Xu throughout the year ended 31 December 2022. The Chairman provides leadership and is responsible for the effective functioning and leadership of the Board. The Executive Vice President focuses on the Company's business development and daily management and operations generally.

INDEPENDENT NON-EXECUTIVE DIRECTORS

During the year ended 31 December 2022, the Board at all times met the requirements of the Listing Rules which requires that at least one-third of the Board members are independent non-executive directors, where to this end, the Board has appointed at least four independent non-executive directors at all times.

During the year ended 31 December 2022, the Company had five independent non-executive Directors with one of whom possessing appropriate professional qualifications or accounting or related financial management expertise so that there is a strong independent element on the Board, which can effectively make independent judgment.

The Company has received written annual confirmation from each of the Independent Non-executive Directors in respect of their independence in accordance with the independence guidelines set out in Rule 3.13 of the Listing Rules. The Company considers all Independent Non-executive Directors are independent.

APPOINTMENT AND RE-ELECTION OF DIRECTORS

Code provision B.2.2 of the CG Code stipulates that every director, including those appointed for a specific term, should be subject to retirement by rotation at least once every three years, and code provision B.2.3 of the CG Code stipulates that if an independent non-executive director has served more than nine years, such director's further appointment should be subject to a separate resolution to be approved by shareholders.

Each of the Directors of the Company is appointed for a specific term of not exceeding three years and is subject to retirement by rotation at least once every three years.

RESPONSIBILITIES, ACCOUNTABILITIES AND CONTRIBUTIONS OF THE BOARD AND MANAGEMENT

The Board of Directors of the Company and the management are committed to upholding good corporate governance practices and business ethics. The Company believes that maintenance of high standard of business ethics and good corporate governance is essential for effective management, healthy business growth and fostering a contemporary corporate culture, which drives the Group to growing sustainably and safeguarding the interests of the shareholders of the Company.

The Board is responsible for leadership and control of the Company and collectively for directing and supervising the Company's affairs, and oversees the Group's businesses, strategic decisions and performance.

The senior management was delegated the authority and responsibility by the Board for the day-to-day management and operations of the Group. In addition, the Board directly, and indirectly through its committees, leads and provides direction to management by laying down strategies and overseeing their implementation, monitors the Group's operational and financial performance, and ensures that sound internal control and risk management systems are in place. The Board has delegated to these Board committees various responsibilities as set out in their terms of reference.

All Directors have carried out duties in good faith, in compliance with the standards of applicable laws and regulations, and act in the interests of the Company and its Shareholders at all times.

All Directors, including non-executive Directors and independent non-executive Directors, have brought a wide spectrum of valuable business experience, knowledge and professionalism to the Board for its efficient and effective functioning.

The independent non-executive Directors are responsible for ensuring a high standard of regulatory reporting of the Company and providing a balance in the Board for bringing effective independent judgement on corporate actions and operations.

All Directors have full and timely access to all the information of the Company as well as the services and advice from the company secretary and senior management. The Directors are always provided in a timely manner with comprehensive, accurate and detailed information on the Company's operation through monthly report, business operation report, important projects report and financial report so as to enable the Directors to make decisions and perform their duties and responsibilities. The Directors may, upon request, seek independent professional advice in appropriate circumstances, at the Company's expenses for discharging their duties to the Company.

The Directors shall disclose to the Company details of other offices held by them.

The Board reserves for its decision all major matters relating to policy matters, strategies and budgets, internal control and risk management, material transactions (in particular those that may involve conflict of interests), financial information, appointment of directors and other significant operational matters of the Company. Responsibilities relating to implementing decisions of the Board, directing and co-ordinating the daily operation and management of the Company are delegated to the management.

BOARD DIVERSITY POLICY

The Company has adopted board diversity policy (the "Board Diversity Policy") for setting out the approach to achieve diversity on the Board and the Board Diversity Policy has been made available on the Company's website. The Company recognizes and embraces the benefits of having a diverse Board and sees increasing diversity at the Board level as an essential element in maintaining the Company's competitive advantage.

Pursuant to the Board Diversity Policy, the Board will review annually the structure, size and composition of the Board and where appropriate, make recommendations on changes to complement the Company's corporate strategy and to ensure that the Board maintains a balanced diverse profile. In relation to reviewing and assessing the Board composition, the Board is committed to diversity at all levels and will consider a number of aspects, including but not limited to gender, age, cultural and educational background, professional qualifications, skills, knowledge and regional and industry experience.

The Company aims to maintain an appropriate balance of diversity perspectives that are relevant to the Company's business growth and is also committed to ensuring that recruitment and selection practices at all levels (from the Board downwards) are appropriately structured so that a diverse range of candidates are considered.

The Board will consider setting measurable objectives to implement the Board Diversity Policy and review such objectives from time to time to ensure their appropriateness and ascertain the progress made towards achieving those objectives.

One of the members of the Board is a female. The Nomination Committee will review the Board Diversity Policy, from time to time as appropriate, to ensure its effectiveness.

GENDER DIVERSITY

The Company values gender diversity across all levels of the Group. The following table sets out the gender ratio in the workforce of the Group, including the Board and senior management as at the date of this annual report:

	Male	Female
Board	89%	11%
	8	1
Senior Management	91.67%	8.33%
	24	2
Other employees	79.39%	20.61%
	1,895	492
Overall workforce	70.55%	20 459/
	79.55% 1,925	20.45% 495

DIRECTOR NOMINATION POLICY

The Company has adopted a director nomination policy (the "Director Nomination Policy") which sets out the selection criteria and process and the Board succession planning considerations in relation to nomination and appointment of Directors of the Company and aims to ensure that the Board has a balance of skills, experience and diversity of perspectives appropriate to the Company and the continuity of the Board and appropriate leadership at Board level.

The Director Nomination Policy sets out the factors for assessing the suitability and the potential contribution to the Board of a proposed candidate, including but not limited to the following:

- Character and integrity;
- Qualifications including professional qualifications, skills, knowledge and experience that are relevant to the Company's business and corporate strategy;
- Diversity in all aspects, including but not limited to gender, age, cultural and educational background, ethnicity, professional experience, skills, knowledge and length of service;
- Requirements of independent Non-executive Directors on the Board and independence of the proposed Independent Non-Executive Directors in accordance with the Listing Rules; and
- Commitment in respect of available time and relevant interest to discharge duties as a member of the Board and Board committees of the Company.

The Director Nomination Policy also sets out the procedures for the selection and appointment of new Directors and re-election of Directors at general meetings.

The Board will review the Director Nomination Policy, from time to time and as appropriate, to ensure its effectiveness.

INDUCTION TRAINING AND CONTINUOUS PROFESSIONAL DEVELOPMENT OF DIRECTORS

Directors shall keep abreast of regulatory developments and changes in order to effectively perform their responsibilities and to ensure that their contribution to the Board remains informed and relevant.

Every newly appointed director will receive formal, comprehensive and tailored made induction on the first occasion of his/her appointment, so as to ensure that he/she has adequate understanding of the business and operations and governance of the Company and that he/she is fully aware of his/her responsibilities and obligations under the Listing Rules and relevant statutory requirements.

Directors should participate in appropriate continuous professional development to develop and refresh their knowledge and skills to ensure that their contribution to the Board remains informed and relevant. Internally-facilitated briefings for Directors would be arranged and reading material on relevant topics will be issued to Directors where appropriate. All Directors are encouraged to attend relevant training courses at the Company's expenses.

All the Directors have actively participated in the continuous professional development by way of attending seminar and/or conferences and/or forums and/or reading materials.

During the year ended 31 December 2022, the following Directors attended seminars/training sessions/in-house briefing/reading materials:

Directors	Attending seminar and/or conferences and/ or forums	Reading journals, updates, articles and/or materials, etc.
Executive Directors		
Wang Xu (appointed on 25 November 2022)	\checkmark	
Zhu Hua (appointed on 4 July 2022)		
Jin Liliang (resigned on 25 November 2022) Ren Jie (resigned on 4 July 2022)	J J	J J
Non-Executive Directors		
Zhang Mi (re-designated as a Non-Executive Director from an Executive Director on 1 January 2022)	1	1
Yang Yong (appointed on 4 July 2022)		1
Chen Wenle (resigned on 4 July 2022)		1
Wang Xiuchang (resigned on 4 July 2022)	1	1
Independent Non-Executive Directors		
Chen Guoming	1	1
Su Mei	1	1
Chang Qing	1	1
Wei Bin	\checkmark	1
Zhang Shiju (appointed on 4 July 2022)	\checkmark	1

BOARD COMMITTEES

The Board has established 4 committees, namely Audit Committee, Remuneration Committee, Nomination Committee and Strategic Investment and Risk Control Committee for overseeing particular aspects of the Company's affairs. All Board committees of the Company are established with specific written terms of reference which deal clearly with their authority and duties. The terms of reference of the Board committees are posted on the Company's website and the Stock Exchange's website and are available to shareholders upon request.

The list of the chairman and members of each Board committee is set out under "Corporate Information" on page 2 of this annual report.

AUDIT COMMITTEE

During the year 2022, Mr. Zhang Shiju has been appointed as the member of the Audit Committee on 4 July 2022.

As at the date of publishment of this annual report, the Audit Committee comprises five independent non-executive Directors, namely Mr. Wei Bin (Committee Chairman), Mr. Chen Guoming, Mr. Chang Qing, Ms. Su Mei and Mr. Zhang Shiju. One of them possesses the appropriate professional qualifications or accounting or related financial management expertise.

The main duties of the Audit Committee include the following:

- To review the financial statements and reports and consider any significant or unusual items raised by the staff responsible for the accounting and financial reporting function or external auditors before submission to the Board;
- To review the relationship with the external auditors by reference to the work performed by the auditors, their fees and terms of engagement, and make recommendations to the Board on the appointment, re-appointment and removal of external auditors;
- To review the adequacy and effectiveness of the Company's financial reporting system, internal control system and risk management system and associated procedures and internal audit function; and
- To review the compliance of the corporate governance issues, the corporate governance report and the corporate governance policy.

The Audit Committee provides supervision on the internal control system of the Group and reports to the Board on any material issues, and makes recommendations to the Board.

During the year under review, the Audit Committee has reviewed the Group's annual results and annual report for the year ended 31 December 2022, the financial reporting and compliance procedures, the report from the management on the Company's internal control and risk management systems and processes, the compliance of the corporate governance issues, the corporate governance report and the corporate policy.

The Audit Committee held six meetings during the year ended 31 December 2022 and the attendance records are set out under "Attendance Records of Directors and Committee Members" on pages 35 to 36 of this Corporate Governance Report.

REMUNERATION COMMITTEE

During the year 2022, Mr. Zhang Mi and Mr. Jin Liliang were resigned as the members of the Remuneration Committee on 4 July 2022 and 25 November 2022 respectively. Mr. Zhang Shiju and Mr. Wang Xu were appointed as the members of the Remuneration Committee on 4 July 2022 and 25 November 2022 respectively.

As of the date of publication of this annual report, the Remuneration Committee comprises four members, including three independent non-executive Directors namely Ms. Su Mei (Committee Chairman), Mr. Wei Bin and Mr. Zhang Shiju, one executive Director namely Mr. Wang Xu.

The primary objectives of the Remuneration Committee include the following:

- To make recommendations to the Board on the remuneration policy and structure of the Directors and the senior management, the incentive mechanism, and the establishment of procedures for developing the remuneration policy and the incentive mechanism;
- To review and approve the remuneration packages of the executive Directors and the senior management by reference to the performance of the individual and the Company as well as market practice and conditions; and
- To review and approve the compensation arrangements for the executive Directors and the senior management in connection with (i) any loss or termination of their office or appointment and (ii) any dismissal or removal of directors for misconduct to ensure such arrangements are determined in accordance with contractual terms and that such compensation is reasonable and appropriate.

The Remuneration Committee normally meets at least once a year for reviewing and making recommendation to the Board on the remuneration policy and structure and determining the annual remuneration packages of the executive Directors and the senior management and other related matters.

The Remuneration Committee held a meeting during the year ended 31 December 2022 and the attendance records are set out under "Attendance Records of Directors and Committee Members" on pages 35 to 36 of this Corporate Governance Report.

Details of the remuneration of the senior management by band are set out in note 34(f) in the Notes to the Audited Financial Statements for the year ended 31 December 2022.

The remuneration policies of the Group focus on the efficiency of the employees and the position-value index, with reference to the individual ability and experience of an employee as well as the market value of the labour market, and emphasize on incentive-orientation and also the establishment of a fair and competitive remuneration system. For long-term incentive policies, the Company has adopted the Share Option Scheme and Restricted Share Award Scheme for eligible participants. Details are set out under the paragraphs headed "Share Option Scheme" and "Restricted Share Award Scheme" in the Report of the Directors.

The basis of determining the emolument of Directors is on various considerations, including Directors' capability, knowledge and experience, participation to the Board, job duties and responsibilities and is also made reference to the market practices and conditions. Except Mr. Wang Xu, the Chairman of the Board, whose remuneration consists of annual basic remuneration and annual performance appraisal remuneration, the remuneration of the Executive Directors is based on their administrative management positions. Independent Non-Executive Directors are entitled to a fixed emolument package. Non-Executive Directors may be entitled to a fixed remuneration under the service contract.

NOMINATION COMMITTEE

Pursuant to Rule 3.27A of the Listing Rules that the issuers should establish a nomination committee which is chaired by the chairman of the board or an independent non-executive director and comprises a majority of independent non-executive directors.

During the year 2022, Mr. Chen Guoming and Mr. Jin Liliang were resigned as the members of the Nomination Committee on 4 July 2022 and 25 November 2022 respectively. Mr. Zhang Shiju and Mr. Wang Xu were appointed as the member of the Nomination Committee on 4 July 2022 and 25 November 2022 respectively.

As of the date of publication of this annual report, the Nomination Committee comprises three members, including one Executive Director namely Mr. Wang Xu (Committee Chairman) and two Independent Non-Executive Directors namely Mr. Chang Qing and Mr. Zhang Shiju.

The primary objectives of the Nomination Committee include the following:

- To make recommendations to the Board on the composition of Board members according to the scale of the Company's operations and corporate governance and on the appointment or re-appointment of Directors and succession planning for Directors, in particular the chairman and the chief executive;
- To review the structure, size and composition (including the skills, knowledge and experience) of the board at least annually and make recommendations on any proposed changes to the board to complement the issuer's corporate strategy;
- To identify individuals suitably qualified to become board members and select or make recommendations to the board on the selection of individuals nominated for directorships; and
- To assess the independence of Independent Non-Executive Directors.

The Nomination Committee normally meets at least once a year for reviewing and making recommendation to the Board on the nomination policy, diversity policy, structure, size and composition (including skills, knowledge and experience) of the Board at least annually and making recommendations on any proposed changes to the Board to complement the Company's corporate strategy.

The Nomination Committee held two meetings during the year ended 31 December 2022 and the attendance records are set out under "Attendance Records of Directors and Committee Members" on pages 35 to 36 of this Corporate Governance Report.

STRATEGIC INVESTMENT AND RISK CONTROL COMMITTEE

During the year 2022, Mr. Ren Jie and Mr. Jin Liliang were resigned as the members of the Strategic Investment and Risk Control Committee on 4 July 2022 and 25 November 2022 respectively. Mr. Zhu Hua and Mr. Wang Xu were appointed as the members of the Strategic Investment and Risk Control Committee on 4 July 2022 and 25 November 2022 respectively.

As of the date of publication of this annual report, the Strategic Investment and Risk Control Committee comprises four members, including two Executive Directors namely Mr. Wang Xu (Committee Chairman) and Mr. Zhu Hua, one non-executive Director namely Mr. Zhang Mi and one Independent Non-Executive Director namely Mr. Chang Qing.

The main duties of the Strategic Investment and Risk Control Committee include the following:

- To review the investment strategies of the Company;
- To review the investment risk control of the Company; and
- To recommend investment strategies and risk control policy and practices to the Board.

The Strategic Investment and Risk Control Committee normally meets at least once a year for reviewing the investment and risk control issues. The Strategic Investment and Risk Control Committee held a meeting during the year ended 31 December 2022 and the attendance records are set out under "Attendance Records of Directors and Committee Members" on pages 35 to 36 of this Corporate Governance Report.

ATTENDANCE RECORDS OF DIRECTORS AND COMMITTEE MEMBERS

During the year ended 31 December 2022, nine Board meetings were held for reviewing and approving the financial and operating performance, and considering and approving the overall strategies and policies of the Company.

Apart from regular Board meetings, the Chairman also held meetings with the Independent Non-executive Directors without the presence of other Directors during the year ended 31 December 2022.

The summary of the attendance record of each Director at the Board meetings, Board Committee meetings and the general meetings during the year ended 31 December 2022 are set out below:

				Attendance/Nu	mber of Meetings			
Name of Director	Board	Audit Committee	Remuneration Committee	Nomination Committee	Strategic Investment and Risk Control Committee	(note 1) Annual General Meeting	(note 2) Extraordinary General Meeting	Meeting between Chairman and independent non- executive Directors
Wang Xu								
(appointed on 25 November								
2022)	2/2	_	1/1	-	-	_	-	-
Zhu Hua								
(appointed on 4 July 2022)	4/7	-	-	-	-	-	1/1	-
Ren Jie								
(resigned on 4 July 2022)	1/2	-	-	-	1/1	0/1	-	-
Jin Liliang								
(resigned on 25 November								
2022)	7/7	-	-	2/2	1/1	1/1	1/1	1/1
Zhang Mi	9/9	-	-	-	1/1	1/1	0/1	-
Yang Yong								
(appointed on 4 July 2022)	6/7	-	-	-	-	-	0/1	-
Chen Wenle						0.11		
(resigned on 4 July 2022)	1/2	-	-	-	-	0/1	-	-
Wang Xiuchang	1/2					0/1		
(resigned on 4 July 2022)	9/9	- 6/6	-	- 1/1	-	1/1	- 1/1	- 1/1
Chen Guoming Su Mei			- 1/1		-	1/1		
	9/9 9/9	6/6 6/6	1/1	- 2/2	- 1/1	1/1	1/1 0/1	1/1 1/1
Chang Qing Wei Bin		6/6	- 1/1			1/1	0/1	1/1
Zhang Shiju	9/9	0/0	1/1	-	-	1/1	1/1	1/1
(appointed on 4 July 2022)	7/7	4/4	1/1	1/1	_	_	1/1	
(appointed on 4 July 2022)	1/1	4/4	1/ 1	1/ 1	-	-	1/1	-

The Directors attended the meetings via video or telephone conference, or in person.

Note 1: The annual general meeting of the Company was held on 22 June 2022.

Note 2: The extraordinary general meeting of the Company was held on 25 October 2022.

DIRECTORS' RESPONSIBILITY IN RESPECT OF THE FINANCIAL STATEMENTS

The Directors acknowledge their responsibility for preparing the financial statements of the Company for the year ended 31 December 2022.

The Directors are not aware of any material uncertainties relating to events or conditions that may cast significant doubt upon the Company's ability to continue as a going concern.

The statement of the independent auditors of the Company about their reporting responsibilities on the financial statements is set out in the Independent Auditors' Report on pages 93 to 98 of this annual report.

Where appropriate, a statement from the Audit Committee explaining its recommendation regarding the selection, appointment, resignation or dismissal of external auditors and the reasons why the Board has taken a different view from that of the Audit Committee.

AUDITORS' REMUNERATION

During the year ended 31 December 2022, the remuneration paid to the Company's former auditors, PricewaterhouseCoopers who resigned on 31 October 2022 and the Company's current auditor, Deloitte Touche Tohmatsu who was appointed on 1 November 2022 in respect of audit services are set out below:

Deloitte Touche Tohmatsu (Appointed on 1 November 2022)

Service Category	Fees
	(in Renminbi)
Audit Services	3,190,000

The auditors' remuneration disclosed in note 6 to the consolidated financial statements included the remuneration paid to PricewaterhouseCoopers and Deloitte Touche Tohmatsu respectively as detailed above. Audit services include review of financial information.

RISK MANAGEMENT AND INTERNAL CONTROLS

The Board acknowledges its responsibility for the risk management and internal control systems and reviewing their effectiveness. Such systems are designed to manage rather than eliminate the risk of failure to achieve business objectives, and can only provide reasonable and not absolute assurance against material misstatement or loss.

The Board has the overall responsibility for evaluating and determining the nature and extent of the risks it is willing to take in achieving the Company's strategic objectives, and establishing and maintaining appropriate and effective risk management and internal control systems.

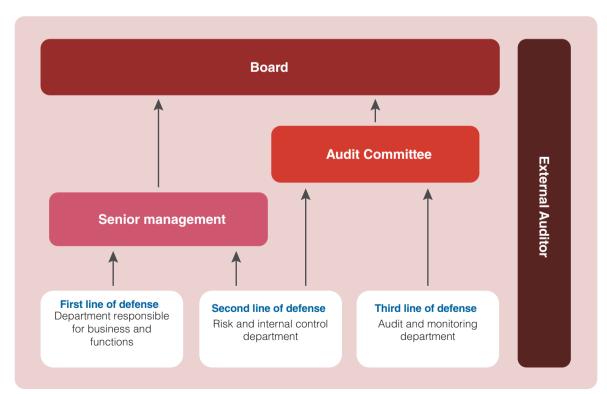
The Audit Committee assists the Board in leading the management and overseeing their design, implementation and monitoring of the risk management and internal control systems.

The Company has established and formulated appropriate policies and checks to ensure that there is no unauthorized use or disposal of asset. Reliable financial and accounting records are maintained in accordance with relevant rules and regulations, relevant accounting standards and regulatory reporting requirements. Material risks which may affect the performance of the Company are properly identified and managed. Such systems and internal controls can only provide reasonable and not absolute assurance against material misstatement or loss and are designed to manage rather than eliminate the risk of failure to achieve business objectives.

RISK MANAGEMENT AND INTERNAL CONTROL FRAMEWORK

The Company has established a risk management organizational structure with clear responsibility rank and reporting program. The risk and internal control department and the audit and monitoring department assist the Board and the Audit Committee in the continuous review of effectiveness of the Company's risk management and internal control system. The Directors regularly receive information on material risks which may affect the performance of the Company from these Committees.

The Company has adopted the following "three lines of defense" model as the guideline of risk management structure:



As the first line of defense, each department and subsidiary of the Company responsible for business and management and internal control-related functions are the frontline of risk exposure and shall actively analyze the possibility and severity of potential/actual risks in the course of ordinary business activity. They also carry out preliminary risk information collection and identification, actively implement risk solution, participate in the development of risk management culture and receive guidance and supervision from the risk and internal control department. The management of the Company, as supported by the risk and internal control department and the audit and monitoring department, is responsible for the design, execution and monitoring of the risk management and submits regular report on the effectiveness of such systems to the Board. The management has confirmed to the Board the effectiveness of the issuer's risk management and internal control system.

As the second line of defense, the risk and internal control department and the risk control panel of the Company are primarily responsible for the coordinated planning and development, maintenance and improvement of the risk management and internal control system. They evaluate and formulate ongoing enhancement on the compliance and reasonableness of the principal business procedures and the risk management mechanism and risk control capability of the Company and its subordinated entities. In accordance with the Company's strategic goal and business plan, they devise or arrange relevant department to devise risk management and internal control system, internal control manual and management measures, including setting up evaluation mechanism of risk management, evaluation mechanism of effectiveness of internal control, recommendation of risk management strategy and internal control improvement, and report to the management and the Audit Committee.

As the third line of defense, the Audit Committee and the audit and monitoring department of the Company are primarily responsible for the follow-up scrutiny, audit and monitoring of the tasks assigned to the first and second line of defense and reporting to the Board. The audit and monitoring department is responsible for performing independent review of the adequacy and effectiveness of the risk management and internal control systems, examining key issues in relation to the accounting practices and all material controls and providing its findings and recommendations for improvement to the Audit Committee.

The risk and internal control department and the audit and monitoring department have adopted an audit method based on risk and control. With their operation plan throughout the year, the audit and monitoring department and the risk and internal control department cover every major task and program of the operation and business of the Company and service units. They also conduct extraordinary review as requested by the management and the result of audit work is submitted to the Audit Committee and the executive and senior management of the Company. The risk and internal control department and the audit and monitoring department conduct examination and follow-up on audit matters to strive for proper execution and report to the management of the Company (as the case may be) and the Audit Committee regularly.

RISK MANAGEMENT AND INTERNAL CONTROL MEASURES

The Company has adopted several policies and programs to evaluate and prudently boost the effectiveness of the risk management and internal control system, including the requirement on the executive management of the Company to conduct evaluation and verify in person the proper and effective operation of such matters every year. The Company believes that such measure shall strengthen future corporate governance and business practice.

During the year 2022, the Company has achieved the following key results in order to strengthen the risk management system:

- The Company has optimized and revised a series of management systems to consolidate the foundation of corporate governance, including the rules of procedure for the board of directors, authorization management of the board of directors, authorization management of the legal representative, equity investment management, fixed asset management, financing management, budget management, capital management, guarantee management, bidding management and other management measures;
- The Company's internal audit and internal control assessment incorporated risk management to the state of audit planning, and prepared the internal control system self-assessment report for the year based on the Company's comprehensive risk analysis; and
- The Company has optimized the risk management and internal control system, formulated an action plan for the prevention and settlement of major business risks, regularly organized and carried out business risk investigation, tracked and monitored the progress of risk prevention and settlement, and continued to achieve results in the settlement of historical risk matters and the prevention of new-coming risks. In the next step, in terms of the key work of risk management and control, the Company will focus on the objectives of "strengthening internal control, preventing risks and promoting compliance", continue to promote the integrated construction of risk control and compliance, and enhance the professional synergy of the second line of defense.

The risk and internal control department and the audit and monitoring department report their work in respect of the sufficiency and effectiveness of the risk management and internal control for the previous period to the Board and the Audit Committee at every regular meeting throughout the year, including but not limited to highlighting any failure in the implementation of these control procedures or any material deficiencies of the procedures.

The risk and internal control department takes the lead in the risk management process of the Company by identifying and assessing the material risks within the Group. The management will then discuss, agree and implement relevant risk management measures and corresponding responsive measures. Relevant risk assessment results are reported to the Board and the Audit Committee.

REVIEW OF RISK MANAGEMENT AND INTERNAL CONTROL EFFECTIVENESS

The Audit Committee and the Board were not aware of any key findings that would have any substantive impact on the business or financial condition of the Company, and of the opinion that the existing risk management and internal control system is appropriate and effective in terms of sufficiency of resources, qualification and experience of staff, training program and financial budget, internal audit and financial report.

The Management reported to the Board and the Audit Committee on the effectiveness of the risk management and internal control system of the year as at 31 December 2022.

The Board, as supported by the Audit Committee as well as the management report and the internal audit findings, reviewed the risk management and internal control systems, including the financial, operational and compliance controls, for the year ended 31 December 2022, and considered that such systems are effective and adequate. The annual review also covered the financial reporting and internal audit function and staff qualifications, experiences and relevant resources.

INTERNAL AUDIT

The Company has specially established an internal audit and supervision department responsible for the internal control of the Group.

The internal audit and supervision department conducts regular supervision and examination over the business of the Group and also carries out the special supervision and examination for significant projects to regulate the management of the Group.

The internal audit and supervision department reports its work to the Audit Committee on a periodical basis while the Audit Committee reviews and approves the internal audit reports and the annual plan for internal audit annually. The audit opinions will be reported to the Board through the Audit Committee.

The Company has set up an independent reporting channel through which the staff of the Company can report the corrupt conducts of other staffs of the Company directly to the internal audit and supervision department, so that the Company can be held harmless from frauds and other misconducts.

INFORMATION DISCLOSURE

The Company has formulated a set of continuing disclosure obligation procedures in response to the inside information provisions under the SFO and the Listing Rules.

The Company proactively publishes voluntary announcements for the matters of significance involving the current development status of the Company so that Shareholders and investors can be timely aware of the current status of the business development of the Company.

COMPANY SECRETARY

On 9 January 2023, Ms. Zhuang Wenmin resigned as the Joint Company Secretaries of the Company and Mr. He Bin has been appointed as the Joint Company Secretaries of the Company. As of the date of publication of this annual report, the primary contact person at the Company is Mr. He Bin, one of the Joint Company Secretaries of the Company. Ms. Lee Mei Yi of Tricor Services Limited, an external service provider, has been appointed by the Company as one of its Joint Company Secretaries since 7 July 2015.

All Directors have access to the advice and services of the Joint Company Secretaries on corporate governance and board practices and matters.

During the year 2022, Ms. Zhuang Wenmin and Ms. Lee Mei Yi, the Joint Company Secretaries during the year, have complied with Rule 3.29 of the Listing Rules by taking no less than 15 hours of the relevant professional training during the year.

SHAREHOLDERS' RIGHTS

To safeguard Shareholder interests and rights, separate resolutions are proposed for each substantially separate issue at Shareholders' meetings, including the election of individual Directors.

All resolutions put forward at Shareholders' meetings will be taken by poll pursuant to the Listing Rules and poll results will be posted on the websites of the Company and of the Stock Exchange after Shareholders' meeting.

CONVENING AN EXTRAORDINARY GENERAL MEETING BY SHAREHOLDERS

The Board may, whenever it thinks fit, convene an extraordinary general meeting. Extraordinary general meetings may be convened by the Board on requisition of one or more Shareholders' holding, at the date of deposit of the requisition, not less than one tenth of the paid up capital of the Company having the right of voting at general meetings. Such requisition shall be made in writing to the Board or the Secretary for the purpose of requiring an extraordinary general meeting to be called by the Board for the transaction of any business specified in such requisition. Such meeting shall be held within 2 months after the deposit of such requisition. If within 21 days of such deposit, the Board fails to proceed to convene such meeting, the requisitionist(s) himself (themselves) may do so in the same manner, and all reasonable expenses incurred by the requisitionist(s) as a result of the failure of the Board shall be reimbursed to the requisitionist(s) by the Company.

PUTTING FORWARD PROPOSALS AT GENERAL MEETINGS

There is no provision allowing Shareholders to move new resolutions at general meetings under the Cayman Islands Companies Law or the Articles of Association of the Company. Shareholders who wish to move a resolution may request the Company to convene a general meeting following the procedures set out in the preceding paragraph.

PUTTING FORWARD ENQUIRIES TO THE BOARD

For putting forward any enquiries to the Board of the Company, shareholders may send written enquiries to the Company.

Note: The Company will not normally deal with verbal or anonymous enquiries.

CONTACT DETAILS

Shareholders may send their enquiries or requests as mentioned above to the following:

Address: 5/F, Manulife Place, 348 Kwun Tong Road, Kowloon, Hong Kong

Email: shareholder@hhcp.com.cn

For the avoidance of doubt, Shareholders must deposit and send the original duly signed written requisition, notice or statement, or enquiry (as the case may be) to the above address or 99 East Road, Information Park, Jinniu District, Chengdu, Shichuan, People's Republic of China and provide their full name, contact details and identification in order to give effect thereto. Shareholders' information may be disclosed as required by law.

COMMUNICATION WITH SHAREHOLDERS AND INVESTORS

The general meetings of the Company provide a forum for communication between the Board and the Shareholders. The Chairman of the Board as well as chairmen of the Audit Committee, Remuneration Committee, Nomination Committee and Strategic Investment and Risk Control Committee or, in their absence, other members of the respective committees normally attend the annual general meetings and other relevant Shareholders' meetings to answer questions of Shareholders. Notices to Shareholders for annual general meetings and all other general meetings will be sent to the Shareholders before such meetings pursuant to the requirement of the Listing Rules.

Information relating to the Company's financial results, corporate details, major projects and events are disseminated through publications of interim and annual reports, announcements, circulars and other corporate communications and publications available on the websites of the Stock Exchange and the Company.

During the Year under review, the Company has not made any changes to its Articles of Association. An up-to-date version of the Company's Articles of Association is also available on the websites of the Stock Exchange and the Company.

To promote effective communication, the Company maintains a website at http://www.hh-gltd.com, where upto date information and updates on the Company's business operations and developments, financial information, corporate governance practices and other information are available for public access.

SHAREHOLDERS COMMUNICATION POLICY

The Company has in place a Shareholders' Communication Policy. The policy aims at promoting effective communication with Shareholders and other stakeholders, encouraging Shareholders to engage actively with the Company and enabling Shareholders to exercise their rights as Shareholders effectively. The Board reviewed the implementation and effectiveness of the Shareholders' Communication Policy and the results were satisfactory.

The Company has established a number of channels for maintaining an on-going dialogue with its Shareholders as follows:

(a) Corporate Communication

"Corporate Communication" as defined under the Listing Rules refers to any document issued or to be issued by the Company for the information or action of holders of any of its securities, including but not limited to the following documents of the Company: (a) the Directors' report, annual accounts together with a copy of the auditor's report and, where applicable, its summary financial report; (b) the interim report and, where applicable, its summary interim report; (c) a notice of meeting; (d) a listing document; (e) a circular; and (f) a proxy form. The Corporate Communication of the Company will be published on the Stock Exchange's website (www.hkex.com.hk) in a timely manner as required by the Listing Rules. Corporate Communication will be provided to Shareholders and non-registered holders of the Company's securities in both English and Chinese versions or where permitted, in a single language, in a timely manner as required by the Listing Rules. Shareholders and non-registered holders of the Company's securities shall have the right to choose the language (either English or Chinese) or means of receipt of the Corporate Communication (in printed form or through electronic means).

(b) Announcements and Other Documents pursuant to the Listing Rules

The Company shall publish announcements (on inside information, corporate actions and transactions etc.) and other documents (e.g. Memorandum and Articles of Association) on the Stock Exchange's website in a timely manner in accordance with the Listing Rules.

(c) Corporate Website

Any information or documents of the Company posted on the Stock Exchange's website will also be published on the Company's website (https://www.hh-gltd.com).

(d) Shareholders' Meetings

The annual general meeting and other general meetings of the Company are primary forum for communication between the Company and its Shareholders. The Company shall provide Shareholders with relevant information on the resolutions(s) proposed at a general meeting in a timely manner in accordance with the Listing Rules. The information provided shall be reasonably necessary to enable Shareholders to make an informed decision on the proposed resolution(s). Shareholders are encouraged to participate in general meetings or to appoint proxies to attend and vote at the meetings for and on their behalf if they are unable to attend the meetings. Where appropriate or required, the Chairman of the Board and other Board members, the chairmen of board committees or their delegates, and the external auditors should attend general meetings of the Company to answer Shareholders' questions (if any). The chairman of the independent board committee (if any) should also be available to answer questions at any general meeting to approve a connected transaction or any other transaction that is subject to independent Shareholders' approval.

(e) Shareholders' Enquiries

Enquiries about Shareholdings

Shareholders should direct their enquiries about their shareholdings to the Company's branch share registrar, Computershare Hong Kong Investor Services Limited, call its hotline at (852) 2862 8555, or go in person to its public counter at Shops 1712-1716 17th Floor, Hopewell Centre, 183 Queen's Road East, Wanchai, Hong Kong.

Enquiries about Corporate Governance or Other Matters to be put to the Board and the Company

The Company will not normally deal with verbal or anonymous enquiries. Shareholders may send any enquiries to the Board by email: shareholder@hhcp.com.cn or by post to 5/F, Manulife Place, 348 Kwun Tong Road, Kowloon, Hong Kong for any assistance.

(f) Other Investor Relations Communication Platforms

Investors/analysts briefings, roadshows, media interviews etc.

AMENDMENTS TO CONSTITUTIONAL DOCUMENTS

During the year under review, the Company has not made any changes to its Articles of Association. An up to date version of the Company's Articles of Association is also available on the Company's website and the Stock Exchange's website.

DIVIDEND POLICY

The Company has adopted a dividend policy (the "Dividend Policy"). With an emphasis on providing reasonable investment return to its Shareholders, the Company strives to implement a sustained and stable dividend policy by considering the current actual operating conditions of the Company, the sustainability and the interests of the Shareholders as a whole.

The Company may distribute dividends to the Shareholders in cash, in shares or in other forms as the Board considers appropriate.

According to the Dividend Policy, subject to the relevant criteria, based on the audited annual statements and the net profit attributable to the Shareholders for the Year and on the premise that the distributable profit is positive and there is sufficient working capital, the Company may distribute annual dividends to the Shareholders in cash in proportion to at least 30% of the annual distributable profit in principle.

In deciding whether to propose a dividend and in determining the dividend amount, the Board shall consider the following factors as a whole: the financial results, the cash flows, the future operations and revenue, the capital requirements and capital expenditure plan, the Shareholders' interests of the Company and its subsidiaries as well as any other relevant factors.

The Board will review the Dividend Policy from time to time and may exercise at its sole and absolute discretion to update, amend and/or modify the Dividend Policy at any time as it seems fit and necessary. There is no assurance that dividends will be paid in any particular amount for any given period.

SCOPE AND REPORTING PERIOD

This is the seventh Environmental, Social and Governance ("ESG") report by Honghua Group Limited ("the Group"), highlighting its ESG performance, with disclosure reference made to the ESG Reporting Guide in Appendix 27 of the Listing Rules of The Stock Exchange of Hong Kong Limited.

The Group is a large-scale equipment manufacturer and drilling service provider, specializing in the research, design, manufacture and set-assembly of drilling rigs, offshore engineering and oil & gas exploitation and production equipment.

This ESG report covers the Group's overall environmental and social performances of its major business operations which contribute to the Group's most significant environmental and social impacts. These include the business operations of Honghua Group Limited and its subsidiaries Honghua (China) Investment Co., Ltd., Honghua International Co., Ltd., Sichuan Honghua Electric Co., Ltd, Sichuan Honghua Petroleum Equipment Co., Ltd. and Honghua Oil & Gas Engineering Technology Services Limited in (i) the head office in Chengdu, (ii) the office and (iii) the manufacturing plant in Guanghan, Sichuan Province of the People's Republic of China ("PRC"), from 1 January 2022 to 31 December 2022 (the "Reporting Period"), unless otherwise stated.

THE GROUP'S SUSTAINABILITY VISION AND COMMITMENT

As one of the leading land drilling rig equipment manufacturers in the world and a large land drilling rig exporter in China, the Group is committed to leading the industry with the highest standards. The Group will continue to enhance collaboration and integration of industrial resources, expand market share, and consolidate the international leading position of the oil and gas equipment supplier and service provider.

The Group integrates sustainable development into its development path. On the one hand, the Group is committed to the green and low-carbon development in the oil and gas equipment industry, and actively contributes to the low-carbon transformation of oil and gas exploitation. On the other hand, the Group directly participates in the new energy equipment manufacturing industry.

The low-carbon transformation of oil and gas exploitation is to continuously strengthen technological innovation, and develop low-carbon drilling rigs, equipment automation and the power grid cleanness with the goal of promoting the intelligent and green and low-carbon development of oil and gas equipment, so as to realize the clean and low-carbon exploitation in oil fields and the green oil and gas industry. The Group provides comprehensive energy integration solutions for global oilfield customers, including promoting the application of new energy, energy storage technology and special power supply technology in oilfields, thereby realizing the oilfield customers' strategic needs for new energy development and low-carbon transformation.

At the same time, leveraging the development strategy of "Six Electricity and Six Industries" of the largest shareholder, Dongfang Electric Corporation, the Group accelerates the deployment of new energy industries and extensively participates in the research and development and manufacturing of new energy industry related specialized and new supporting products such as wind power, solar thermal and photovoltaic etc., so as to promote the diversification of energy structure and green and low carbon development in China and contribute to the realization of the "3060 goal" of carbon peak and carbon neutrality.

ESG management is of great importance in the Group's business operation. The Group incorporates ESG considerations into its operation and is devoted to:

- Ensuring the occupational health and safety of employees;
- Creating a green work environment;
- Enhancing the capabilities of employees;
- Improving the quality of asset operation and the efficiency of human resources;
- Promoting industry diversification in an orderly manner; and
- Enriching corporate culture to strengthen bond among employees.

The Board of the Group understands that a sound ESG management structure is essential to the Group's development. Apart from pursuing continuous growth and success, the Group strives for excellence in its ESG management. The Group also communicates with its stakeholders in an open and transparent manner to enhance stakeholders' understanding towards the Group's operation.

STANDARDS AND CERTIFICATIONS

As a licensed manufacturer under the American Petroleum Institute ("API") Monogram program, the Group conforms to the specifications set out by the API. The Group's quality management system complies with the ISO9001:2015 and GB/T19001-2015 standards. Its design, manufacture and service of drilling rigs and associated components conform to the API Specification Q1.

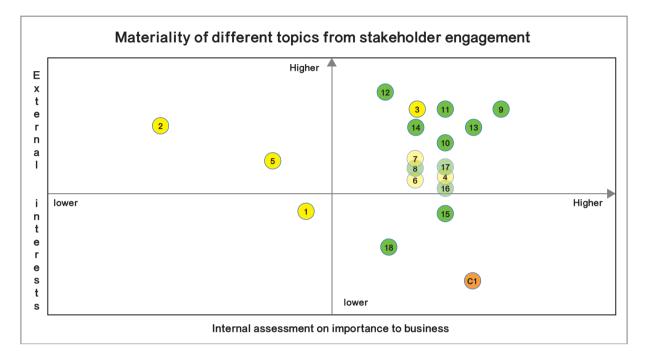
Since 2000, the Group established and operated quality management system, which subsequently passed the examinations by several renowned certificate authorities, and obtained API Q1 and ISO 9001 quality management system certification, API 4F/7K/8C/6A/7-1/16C product certification, European Conformity (CE) product certification, Russia-Belarus-Kazakhstan CU-TR Customs Union production certification, ASME U&U2 pressure vessel manufacture permit, and domestic pressure vessel and pressure tube component design/manufacture permit etc.

THE STATEMENT OF THE BOARD OF DIRECTORS

The Company understands that the leadership and participation of the Board is crucial to the implementation of sustainable development strategies. Therefore, the Board shoulders the responsibility of leading and supervising ESG related matters, and is responsible for leading the Group to seize the opportunities and respond to the risks brought by sustainable development. The Board regularly decides on and monitors ESG policies and strategies, including the approval and consideration of the ESG-related goals, progress review of the goals, evaluation and prioritisation of the materiality, etc. Directors will also regularly review the ESG performance of the Group, review and approve the disclosures in ESG report, and ultimately review and approve the final disclosures in the report. Meanwhile, subsidiaries of the Group have established their respective safety and environmental committee, which undertakes and implements various safety production matters and ESG-related matters of respective subsidiaries, so as to further improve the effectiveness of sustainable development governance.

STAKEHOLDER ENGAGEMENT AND MATERIALITY

The Group values feedback of its stakeholders as they bring invaluable directions for continuous development to the Group. Internal and external stakeholders have been involved in regular engagement activities to share views regarding the Group's operation and performances. The Group has specifically engaged the board members, senior management, frontline staff, regulators, clients and suppliers to gain further insights on material ESG aspects and challenges in the Reporting Period. The Materiality Matrix below shows the result of our materiality assessment process:



Environmental		Social		Others	
1	Energy	8	Employment	C1	Food Safety and Health
2	Water	9	Occupational Health and Safety		
3	Air Emission	10	Development and Training		
4	Waste and Effluent	11	Labour Standards		
5	Other Raw Materials Consumption	12	Supplier Management		
6	Environmental Protection Measures	13	Intellectual Property		
7	Climate Change	14	Data Protection		
		15	Customer Service		
		16	Product/Service Quality		

- 17 Anti-corruption
- 18 Community Investment

Among the environmental and social aspects, the followings were the most material aspects of the Group's operation:

- Air Emission
- Occupational Health and Safety
- Development and Training
- Labour Standards
- Intellectual Property

The above aspects were strictly managed through strict compliance with the relevant laws and regulations, and the Group's policies and guidelines. Management of the aspects has been described in separate sections below. The Group will continue to identify areas of improvement for the concerned aspects and keep close communication with its stakeholders to exchange ideas for advancing the Group's ESG management.

STAKEHOLDERS' FEEDBACK

The Group welcomes stakeholders' feedback on our ESG approach and performance. Please give your suggestions or share your views with the Group via email at shareholder@hhcp.com.cn.

A. ENVIRONMENTAL

The Group operates in accordance with its environmental and resources management policies, which are also in compliance with all applicable national laws and regulations including the *Environmental Protection Law of the PRC, the Atmospheric Pollution Prevention and Control Law of the PRC, the Water Pollution Prevention and Control Law of the PRC, the Law of the PRC on Prevention and Control of Environmental Pollution by Solid Wastes, and Regulation on Urban Drainage and Sewage Treatment. All emissions and discharges meet the national statutory standards. During the Reporting Period, there were no material non-compliance issues relating to the environment.*

A1. Emissions

A1.1. Air Pollutant Emissions

The Group consumed natural gas, petrol and diesel in the Reporting Period, which contributed to the emission of 243.67 kg of nitrogen oxides ("NO_x"), 0.43 kg of sulphur oxides ("SO_x") and 2.02 kg of respiratory suspended particles ("PM"). Emissions from the Group's operation were treated before release.

A1.2. Greenhouse Gas Emissions

		Emission (in tonnes of carbon dioxide	
Scope of Greenhouse Gas Emissions	Emission Sources	equivalent "tCO ₂ e")	Total Emission (in percentage)
			(p
Scope 1 Direct Emission			
Combustion of fuel for stationary source	natural gas	2372.10	24.08%
Combustion of fuel for mobile sources	Petrol	165.80	
	Diesel	74.90	
Scope 2 Energy Indirect Emission			
Purchased electricity		7953	73.29%
Scope 3 Other Indirect Emission			
Paper waste disposal		4.30	2.63%
Business air travel		281.60	
Total		10851.70	100%

- Note1: Emission factors were referred to Appendix 27 of the Main Board Listing Rules and their referred documentation as set out by Hong Kong Exchanges and Clearing Limited, unless stated otherwise.
- Note2: Except for emission factor for purchased electricity, other CO2 emission factors were latest data for the corresponding period sourced from the greenhouse gas emission factor database of Chinese Products in the whole life cycle.
- Note3: Pursuant to the Notice on Administration Works on Greenhouse Gas Emission Report by Power Generation Enterprises for 2023-2025 《關於做好2023 2025年發電行業企業溫室氣體排放報告管 理有關工作的通知》 issued by the Ministry of Ecology and Environment of the People's Republic of China, it is pointed out that the average emission factor for national grid was 0.5703t CO2/MWh in 2022, and the emission factor for electricity purchased by the Group in 2022 was calculated based on the aforementioned emission factor.

The Group's activities contributed to 10,851.70 tonnes of carbon dioxide equivalent (including carbon dioxide, methane and nitrous oxides) during the Reporting Period. The Group plans to reduce its carbon dioxide emission/RMB10,000 of revenue by 18%, compared with 2020 levels, in 5 years.

A1.3. Hazardous Waste

Hazardous wastes generated were stored in designated area and collected by licensed collectors. During the Reporting Period, a total of 297.52 tonnes of hazardous wastes was generated, representing 66.47 kg/million RMB of revenue. Hazardous wastes were collected by qualified collectors for treatment and recycling.

	Wastes Generated	Wastes Generated	
Hazardous Wastes	in 2022 (tonnes)	(in percentage)	
Oil-containing wraps	1.00	0.34%	
Filter sponge	9.15	3.08%	
Waste mineral oil	16.68	5.61%	
Waste oil paint containers	68.30	22.96%	
Paint residue	193.38	65.00%	
Waste activated carbon	3.79	1.27%	
Waste emulsion	5.22	1.75%	
Total	297.52	100.00%	

A1.4. Non-hazardous Waste

A total of 3,272.49 tonnes of non-hazardous wastes was generated by the Group during the Reporting Period, with intensity of 731.10 kg/million RMB of revenue. Non-hazardous wastes were collected by qualified collectors. The Group targets to reduce non-hazardous waste generation by 10%, compared with 2021 levels, in 10 years.

	Wastes Generated	Wastes Generated (in percentage)	
Non-hazardous Wastes	in 2022 (in tonnes)		
Scrap Steel	1,942.05	59.34%	
Scrap Iron Filings	1,322.52	40.41%	
Waste Woods	5.50	0.17%	
Waste Paper	2.42	0.07%	
Total	3,272.49	100.00%	

A1.5. Measures to Mitigate Emissions

The health, safety and environmental ("HSE") management system of the Group, which is implemented through daily supervision and inspection, is formulated with the objectives of pursuing occupational health and production safety, minimizing environmental pollution, and sustaining continuous improvement. The Group has commenced the construction of green workshops, implemented clean technology upgrade, and accelerated the improvement in environment protection performance. Emissions and discharges are closely monitored, analyzed, and inspected regularly by qualified units and specialists. If any accidents causing disruption or damage to the surrounding communities or the environment occurred, persons in charge will be subject to disciplinary actions.

The Group avoids air travel whenever possible, and business air travel is tracked. We continuously enhance employees' awareness of greenhouse gas emission, and encourage employees to adopt environmentally friendly practices in their daily life. For instance, we encourage employees to use green and environmentally friendly transportation, such as public transportation or shared bicycles, when travelling to and from the office. This not only can benefit the physical and mental health of employees but also protect our climate and environment.

The Group closely monitors emissions of smoke and dust, sulphur dioxide, nitrogen oxides, volatile organic compounds (VOCs), benzene, toluene and xylene. In the process of anti-corrosion for products, in respect of volatile organic compounds (VOCs) treatment, the Group replaces oil-based paint with water-based paint at source to reduce the use of oil-based paint as much as possible, thereby reducing VOCs emission at source. In respect of waste gas treatment, the Group currently adopts the spray adsorption + filtration + low-temperature plasma + activated carbon adsorption treatment, urges competent departments to enhance the regular inspection and maintenance of environmental protection equipment, and timely replaces adsorption materials and filters so as to ensure treatment efficiency. The Group explores new treatment modes such as combustion treatment technologies, and promotes equipment and technology upgrade. The Group makes good use of ventilators in welding zone. At the same time, welding fume purifiers are installed at welding spots so as to ensure timely emission in compliance with regulation upon fume purification. The Group also adopts advanced technologies, such as zeolite rotor + catalytic combustion, to control emissions. The collection and treatment facilities have efficiencies of 98% or above.

Apart from emission control, the Group has assigned specific department in responsible for the coordination of vehicle arrangements to ensure that vehicles are used in the most efficient way. Engines are timely turned off when idling so as to minimize the use of air conditioning in vehicles and reduce waste gas emission.

A1.6. Waste Handling and Reduction Initiatives

The Group stores its wastes in designated areas with strict control, and assigns special personnel to manage and dispose of such wastes. No one is capable of disposing of and transfer wastes without permission. The Group has established a sound management system for solid wastes and hazardous wastes, and minimized the environment risks caused by the diffusion, scattering and leakage of solid wastes and hazardous wastes through controlling the risks in the collection, storage, trans-shipment, use and disposal. In order to improve waste management and minimize pollution risk, the Group provides professional training for warehouse administrators and waste disposal personnel to improve their waste management skills, standardize operations and ensure compliance. The Group has installed ventilation, fire-fighting, sewage discharge and storage facilities in storage places and disposal areas, and posts visual signs to inform relevant personnel of risks and management requirements. The Group conducts qualification evaluation of waste disposers to ensure the legal disposal of transferred wastes. Wastes-related records shall be kept according to the document monitoring procedures. During the year, the Group actively promoted the hazardous waste networking project, and monitored the whole process of waste production, trans-shipment, incoming, outgoing and disposal to ensure the continuous hazardous waste management and control.

The Group avoids and reduces paper use to promote a paperless office. It encourages double-sided printing and provides recycling collection trays to collect recyclable paper separately. Apart from saving paper, distribution of office resources (e.g. stationery) is strictly monitored through a registration system. When waste is inevitably generated, the Group recycles wastes to minimize the environmental impacts.

A2. Use Of Resources

To reduce utilization of resources, the Group has formulated management policies regarding energy and resources use, which manages consumption of natural gas, electricity, water, raw materials, packaging materials, office paper and other office necessities.

A2.1. Energy Consumption

The energy consumption involved in the Group's operation includes the use of natural gas, petrol, diesel and electricity. Natural gas is used for canteen operation, heating and forging; petrol and diesel are used for drilling rig testing and the Group's vehicles. Electricity is used for production, central air conditioning and lighting.

The Group consumed a total of 25,728,538 kWh energy in the Reporting Period. The Group targets to have a reduction in comprehensive energy consumption per RMB10,000 of revenue by 15%, compared with 2020 levels, in 5 years.

The detailed energy consumption is summarized in the table below:

	Direct	Consumption
Energy Consumption Sources	Consumption	(in kWh)
Natural Gas	1,098,201.85 m³	10,850,668
Petrol (mobile)	73,275.07 L	649,376
Diesel (mobile)	28,308.84 L	283,109
Electricity	13,945,385 kWh	13,945,385
Total		25,728,538

A2.2. Water Consumption

A total of 313,976.04 m³ of water, supplied by the municipal water suppliers, was consumed during the Reporting Period, with water consumption intensity of 70.15 m³/million RMB of revenue. There was no significant issue in sourcing water during the Reporting Period.

Wastewater Treatment

A total of 214,400 m³ of wastewater was generated during the Reporting Period. The Group ensures that wastewater is treated and meets the standard of the PRC before discharge. Discharging pollutants or wastewater into the surface water drainage without compliance treatment is prohibited. Wastewater treatment facilities are regularly cleaned to enhance effectiveness. The Group holds valid discharge permit and keeps track of its discharges. It also continuously improves its production process, upgrades equipment, adopts new technologies, facilitates the transformation from diesel-power to clean energy power, promotes energy saving and emission reduction in drilling rig commissioning, reinforces existing on-site wastewater treatment facilities and recycles production water after sedimentation. The Group complied with the Integrated Wastewater Discharge Standard (GB8978-1996) of the PRC during the Reporting Period.

A2.3. Energy Use Efficiency Initiatives

The Group keeps track of its monthly electricity consumption and controls consumption by:

Developing electricity consumption systems to calculate, compare and analyses total electricity consumption;

Adopting energy-saving lighting whenever possible, and reducing electricity use and waste through the increasing application of sensor lightings and voice-control lightings;

Choosing vehicles and equipment with high energy efficiency, and eliminating high energy consumption equipment;

Controlling the temperature of air-conditioners at the range of 23-25°C;

Conserving fuel consumption by enforcing regulations;

Combining trips to reduce fuel use;

Educating employees to optimize productivity and reduce unnecessary electricity use;

Promoting electricity conservation behaviors among employees, and switching off office and corridor lightings based on the lighting condition in daily operation and office; and

Regularly inspecting and maintaining transmission pipelines, and making timely rectification on water evaporating, emitting, dripping and leaking. When leakage is identified, pipelines are repaired immediately.

A2.4. Water Use Efficiency Initiatives

The Group keeps track of its monthly water consumption and controls consumption by:

- Recycling production water after treating by sedimentation;
- Maintaining taps, fire hydrants and pipe network to avoid wastage due to water evaporating, emitting, dripping and leaking;
- Promoting water conservation spirits among employees;
- Maintaining pipelines, fire hydrants and pipe network to avoid wastage due to leakage; and
- Installing timer water supply tank in toilets to avoid wastage at nights when toilet are not being used.

A2.5. Packaging Materials

At product design stage, the Group reduces the use of raw materials whenever possible. The Group promotes the use of idle materials in inventory through encouragement, incentive and inventory enquiry. New materials will only be ordered whenever the inventories cannot meet with product demands so as to avoid waste of raw materials. During the Reporting Period, the Group consumed mainly plastic, wooden materials and paper boxes for packaging, and packaging materials were mostly made up of recyclable materials. Wooden boxes for packaging are processed in-house. The rest of the packaging materials are coordinated by the supply department to purchase from external suppliers. The Group conducts central collection of wooden packaging boxes, iron brackets and packaging process so as to repurpose waste packaging materials on site to the greatest extent. For instance, waste wooden boxes and scrap iron are used to make brackets and transferal trays, and larger wooden parts are used as product skid after re-processing. The amount of packaging material consumed is presented in the table below:

Packaging Materials	Consumption
Transparent plastic tube	16275 (m)
Heat shrink tube	742 (m)
Films, zip ties, PVC and packing straps etc.	71702 (pieces)
Cabinet laminate/blockboard	5266 (pieces)
Wooden boxes	32 (boxes)
Stack wood	296.50 (m ³)
Square wood	1.58 (m³)
Iron wires, suspenders, double-ended screws etc.	9177 (pieces)
Machine wiper, lithium base grease etc.	1761.80 (kg)
Carpets	2900 (m²)
Paper boxes	1100 (boxes)
Packing paper boxes	370 (boxes)

A3. THE ENVIRONMENT AND NATURAL RESOURCES

A3.1. Significant Impacts of Activities on the Environment

The Group's production generates exhaust gas, dust and smoke, hazardous waste, wastewater and noise nuisance. The Group has also formulated the "Honghua Group Co., Ltd. Energy Saving and Environmental Protection Management regulations", which state the management systems, rewards and punishment scheme, and structures and responsibilities of different teams. They state clearly that units directly or indirectly discharging air emissions, wastewater, noise and solid waste during production and business operations must register the pollutant discharged at the time specified by the Environmental Protection Department of the local government and apply for pollutant discharge permits in accordance with regulations.

The Group has taken the following actions to minimize impacts on the environment and natural resources:

- Treating exhaust gas by activated carbon, UV photolysis and plasma purification;
- Treating dust by bag filters + spraying;
- Extracting dust from welding machines by purifier;
- Conducting cleaner production audits;
- Employing only licensed collectors and engaging qualified factories to collect and treat hazardous waste;
- Treating wastewater through sedimentation and filtration before discharge to municipal pipeline network for centralized treatment;
- Reducing production noise level and vibration by sound insulation wall;
- Digitalizing documents and procedures whenever possible and promoting paperless office;
- Promoting double-sided printing to reduce paper use; and
- Recycling wastepaper.

The abovementioned emissions, hazardous waste and wastewater generation, and noise level have been monitored and assessed annually.

The Group is committed to managing its production and operations with sensitivity to environmental protection. The Group will continue to minimize its adverse impact on the environment through regular monitoring, assessment and evaluation of performances.

A4. CLIMATE CHANGE

A warming planet creates a wide range of risks for business, from disrupted supply chains to rising insurance costs to labor challenges. With the increasing threat of climate change and the associated physical damage, change in market perception and shift in preference of the public towards more environmentally friendly products and services, the financial, reputational and strategic risk implications are becoming increasingly prominent. Climate change already has far-reaching impacts on the oil industry, putting the operation, reliability, and growth of the sector at risk will undoubtedly be of increasing concern to the Group and industry as a whole for the foreseeable future. The Group has identified the major climate-related risks and responsive measures:

Risk	< Category	Description	Responsive Measure		
Physical risk	Continuous high temperature and drought etc.	Limited power supply in factories and project sites as a result of high temperature and drought, thus affecting normal production	Install energy storage and new energy power generation devices so as to maintain production as much as possible under extreme condition		
Transition risk	Market risk	Major oilfield customers adjust their business structure and reduce investment in tradition oil and gas exploitation, resulting in decrease in revenue of the Company	Deploy in new energy and relevant equipment manufacturing industry, and proactively participate in the comprehensive integration and development of oil and gas and new energy in domestic and overseas oilfields		
	Policy and legal risk	Government may impose laws and regulations regarding restrictions on carbon emission or levy of carbon tax, thus affecting the production and operating cost of the Company and customers	Apply energy-saving equipment, use clean energy and reduce carbon emission of the Company; promote the electrification of oil and gas exploitation, i.e. replace diesel-driven drilling equipment with electricity-driven equipment, so as to reduce carbon emission in exploitation by customers		

Climate change opportunities

With the consensus on global energy structural reform and transition, the market for clean and low-carbon natural gas and unconventional gas are expected to grow exponentially. China has vast reserves of shale gas resources that are commercially viable as a result of advances in horizontal drilling and hydraulic fracturing technologies. These technologies enable greater access to natural gas in shale formations. The Group has seized the opportunity, and accelerated its shale gas development services. The Group has launched the first "one-key linkage" automatic machine tool system and new equipment including electric coiled tubing in China, which are widely recognized in the market, consolidating its leading position in the drilling and fracturing market.

The Group provides key equipment and comprehensive power supply services for the electrification of shale gas mining industry chain, and helps green shale gas mining. According to the data released by CNPC News Center, unconventional oil and gas accounts for 20% of China's total oil and gas production. Therefore, reducing carbon emissions in the unconventional oil and gas exploitation process is of great significance for achieving the "3060 goal" of carbon peak and carbon neutrality. Shale gas is an important part of unconventional oil and gas, and the core competitiveness of the Group in the green shale gas exploitation can be extended to other unconventional oil and gas resources at home and abroad.

As energy conservation, emission reduction, cost reduction and efficiency enhancement have become the keynote of oil and gas exploitation industry, replacing diesel power with electricity has become an important way to achieve the low-carbon industry goal, carbon peak and carbon neutrality, which is in line with the Group's strategic positioning and direction. As the first and leading electric fracturing equipment manufacturing and comprehensive service enterprise in China, the Group has taken the lead in the field of electric shale gas exploitation. After years of hard work, the Group has formed a complete product and service system and accumulated a large number of outstanding talents and service experience, which has played a great role in promoting green shale gas exploitation.

Most shale gas work areas are located in remote areas with few people. The problem of poor or no electricity has become the key restriction in the electrification of shale gas exploitation. The key to solving the power supply problem lies in the construction of local power grid. The Group has seized the historic opportunity of the electrification transformation of shale gas exploitation, focused on the comprehensive power supply service of the whole industrial chain, vigorously developed the local shale gas power grid, and gradually expanded its coverage to major shale gas exploitation areas. The Group has leveraged the patented product of high-horsepower electric fracturing pump and professional service team, and effectively reduced the shale gas exploitation cost, which completely solves the high cost and low efficiency problem in traditional shale gas exploitation, and promotes the development process of green and electric shale gas exploitation. According to statistics, the Group has saved hundreds of thousands of tons of carbon dioxide emissions for oilfield users.

B. SOCIAL

1. EMPLOYMENT AND LABOUR PRACTICES

B1. Employment

The Group believes that employees are important assets. The Group complies with the Labor Law of the PRC, the Labor Contract Law of the PRC, and the Social Insurance Law of the PRC. During the Reporting Period, the Group was not aware of any material non-compliance with the relevant laws and regulations relating to employment.

Employee Benefits and Welfare

The Group's remuneration packages and fringe benefits include basic salary, overtime work compensation, allowance, subsidy and award. The Group also provides social insurances (including pension, medical, work-related injury, unemployment and maternity insurances), housing fund contributions and other welfare according to the statutory requirement. Major benefits provided by the Group cover all members of the Group and vary depending on job positions. Benefits provided by the Group are listed below:

- Insurance: mandatory social insurance, employer's liability and accident insurance
- Benefits: staff protective tools, heatstroke prevention subsidy, food subsidy and in-service training etc.
- Bonuses: performance and examination bonuses and separate bonuses

There was no material non-compliance with laws and regulations relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, and other benefits and welfare was recorded during the Reporting Period.

Equal Opportunity

The Company respects diversity in the workplace and treats employees equally regardless of their age, nationality, ethnicity, race, sex, religious belief and cultural background. To protect the legitimate rights of female employees, the labor union provides maternity blessing to female employees. The Company has optimized its employee representative mechanism. Material matters in relation to vital interests of employees will be timely considered at the employee representative meeting, with feedback and recommendations being listened, thus creating harmonious employment relationship. There was no material non-compliance with laws and regulations relating to equal opportunity, diversity and anti-discrimination was recorded during the Reporting Period.

Communication with Employees

The Company attaches great importance to the health and satisfaction of its employees, and pays attention to the physical and mental wellbeing of employees and their families. During the Reporting Period, the Group maintained close communication with employees and had been doing substantive work for employees, covering areas such as employee pandemic prevention and health, protection services, children's schooling, and culture building etc.

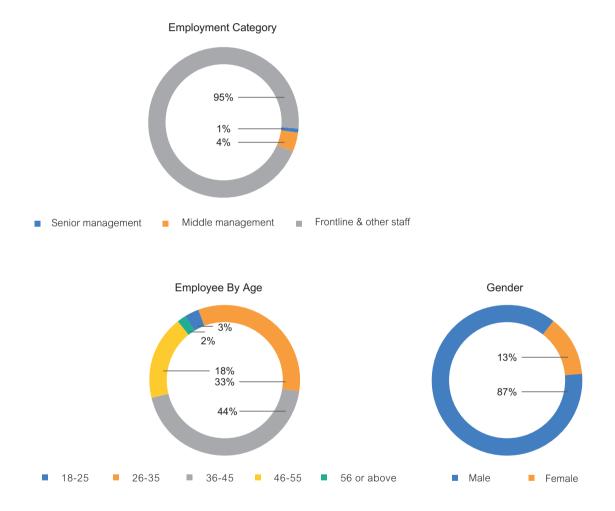
In terms of employees' health, the Group organizes health checks for employees every year, with more than 2,000 employee participants, and arranges experts to interpret health check reports for employees. In Guanghan base, the Group has built an activity venue of basketball field for employees to facilitate their exercises after work.

In terms of employee caring, during the epidemic, the Group paid visits to more than 600 employees in closed-loop production, and distributed jump ropes, chess and other equipment beneficial to employees' physical and mental health.

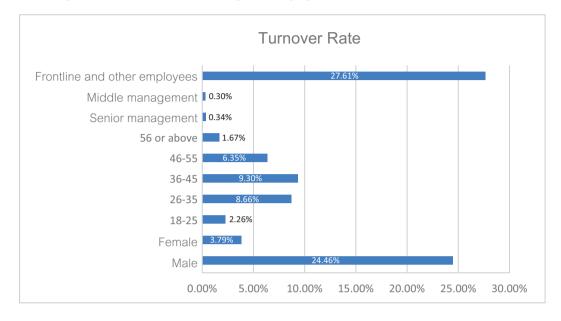
Meanwhile, the Group also actively carries out cultural activities, basketball games, and garden activities to ensure employees' sense of cultural integration, and to create an inspiring, harmonious, stable, optimistic and confident working atmosphere.

Workforce

There were employees 2,032 as of 31 December 2022. All of them were full-time employees from the PRC. The total workforce by employment category, age group and gender are as follows:



A total of 574 employees left the Group, representing a turnover rate of 28.24%, during the Reporting Period. The turnover rate by gender, age group are as follows:



B2. Employee Health and Safety

Occupational Health and Safety

The Group is committed to providing a healthy and safe environment. The Group complies with the Work Safety Law of the PRC and the Law of the PRC on the prevention and Control of Occupational Diseases. Occupational health and safety issues are managed by the Group's HSE committee. Management on occupational health and safety has met the ISO 45001:2018 standard. To pursue occupational health and production safety, the Group has established separate policies on different aspects, including safe production, occupational hazards, hazardous chemical, fire safety, accident prevention and emergency response plan. The policies and practice are reviewed yearly. During the Reporting Period, the Group formulated the Notice of Production Safety. The Group hopes to create a healthy and safe work environment by incorporating technologies, strengthen monitoring and inspection and providing training.

All employees are required to follow the safety measurements and guidelines strictly. Their safety practices and performances are examined regularly to ensure that they are competent for safe operation. Any staff member who fails to follow correct precautions may be subject to disciplinary actions. In contrast, departments and individuals performing well in occupational safety, or providing suggestions that help improve operational safety are rewarded. Production safety education and training are provided to employees to further equip them with knowledge of safe production regulations, technology, tools and skills. Innovative measures such as virtual reality (VR), simulation, experiential training methods are used to improve the training effect. The Group also checks the certificates of and provides induction training to new employees.

The Group provides health check to its employees and organizes health seminars and consultation sessions annually. Fire drills are arranged to familiarize employees with the proper evacuation routes and practices in case a fire, power outage or another disaster occurs during working hours. Personal protective equipment (PPE) is provided to employees and inspections are conducted to ensure the proper use of PPE.

The Group attaches great importance to work safety, fire safety, traffic safety, disaster prevention and mitigation, as well as epidemic prevention and control. With various safety prevention and control measures implemented by the management, there were no material production safety incidents, major fire incidents and major traffic fatality accidents during the Reporting Period. No cases of collective infection of coronavirus were reported. The overall safety situation continued to be stable and controllable. The annual safety targets and key safety tasks were completed, creating a favorable environment for scientific research, production and business development.

There was no material non-compliance with the laws and regulations relating to providing a safe working environment and protecting employees from occupational hazards during the Reporting Period.

Occupational Health and Safety Data	2022	2021	2020
Work related fatality	0	0	0
Work injury cases >3 days	1	17	0
Work injury cases <=3 days	0	0	0
Lost days due to work injury	366	11,032	0

Food Health and Safety

The Group has explicit contract terms with its contractors to ensure food safety. Food ingredients are fully tested before cooking. Samples of each dish are kept for the record and testing if necessary. Food premises are sanitized regularly and inspected every day.

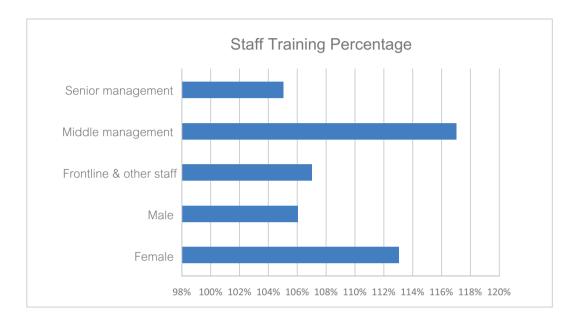
COVID-19 Pandemic Prevention and Control

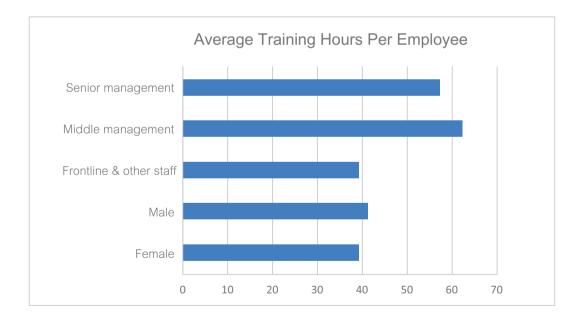
In response to the COVID-19 pandemic, the Group took protective measures to reduce risks and keep the working environment hygienic. The Group required everyday cleaning and disinfection in the working environment such as offices, bathrooms, public areas and shared equipment. Employees must wear masks and keep social distance to reduce gatherings and lower the chances of cross infection, so as to minimize the mutual contraction risk. Meanwhile, the Group further improved the emergency plan and working procedures for epidemic prevention and control during the reporting year, eliminated risks through daily symptoms assessment and large-scale nucleic acid detection, and ensured no clustered epidemic through strict closed-loop production. In the meantime, the Group strictly controlled the business travellers, and strengthened the pre-trip risk assessment. When business trips were greatly reduced, employees met with customers through telephone conferences and video conferencing tools to maintain social distance. In addition, the Group had implemented dining service restrictions and other sanitary measures in the staff canteen to avoid close contact among employees.

B3. Development and Training

The Group believes that development and training are crucial for employees to discharge their duties more effectively and efficiently. During the Reporting Period, employees participated in various types of training including induction, operational, safety, quality, and management training. For instance, electrical work and welding project training courses were provided to enhance the professional skills and quality of practice. To nurture talents, the Group has established online and offline training system and conducted skills evaluation for employees. The Group provides training according to their training needs. An internal training team is established to improve and ensure the training quality.

During the Reporting Period, 88,867 hours of training had been provided to 2,235 employees. The average training hours per employee was 39 hours. The details of staff training for 2022 are as follows:





B4. Labor Standards

Child and forced labor are strictly prohibited within the Group. The Group strictly observes applicable laws and regulations regarding employment and labor standards, such as the Labor Law of the PRC, the Labor Contract Law of the PRC.

The Group stringently verifies their information with documents, including identity card and academic certificates, during the recruitment process to guard against child labor. No teenagers under 16 years old shall be employed by the Group. All employees have signed the employment contract and agreed on the stipulated employment terms and conditions. The rights and interests of women and minorities are protected under the Group's policies and all the applicable national regulations. All employees only work overtime voluntarily and when needed. The Group prohibits any punishments, management methods and behaviors involving verbal abuse, physical punishment, physical abuse, oppression, sexual harassment, etc. against its employees for any reasons. If a violation is found, the Group will terminate the employment of the concerned persons immediately and take necessary disciplinary action against anyone who is in breach of any applicable laws and regulations. There was no material non-compliance with applicable laws and regulations to the prevention of child and forced labor during the Reporting Period.

No non-compliance with relevant laws and regulations relating to preventing child and forced labor had been identified during the Reporting Period. There were no major risks associated with incidents of child and forced labor within the Group's operation sites.

2. OPERATING PRACTICES

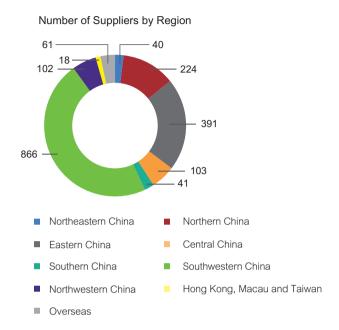
B5. Supply Chain Management

The Group believes that proper management of its supply chain could bring positive impact to the natural environment and the society. The Group has formulated relevant policies and procedures for the management of the environmental and social impact of its supply chain.

The Group only selects qualified suppliers that have passed supplier assessments. Selected suppliers are evaluated against different performance criteria monthly and annually. According to the Group's scoring system, suppliers are assessed and scored with respect to their qualifications, productivity, technology, performances, and quality management. Suggestions will be given to suppliers with unsatisfactory score for rectification. Suppliers who fail to meet the standard will have cooperation suspended until improvements are made.

The Group also aims to improve the environmental and social risk management level of its suppliers through audits, training, and other activities, and takes active measures to encourage suppliers to prevent, mitigate and remediate existing and potential negative environmental and social impacts.

The Group had 1,846 qualified suppliers in the Reporting Period. More than 90% suppliers of the Group were from the PRC. The number of suppliers by region is as follow:



To manage the environmental and social risks of its supply chain, the Group articulates its HSE policies to visiting suppliers at the notice board of the procurement department and has implemented measures to assess and monitor the environmental and social performances of suppliers as shown in the table below.

Supply Chain Management

Social Aspects

Environmental Aspects	•	Through procurement agreement or oral communication,
		the Group requires suppliers to use environmentally
		friendly materials for packaging and minimize the adverse
		impact on the environment if possible.

- The Group assesses the discharge permits of its suppliers when applicable. Suppliers without valid discharge permits will not pass the Group's supplier assessment.
- When assessing suppliers, the Group considers whether the suppliers have been certified to any environmental management system. Suppliers with certified environmental management system attain higher scores in the scoring system.
- The Group requires selected suppliers to sign the Safety, Fire and Environmental Protection Agreement.
- Suppliers supplying PPE shall possess valid LA certificates and fulfil qualification requirements set by the Group. Selected suppliers are evaluated by the safety management department and production department of the Group annually.
 - Before entering the manufacturing plants, suppliers must read and sign the Entry Terms or the Entry Safety Notice. They will be reminded to put on appropriate PPE and comply with the safety requirements set out by the Group.
 - Through agreement, the Group requires suppliers to safeguard their employees' health and safety.

B6. Product Responsibility

The Group is committed to providing products and services with high standard of quality, safety and security, and protecting the intellectual property right and personal data. To provide qualified products and services to customers, the Group has established a quality management system, which follows the ISO 9000 standards and complies strictly with the API specification Q1. The quality management department establishes, implements and maintains the quality management system to promote continuous improvement.

There was no material non-compliance relating to health and safety, advertising, labelling and privacy matters regarding products and services provided and method of redress during the Reporting Period.

Product Assurance and Recall

Product quality is assured through compliance with the international standards and the stringent inspection processes. Apart from meeting the ISO 9000 standards, main components of the drilling rigs have obtained the CE markings, fulfilled the state Gosstandart ("GOST") standards, API standards and all product requirements of the export markets.

The Group manages its manufacturing process and its contractors' performances effectively. Defective incoming materials, intermediate products and final products are eliminated from the production line immediately after being noticed. Substandard products are analyzed and handled with corrective or preventive measures according to the Group's policy.

Complaints

During the Reporting Period, the Group updated several product and service related documents, such as the "Implementation Rules for Processing Product and Service Information Feedback", "Customer Satisfaction Evaluation Rules", and "Customer Complaint Classification Management System". Changes included redefining the major quality issues, updating the responsibilities of the after-sales service department and marketing department, setting up of "Customer (Service) Satisfaction Survey Form", and adjusting the international after-sales service.

No complaint was received during the reporting period. No product was recalled due to safety and health reasons and no material non-compliance with laws and regulations in relation to product health and safety was recorded during the Reporting Period.

Intellectual Property ("IP") Rights

The Group protects self-owned IP rights and makes certain that its suppliers and other business partners respect the IP rights of the third parties. All drawings, views, manuals, designs, models, procedures provided by the Group to suppliers and other business partners shall not be copied or leaked to third parties without the Group's consent. The Group respects IP rights and prudently eliminates the risk of infringement through research and analysis. Suppliers and other IP rights in the process of design, research and development, and manufacturing. They can be held responsible for all costs if the infringement has caused loss to the Group.

An intellectual property management team has been established for enhancing the Group's IP management, identifying risks and dealing with infringement cases. After investigation and analysis by the intellectual property management team and the legal department, the Group will take appropriate actions, including legal actions, against infringers depending on the circumstances.

During the Reporting Period, the Group applied for 84 new patents, including 53 invention patents, 29 utility model patents and 2 appearance designs. It currently holds a total of 790 IP rights which include invention patents, utility model patents and appearance design patents. Among which, there are 275 invention patents, 497 utility model patents and 18 appearance design patents. No material non-compliance with the laws and regulations in relation to IP rights was recorded.

Information Security Management

The Group has developed and implemented a comprehensive range of policies for information security management. The goals of information security of the Group include: to establish and continuously optimize the multi-levels information security management system and technology system of the Group and its subsidiaries based on the management principle of centralized control, hierarchical management, prevention-focused and demand-based adjustment, secure the safe and stable operation of information system and equipment, and ensure the security of various information. To safeguard internal information and data assets, the Group adopted measures including:

- Control of authorities and accessibilities, USB ports and optical drive uses;
- Prohibition of the use of peer-to-peer file sharing services and installation of software at user level;
- Audit of internet access and activities; and
- Encryption of core data.

The Group requires its employees to strictly comply with relevant rules on information security management of the Company. It strives to strengthen employees' awareness on information security and the concept of rule of law, making employees consciously maintain information system security and protect trade secrets of the Company. By signing the employment contract, employees also undertake to protect IP rights and not to disclose any confidential information (including customer information). Customer information includes but not limited to customers' views, inventions, data and models, content of documents and correspondences, financial information, marketing strategies and trade secrets. If an employee violates information security management rules, damages computer and information system devices, uses information illegally, distorts data or steals trade secrets of the Company, or directly or indirectly causing the leakage of confidential information, such employee shall be punished in accordance with relevant rules of the Company. In case of severe case that constitutes crime commitment in accordance with relevant national laws, such case will be passed to law enforcement departments and pursued legal responsibilities of relevant employees.

No substantiated complaints regarding breach of client privacy, identified leak, theft, or loss of customer information was received during the Reporting Period.

B7. Anti-corruption

The Group believes that honesty, integrity and fairness are fundamental elements of the Group. It is committed to protecting the legitimate rights of shareholders and investors. Any bribery, theft, fraud and misappropriation are prohibited. Improper benefits including banquets, entertainment, cash, stocks, equities, securities, valuables and properties, etc. shall not be accepted. The Group has established policies and regulations, including Terms of Reference of Discipline Inspection Committee, Implementation Plan on the Implementation of Communist Party Integrity Building and Supervision Accountability System, Regulations on the Integrity of Employees and Interim Measures for Discipline Inspection and Supervision etc., which apply to all processes of its business operation including procurement, manufacturing, marketing and communication.

The Group has a discipline inspection office, being the daily operating department under the Discipline Inspection Committee. The discipline inspection is fully responsible for the supervision over discipline accountability and inspection works of the Company. It is also responsible for leading and supervising its subordinate discipline departments and guiding the inspection works conducted by subordinate discipline departments. The Group has established a whistleblowing system. All employees are encouraged to assist in tackling fraud, corruption and other malpractice, and report any suspected cases to the auditing department through email (jubao.hhgp@hhcp.com.cn) or hotline (+86 28 68176829). When there are alleged cases in violation of laws, regulations or the Group's policy, the Group will investigate and impose disciplinary actions upon offenders after verification.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

During the Reporting Period, the Group leaders gave integrity lectures, invited the competent discipline inspection leaders to carry out warning education and training for the middle-level and above leaders, and held rotation training classes on discipline and rules awareness and distributed learning materials, with a total of more than 2,300 participants. The Group carried out "mobile classroom", leveraged the intranet, discipline inspection business contact group and other means to timely convey the publicity and integrity concept, and released typical discipline and law violation cases to warn "people around" with "cases nearby".

During the Reporting Period, there were no litigation cases that seriously violated relevant anti-corruption laws and regulations and had a significant impact on the Group.

B8. Community Investment

The Group had no particular policy on community investment, but it actively supports poverty alleviation. During the Reporting Period, the Group spent over RMB360,000 to purchase agricultural products from the State's poverty counties to support poverty alleviation through procurement.

The Group organized voluntary blood donation activities, and donated a total of 16,000 ml. When the Ganzi Luding earthquake happened, the employees voluntarily donated a total of over RMB150,000. The Group organized employees to actively participate in the "RMB10 Micro Love" activity, with a total donation of RMB8,800, so as to gather for charity and care for the healthy growth of the next generation.

The Board presents this annual report, together with the audited consolidated financial statements of the Group for the year ended 31 December 2022.

PRINCIPAL ACTIVITIES

The Company is an investment holding company. The Group principally engages in research, design, manufacture, setting and sale of land rigs and related parts and components, design and manufacture the offshore drilling module. Meanwhile it also provides clients with technical support services and drilling engineering services. During the Year, the nature of principal activities of the Group has no substantial change.

RESULTS AND DISTRIBUTION

The results of the Group for the year ended 31 December 2022 are set out in the consolidated financial statements on pages 99 to 241 of this annual report. The Board did not recommend a final dividend for the year ended 31 December 2022.

SHARE CAPITAL

Changes in the share capital of the Company during the Year are set out in note 29 to the consolidated financial statements.

PRE-EMPTIVE RIGHT

There is no provision of pre-emptive right under the Articles of Association and the laws of the Cayman Islands stipulating that the Company shall offer new Shares to existing Shareholders in proportion.

PURCHASE, SALE OR REDEMPTION OF THE LISTED SECURITIES OF THE COMPANY

Neither the Company nor any of its subsidiaries has purchased, sold or redeemed any of the Company's shares during the year ended 31 December 2022.

RESERVES

As of 31 December 2022, the Group has a total of approximately RMB2,476 million worth of reserve. Details of movements in the reserves of the Group during the Year are set out in the consolidated statement of changes in equity in the consolidated financial statements.

SUBSIDIARIES

Details of the Company's principal subsidiaries as of 31 December 2022 are set out in note 11 to the consolidated financial statements.

DIRECTORS

The existing Directors of the Company during the Year and as of the date of this annual report are set out on page 2 the section "Corporate Information" of this annual report.

The status of all the Directors of the Company holding their offices during the year is set out in the section "Corporate Information".

In accordance with the Articles of Association, one third of the Directors (or closest to but not less than one third if the number is not three or a multiple of three) shall retire from office by rotation at each annual general meeting and each Director is required to retire at least once every three years and any Director appointed by the Board shall hold office only until the next general meeting and shall then be eligible for re-election at the meeting.

According to the independent guidelines under the Listing Rules, the Company has received the annual confirmation of their independence from each Independent Non-executive Director, and the Company still considers such Independent Non-executive Directors as independent.

DIRECTORS' SERVICE CONTRACTS

Each of the Director of the Company is engaged on a service contract for a term of 3 years. The appointment may be terminated by not less than 3 months' written notice. The Directors shall retire by rotation and be eligible for reelection subject to the Articles of Association.

None of the Directors has a service contract with the Company which is not determinable within one year without payment of compensation, other than statutory compensation.

PERMITTED INDEMNITY

Pursuant to the Company's Articles of Association, subject to the Companies Law, every Director shall be indemnified out of the assets of the Company against all costs, charges, expenses, losses and liabilities which he/ she may sustain or incur in the execution of his/her office or otherwise in relation thereto. The Company has taken out insurance against the liability and costs associated with defending any proceedings which may be brought against directors of the Group.

DIRECTORS' INTERESTS IN CONTRACTS

Save as disclosed under the following "Connected connected transactions", none of the Directors directly or indirectly had any material interest in the contracts of significance in relation to the Group's business to which the Company or its holding company or any of its subsidiaries was a party at the end of the Year or at any time during the Year.

REMUNERATION FOR DIRECTORS AND SENIOR MANAGEMENT

For the year ended 31 December 2022, details of remuneration for the Directors and Senior Management of the Company are set out in notes 8 and 34(f) to the consolidated financial statements.

The emoluments of the Executive Director and Senior Management by bands are as follows:

	2022 Number of individuals
RMB0 to RMB1,000,000	11
RMB1,000,001 to RMB2,000,000	3
RMB2,000,001 to RMB3,000,000	-
RMB3,000,001 to RMB4,000,000	-
RMB4,000,001 to RMB5,000,000	-
RMB5,000,001 to RMB6,000,000	_

DIRECTORS' AND CHIEF EXECUTIVES' INTERESTS AND/OR SHORT POSITIONS IN THE SHARES, UNDERLYING SHARES AND DEBENTURES OF THE COMPANY OR ANY ASSOCIATED CORPORATION

At 31 December 2022, the interests and short positions of each Director and Chief Executive in the Shares, underlying Shares and debentures of the Company and its associated corporations (within the meaning of the SFO), as recorded in the register required to be kept by the Company under Section 352 of Part XV of the SFO or as notified to the Company and the Stock Exchange pursuant to the Model Code contained in Appendix 10 to the Listing Rules were as follows:

A) ORDINARY SHARES OF HK\$0.1 EACH OF THE COMPANY

	Long/Short position	Nature of interest	Number of shares held	% of the issued share capital of the Company
Mr. Zhang Mi	Long	Personal interest, corporate interest and settlor of a discretionary trust	323,408,548(1)	6.03%
Mr. Ren Jie (<i>Resigned with</i> <i>effect from</i> 4 July 2022)	Long	Personal interest, corporate interest and settlor of a discretionary trust	124,530,240 ⁽²⁾	2.32%
Ms. Su Mei	Long	Personal interest	150,000 ⁽³⁾	0.002%

(1) Zhang Mi individually owns 3,050,000 Shares. Yi Langlin, spouse of Zhang Mi owns 2,156,000 Shares. Zhang Mi is the settlor of a discretionary trust, The ZYL Family Trust, whose trustee, through Wealth Afflux Limited, holds 318,202,548 Shares.

(2) Ren Jie individually owns 1,549,000 Shares. He is the settlor of a discretionary trust. The Trustee of The RJDJ Victory Trust owns 122,981,240 Shares.

(3) Su Mei individually owns 150,000 Shares.

B) SHARE OPTIONS OF THE COMPANY

		Number of
		options held –
	Long/Short Position	Personal interest
Mr. Zhang Mi	Long	1,190,000
Mr. Ren Jie (Resigned with effect from 4 July 2022)	Long	2,885,000
Mr. Chen Guoming	Long	1,050,000

Save as disclosed above, as at 31 December 2022, none of the Directors and Chief Executives (including their spouse and children under 18 years of age) had any interest in, or had been granted, or exercised, any rights to subscribe for Shares (or warrants or debentures, if applicable) of the Company and its associated corporations required to be disclosed pursuant to the SFO.

SUBSTANTIAL SHAREHOLDERS' INTERESTS OR/AND SHORT POSITIONS IN THE SHARES AND UNDERLYING SHARES OF THE COMPANY

The register of substantial shareholders required to be kept under section 336 of Part XV of the SFO shows that, as at 31 December 2022, the Company had been notified of the following substantial shareholders' interests and short positions, being 5% or more of the Company's issued share capital. These interests are in addition to those disclosed above in respect of the Directors and Chief Executives of the Company.

				Number of s	shares held		
		Personal	interest				
	Long/Short	Share	Shares	Corporate	Corporate interest and settlor of a discretionary		% of the issued share capital of
Name	Position	option	Interest	interest	trust	Total	the Company
Wealth Afflux Limited	Long	-	318,202,548	-	-	318,202,548(1)	5.94%
Tricor Equity Trustee Limited	Long	-	-	-	733,545,441	733,545,441 ⁽²⁾	13.69%
Yi Langlin	Long	-	2,156,000 322,442,548 (family interest)	-	-	324,598,548 ⁽³⁾	6.06%
Dongfang Electric International Investment Co., Limited	Long	-	1,606,000,000	-	-	1,606,000,000 ⁽⁴⁾	29.98%
Dongfang Electric Corporation	Long	-	-	1,606,000,000	-	1,606,000,000(4)	29.98%

Notes:

- (1) Wealth Afflux Limited is held by Tricor Equity Trustee Limited (as the trustee of The ZYL Family Trust). The ZYL Family Trust is a discretionary trust established by Zhang Mi (as the settlor), with Tricor Equity Trustee Limited (as the trustee). The beneficiaries under The ZYL Family Trust are Zhang Mi and his family members.
- (2) Tricor Equity Trustee Limited, as the trustee of The ZYL Family Trust and the 5 other Trusts, holds 733,545,441 Shares in total.
- (3) Yi Langlin, spouse of Zhang Mi, is deemed to be interested in 324,598,548 Shares in which Zhang Mi holds 1,190,000 share options.
- (4) Dongfang Electric International Investment Co., Limited is owned 100% by Dongfang Electric Corporation and holds 1,606,000,000 Shares.

Save as disclosed above, to the best of the Directors and the Chief Executives of the Company's knowledge, as at 31 December 2022, none of the persons, other than the Directors or the Chief Executives of the Company, had interests or short positions in the Shares and underlying Shares of the Company which would fall to be disclosed to the Company under the provisions of Divisions 2 and 3 of Part XV of the SFO or recorded in the register as required under Section 336 of the SFO.

SHARE OPTION SCHEME

(A) SHARE OPTION SCHEME

Upon conditional approval by resolution in writing by all shareholders of the Company on 21 January 2008, the Company adopted a share option scheme (the "Share Option Scheme"). The Pre-IPO Share Option Scheme will remain in force for a period of ten years from the date of grant until 20 January 2018. Save as disclosed below, no options were granted or to be granted under the Share Option Scheme. As at 1 January 2022 and 31 December 2022, no options were available for grant under the scheme mandate. For the year ended 31 December 2022, no shares may be issued in respect of options granted under the Share Option Schemes. Details of the Share Option Scheme are as follows:

Purpose

The purpose of the Share Option Scheme is to provide incentives or rewards to Participants for their contribution to the Group and/or to enable the Group to recruit and retain high caliber employees and attract human resources that are available to the Group. The Share Option Scheme will give the Participants an opportunity to have a personal stake in the Company and will (a) motivate the Participants to optimise their performance and efficiency; and (b) attract and retain the Participants whose contributions are important to the long-term growth and profitability of the Group.

Participants

The Participants of the Share Option Scheme are (a) any executive director, employee or proposed employee (whether full time or part time) of any member of the Group; (b) any non-executive director (including independent non-executive directors) of any member of the Group; (c) any supplier of goods or services to any member of the Group; (d) any customer of any member of the Group; (e) any person or entity that provides research, development or other technological support or any advisory, consultancy, professional or other services to any member of the Group; (f) any shareholder of any member of the Group or any holder of any securities issued by any member of the Group; (g) any joint venture partner, business or strategic alliance partner, in each case of any member of the Group; (h) any discretionary trust whose discretionary objects may be any executive director, employee or proposed employee (whether full time or part time) and any non-executive director (including independent non-executive directors) of any member of the Group, any supplier of goods or services to any member of the Group, any customer of any member of the Group, any supplier of goods or services to any member of the Group, any customer of any member of the Group, any supplier of goods or services to any member of the Group, any customer of any member of the Group, consultancy, professional or other services to any member of the Group, any supplier of any member of the services to any member of the Group, any shareholder of any member of the Group, consultancy, professional or other services to any member of the Group, any shareholder of any member of the Group, any person or entity that provides research, development or other technological support or any advisory, consultancy, professional or other services to any member of the Group, and any joint venture partner, business or strategic alliance partner, in each case of any member of the Group.

Total number of Shares available for issue under the Share Option Scheme and % of issued share capital as at the date of this annual report

There are no Shares available for issue pursuant to the Share Option Scheme.

Maximum entitlement of each Participant

The total number of Shares issued and to be issued upon exercise of options granted to any Participant (including both exercised and outstanding options) under the Share Option Scheme, in any 12-month period up to the date of grant shall not exceed 1% of the Shares in issue. Any further grant of options in excess of such limit must be separately approved by Shareholders in general meeting with such Participant and his associates abstaining from voting. In such event, the Company must send a circular to the Shareholders containing the identity of the Participant, the number and terms of the options to be granted (and options previously granted to such Participant), and all other information required under the Listing Rules. The number and terms (including the exercise price) of the options to be granted must be fixed before the approval of the Shareholders and the date of the Board meeting proposing such further granted should be taken as the date of grant for the purpose of calculating the subscription price.

Time of exercise of option

An option may be exercised in accordance with the terms of the Share Option Scheme at any time during a period as the Board may determine which shall not exceed ten years from the date of grant subject to the provisions of early termination thereof.

Vesting period

The Share Option Scheme does not provide for a vesting period for the options granted or to be granted under the Share Option Scheme.

Amounts to be paid on acceptance of share options

The amount payable by the grantee of an option to the Company on acceptance of the offer for the grant of an option is HK\$1.00.

Basis of determining the exercise price

The subscription price of a Share in respect of any particular option granted under the Share Option Scheme shall be a price solely determined by the Board and notified to a Participant and shall be at least the higher of: (a) the closing price of the Shares as stated in the Stock Exchange's daily quotations sheet on the date of grant of the option; (b) the average of the closing prices of the Shares as stated in the Stock Exchange's daily quotations sheets for the 5 business days immediately preceding the date of grant of the option; and (c) the nominal value of a Share on the date of grant of the option.

Details of the grant share options under the Share Option Scheme in the validity period ended 31 December 2022 were as follows:

Date of grant	Number of grant (shares)	Exercise price per Share (HK\$)	Exercise period of share options	Valid period of the share options
24 March 2014	3,200,000	2.024	Up to 30% of the share options granted to each grantee from 24 April 2014 to 23 April 2015; up to 60% of the share options granted to each grantee on or before 23 April 2016; all the remaining share options granted to each grantee on or after 24 April 2016.	up to 23 March 2024

Date of grant	Number of grant (shares)	Exercise price per Share (HK\$)	Exercise period of share options	Valid period of the share options
2 July 2014	40,575,000	1.96	Vesting of the share options is conditional upon the achievement of corporate goals of the Company and the individual performance of the respective Grantees. The share options or any portion thereof shall lapse if the relevant corporate goals cannot be achieved. Up to 30% of the share options granted to each grantee after April 2015; up to 60% of the share options granted to each grantee after April 2016; all the remaining share options granted to each grantee after April 2017.	up to 1 July 2024
21 September 2016	41,350,000	0.44	Up to 30% of the Share Options granted to each Grantee from 21 September 2017 to 20 September 2018;up to 60% of the Share Options granted to each Grantee on or before 20 September 2019; all the remaining Share Options granted to each Grantee on or after 21 September 2019.	up to 20 September 2026

Particulars and movements of share options under the Share Option Scheme during the year ended 31 December 2022 were as follows:

			Number of s	hare options	_					
Name or category of participant	Outstanding as at 01/01/2022	Granted during the Year	Exercised during the Year	Lapsed during the Year	Cancelled during the Year	Outstanding as at 31/12/2022	Date of grant (DD/MM/YY)	Exercise period (DD/MM/YY)	Exercise price per Share HK\$	Price immediately preceding the grant date of share options HK\$
Directors										
Mr. Zhang Mi	1,190,000	-	-	-	-	1,190,000	02/07/2014	02/07/2014-01/07/2024	1.96	1.92
Mr. Ren Jie	885,000	-	-	-	-	885,000	02/07/2014	02/07/2014-01/07/2024	1.96	1.92
(Resigned with effect from 4 July 2022)	2,000,000	-	-	-	-	2,000,000	21/09/2016	21/09/2017-20/09/2026	0.44	0.435
Mr. Chen Guoming	550,000	-	-	-	-	550,000	24/03/2014	24/04/2014-23/03/2024	2.024	2.02
Ŭ	500,000	-	-	-	-	500,000	21/09/2016	21/09/2017-20/09/2026	0.44	0.435
Sub-total	5,125,000	-	-	-	-	5,125,000				
Other										
Employee	10,621,000	-	-	10,621,000	-	-	05/04/2012	05/04/2013-04/04/2022	1.19	1.20
Employee	2,650,000	-	-	-	-	2,650,000	24/03/2014	24/04/2014-23/03/2024	2.024	2.02
Employee	12,619,368	-	-	569,060	-	12,050,308	02/07/2014	02/07/2014-01/07/2024	1.96	1.92
Employee	32,251,000	-	-	1,730,000	-	30,521,000	21/09/2016	21/09/2017-20/09/2026	0.44	0.435
Sub-total	58,141,368	_	_	12,920,060	-	45,221,308				
Total	63,266,368	_	-	12,920,060	-	50,346,308				

(B) SHARE OPTION SCHEME OF 2017

The 2017 Share Option Scheme is conditionally adopted by the Shareholders at the annual general meeting held on 14 June 2017. As at 31 December 2022, no options were granted or to be granted under the 2017 Share Option Scheme. No share options were granted to the following persons under the 2017 Share Option Scheme since the adoption thereof and up to the date of this report:

- (i) each of the directors, chief executive or substantial shareholders of the Company, or their respective associates;
- (ii) each participant with options to be granted in excess of the 1% individual limit;
- (iii) each related entity participant or service provider with options to be granted in any 12-month period exceeding 0.1% of the relevant class of shares in issue of the Company;
- (iv) the five highest paid individuals during the financial year; and
- (iv) other employee participants, related entity participants and service providers.

As at 1 January 2022 and 31 December 2022, 513,742,090 and 513,742,090 options were available for grant under the scheme mandate. For the year ended 31 December 2022, 513,742,090 shares may be issued in respect of options granted under the 2017 Share Option Scheme. Details of the 2017 Share Option Scheme are as follows:

Purpose

The purpose of the Scheme is to provide incentives or rewards to Participants for their contribution to the Group and/or to enable the Group to recruit and retain high caliber employees and attract human resources that are available to the Group. The Scheme will give the Participants an opportunity to have a personal stake in the Company and will (a) motivate the Participants to optimise their performance and efficiency; and (b) attract and retain the Participants whose contributions are important to the long-term growth and profitability of the Group.

Participants

(a) any Executive Director, employee or proposed employee (whether full time or part time) of any member of the Group; (b) any Non-executive Director (including Independent Non-executive Director) of any member of the Group; (c) any supplier of goods or services to any member of the Group; (d) any customer of any member of the Group; (e) any advisor, consultant, any person or entity with professional or other services who provides research, development or other technical support to any member of the Group; (f) any joint venture, business or strategic alliance partner of any member of the Group; (g) discretionary trust whose discretionary objects are as follows: any Executive Director, employee or prospective employee (whether full time or part time) and any Non-executive Director (including Independent Non-executive Director) of any member of the Group, any supplier of goods or services to any member of the Group, any customer of any member of the Group, any advisor, consultant, any person or entity with professional or other services who provides research, development or other technical support to any member of the Group, any customer of any member of the Group, any supplier of goods or services to any member of the Group, and customer of any member of the Group, any advisor, consultant, any person or entity with professional or other services who provides research, development or other technical support to any member of the Group, and any joint venture, business or strategic alliance partner of any member of the Group.

Total number of Shares available for issue under the 2017 Share Option Scheme and % of issued share capital as at the date of this annual report

The total number of Shares available for issue under the 2017 Share Option Scheme are 513,742,090 shares, accounting for 9.59% of the issued share capital of the Company as at the date of this annual report. As at the date of this annual report, no options were granted under the 2017 Share Option Scheme.

Maximum entitlement of each participant

The total number of Shares issued and to be issued upon exercise of options granted to any Participant (including both exercised and outstanding options) under the Share Option Scheme, in any 12-month period up to the date of grant shall not exceed 1% of the Shares in issue. Any further grant of options in excess of such limit must be separately approved by Shareholders in general meeting with such Participant and his associates (as defined under the Listing Rules) abstaining from voting. In such event, the Company must send a circular to the Shareholders containing the identity of the Participant, the number and terms of the options to be granted (and options previously granted to such Participant), and all other information required under the Listing Rules. The number and terms (including the exercise price) of the options to be granted must be fixed before the approval of the Shareholders and the date of the Board meeting proposing such further granted should be taken as the date of grant for the purpose of calculating the subscription price.

The period in which Shares must be taken up for under the Share Option Scheme

An offer for the grant of options must be made to a Participant on a trading day by letter in such form as the Board may from time to time determine, requiring the Participant to undertake to hold the option on the terms on which it is to be granted and to be bound by the provisions of the Share Option Scheme and shall remain open for acceptance by the Participant concerned within seven days inclusive of the day on which such offer was made.

The minimum period, if any, for which a share option must be held before it can be exercised

Unless otherwise determined by the Board and stated in the offer of grant of share options to the grantee, there is no minimum period for which a share option must be held before it can be exercised. The 2017 Share Option Scheme does not provide for a vesting period for the options granted or to be granted under the 2017 Share Option Scheme.

Time of exercise of option

An option may be exercised in accordance with the terms of the Share Option Scheme at any time during a period as the Board may determine which shall not exceed ten years from the date of grant subject to the provisions of early termination thereof.

Amounts to be paid on acceptance of share options

Grantee of share option must pay HK\$1.00 to the Company upon acceptance of share option offer.

Basis of determining the exercise price

The subscription price of the share option granted under the Share Option Scheme is solely determined and notified to the participants by the Board of Directors, but not less than the highest of (i) the closing price of the Company's Shares as stated in the daily quotations sheet of the Stock Exchange on the date of the grant; (ii) the average closing price of the Company's Shares as stated in the Stock Exchange's daily quotations sheet for the five trading days immediately preceding the date of the grant; and (iii) the nominal value of the Company's Shares as at date of grant.

The remaining life of the 2017 Share Option Scheme

Subject to early termination of the Share Option 2017 Scheme pursuant to the terms thereof, the 2017 Share Option Scheme shall remain valid and effective for 10 years commencing on the date of its adoption on 14 June 2017. As at the date of this annual report, the remaining life of the 2017 Share Option Scheme is less than 5 years.

RESTRICTED SHARE AWARD SCHEME

On 30 December 2011, the Board approved and adopted a restricted share award scheme ("the Original Scheme"). The Original Scheme has expired at 30 December 2021 for a term of 10 years commencing on the Adoption Date. As at 30 December 2021, in accordance with the Original Scheme Rules, the Trustee has purchased 97,817,000 of the Company's Shares, accounting for 1.82% of the issued share capital of the Company and total of 36,917,700 shares were granted to the Selected Participants and out of which 190,000 Shares were subsequently cancelled. 61,089,300 Shares may be administered and have not yet been granted (representing approximately 1.14% of the total number of issued Shares of the Company).

At the Board meeting of the Company held on 29 December 2021, the Board adopted the 2021 Restricted Share Award Scheme. The 2021 Scheme shall be effective for a term of 10 years commencing on the Adoption Date (29 December 2021). As at the date of this annual report, the remaining life of the 2021 Restricted Share Award Scheme is less than 9 years. As at 1 January 2022 and 31 December 2022, 267,799,745 and 267,799,745 restricted shares were available for grant under the scheme mandate. There are 267,799,745 restricted shares to be granted under the 2021 Restricted Share Award Scheme. With the prior approval of the Board, the Trustee may purchase Shares up to 5% of the issued share capital of the Company from time to time in accordance with the Scheme Rules (including the Shares which may be administered and have not yet been granted under the original Scheme). The Shares will be held in trust for the relevant Selected Participant until such Shares are vested with the relevant Selected Participants in accordance with the Scheme Rules. The Scheme shall be subject to the administration of the Board in accordance with the Scheme Rules. Details of the 2021 Restricted Share Award Scheme and the terms thereof are set out in the announcement of the Company dated 30 December 2022.

Purpose

The purpose of the 2021 Restricted Share Award Scheme is to recognise the contributions by the eligible participants and to give incentives in order to retain them for their continuing operation and development and to attract suitable personnel for further development of the Group, and to provide them with a direct economic interest in attaining the long-term business objectives of the Company.

Participants

Any employee or Director, any consultant or adviser of the Company or any member of the Group.

Total number of Shares available for issue under the 2021 Restricted Share Award Scheme and % of issued share capital as at the date of this annual report

No new Shares will be granted under the 2021 Restricted Share Award Scheme.

Maximum entitlement of each participant

The maximum number of the Restricted Shares which may be awarded to a Selected Participant under the Scheme shall not exceed 1% of the issued share capital of the Company from time to time.

Vesting Period

When the Selected Participant has satisfied all vesting conditions specified by the Board in the written grant letter at the time of making the award and become entitled to the Shares forming the subject of the award, the Trustee shall transfer the relevant vested Shares to that Selected Participant. The 2021 Restricted Share Award Scheme does not provide for a vesting period of the restricted share granted or to be granted under the 2021 Restricted Share Award Scheme Award Scheme.

Amounts to be paid on acceptance of the restricted shares

The 2021 Restricted Share Award Scheme does not provide for the amounts to be paid on acceptance of the restricted shares.

Basis of determining the purchase price

The 2021 Restricted Share Award Scheme does not provide for the basis of determining the purchase price of the restricted shares granted under the 2021 Restricted Share Award Scheme.

Movement of the restricted shares granted under the Restricted Share Award Scheme

No restricted shares were granted under the 2021 Restricted Share Award Scheme since the adoption thereof and up to the date of this report.

CONNECTED TRANSACTIONS

During the Year, the Group has the following connected transactions which are required to be disclosed in this report in accordance with Chapter 14A of the Listing Rules. Certain related parties transactions disclosed in note 34 to the consolidated financial statements were not disclosed below as they fulfilled the exemption requirements in Chapter 14A of the Listing Rules.

FINANCIAL COOPERATION AGREEMENT BETWEEN AEROSPACE ASIFC AND THE GROUP

On 12 May 2021, the Company and Aerospace Science and Industry Financial Corporation ("ASIFC") entered into the Financial Cooperation Agreement. According to the Financial Cooperation Agreement, ASIFC will provide the Group with deposit, lending and other comprehensive credit facilities services, settlement and free settlement services. Term of the Financial Cooperation Agreement was 3 years from 1 June 2021. During the period from 1 January 2022 to 29 June 2022, the daily maximum balance of deposits (including accrued interests) under the Financial Cooperation Agreement was RMB1.5 billion, and the actual balance of deposits was RMB0 million. The cap of lending and other comprehensive credit facilities services provided by ASIFC to the Group and secured by the Group's assets was RMB0.65 billion and the actual lending and other comprehensive credit facilities was RMB0 million.

As at 29 June 2022, CASIC indirectly holds 29.98% of the shares in the Company and therefore is a substantial shareholder and connected person of the Company. CASIC and its subsidiaries together hold a 100% equity interest in Aerospace Science and Industry Financial Corporation, thus Aerospace Science and Industry Financial Corporation is an associate of CASIC and in turn a connected person of the Company. Therefore, the deposit transactions under the Financial Cooperation Agreement constitute connected transactions.

PURCHASE FRAMEWORK AGREEMENT BETWEEN SHANGHAI OFFSHORE AND SICHUAN HONGHUA

On 22 January 2020, Sichuan Honghua Petroleum Equipment Co., Ltd. ("Sichuan Honghua"), entered into a purchase framework agreement ("Original Purchase Framework Agreement") with Shanghai Honghua Offshore Oil & Gas Equipment Co., Ltd. ("Shanghai Offshore"). On 25 May 2020, Sichuan Honghua and Shanghai Offshore entered into a written agreement to make amendments to the Original Purchase Framework Agreement, pursuant to which Shanghai Offshore will provide Sichuan Honghua with drilling and exploiting equipment, automation systems, vessels, other ancillary equipment and related services (including but not limited to installation, commissioning and maintenance services); large-scale steel structure processing, construction, installation and commissioning services. The term of the Purchase Framework Agreement commences at the date of the agreement and expires on 31 December 2022. During the period from 1 January 2022 to 20 July 2022, the annual cap under the Purchase Framework Agreement is RMB400 million and the actual amount was RMB0 million.

As at 20 July 2022, Shanghai Offshore is owned as to 51% equity interest by Jiangsu Hongjieding. Mr. Zhang Mi, a non-executive director of the Company, through his sole proprietorship, holds 53.85% of equity interests in Jiangsu Hongjieding. Accordingly, Shanghai Offshore is a connected person of the Company, and the transactions between Sichuan Honghua and Shanghai Offshore constitute the continuing connected transaction of the Company under Chapter 14A of the Listing Rules.

STRATEGIC COOPERATION FRAMEWORK AGREEMENT BETWEEN ASIFL AND HONGHUA INVESTMENT

On 25 May 2020, Honghua (China) Investment Co., Ltd. ("Honghua Investment") and Aerospace Science & Industry Financial Leasing Co,. Ltd. ("ASIFL") entered into the Strategic Cooperation Framework Agreement, pursuant to which, ASIFL will purchase certain equipment and products from Honghua Investment and its subsidiaries for the three years ending 31 December 2022 starting from the effective date of the Strategic Cooperation Framework Agreement. During the period from 1 January 2022 to 29 June 2022, the annual cap under the Strategic Cooperation Framework Agreement for the year 2021 is RMB300 million and the actual amount was RMB0 million.

As at 29 June 2022, CASIC indirectly holds 29.98% of the shares in the Company through its wholly-owned subsidiary, Kehua, and therefore is a substantial shareholder and a connected person of the Company. CASIC and its subsidiaries together hold a 46.5% equity interest in ASIFL, thus ASIFL is an associate of CASIC and in turn a connected person of the Company. Therefore, the transactions under the Strategic Cooperation Framework Agreement constitute connected transactions of the Company under Chapter 14A of the Listing Rules.

PURCHASE, SALES AND FINANCE LEASE FRAMEWORK AGREEMENT BETWEEN DFEC AND THE GROUP

On 30 September 2022, the Company entered into the Purchase Framework Agreement with Dongfang Electric Co., Ltd. ("DFEC"), pursuant to which, The Group will purchase products (including but not limited to materials and equipments such as steel, oil storage tanks, casing heads and preventers, semi-finished products, parts and components, production tools and others) and services (including but not limited to processing services, technical services, inspection and testing services, after-sales and engineering services, transportation services and others) from DFEC Group. The annual cap under the Purchase Framework Agreement for the period from 26 October 2022 to 31 December 2022 is RMB550 million and the actual amount was RMB101.836 million.

On 30 September 2022, the Company entered into the Sales Framework Agreement with DFEC, pursuant to which, the Group will sell products (including but not limited to structural parts such as weldments products for containers, steel structure products, semi-finished products, accessories, equipments such as fuel tank, oil tank and pressure vessels, parts and components and others) and provide services (including but not limited to processing services, technical services, inspection and testing services, sales of electronic control, electric machinery products and after-sales services, engineering services and others) to DFEC Group. The annual cap under the Sales Framework Agreement for the period from 26 October 2022 to 31 December 2022 is RMB500 million and the actual amount was RMB87.974 million.

On 30 September 2022, the Company entered into the Finance Lease Framework Agreement with DFEC, pursuant to which, the Group will provide DFEC Group with finance leasing services. The annual caps (including principal, lease interest and handling fees) under the Finance Lease Framework Agreement for the period from 26 October to 31 December 2022 is RMB50 million and the actual amount was RMB0 million.

The terms of the above framework agreements are from 26 October 2022 to 31 December 2024.

As of 29 June 2022, as Dongfang Electric Corporation directly and indirectly holds approximately 29.98% of the issued share capital of the Company, it is a substantial shareholder within the meaning of the Listing Rules and is therefore a connected person of the Company. Dongfang Electric Corporation is the controlling shareholder of DFEC within the meaning of the Listing Rules. DFEC is an associate of Dongfang Electric Corporation and therefore a connected person of the Company. Accordingly, the above Purchase, Sales and Finance Lease Framework Agreements and the transactions contemplated thereunder constitute continuing connected transactions of the Company under Chapter 14A of the Listing Rules.

FINANCIAL SERVICES FRAMEWORK AGREEMENT BETWEEN DONGFANG ELECTRIC FINANCE AND THE GROUP

On 30 September, 2022, the Company entered into the Financial Services Framework Agreement with Dongfang Electric Finance Co., Ltd. ("Dongfang Electric Finance"), pursuant to which, Dongfang Electric Finance will provide the Group with deposit services, lending services and settlement services. The term of the Financial Services Framework Agreement is from 26 October 2022 to 31 December 2024. The daily maximum balance of deposits placed by the Group with Dongfang Electric Finance for the period from 26 October 2022 to 31 December 2022 is RMB1.2 Billion and the actual amount was RMB0 million; the cap of lending provided by Dongfang Electric Finance to the Group and secured by the Group's assets is RMB1.2 Billion and the actual amount was RMB0 million.

As of 29 June 2022, Dongfang Electric Corporation holds 1,606,000,000 shares (representing 29.98% of the total issued share capital of the Company) of the Company through its wholly-owned subsidiary Electric Investment, and therefore is a substantial shareholder and connected person of the Company. DFEC holds 95% of the shares of Dongfang Electric Finance, and Dongfang Electric Corporation holds 5% of the shares of Dongfang Electric Finance is an associate of Dongfang Electric Corporation and in turn a connected person of the Company. Therefore, the transactions under the Financial Services Framework Agreement constitute continuing connected transactions of the Company under Chapter 14A of the Listing Rules.

All the Independent Non-executive Directors have reviewed the above continuing connected transactions and confirmed that these transactions have been entered into are:

- (1) in the ordinary and usual course of the business of the Group;
- (2) either on normal commercial terms or on terms no less favourable to the Group than terms available to or from independent third parties; and
- (3) in accordance with the relevant agreements governing them on terms that are fair and reasonable and in the interest of the Shareholders as a whole.

In accordance with Rule 14A.56 of the Listing Rules, the Company is required to obtain a letter from its auditor to confirm that nothing has come to their attention that causes them to believe that these continuing connected transactions:

- (1) have not been approved by the board of directors of the company;
- (2) were not made in accordance with the pricing policy of the Company;
- (3) were not conducted, in all material respects, in accordance with the relevant agreement governing those transactions;
- (4) have exceeded the cap disclosed in previous announcements.

The Company's auditors were engaged to report on the Group's continuing connected transactions in accordance with Hong Kong Standard on Assurance Engagements 3000 "Assurance Engagements Other Than Audits or Reviews of Historical Financial Information" and with reference to Practice note 740 "Auditor's Letter on Continuing Connected Transactions under the Hong Kong Listing Rules" issued by the Hong Kong Institute of Certified Public Accountants. The auditors have issued to the Board an unqualified letter containing their findings and conclusions in respect of the continuing connected transactions disclosed by the Group in pages 87 to 89 of this annual report in accordance with Rule 14A.56 of Listing Rules. A copy of the auditor's letter has also been provided to the Stock Exchange.

BANK LOANS

Details of our bank loans and other borrowings are set out in note 25 to the consolidated financial statements.

FINANCIAL SUMMARY

Our financial summary for the past five years are set out in the section headed "Five-Year Financial Highlights" of this annual report.

STAFF RETIREMENT AND BENEFIT SCHEME

Details of the staff retirement and benefit scheme are set out in notes 9 and 30 to the consolidated financial statements.

FIXED ASSETS

Details of the changes of the fixed assets of the Group are set out in note 15 to the consolidated financial statements.

MAJOR CUSTOMERS AND SUPPLIERS

- 1. During the Year, the Group's five largest suppliers in total accounted for approximately 32.9% of total purchase, and the largest supplier accounted for approximately 15.9% of total purchase.
- 2. During the Year, the Group's five largest customers accounted for approximately 34.9% of total sales and the largest customer accounted for approximately 12.5% of revenue.
- 3. None of the Directors of the Company, their associates or any Shareholder (which to the knowledge of the Directors owns more than 5% of the Company's share capital) had an interest in the above suppliers or customers.

ENTRUST DEPOSITS AND ENTRUST LOANS

As at 31 December 2022, the Company has no entrust deposits or entrust loans being placed with commercial banks or non-commercial banks and other finance institutions.

TAXATION POLICY

The details of the Group's applicable income taxation policy and income tax rate are set out in note 12 to the consolidated financial statements.

SUFFICIENCY OF PUBLIC FLOAT

Based on the information that is publicly available to the Company and within the knowledge of the Directors as at the date of this report, the Company has maintained sufficient public float since its Listing Date.

MANAGEMENT CONTRACTS

There was no contract concerning the management or administration of the whole or any substantial part of the business of the Company which was entered into or existed during the Year.

AUDITOR

PricewaterhouseCoopers has resigned as the auditor of the Company on 31 October 2022. The Board has resolved to appoint Deloitte Touche Tohmatsu as the auditor of the Company on 1 November 2022 to fill up the casual vacancy following the resignation of PricewaterhouseCoopers. Save as disclosed above, there were no other changes in auditor of the Company during the past three years.

The financial statements of the Group for the year ended 31 December 2022 have been audited by Deloitte Touche Tohmatsu who will retire at the forthcoming annual general meeting and being eligible, offer themselves for reappointment. A resolution for the re-appointment of Deloitte Touche Tohmatsu as auditor of the Company will be proposed at the forthcoming annual general meeting of the Company.

By the order of the Board Honghua Group Limited Chairman Wang Xu

Hong Kong, 28 March 2023





(incorporated in the Cayman Islands with limited liability)

Opinion

We have audited the consolidated financial statements of Honghua Group Limited (the "Company") and its subsidiaries (collectively referred to as the "Group") set out on pages 99 to 241, which comprise the consolidated statement of financial position as at 31 December 2022, and the consolidated statement of profit or loss and the consolidated statement of profit or loss and other comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2022, and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards ("IFRSs") and have been properly prepared in compliance with the disclosure requirements of the Hong Kong Companies Ordinance.

Basis for Opinion

We conducted our audit in accordance with Hong Kong Standards on Auditing ("HKSAs") issued by the Hong Kong Institute of Certified Public Accountants ("HKICPA"). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the HKICPA's Code of Ethics for Professional Accountants (the "Code"), and we have fulfilled our other ethical responsibilities in accordance with the Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current year. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matter

How our audit addressed the key audit matter

Impairment assessment on trade receivables from a customer domicile in Ukraine

We identified the impairment assessment on trade receivables due from a customer domicile in Ukraine as a key audit matter due to the significance of the balance to the Group's consolidated financial statements, combined with the involvement of significant management estimations in assessing the expected credit loss ("ECL") of the trade receivables due from such customer.

As disclosed in notes 3(a) and 36.3.2(i) to the consolidated financial statements, the provision of ECL was assessed by the management based on valuation prepared by independent gualified professional valuer engaged by the Company and approved by management and the ECL is determined by the Group based on default probability and default loss rate. During the year ended 31 December 2022, in view of the conflict between Russia and Ukraine, the Group made individual assessment on trade receivables due from a customer domicile in Ukraine. The provision is made based on key assumptions that (i) 50% of the receivable from such customer will be covered and reimbursed by the insurance company if these balances are ratified to be uncollectible by insurance company; and (ii) the management expect to recover 40% of the remaining uncollectible balance after insurance coverage upon necessary collection action being taken.

As disclosed in note 22(b) to the consolidated financial statements, as at 31 December 2022, carrying amount of trade receivables from the customer domicile in Ukraine amounting to approximately RMB648,562,000 (net of impairment loss of approximately RMB243,655,000). During the year ended 31 December 2022, the Group provided expected credit loss of approximately RMB230,698,000 in respect of such receivables.

Our procedures in relation to the impairment assessment on trade receivables from a customer domicile in Ukraine include:

- Obtaining an understanding of the process of how the management determined the ECL of trade receivables including the individual assessment on the credit-impaired trade receivables with the involvement of independent qualified professional valuer engaged by the Company, including but not limited to an understanding of the methodology and key assumptions made in determining the default probability and default loss rate for the ECL assessment;
- Testing the accuracy and completeness of key data sources applied in the ECL assessment by checking to the Group's relevant sales contracts and other supporting information;
- Assessing the reasonableness on the rate of insurance coverage adopted by the management;
- Evaluating, together with our internal valuation specialists, the reasonableness and appropriateness of the ECL methodology and key assumptions applied in determining the default probability and default loss rate, with reference to the economic information related to the customer; and
- Evaluating the competence, capabilities and objectivity of the independent qualified professional valuer engaged by the Company and obtaining an understanding on their scope of work.

Key audit matter

How our audit addressed the key audit matter

Allowance for inventories

We identified the allowance for inventories as a key audit matter due to the significance of the balance to the Group's consolidated financial statements as a whole, combined with the involvement of significant management estimations in assessing of net realisable value ("NRV") of inventories.

As disclosed in note 3(b) to the consolidated financial statements, inventories are stated at the lower of cost and NRV. NRV is the estimated selling price in the ordinary course of business, less the estimated costs of completion and the estimated costs necessary to make the sale. The management reviews the aging of inventories at the end of the reporting period and estimates allowance for obsolete and slow-moving inventory items identified, as well as those inventories with carrying amount less than NRV, using the key inputs including the latest selling prices, and estimated costs of completion based on current market conditions.

As set out in note 21 to consolidated financial statements, the carrying amount of the Group's inventories was approximately RMB1,491,298,000 (net of provision of inventory of approximately RMB221,730,000) as at 31 December 2022. During the year ended 31 December 2022, the Group recognised allowance for inventories of approximately RMB85,569,000.

Our procedures in relation to allowance for inventories include:

- Obtaining an understanding of the process of how the management estimates the allowance for inventories;
- Assessing the appropriateness of the management's estimation of cost necessary to make the sale included in NRV assessments;
- Testing the estimated selling prices by referencing to the selling prices of the recent sales transactions from customers and/or the contract prices, on a sample basis; and
- Evaluating the reasonableness of the estimated costs of completion by comparing the estimated gross margin ratio with the similar historical contracts with customers, on a sample basis.

Other Matter

The consolidated financial statements of the Group for the year ended 31 December 2021 were audited by another auditor who expressed an unmodified opinion on those statements on 29 March 2022, with a separate section regarding the material uncertainty related to going concern.

Other Information

The directors of the Company are responsible for the other information. The other information comprises the information included in the annual report, but does not include the consolidated financial statements and our auditor's report thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of Directors and Those Charged with Governance for the Consolidated Financial Statements

The directors of the Company are responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with IFRSs and the disclosure requirements of the Hong Kong Companies Ordinance, and for such internal control as the directors determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the directors are responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion solely to you, as a body, in accordance with our agreed terms of engagement, and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with HKSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with HKSAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current year and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in the independent auditor's report is Chan, Benjie Pak Kin.

Deloitte Touche Tohmatsu Certified Public Accountants

Hong Kong 28 March 2023

CONSOLIDATED STATEMENT OF PROFIT OR LOSS

		Year ended 31	December	
		2022	2021	
	Notes	RMB'000	RMB'000	
Revenue	4	4,476,104	2,936,604	
Cost of sales	6	(4,016,211)	(2,573,600)	
Gross profit		459,893	363,004	
Distribution costs	6	(215,290)	(161,975)	
Administrative expenses	6	(356,056)	(335,008)	
Research and development expenses	6	(123,587)	(145,613)	
Net impairment losses on financial assets and contract assets	36.3.2	(299,193)	(363,100)	
Other income	5	68,367	89,308	
Other gains or losses, net	7	32,663	(56,829)	
Operating loss		(433,203)	(610,213)	
Finance income	10	67,533	95,679	
Finance expenses	10	(256,782)	(228,350)	
Finance expenses – net		(189,249)	(132,671)	
Share of net losses of an associate and joint ventures				
accounted for using the equity method	18	(2,331)	(2,460)	
Loss before income tax		(624,783)	(745,344)	
Income tax (expense)/credit	12	(328)	11,343	
Loss for the year		(625,111)	(734,001)	
(Loss)/profit for the year attributable to:				
- Owners of the Company		(634,418)	(717,191)	
- Non-controlling interests		9,307	(16,810)	
		0,001	(10,010)	
		(625,111)	(734,001)	
Loss per share attributable to owners of the Company				
Basic and diluted (RMB cents per share)	14	(11.98)	(13.54)	
			. ,	

CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

	Year ended 3	1 December
	2022	2021
	RMB'000	RMB'000
Loss for the year	(625,111)	(734,001)
Other comprehensive income		
Items that may be reclassified to profit or loss		
Exchange differences arising on translation of foreign operations	369,454	(118,519)
Items that will not be reclassified to profit or loss		
Currency translation differences	(301,230)	94,205
Change in the fair value of equity investments at fair value		
through other comprehensive income	(8,725)	11,638
Income tax relating to items that will not be reclassified to profit or loss	1,077	(2,549)
Other comprehensive income for the year, net of tax	60,576	(15,225)
Total comprehensive income for the year	(564,535)	(749,226)
Total comprehensive income attributable to:		
- Owners of the Company	(573,842)	(732,725)
- Non-controlling interests	9,307	(16,501)
	(564,535)	(749,226)

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

AT 31 DECEMBER 2022

		At 31 Dec	cember
		2022	2021
	Notes	RMB'000	RMB'000
Non-current assets			
Property, plant and equipment	15	2,656,996	2,921,864
Right of use assets	16	322,625	323,561
Intangible assets	17	275,402	246,530
Investments accounted for using the equity method	18	35,624	34,037
Debt investments	19		23,295
Deferred income tax assets	28	263,994	256,730
Financial assets at fair value through other	20	200,334	200,700
comprehensive income	36.4.1	81,599	92,664
Trade and other receivables	22	712,801	909,237
Term deposits	22		90,000
Other non-current assets	20		100,565
	20	00,995	100,000
			1 0 0 0 1 0 0
		4,436,036	4,998,483
Current assets			
Inventories	21	1,491,298	1,694,060
Contract costs		170,979	128,600
Contract assets	4	631,374	448,825
Trade and other receivables	22	4,656,550	3,501,182
Debt investments	19	-	28,799
Loan to an associate and other related party	36.3.2	-	12,515
Current tax recoverable		3,762	780
Financial assets at fair value through other			
comprehensive income	36.4.1	31,238	26,609
Pledged bank deposits	23	210,249	204,640
Term deposit	23	90,000	-
Cash and cash equivalents	23	601,001	703,417
		7,886,451	6,749,427
Total assets		12,322,487	11,747,910

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

AT 31 DECEMBER 2022

		At 31 Dec	cember	
		2022	2021	
	Notes	RMB'000	RMB'000	
Current liabilities				
Contract liabilities	4	760,953	154,348	
Trade and other payables	24	3,199,298	2,394,391	
Income tax payable		27,209	41,877	
Borrowings	25	4,324,420	5,145,838	
Provisions for other liabilities and charges	26	29,748	27,978	
Deferred income	27	6,949	10,028	
Lease liabilities	16	28,490	18,783	
			/ -	
		8,377,067	7,793,243	
Non-current liabilities				
	0.4	70 407	100 705	
Trade and other payables	24	78,197	136,795	
Borrowings	25	623,174	-	
Deferred income	27	12,550	21,779	
Lease liabilities	16	37,504	49,697	
		751,425	208,271	
Total liabilities		9,128,492	8,001,514	
EQUITY				
Share capital	29	488,023	488,023	
Other reserves	31	4,264,762	4,206,583	
Accumulated losses	01	(1,788,991)	(1,156,970	
Equity attributable to owners of the Company		2,963,794	3,537,636	
Non-controlling interests		230,201	208,760	
		230,201	200,700	
		3,193,995	3,746,396	
Total liabilities and equity		12,322,487	11,747,910	

The consolidated financial statements on pages 99 to 241 were approved and authorised for issue by the board of directors on 28 March 2023 and are signed on its behalf by:

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

				Attri	butable to ov	vners of the C	Company					
								Shares held			_	
								for share			Non-	
	Share	Share	Other	Capital	Surplus	Exchange	Fair value	award	Accumulated		controlling	Total
	capital	premium	Reserve	reserve	reserve	reserve	reserve	scheme	losses	Total	interests	equity
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
	(Note 29)	(Note 31)	(Note 31)	(Note 31)	(Note 31)	(Note 31)	(Note 31)	(Note 30)				
Balance at 1 January 2021	488,023	3,597,179	60,204	520,189	469,696	(308,366)	8,998	(124,618)	(441,939)	4,269,366	225,261	4,494,627
Loss for the year	_	_	_	_	_	_	_	_	(717,191)	(717,191)	(16,810)	(734,001)
Other comprehensive income	_		-	-	_	(24,623)	9,089	-	-	(15,534)	309	(15,225)
Total comprehensive income	_		-	_	_	(24,623)	9,089	_	(717,191)	(732,725)	(16,501)	(749,226)
Transactions with owners												
Donation from shareholders	-	-	995	-	-	-	-	-	-	995	-	995
Options lapsed under share option schemes	-	-	-	(2,976)	-	-	-	-	2,976	-	-	-
Appropriation to surplus reserve	-	-	-	-	816	-	-	-	(816)	-	-	
Total transactions with owners,												
recognised directly in equity	-		995	(2,976)	816	-	-	-	2,160	995	-	995
Balance at 31 December 2021	488,023	3,597,179	61,199	517,213	470,512	(332,989)	18,087	(124,618)	(1,156,970)	3,537,636	208,760	3,746,396

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

				Attrib	outable to o	wners of the	Company					
								Shares held				
								for share			Non-	
	Share	Share	Other	Capital	Surplus	Exchange	Fair value	award	Accumulated		controlling	Total
	capital	premium	Reserve	reserve	reserve	reserve	reserve	scheme	losses	Total	interests	equity
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
	(Note 29)	(Note 31)	(Note 31)	(Note 31)	(Note 31)	(Note 31)	(Note 31)	(Note 30)				
Balance at 1 January 2022	488,023	3,597,179	61,199	517,213	470,512	(332,989)	18,087	(124,618)	(1,156,970)	3,537,636	208,760	3,746,396
(Loss)/profit for the year	-	-	-	-	-	-	-	-	(634,418)	(634,418)	9,307	(625,111)
Other comprehensive income	-	-	-	-	-	68,224	(7,648)	-	-	60,576	-	60,576
Total comprehensive income	-	-	-	-	-	68,224	(7,648)	-	(634,418)	(573,842)	9,307	(564,535)
Transactions with owners												
Derecognition of a subsidiary	-	-	-	-	-	-	-	-	-	-	12,134	12,134
Options lapsed under share											, -	
option schemes	-	-	-	(4,892)	-	-	-	-	4,892	-	-	-
Appropriation to surplus reserve	-	-	-	-	2,495	-	-	-	(2,495)	-	-	-
Total transactions with owners,												
recognised directly in equity	-	-	-	(4,892)	2,495	-	-	-	2,397	-	12,134	12,134
Balance at 31 December 2022	488,023	3,597,179	61,199	512,321	473,007	(264,765)	10,439	(124,618)	(1,788,991)	2,963,794	230,201	3,193,995

CONSOLIDATED STATEMENT OF CASH FLOWS

		Year ended 31	Year ended 31 December		
		2022	2021		
	Note	RMB'000	RMB'000		
Operating activities					
Cash used in operations	32	(209,733)	(983,209)		
Income tax paid		(16,277)	(33,054)		
Net cash used in operating activities		(226,010)	(1,016,263)		
Investing activities					
Payment for additions of property, plant and equipment					
and construction in progress		(37,218)	(49,166		
Proceeds from financing lease as lessor		10,191	64,269		
Proceeds from disposal of property, plant and equipment		23,029	15,074		
Proceeds from government grants related to assets		3,772	6,263		
Receipts of loans to related parties		12,515	-		
Dividends received		-	1,458		
Receipt of debt investments		52,094	49,135		
Interest received		57,169	5,179		
Expenditure on development project and other intangible assets		(56,854)	(799		
Proceeds from acquisition of subsidiary, net of cash acquired		6,741	162		
Payment for term deposit		-	(50,000)		
Net cash generated from investing activities		71,439	41,575		
Financing activities					
Proceeds from borrowings		4,623,497	2,952,420		
Repayment of senior notes		(1,201,040)	-		
Repayments of borrowings		(3,182,778)	(2,171,190		
Interest and charges paid		(208,986)	(227,459		
Receipts of financing guarantee		-	200,000		
Payments of lease liabilities		(5,431)	(23,080		
Net cash generated from financing activities		25,262	730,691		
net cash generated nom mancing activities		20,202	730,091		
Net decrease in cash and cash equivalents		(129,309)	(243,997		
Cash and cash equivalents at the beginning of year		703,417	952,384		
Effect of foreign exchange rate changes		26,893	(4,970)		
Cash and cash equivalents at end of the year		601,001	703,417		

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED 31 DECEMBER 2022

1. General

Honghua Group Limited ("the Company") and its subsidiaries (together, "the Group") are principally engaged in manufacturing of drilling rigs, oil and gas exploitation equipment, providing drilling services and fracturing.

The Company was incorporated in the Cayman Islands on 15 June 2007 as an exempted company with limited liability under the Companies Law, Cap22 (Law 3 of 1961, as consolidated and revised) of the Cayman Islands. The address of its registered office is Windward 3, Regatta Office Park, PO Box 1350, Grand Cayman, KY1-1108, Cayman Islands. The principal place of business of the Group is 99 East Road, Information Park, Jinniu District, Chengdu, Sichuan, the People's Republic of China (the "PRC").

The Company was listed on the Main Board of the Stock Exchange of Hong Kong Limited ("SEHK") on 7 March 2008.

These financial statements are presented in Renminbi ("RMB"), unless otherwise stated, and were approved for issue by the Board of Directors of the Company on 28 March 2023.

Change of shareholder of the Company

On 27 November 2021, the Company received a notice from its largest shareholder, Kehua Technology Co., Limited ("Kehua Technology", a wholly-owned subsidiary of 中國航天科工集團有限公司 China Aerospace Science and Industry Corporation Limited, "CASIC"), that Kehua Technology entered into a gratuitous transfer agreement with Dongfang Electric International Investment Co., Ltd. ("Dongfang Investment", a wholly-owned subsidiary of 中國東方電氣集團有限公司 Dongfang Electric Corporation, "DEC") on 26 November 2021. According to the gratuitous transfer agreement, Kehua Technology intended to transfer its 1,606,000,000 shares of the Company (accounting for 29.98% of the total issued share capital of the Company) to Dongfang Investment for nil consideration (the "Gratuitous Transfer").

On 29 June 2022, the Gratuitous Transfer was completed and Dongfang Investment owns 29.98% of the total issued share capital of the Company and becomes the largest shareholder of the Company.

2. Summary of significant accounting policies

2.1 Basis of preparation

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRSs") issued by the International Accounting Standards Board. In addition, the consolidated financial statements include applicable disclosures required by the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited ("Listing Rules") and by the Hong Kong Companies Ordinance.

FOR THE YEAR ENDED 31 DECEMBER 2022

2. Summary of significant accounting policies (Continued)

2.1 Basis of preparation (Continued)

As at 31 December 2022, the Group has net current liabilities position of approximately RMB490,616,000 (2021: RMB1,043,816,000). The directors of the Company have, at the time of approving the consolidated financial statements, a reasonable expectation that the Group has adequate resources to continue in operational existence for the foreseeable future after considering the followings:

- during the year ended 31 December 2021, a subsidiary within the Group failed to meet the requirement of a financial indicator agreed in certain loan contract, which constituted the subsidiary's failure to comply certain agreed terms of the relevant loan contract and triggered default and cross default clauses in several other bank loan contracts within the Group (hereinafter collectively referred to as "the Default Matters"), which caused the relevant banks and financial institutions to have rights to request the Group to immediately repay all principals and interests of the relevant borrowings. As at 31 December 2021, principals of long-term borrowings due after 31 December 2022 as agreed in original loan contracts amounting to RMB1,136,318,000 was reclassed and presented under current liabilities. During the year ended 31 December 2022, the subsidiary has renegotiated and re-entered the loan contract with the relevant bank with the financial indicator clause being removed. As such, Default Matters was resolved during the current year and no reclassification was considered necessary at of 31 December 2022;
- on 30 September 2022, the Company announced that it had entered into a financial service framework agreement with 東方電氣集團財務有限公司 ("Dongfang Electric Finance") the subsidiary of DEC, and Dongfang Electric Finance agreed to provide RMB1,800,000,000 credit facility to the Company available for drawdown during the year ending 31 December 2023. Subsequent to 2022 and up to the date of the financial statements, the Group has drawn down RMB1,400,000,000 from the credit facility. The borrowing is repayable after three years from the date of drawndown, which is intended to replace some of the borrowings that are due within one year;
- on 18 January 2023, the Company announced share subscription plans by Dongfang Investment and affiliate of one of its shareholder amounting to approximately Hong Kong Dollar ("HKD") 1,021,121,000 (equivalent to approximately RMB912,137,000). The share subscription is subject to the approval of independent eligible shareholders which is scheduled to be held on 17 April 2023;
- as at 31 December 2022, the Group has unused banking facility of approximately RMB2,096,306,000, which is available for immediate drawdown and utilisation in the course of ordinary business from the date of the approval of these consolidated financial statements; and
- the Group's financial performance had been improving since the second half of 2022 and the loss for the second half of 2022 narrowed as compared to the first half of 2022. The management is expecting the Group's financial performance be further enhanced in 2023.

2. Summary of significant accounting policies (Continued)

2.1 Basis of preparation (Continued)

In view of the above circumstances, the directors of the Company expect that the Group will have sufficient liquidity to finance its operations for the next twelve months from the date of approval of these consolidated financial statements. Therefore, the consolidated financial statements have been prepared on going concern basis. The going concern basis assumes that the Group will continue in operation for the foreseeable future and will be able to realise its assets and discharge its liabilities and commitments in the normal course of business.

The consolidated financial statements have been prepared on the historical cost basis except for certain financial instruments that are measured at fair values at the end of each reporting period, as explained in the accounting policies set out below.

Historical cost is generally based on the fair value of the consideration given in exchange for goods and services.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, the Group takes into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date. Fair value for measurement and/or disclosure purposes in these consolidated financial statements is determined on such a basis, except for share-based payment transactions that are within the scope of *IFRS 2 Share-based Payment*, leasing transactions that are accounted for in accordance with *IFRS 16 Leases* and measurements that have some similarities to fair value but are not fair value, such as net realisable value in *IAS 2 Inventories* or value in use in *IAS 36 Impairment of Assets*.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

For financial instruments which are transacted at fair value and a valuation technique that unobservable inputs is to be used to measure fair value in subsequent periods, the valuation technique is calibrated so that at initial recognition the results of the valuation technique equals the transaction price.

2. Summary of significant accounting policies (Continued)

2.1 Basis of preparation (Continued)

In addition, for financial reporting purposes, fair value measurements are categorised into Level 1, 2 or 3 based on the degree to which the inputs to the fair value measurements are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date;
- Level 2 inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly; and
- Level 3 inputs are unobservable inputs for the asset or liability.

The principal accounting policies are set out below.

2.1.1 New and amended standards adopted by the Group

In the current year, the Group has applied the following amendments to IFRSs for the first time, which are mandatorily effective for the Group's annual period beginning on 1 January 2022 for the preparation of the consolidated financial statements:

Amendments to IFRS 3	Reference to the Conceptual Framework
Amendment to IFRS 16	Covid-19-Related Rent Concessions beyond 30 June 2021
Amendments to IAS 16	Property, Plant and Equipment – Proceeds before Intended Use
Amendments to IAS 37	Onerous Contracts - Cost of Fulfilling a Contract
Amendments to IFRSs	Annual Improvements to IFRSs 2018-2020
Amendment to IFRS 16 Amendments to IAS 16 Amendments to IAS 37	Covid-19-Related Rent Concessions beyond 30 June 2021 Property, Plant and Equipment – Proceeds before Intended Use Onerous Contracts – Cost of Fulfilling a Contract

Except as described below, the application of amendments to IFRSs in the current year has had no material impact on the Group's financial positions and performance for the current and prior years and/or on the disclosures set out in these consolidated financial statements.

Impacts on application of Amendments to IAS 37 Onerous Contracts – Cost of Fulfilling a Contract

The Group has applied the amendments for the first time in the current year. The amendments specify that, when an entity assesses whether a contract is onerous in accordance with IAS 37, the unavoidable costs under a contract should reflect the least net cost of exiting from the contract, which is the lower of the cost of fulfilling it and any compensation or penalties arising from failure to fulfil it. Costs of fulfilling the contract include incremental costs and an allocation of other costs that relate directly to fulfilling contracts (e.g. an allocation of the depreciation charge for an item of property, plant and equipment used in fulfilling the contract).

FOR THE YEAR ENDED 31 DECEMBER 2022

2. Summary of significant accounting policies (Continued)

2.1 Basis of preparation (Continued)

2.1.1 New and amended standards adopted by the Group (Continued)

Impacts on application of Amendments to IAS 37 Onerous Contracts – Cost of Fulfilling a Contract (Continued)

In accordance with the transitional provisions, the amendments are applicable to contracts for which the Group has not yet fulfilled all its obligations as at the date of initial application, 1 January 2022. Specifically, the Group's assessment of onerous contracts in relation to service contracts under drilling engineering service and fracturing.

The application of the amendments in the current year has had no impact on the Group's financial positions and performance.

2.1.2 New standards and amendments not yet adopted

IFRS 17 (including the June 2020 and December 2021	Insurance Contracts ¹
Amendments to IFRS 17)	
Amendments to IFRS 10	Sale or Contribution of Assets between an Investor and its
and IAS 28	Associate or Joint Venture ²
Amendment to IFRS 16	Lease Liability in a Sale and Leaseback ³
Amendments to IAS 1	Classification of Liabilities as Current or Non-current ³
Amendments to IAS 1	Non-current Liabilities with Covenants ³
Amendments to IAS 1 and	Disclosure of Accounting Policies ¹
IFRS Practice Statement 2	
Amendments to IAS 8	Definition of Accounting Estimates ¹
Amendments to IAS 12	Deferred Tax related to Assets and Liabilities arising from a Single Transaction ¹

- 1 Effective for annual periods beginning on or after 1 January 2023.
- 2 Effective for annual periods beginning on or after a date to be determined.
- 3 Effective for annual periods beginning on or after 1 January 2024.

Except for the amendments to IFRSs mentioned below, the directors of the Company anticipate that the application of all other new and amendments to IFRSs will have no material impact on the consolidated financial statements in the foreseeable future.

2. Summary of significant accounting policies (Continued)

2.1 Basis of preparation (Continued)

2.1.2 New standards and amendments not yet adopted (Continued)

Amendments to IFRS 16 Lease Liability in a Sale and Leaseback

The amendments add subsequent measurement requirements for sale and leaseback transactions that satisfy the requirements of IFRS 15 to be accounted for as a sale. The amendments require a seller-lessee to determine "lease payments" or "revised lease payments" such that the seller-lessee would not recognise a gain or loss that relates to the right of use retained by the seller-lessee. The amendments also clarify that applying the requirements does not prevent the seller-lessee from recognising in profit or loss any gain or loss relating to subsequent partial or full termination of a lease.

As part of the amendments, Illustrative Example 25 accompanying IFRS 16 is added to illustrate the application of the requirements in a sale and leaseback transaction with variable lease payments that do not depend on an index or rate.

The amendments are effective for annual reporting periods beginning on or after 1 January 2024, with early application permitted. The application of the amendments is not expected to have significant impact on the financial position and performance of the Group.

Amendments to IAS 1 Classification of Liabilities as Current or Non-current (the "2020 Amendments") and Amendments to IAS 1 Non-current Liabilities with Covenants ("the 2022 Amendments")

The 2020 Amendments provide clarification and additional guidance on the assessment of right to defer settlement for at least twelve months from reporting date for classification of liabilities as current or non-current, which:

- clarify that if a liability has terms that could, at the option of the counterparty, result in its settlement by the transfer of the entity's own equity instruments, these terms do not affect its classification as current or non-current only if the entity recognises the option separately as an equity instrument applying IAS 32 Financial Instruments: Presentation.
- specify that the classification of liabilities as current or non-current should be based on rights that are in existence at the end of the reporting period. Specifically, the amendments clarify that the classification should not be affected by management intentions or expectations to settle the liability within 12 months.

FOR THE YEAR ENDED 31 DECEMBER 2022

2. Summary of significant accounting policies (Continued)

2.1 Basis of preparation (Continued)

2.1.2 New standards and amendments not yet adopted (Continued)

Amendments to IAS 1 Classification of Liabilities as Current or Non-current (the "2020 Amendments") and Amendments to IAS 1 Non-current Liabilities with Covenants ("the 2022 Amendments") (Continued)

For rights to defer settlement for at least twelve months from reporting date which are conditional on the compliance with covenants, the requirements introduced by the 2020 Amendments have been modified by the 2022 Amendments. The 2022 Amendments specify that only covenants with which an entity is required to comply with on or before the end of the reporting period affect the entity's right to defer settlement of a liability for at least twelve months after the reporting date. Covenants which are required to comply with only after the reporting period do not affect whether that right exists at the end of the reporting period.

In addition, the 2022 Amendments specify the disclosure requirements about information that enables users of financial statements to understand the risk that the liabilities could become repayable within twelve months after the reporting period, if the entity classify liabilities arising from loan arrangements as non-current when the entity's right to defer settlement of those liabilities is subject to the entity complying with covenants within twelve months after the reporting period.

The 2022 Amendments also defer the effective date of applying the 2020 Amendments to annual reporting periods beginning on or after 1 January 2024. The 2022 Amendments, together with the 2020 Amendments, are effective for annual reporting periods beginning on or after 1 January 2024, with early application permitted. If an entity applies the 2020 amendments for an earlier period after the issue of the 2022 Amendments, the entity should also apply the 2022 Amendments for that period.

Based on the Group's outstanding liabilities as at 31 December 2022, the application of the 2020 and 2022 Amendments will not result in reclassification of the Group's liabilities.

Amendments to IAS 8 Definition of Accounting Estimates

The amendments define accounting estimates as "monetary amounts in financial statements that are subject to measurement uncertainty". An accounting policy may require items in financial statements to be measured in a way that involves measurement uncertainty — that is, the accounting policy may require such items to be measured at monetary amounts that cannot be observed directly and must instead be estimated. In such a case, an entity develops an accounting estimate to achieve the objective set out by the accounting policy. Developing accounting estimates involves the use of judgements or assumptions based on the latest available, reliable information.

2. Summary of significant accounting policies (Continued)

2.1 Basis of preparation (Continued)

2.1.2 New standards and amendments not yet adopted (Continued)

Amendments to IAS 8 Definition of Accounting Estimates (Continued)

In addition, the concept of changes in accounting estimates in IAS 8 is retained with additional clarifications.

The application of the amendments is not expected to have significant impact on the Group's consolidated financial statements.

2.2 Subsidiaries

2.2.1 Consolidation

A subsidiary is an entity (including a structured entity) over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are consolidated from the date on which control is transferred to the Group. They are deconsolidated from the date that control ceases.

(a) Business combinations

The Group applies the acquisition method to account for business combinations. The consideration transferred for the acquisition of a subsidiary is the fair values of the assets transferred, the liabilities incurred to the former owners of the acquiree and the equity interests issued by the Group. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration arrangement. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date.

The Group recognises any non-controlling interest in the acquiree on an acquisition-byacquisition basis. Non-controlling interests in the acquiree that are present ownership interests and entitle their holders to a proportionate share of the entity's net assets in the event of liquidation are measured at either fair value or the present ownership interests' proportionate share in the recognised amounts of the acquiree's identifiable net assets. All other components of non-controlling interests are measured at their acquisition date fair value, unless another measurement basis is required by IFRS.

FOR THE YEAR ENDED 31 DECEMBER 2022

2. Summary of significant accounting policies (Continued)

2.2 Subsidiaries (Continued)

2.2.1 Consolidation (Continued)

(a) Business combinations (Continued)

Acquisition-related costs are expensed as incurred.

If the business combination is achieved in stages, the acquisition date carrying value of the acquirer's previously held equity interest in the acquiree is remeasured to fair value at the acquisition date. Any gains or losses arising from such remeasurement are recognised in profit or loss.

Any contingent consideration to be transferred by the Group is recognised at fair value at the acquisition date. Subsequent changes to the fair value of the contingent consideration that is deemed to be an asset or liability is recognised in profit or loss. Contingent consideration that is classified as equity is not remeasured, and its subsequent settlement is accounted for within equity.

The excess of the consideration transferred, the amount of any non-controlling interest in the acquiree and the acquisition-date fair value of any previous equity interest in the acquiree over the fair value of the identifiable net assets acquired is recorded as goodwill. If the total of consideration transferred, non-controlling interest recognised and previously held interest measured is less than the fair value of the net assets of the subsidiary acquired in the case of a bargain purchase, the difference is recognised directly in profit or loss.

Intra-group transactions, balances and unrealised gains on transactions between group companies are eliminated. Unrealised losses are also eliminated unless the transaction provides evidence of an impairment of the transferred asset. When necessary, amounts reported by subsidiaries have been adjusted to conform with the Group's accounting policies.

2. Summary of significant accounting policies (Continued)

2.2 Subsidiaries (Continued)

2.2.1 Consolidation (Continued)

(a) Changes in ownership interests in subsidiaries without change of control

Transactions with non-controlling interests that do not result in a loss of control are accounted for as equity transactions – that is, as transactions with the owners of the subsidiary in their capacity as owners. The difference between fair value of any consideration paid and the relevant share acquired of the carrying amount of net assets of the subsidiary is recorded in equity. Gains or losses on disposals to non-controlling interests are also recorded in equity.

(b) Disposal of subsidiaries

When the Group ceases to have control, any retained interest in the entity is re-measured to its fair value at the date when control is lost, with the change in carrying amount recognised in profit or loss. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognised in other comprehensive income in respect of that entity are accounted for as if the Group had directly disposed of the related assets or liabilities. It means the amounts previously recognised in other category of equity as specified/permitted by applicable IFRSs.

2.2.2 Separate financial statements

Investments in subsidiaries are accounted for at cost less impairment. Cost includes direct attributable costs of investment. The results of subsidiaries are accounted for by the Company on the basis of dividend received and receivable.

Indicators of impairment of the investments in subsidiaries include the receipt of dividend from these investments if the dividend exceeds the total comprehensive income of the subsidiary in the period the dividend is declared or if the carrying amount of the investment in the separate financial statements exceeds the carrying amount in the consolidated financial statements of the investee's net assets including goodwill. The amount of impairment is calculated as the difference between the recoverable amount of the investment in the subsidiary and its carrying value.

2. Summary of significant accounting policies (Continued)

2.3 Associates

Associates are all entities over which the Group has significant influence but not control, generally accompanying a shareholding of between 20% and 50% of the voting rights. Investments in associates are accounted for using the equity method of accounting. Under the equity method, the investment is initially recognised at cost, and the carrying amount is increased or decreased to recognise the investor's share of the profit or loss of the investee after the date of acquisition. The Group's investments in associates include goodwill identified on acquisition. Upon the acquisition of the ownership interest in an associate, any difference between the cost of the associate and the Group's share of the net fair value of the associate's identifiable assets and liabilities is accounted for as goodwill.

If the ownership interest in an associate is reduced but significant influence is retained, only a proportionate share of the amounts previously recognised in other comprehensive income is reclassified to profit or loss where appropriate.

The Group's share of post-acquisition profit or loss is recognised in profit or loss, and its share of post-acquisition movements in other comprehensive income is recognised in other comprehensive income with a corresponding adjustment to the carrying amount of the investment. When the Group's share of losses in an associate equals or exceeds its interest in the associate, including any other unsecured receivables, the Group does not recognise further losses, unless it has incurred legal or constructive obligations or made payments on behalf of the associate.

The Group determines at each reporting date whether there is any objective evidence that the investment in the associate is impaired. If this is the case, the Group calculates the amount of impairment as the difference between the recoverable amount of the associate and its carrying value and recognises the amount adjacent to 'share of profits of associates' in profit or loss.

Profits and losses resulting from upstream and downstream transactions between the Group and its associate are recognised in the Group's consolidated financial statements only to the extent of unrelated investor's interests in the associates. Unrealised losses are eliminated unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of associates have been changed where necessary to ensure consistency with the policies adopted by the Group.

Gains or losses on dilution of equity interest in associates are recognised in profit or loss.

2. Summary of significant accounting policies (Continued)

2.4 Joint arrangements

The Group has applied IFRS 11 to all joint arrangements. Under IFRS 11 investments in joint arrangements are classified as either joint operations or joint ventures depending on the contractual rights and obligations of each investor. The Group has assessed the nature of its joint arrangements and determined them to be joint ventures. Joint ventures are accounted for using the equity method.

Under the equity method of accounting, interests in joint ventures are initially recognised at cost and adjusted thereafter to recognise the Group's share of the post-acquisition profits or losses and movements in other comprehensive income. The Group's investments in joint ventures include goodwill identified on acquisition. Upon the acquisition of the ownership interest in a joint venture, any difference between the cost of the joint venture and the Group's share of the net fair value of the joint ventures' identifiable assets and liabilities is accounted for as goodwill. When the Group's share of losses in a joint venture equals or exceeds its interests in the joint ventures, including any other unsecured receivables, the Group does not recognise further losses, unless it has incurred obligations or made payments on behalf of the joint ventures.

Unrealised gains on transactions between the Group and its joint ventures are eliminated to the extent of the Group's interest in the joint ventures. Unrealised losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of the joint ventures have been changed where necessary to ensure consistency with the policies adopted by the Group.

2.5 Segment reporting

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision maker. The chief operating decision maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the senior executive management that makes strategic decisions.

2.6 Foreign currency translation

2.6.1 Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates ('the functional currency'). The consolidated financial statements are presented in RMB, which is the Group's and Company's presentation currency. The Company's functional currency is in HKD.

FOR THE YEAR ENDED 31 DECEMBER 2022

2. Summary of significant accounting policies (Continued)

2.6 Foreign currency translation (Continued)

2.6.2 Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or valuation where items are re-measured. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are generally recognised in profit or loss, except when deferred in other comprehensive income as qualifying cash flow hedges and qualifying net investment hedges.

Foreign exchange gains and losses are presented in the statement of profit or loss within 'other gains or losses – net'.

Translation differences on non-monetary financial assets and liabilities such as equities held at fair value through profit or loss are recognised in profit or loss as part of the fair value gain or loss. Translation differences on non-monetary financial assets, such as equity instruments measured at fair value through other comprehensive income, are included in other comprehensive income.

2.6.3 Group companies

The results and financial position of the group entities (none of which has the currency of a hyperinflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- (a) assets and liabilities for each statement of financial position presented are translated at the closing rate at the date of that statement of financial position;
- (b) income and expenses for each statement of profit or loss are translated at average exchange rates (unless this is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated at the dates of the transactions), and
- (c) all resulting currency translation differences are recognised in other comprehensive income.

Goodwill and fair value adjustments arising on the acquisition of a foreign operation are treated as assets and liabilities of the foreign operation and translated at the closing rate. Currency translation differences arising are recognised in other comprehensive income.

2. Summary of significant accounting policies (Continued)

2.6 Foreign currency translation (Continued)

2.6.4 Disposal of foreign operation and partial disposal

On the disposal of a foreign operation (that is, a disposal of the Group's entire interest in a foreign operation, or a disposal involving loss of control over a subsidiary that includes a foreign operation, a disposal involving loss of joint control over a joint venture that includes a foreign operation, or a disposal involving loss of significant influence over an associate that includes a foreign operation), all of the currency translation differences accumulated in equity in respect of that operation attributable to the owners of the company are reclassified to profit or loss.

2.7 Property, plant and equipment

Property, plant and equipment is stated at historical cost less accumulated depreciation and impairment losses. Historical cost includes expenditure that is directly attributable to the acquisition of the items.

Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognised. All other repairs and maintenance are charged to the statement of profit or loss during the financial period in which they are incurred.

For the drilling rigs used for drilling engineering services included in plant and machinery, the depreciation is calculated using units-of-production method. Drilling rig is depreciated over an approximate of 5,000~6,000-day period, after provision for residual values.

Depreciation on other assets is calculated using the straight-line method to allocate their cost to their residual values over their estimated useful lives, as follows:

•	Freehold land	No depreciation
•	Buildings held for own use	20-35 years
•	Plant and machinery	5-10 years
•	Fixtures, fittings and equipment	5-10 years
•	Motor vehicles	5-6 years

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period.

2. Summary of significant accounting policies (Continued)

2.7 Property, plant and equipment (Continued)

An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount (Note 2.9).

Gains and losses on disposals are determined by comparing proceeds with carrying amount and are recognised within 'Other gains or losses, net' in profit or loss.

Construction-in-progress ("CIP") represents buildings under construction and plant and equipment pending for installation, and are stated at cost less impairment loss. Costs include construction and acquisition costs. No provision for depreciation is made on CIP until such time as the relevant assets are completed and ready for intended use. When the assets concerned are brought into use, the costs are transferred to property, plant and equipment and depreciated in accordance with the policy as stated above.

If a property becomes an investment property because its use has changed as evidenced by end of owner-occupation, the property was transferred to investment property at carrying amount. No remeasurement of the fair value of investment property was carried out at the date of transfer.

2.8 Intangible assets

2.8.1 Technical know-how

Separately acquired technical know-how is shown at historical cost. Technical knowhow acquired in a business combination is recognised at fair value at the acquisition date. Technical know-how has a finite useful life and is carried at cost less accumulated amortisation. Amortisation is calculated using the straight-line method to allocate the cost of technical knowhow over its estimated useful life of 10 years.

2.8.2 Capitalised development costs

Capitalised development costs that are directly attributable to the design and testing of new or improved products when meet relevant criteria. Amortisation is calculated using the straight-line method over its estimated useful life of 5 to 10 years.

2. Summary of significant accounting policies (Continued)

2.9 Impairment of non-financial assets

Intangible assets that have an indefinite useful life or intangible assets not ready to use are not subject to amortisation and are tested annually for impairment. Assets that are subject to amortisation are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash inflows (CGUs). Nonfinancial assets other than goodwill that suffered an impairment are reviewed for possible reversal of the impairment at the end of each reporting date. Corporate assets are allocated to the relevant CGU when a reasonable and consistent basis of allocation can be established, or otherwise they are allocated to the smallest group of CGU for which a reasonable and consistent allocation basis can be established.

2.10 Financial assets

2.10.1 Classification

The Group classifies its financial assets in the following measurement categories:

- those to be measured subsequently at fair value (either through other comprehensive income ("OCI") or through profit or loss), and
- those to be measured at amortised cost.

The classification depends on the entity's business model for managing the financial assets and the contractual terms of the cash flows.

For assets measured at fair value, gains and losses will either be recorded in profit or loss or OCI. For investments in equity instruments that are not held for trading, this will depend on whether the Group has made an irrevocable election at the time of initial recognition to account for the equity investment at fair value through other comprehensive income ("FVTOCI").

The Group reclassifies debt investments when and only when its business model for managing those assets changes.

2.10.2 Recognition and derecognition

Regular way purchases and sales of financial assets are recognised on trade-date, the date on which the Group commits to purchase or sell the asset. Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or have been transferred and the Group has transferred substantially all the risks and rewards of ownership.

FOR THE YEAR ENDED 31 DECEMBER 2022

2. Summary of significant accounting policies (Continued)

2.10 Financial assets (Continued)

2.10.3 Measurement

At initial recognition, the Group measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss ("FVTPL"), transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at FVTPL are expensed in profit or loss.

Financial assets with embedded derivatives are considered in their entirety when determining whether their cash flows are solely payment of principal and interest.

Debt instruments

Subsequent measurement of debt instruments depends on the Group's business model for managing the asset and the cash flow characteristics of the asset. There are three measurement categories into which the Group classifies its debt instruments:

- Amortised cost: Assets that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortised cost. Interest income from these financial assets is included in finance income using the effective interest rate method. Any gain or loss arising on derecognition is recognised directly in profit or loss and presented in other gains or losses together with foreign exchange gains and losses. Impairment losses are presented as separate line item in the statement of profit or loss.
- FVTOCI: Assets that are held for collection of contractual cash flows and for selling the financial assets, where the assets' cash flows represent solely payments of principal and interest, are measured at FVTOCI. Movements in the carrying amount are taken through OCI, except for the recognition of impairment gains or losses, interest income and foreign exchange gains and losses which are recognised in profit or loss. When the financial asset is derecognised, the cumulative gain or loss previously recognised in OCI is reclassified from equity to profit or loss and recognised in other gains or losses. Interest income from these financial assets is included in finance income using the effective interest rate method. Foreign exchange gains and losses are presented in other gains or losses.
- FVTPL: Assets that do not meet the criteria for amortised cost or FVTOCI are measured at FVTPL. A gain or loss on a debt investment that is subsequently measured at FVTPL is recognised in profit or loss and presented net within other gains or losses in the period in which it arises.

2. Summary of significant accounting policies (Continued)

2.10 Financial assets (Continued)

2.10.3 Measurement (Continued)

Equity instruments

The Group subsequently measures all equity investments at fair value. Where the Group's management has elected to present fair value gains and losses on equity investments in OCI, there is no subsequent reclassification of fair value gains and losses to profit or loss following the derecognition of the investment. Dividends from such investments continue to be recognised in profit or loss as other income when the Group's right to receive payments is established.

Changes in the fair value of financial assets at FVTPL are recognised in other gains or losses in the statement of profit or loss as applicable.

2.10.4 Impairment

The Group assesses on a forward-looking basis the expected credit losses associated with its debt instruments carried at amortised cost and FVTOCI. The impairment methodology applied depends on whether there has been a significant increase in credit risk.

For trade receivables, the Group applies the simplified approach permitted by IFRS 9, which requires expected lifetime losses to be recognised from initial recognition of the receivables, see Note 36.3.2 for further details.

2.11 Offsetting financial instruments

Financial assets and liabilities are offset and the net amount reported in the consolidated statement of financial position where there is a legally enforceable right to offset the recognised amounts, and there is an intention to settle on a net basis or realise the asset and settle the liability simultaneously. The legally enforceable right must not be contingent on future events and must be enforceable in the normal course of business and in the event of default, insolvency or bankruptcy of the company or the counterparty.

FOR THE YEAR ENDED 31 DECEMBER 2022

2. Summary of significant accounting policies (Continued)

2.12 Investment properties

Investment properties are properties held to earn rentals and/or for capital appreciation.

Investment properties are initially measured at cost, including any directly attributable expenditure. Subsequent to initial recognition, investment properties are stated at cost less subsequent accumulated depreciation and any accumulated impairment losses. Depreciation is recognised so as to write off the cost of investment properties over their estimated useful lives and after taking into account of their estimated residual value, using the straight-line method.

An investment property is derecognised upon disposal or when the investment property is permanently withdrawn from use and no future economic benefits are expected from its disposal.

2.13 Inventories

Inventories are stated at the lower of cost and net realisable value. Cost is determined using the weighted average method. The cost of finished goods and work in progress comprises design costs, raw materials, direct labour, other direct costs and related production overheads (based on normal operating capacity). It excludes borrowing costs. Net realisable value is the estimated selling price in the ordinary course of business, less applicable variable selling expenses.

2.14 Trade and other receivables

Trade receivables are amounts due from customers for merchandise sold or services performed in the ordinary course of business. If collection of trade and other receivables is expected in one year or less (or in the normal operating cycle of the business if longer), they are classified as current assets. If not, they are presented as non-current assets.

Trade and other receivables are recognised initially at the amount of consideration that is unconditional unless they contain significant financing components, when they are recognised at fair value. The Group holds the trade receivables with the objective to collect the contractual cash flows and therefore measures them subsequently at amortised cost using the effective interest method. See Note 22 for further information about the Group's accounting for trade receivables and Note 36.3.2 for a description of the Group's impairment policies.

2.15 Cash and cash equivalents

In the consolidated statement of cash flows, cash and cash equivalents include cash in hand, deposits held at call with banks, other short-term highly liquid investments with original maturities of three months or less, and bank overdrafts.

2. Summary of significant accounting policies (Continued)

2.16 Share capital

Ordinary shares are classified as equity.

Incremental costs directly attributable to the issue of new shares or options are shown in equity as a deduction, net of tax, from the proceeds.

2.17 Trade and other payables

Trade payables are obligations to pay for goods or services that have been acquired in the ordinary course of business from suppliers. Trade payables are classified as current liabilities if payment is due within one year or less (or in the normal operating cycle of the business if longer). If not, they are presented as non-current liabilities.

Trade payables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method.

2.18 Borrowings

Borrowings are recognised initially at fair value, net of transaction costs incurred. Borrowings are subsequently carried at amortised cost; any difference between the proceeds (net of transaction costs) and the redemption amount is recognised in profit or loss over the period of the borrowings using the effective interest method.

Fees paid on the establishment of loan facilities are recognised as transaction costs of the loan to the extent that it is probable that some or all of the facility will be drawn down. In this case, the fee is deferred until the draw down occurs. To the extent there is no evidence that it is probable that some or all of the facility will be drawn down, the fee is capitalised as a prepayment for liquidity services and amortised over the period of the facility to which it relates.

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least 12 months after the end of the reporting period.

2. Summary of significant accounting policies (Continued)

2.19 Borrowing costs

General and specific borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale.

Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalisation.

All other borrowing costs are recognised in profit or loss in the period in which they are incurred.

Borrowing costs include interest expense, finance charges in respect of finance lease and exchange differences arising from foreign currency borrowings to the extent that they are regarded as an adjustment to interest costs. The exchange gains and losses that are an adjustment to interest costs include the interest rate differential between borrowing costs that would be incurred if the entity had borrowed funds in its functional currency, and the borrowing costs actually incurred on foreign currency borrowings. Such amounts are estimated based on interest rates on similar borrowings in the entity's functional currency.

When the construction of the qualifying assets takes more than one accounting period, the amount of foreign exchange differences eligible for capitalisation is determined for each annual period and are limited to the difference between the hypothetical interest amount for the functional currency borrowings and the actual interest incurred for foreign currency borrowings. Foreign exchange differences that did not meet the criteria for capitalisation in previous years should not be capitalised in subsequent years.

2.20 Current and deferred income tax

The tax expense for the period comprises current and deferred tax. Tax is recognised in profit or loss, except to the extent that it relates to items recognised in other comprehensive income or directly in equity. In this case, the tax is also recognised in other comprehensive income or directly in equity, respectively.

2. Summary of significant accounting policies (Continued)

2.20 Current and deferred income tax (Continued)

2.20.1 Current income tax

The current income tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the consolidated statement of financial position date in the countries where the Company and its subsidiaries and associates operate and generate taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

2.20.2 Deferred income tax

Inside basis differences

Deferred income tax is recognised on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. However, deferred tax liabilities are not recognised if they arise from the initial recognition of goodwill, the deferred income tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss. Deferred income tax is determined using tax rates (and laws) that have been enacted or substantially enacted by the consolidated statement of financial position date and are expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled.

Deferred tax assets are recognised only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

Outside basis differences

Deferred income tax liabilities are provided on taxable temporary differences arising from investments in subsidiaries, associates and joint arrangements, except for deferred income tax liability where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future. Generally the Group is unable to control the reversal of the temporary difference for associates. Only when there is an agreement in place that gives the Group the ability to control the reversal of the temporary difference in the foreseeable future, deferred tax liability in relation to taxable temporary differences arising from the associate's undistributed profits is not recognised.

Deferred income tax assets are recognised on deductible temporary differences arising from investments in subsidiaries, associates and joint arrangements only to the extent that it is probable the temporary difference will reverse in the future and there is sufficient taxable profit available against which the temporary difference can be utilised.

FOR THE YEAR ENDED 31 DECEMBER 2022

2. Summary of significant accounting policies (Continued)

2.20 Current and deferred income tax (Continued)

2.20.2 Deferred income tax (Continued)

Offsetting

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred income tax assets and liabilities relate to income taxes levied by the same taxation authority on either the taxable entity or different taxable entities where there is an intention to settle the balances on a net basis.

2.21 Employee benefits

2.21.1 Pension obligations

Pursuant to the relevant labour rules and regulations in the PRC, the PRC subsidiaries of the Group participates in defined contribution retirement benefit schemes (the "Schemes") organised by the PRC municipal government authorities whereby the Group is required to make contributions to the Schemes. The local government authority is responsible for the entire pension obligations payable to retired employees. The contributions to the schemes are charged to profit or loss as and when incurred.

2.21.2 Housing fund and other benefits

All full-time employees of the Group's subsidiaries in the PRC are entitled to participate in various government-sponsored housing and other benefits funds. The Group contributes on a monthly basis to these funds based on certain percentages of the salaries of the employees. The Group's liability in respect of these funds is limited to the contributions payable in each period.

2.21.3 Short-term employee benefits

Short-term employee benefits are recognised at the undiscounted amount of the benefits expected to be paid as and when employees rendered the services. All short-term employee benefits are recognised as an expense unless another IFRS requires or permits the inclusion of the benefit in the cost of an asset.

2. Summary of significant accounting policies (Continued)

2.22 Share-based payments

2.22.1 Equity-settled share-based payment transactions

The Group operates an equity-settled, share-based compensation plan, under which the entity receives services from employees as consideration for equity instruments (options) of the Group. The fair value of the employee services received in exchange for the grant of the options is recognised as an expense. The total amount to be expensed is determined by reference to the fair value of the options granted:

- including any market performance conditions (for example, an entity's share price);
- excluding the impact of any service and non-market performance vesting conditions (for example, profitability, sales growth targets and remaining an employee of the entity over a specified time period); and
- including the impact of any non-vesting conditions (for example, the requirement for employees to save or holding shares for a specified period of time).

At the end of each reporting period, the Group revises its estimates of the number of options that are expected to vest based on the non-marketing performance and service conditions. It recognises the impact of the revision to original estimates, if any, in profit or loss, with a corresponding adjustment to equity.

In addition, in some circumstances employees may provide services in advance of the grant date and therefore the grant date fair value is estimated for the purposes of recognising the expense during the period between service commencement period and grant date.

When the options are exercised, the Company issues new shares. The proceeds received net of any directly attributable transaction costs are credited to share capital (and share premium).

2.22.2 Share-based payment transactions among group entities

The grant by the Company of options over its equity instruments to the employees of subsidiary undertakings in the Group is treated as a capital contribution. The fair value of employee services received, measured by reference to the grant date fair value, is recognised over the vesting period as an increase to investment in subsidiary undertakings, with a corresponding credit to equity in the parent entity accounts.

2. Summary of significant accounting policies (Continued)

2.23 Provision

Provisions for warranties costs and legal claims are recognised when: the Group has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required to settle the obligation and the amount can be reliably estimated. Provisions are not recognised for future operating losses.

Where there are a number of similar obligations, the likelihood that an outflow will be required in settlement is determined by considering the class of obligations as a whole. A provision is recognised even if the likelihood of an outflow with respect to any one item included in the same class of obligations may be small.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation using a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the obligation. The increase in the provision due to the passage of time is recognised as interest expense.

Present obligations arising under onerous contracts are recognised and measured as provisions. An onerous contract is considered to exist where the Group has a contract under which the unavoidable costs of meeting the obligations under the contract exceed the economic benefits expected to be received from the contract. The unavoidable costs under a contract reflect the least net cost of exiting from the contract, which is the lower of the net cost of fulfilling it and any compensation or penalties arising from failure to fulfil it.

2.24 Revenue recognition

The Group recognises revenue when (or as) a performance obligation is satisfied, i.e. when "control" of the goods or services underlying the particular performance obligation is transferred to the customer.

A performance obligation represents a good or service (or a bundle of goods or services) that is distinct or a series of distinct goods or services that are substantially the same.

2. Summary of significant accounting policies (Continued)

2.24 Revenue recognition (Continued)

Control is transferred over time and revenue is recognised over time by reference to the progress towards complete satisfaction of the relevant performance obligation if one of the following criteria is met:

- the customer simultaneously receives and consumes the benefits provided by the Group's performance as the Group performs;
- the Group's performance creates or enhances an asset that the customer controls as the Group performs; or
- the Group's performance does not create an asset with an alternative use to the Group and the Group has an enforceable right to payment for performance completed to date.

Otherwise, revenue is recognised at a point in time when the customer obtains control of the distinct good or service.

2.24.1 Sales of goods

Revenue recognised at a point of time

The Group manufactures and sells land drillings rigs, parts and components to the ultimate customers. Sales are recognised when control of the products has transferred, being when the customer has the ability to direct the use of and obtain substantially all of the remaining benefits from the products. The control of products is transferred when products have been shipped to the specified location, being when customer has accepted the products and collectability of the related parted receivables is reasonably assured.

FOR THE YEAR ENDED 31 DECEMBER 2022

2. Summary of significant accounting policies (Continued)

2.24 Revenue recognition (Continued)

2.24.1 Sales of goods (Continued)

Revenue recognised over time

Revenue is recognised over time for contracts (related to manufacture and sell of land drilling rigs) that the Group's performance does not create an asset with alternative use and the Group has an enforceable right to payment for performance completed to date. Revenue is measured on the basis of the Group's efforts or inputs to the satisfaction of a performance obligation relative to the total expected inputs to the satisfaction of that performance obligation, which best depicts the Group's performance in transferring control of goods.

The sales commission is the incremental cost of obtaining a contract and the Group expenses these costs as incurred where the expected amortisation period is one year or less.

For contracts that contain more than one performance obligations, typically sales of products, transportation as well as installation services in one contract, the Group allocates the transaction price to each performance obligation on a relative stand-alone selling price basis.

The Group's obligation to repair or replace faulty products under the standard warranty terms is recognised as a provision, see Note 26.

Instalment sales, under which the consideration is receivable by instalments. Financing components shall be considered for certain contracts where the period between the transfer of the promised goods or services to the customer and payment by the customer exceeds one year. As a consequence, the Group adjusts the transaction prices for the time value of money.

As receivable is recognised when the goods are delivered as this is the point in time that the consideration is unconditional because only the passage of time is required before the payment is due.

2.24.2 Sales of services

The Group provides drilling engineering services and fracturing services. Revenue is recognised on the basis of outputs to the satisfaction of the performance obligation relative to the total expected outputs to the satisfaction of that performance obligation.

2. Summary of significant accounting policies (Continued)

2.24 Revenue recognition (Continued)

2.24.3 Contract costs – costs to fulfil a contract

The Group incurs costs to fulfil a contract in its drilling engineering services and fracturing services. The Group first assesses whether these costs qualify for recognition as an asset in terms of other relevant standards, failing which it recognises an asset for these costs only if they meet all of the following criteria:

- the costs relate directly to a contract or to an anticipated contract that the Group can specifically identify;
- the costs generate or enhance resources of the Group that will be used in satisfying (or in continuing to satisfy) performance obligations in the future; and
- the costs are expected to be recovered.

The asset so recognised is subsequently amortised to profit or loss on a systematic basis that is consistent with the transfer to the customer of the goods or services to which the assets relate. The asset is subject to impairment review.

2.24.4 Incremental costs of obtaining a contract

Incremental costs of obtaining a contract are those costs that the Group incurs to obtain a contract with a customer that it would not have incurred if the contract had not been obtained.

The Group recognises such costs as an asset if it expects to recover these costs. The asset so recognised is subsequently amortised to profit or loss on a systematic basis that is consistent with the transfer to the customer of the goods or services to which the assets relate.

The Group applies the practical expedient of expensing all incremental costs (ie. commission) to obtain a contract if these costs would otherwise have been fully amortised to profit or loss within one year.

FOR THE YEAR ENDED 31 DECEMBER 2022

2. Summary of significant accounting policies (Continued)

2.25 Earnings per share

2.25.1 Basic earnings per share

Basic earnings per share is calculated by dividing:

• the profit attributable to owners of the company, excluding any costs of servicing equity other than ordinary shares by the weighted average number of ordinary shares outstanding during the financial year, adjusted for bonus elements in ordinary shares issued during the year and excluding treasury shares.

2.25.2 Diluted earnings per share

Diluted earnings per share adjusts the figures used in the determination of basic earnings per share to take into account:

- the after income tax effect of interest and other financing costs associated with dilutive potential ordinary shares; and
- the weighted average number of additional ordinary shares that would have been outstanding assuming the conversion of all dilutive potential ordinary shares.

2.26 Dividend income

Dividends are received from financial assets measured at FVTPL and at FVTOCI. Dividends are recognised as other income in profit or loss when the right to receive payment is established. This applies even if they are paid out of pre-acquisition profits, unless the dividend clearly represents a recovery of part of the cost of an investment. In this case, the dividend is recognised in OCI if it relates to an investment measured at FVTOCI. However, the investment may need to be tested for impairment as a consequence.

2.27 Leases

Leases are recognised as a right of use asset and a corresponding liability at the date at which the leased asset is available for use by the Group.

Contracts may contain both lease and non-lease components. For lease that contains both lease and non-lease components, the Group has elected not to separate lease and non-lease components and instead accounts the lease as a single lease component.

2. Summary of significant accounting policies (Continued)

2.27 Leases (Continued)

Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions. The lease agreements do not impose any covenants other than the security interests in the leased assets that are held by the lessor. Leased assets may not be used as security for borrowing purposes.

Assets and liabilities arising from a lease are initially measured on a present value basis. Lease liabilities include the net present value of the following lease payments:

- fixed payments (including in-substance fixed payments), less any lease incentives receivable;
- variable lease payment that are based on an index or a rate, initially measured using the index or rate as at the commencement date;
- amounts expected to be payable by the Group under residual value guarantees;
- the exercise price of a purchase option if the Group is reasonably certain to exercise that option; and
- payments of penalties for terminating the lease, if the lease term reflects the Group exercising that option.

The variable lease payments which are not based on an index or a rate are not included in the measurement of the lease liability initially, and are recognised in profit or loss in the period in which the event or condition that triggers those payments occurs.

Lease payments to be made under reasonably certain extension options are also included in the measurement of the liability.

The lease payments are discounted using the interest rate implicit in the lease. If that rate cannot be readily determined, which is generally the case for leases in the Group, the lessee's incremental borrowing rate is used, being the rate that the individual lessee would have to pay to borrow the funds necessary to obtain an asset of similar value to the right of use asset in a similar economic environment with similar terms, security and conditions.

FOR THE YEAR ENDED 31 DECEMBER 2022

2. Summary of significant accounting policies (Continued)

2.27 Leases (Continued)

To determine the incremental borrowing rate, the Group:

- where possible, uses recent third-party financing received by the individual lessee as a starting point, adjusted to reflect changes in financing conditions since third party financing was received;
- uses a build-up approach that starts with a risk-free interest rate adjusted for credit risk for leases held by the entities within the Group, which does not have recent third party financing; and
- makes adjustments specific to the lease, e.g. term, country, currency and security.

Lease payments are allocated between principal and finance cost. The finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period.

Right of use assets are measured at cost comprising the following:

- the amount of the initial measurement of lease liability;
- any lease payments made at or before the commencement date less any lease incentives received;
- any initial direct costs, and
- restoration costs.

Right of use assets are generally depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis. If the Group is reasonably certain to exercise a purchase option, the right of use asset is depreciated over the underlying asset's useful life.

Payments associated with short-term leases of equipment and vehicles and all leases of low-value assets are recognised on a straight-line basis as an expense in profit or loss. Short-term leases are leases with a lease term of 12 months or less.

Lease income from operating leases where the Group is a lessor is recognised in income on a straightline basis over the lease term or on another systematic basis. Initial direct costs incurred in obtaining an operating lease are added to the carrying amount of the underlying asset and recognised as expense over the lease term on the same basis as lease income.

2. Summary of significant accounting policies (Continued)

2.27 Leases (Continued)

When the Group is an intermediate lessor, it accounts for the head lease and the sublease as two separate contracts. The sublease is classified as a finance or operating lease by reference to the right-of-use asset arising from the head lease, not with reference to the underlying asset.

Amounts due from lessees under finance leases are recognised as receivables at commencement date at amounts equal to net investments in the leases, measured using the interest rate implicit in the respective leases. Interest income is allocated to accounting periods so as to reflect a constant periodic rate of return on the Group's net investment outstanding in respect of the leases.

The respective leased assets are included in the consolidated statement of financial position based on their nature.

In classifying a sublease, the intermediate lessor shall classify the sublease as a finance lease or an operating lease as follows:

- if the head lease is a short-term lease that the Group, as a lessee, has accounted this lease on a straight-line basis over the lease term as an expense in profit or loss, the sublease shall be classified as an operating lease;
- otherwise, the sublease shall be classified by reference to the right of use assets arising from the head lease, rather than by reference to the underlying asset.

2.28 Dividend distribution

Provision is made for the amount of any dividend declared, being appropriately authorised and no longer at the discretion of the entity, on or before the end of the reporting period but not distributed at the end of the reporting period.

2.29 Government grant

Grants from the government are recognised at their fair value where there is a reasonable assurance that the grant will be received and the Group will comply with all attached conditions.

Government grants relating to costs are deferred and recognised in the profit or loss over the period necessary to match them with the costs that they are intended to compensate.

Government grants relating to the purchase of property, plant and equipment are included in noncurrent liabilities as deferred income and are credited to profit or loss on a straight-line basis over the expected lives of the related assets.

2. Summary of significant accounting policies (Continued)

2.30 Interest income

Interest income on financial assets at amortised cost and financial assets at FVTOCI calculated using the effective interest method is recognised in the consolidated statement of profit or loss as part of other income.

Interest income is presented as finance income where it is earned from financial assets that are held for cash management purposes, see Note 10 below. Any other interest income is included in other income.

Interest income is calculated by applying the effective interest rate to the gross carrying amount of a financial asset except for financial assets that subsequently become credit-impaired. For credit impaired financial assets the effective interest rate is applied to the net carrying amount of the financial asset (after deduction of the loss allowance).

2.31 Research and development

Research expenditure is recognised as an expense as incurred. Costs incurred on development projects (relating to the design and testing of new or improved products) are recognised as intangible assets when the following criteria are fulfilled:

- it is technically feasible to complete the intangible asset so that it will be available for use or sale;
- management intends to complete the intangible asset and use or sell it;
- there is an ability to use or sell the intangible asset;
- it can be demonstrated how the intangible asset will generate probable future economic benefits;
- adequate technical, financial and other resources to complete the development and to use or sell the intangible asset are available; and
- the expenditure attributable to the intangible asset during its development can be reliably measured.

Other development expenditures that do not meet these criteria are recognised as an expense as incurred. Development costs previously recognised as an expense are not recognised as an asset in a subsequent period. Capitalised development costs are recorded as intangible assets and amortised from the point at which the asset is ready for use on a straight-line basis over its useful life.

3. Critical accounting estimates and judgements

Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

The Group makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are addressed below.

(a) Impairment assessment on trade receivables due from a customer domicile in Ukraine

The Group determines expected credit losses based on default probability and default loss rate.

During the year ended 31 December 2022, in view of the conflict between Russia and Ukraine, the Group made individual assessment on trade receivables due from a customer domicile in Ukraine. The provision of expected credit loss was assessed by the management based on valuation prepared by independent qualified professional valuer engaged by the Company and approved by management. When determines the expected credit loss of such receivables, the Group take into account the insurance coverage, as well as the economic information related to the customer. As at 31 December 2022, carrying amount of trade receivables due from the customer domicile in Ukraine amounted to approximately RMB648,562,000 (2021: RMB838,491,000), net of expected credit loss of approximately RMB243,655,000 (2021: RMB12,956,000).

Details of the Group's measurement of expected credit loss is in Note 36.3.2(i).

(b) Allowance for inventories

Inventories are stated at the lower of cost and net realisable value ("NRV"). NRV is the estimated selling price in the ordinary course of business, less the estimated costs of completion and the estimated costs necessary to make the sale. The management reviews the aging of inventories at the end of the reporting period and estimates allowance for obsolete and slow-moving inventory items identified, as well as those inventories with carrying amount less than NRV, using the key inputs including the latest selling prices, and estimated costs of completion based on current market conditions. Due to changes in market conditions, actual selling price and costs of completion may be different from estimation and profit or loss could be affected by differences in this estimation. As at 31 December 2022, the carrying amount of inventories amounted to RMB1,491,298,000 (2021: RMB1,694,060,000). During the year ended 31 December 2022, the Group recognised allowance for inventories of approximately RMB85,569,000 (2021: RMB38,647,000).

FOR THE YEAR ENDED 31 DECEMBER 2022

3. Critical accounting estimates and judgements (Continued)

(c) Deferred tax assets

As at 31 December 2022, a deferred tax asset of RMB71,597,000 (2021: RMB133,687,000) in relation to unused tax losses for certain operating subsidiaries has been recognised in the consolidated statement of financial position. No deferred tax asset has been recognised on the tax losses of RMB1,937,660,000 (2021: RMB1,409,204,000) due to the unpredictability of future profit streams. The realisability of the deferred tax asset mainly depends on whether sufficient future profits or taxable temporary differences will be available in the future, which is a key source of estimation uncertainty. In cases where the actual future taxable profits generated are less or more than expected, or change in facts and circumstances which result in revision of future taxable profits estimation, a material reversal or further recognition of deferred tax assets may arise, which would be recognised in profit or loss for the period in which such a reversal or further recognition takes place.

(d) Impairment of non-financial assets

If circumstances indicate that the carrying value of non-financial assets may not be recoverable, these assets may be considered impaired, and an impairment loss may be recognised in accordance with IAS 36 *Impairment of Assets*. These assets are tested for impairment whenever events or changes in circumstances indicate that their recorded carrying amounts may not be recoverable. When an asset is impaired, the carrying amount is reduced to the recoverable amount. The recoverable amount is the greater of the fair value less costs to sell and the value in use. In determining that value in use, expected cash flows generated by the assets are discounted to their present value, which requires significant judgement relating to revenue, gross margin and pre-tax discount rate. The Group uses all readily available information in determining an amount that is a reasonable approximation of recoverable amount, including estimates based on reasonable and supportable assumptions and projections of revenue and amount of operating costs.

4. Segment information

The senior executive management is the Group's chief operating decision maker. Management has determined the operating segments based on the information reviewed by the senior executive management for the purposes of allocating resources and assessing performance.

The Group manages its businesses by divisions, which are organised by business lines and geographically. In a manner consistent with the way in which information is reported internally to the Group's chief operating decision maker ("CODM") for the purposes of resource allocation and performance assessment, the Group has identified four reportable segments. No operating segments have been aggregated in arriving at the reportable segments of the Group.

Specially, the Group's operating and reportable segments under IFRS 8 are as follows:

- (a) land drilling rigs;
- (b) parts and components and others;
- (c) drilling engineering services; and
- (d) fracturing services.

The senior executive management assesses the performance of the operating segments based on a measure of segment profit or loss. This measurement basis excludes the share of loss of joint ventures and associates, other gains or losses, net and other income and unallocated head office and corporate expenses. Finance income and expenses are not allocated to segments, as this type of activity is driven by the central treasury function, which manages the cash position of the Group. Other information provided, except as noted below, to the senior executive management is measured in a manner consistent with that in the consolidated financial statements.

Sales between segments are carried out in the ordinary course of business and in accordance with the terms of the underlying agreements. The revenue from external parties reported to the senior executive management is measured in a manner consistent with that in profit or loss.

4. Segment information (Continued)

The following table presents revenue and profit information regarding the Group's operating segments for the years ended 31 December 2022 and 2021 respectively. The Group derives revenue from the transfer of good and services over time and at a point in the following operating segments.

	Land drilling rigs Year ended 31 December		Parts and components and others Year ended 31 December		Drilling engineering services Year ended 31 December		Fracturing service Year ended 31 December		Total Year ended 31 December	
	2022 RMB'000	2021 RMB'000	2022 RMB'000	2021 RMB'000	2022 RMB'000	2021 RMB'000	2022 RMB'000	2021 RMB'000	2022 RMB'000	2021 RMB'000
Segment revenue	885,619	89,127	3,002,218	1,799,416	430,233	236,940	1,062,253	1,018,677	5,380,323	3,144,160
Inter-segment revenue	(142,436)	(101,074)	(747,442)	(106,482)	(10,941)		(3,400)		(904,219)	(207,556)
Revenue from external customers	743,183	(11,947)	2,254,776	1,692,934	419,292	236,940	1,058,853	1,018,677	4,476,104	2,936,604
	740,100	(11,047)	2,234,110	1,032,304	413,232	200,040	1,000,000	1,010,011	4,10,104	2,000,004
Timing of revenue recognition for contracts with customers										
- At a point in time	545,380	89,127	2,893,272	1,696,897	-	-	476,727	378,118	3,915,379	2,164,142
– Over time	340,239	-	-	-	430,233	236,940	585,526	640,559	1,355,998	877,499
Lease income	-	-	108,946	102,519	-	-	-	-	108,946	102,519
Reportable segment loss	(82,300)	(86,293)	(256,282)	(385,730)	(39,982)	(34,253)	(98,715)	(82,529)	(477,279)	(588,805)
Other segment information:										
Depreciation and amortisation										
for the year (Note)	56,738	7,202	161,509	105,106	32,010	46,112	80,837	22,433	331,094	180,853
Impairment on trade and other										
receivables and contract assets	221,934	12,621	17,613	326,111	79,299	2,750	(19,653)	21,618	299,193	363,100
Allowance for inventories	-	5,510	85,569	33,137	-	-	-	-	85,569	38,647
Write-down of contract costs	-	-	-	-	56,886	14,184	3,399	-	60,285	14,184
Impairment provision of property,										
plant and equipment	-	-	-	-	18,112	14,196	-	-	18,112	14,196

Note: The amount includes depreciation and amortisation of property, plant and equipment, intangible assets, right of use assets and other non-current assets.

4. Segment information (Continued)

Given the manufacturing processes of the Group's business are in a form of vertical integration, the CODM considered segment assets and liabilities information was not relevant in assessing performance of and allocating resources to the operations segments. During the year ended 31 December 2022 and 2021, such information was not reviewed by the Group's CODM. Accordingly, no segment assets and liabilities are presented.

A reconciliation of segment loss to loss before income tax is provided as follows:

	Year ended 31 December		
	2022	2021	
	RMB'000	RMB'000	
Segment loss			
- for reportable segments	(477,279)	(588,805)	
Elimination of inter-segment profit	(33,652)	(17,409)	
Segment loss derived from the Group's external customers	(510,931)	(606,214)	
Share of loss of joint ventures	(2,331)	(2,460)	
Other income and other gains or losses, net	101,030	32,479	
Finance income	67,533	95,679	
Finance expenses	(256,782)	(228,350)	
Unallocated head office and corporate expenses	(25,556)	(36,478)	
Loss before income tax	(624,783)	(745,344)	

The following is an analysis of the Group's revenue from its major products and services:

	Year ended 31 December		
	2022	2021	
	RMB'000	RMB'000	
Land drilling rigs	743,183	(11,947)	
Parts and components and others	2,254,776	1,692,934	
Drilling engineering services	419,292	236,940	
Fracturing services	1,058,853	1,018,677	
	4,476,104	2,936,604	

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4. Segment information (Continued)

The following table sets out revenue from external customers by geographical location, based on the destination of the customer:

	Year ended 31 December	
	2022 20	
	RMB'000	RMB'000
PRC (country of domicile)	2,556,410	2,176,955
Americas	71,066	43,612
Middle East	787,719	422,099
Europe and Central Asia	51,208	183,141
South Asia and South East Asia	68,819	61,002
Africa	940,882	49,795
	4,476,104	2,936,604

The following table sets out non-current assets, other than financial instruments and deferred income tax assets, by geographical location:

	At 31 December	
	2022	2021
	RMB'000	RMB'000
PRC (country of domicile)	2,949,692	3,117,061
Americas	1,606	280
Middle East	389,420	447,005
Europe and Central Asia	1,301	28,174
Africa	35,623	34,037
	3,377,642	3,626,557

For the year ended 31 December 2022, revenue of approximately RMB528,577,000 (2021: RMB326,011,000) was derived from one external customer. The revenue was attributed to the sales of "parts and components and other" (2021: fracturing service). No other customer contributed over 10% of the total revenue of the Group.

4. Segment information (Continued)

Assets and liabilities related to contracts with customers

(a) The Group has recognised the following assets and liabilities related to contracts with customers:

	At 31 December	
	2022	2021
	RMB'000	RMB'000
Contract assets – current	652,999	460,090
Less: loss allowance	(21,625)	(11,265)
Contract assets, net	631,374	448,825
Contract liabilities – current	760,953	154,348

As at 1 January 2021, contract assets and contract liabilities amounted to RMB687,791,000 and RMB139,608,000, respectively.

Included in contract liabilities represented amount of approximately RMB20,791,000 (2021: Nil) received from the Group's related companies.

Contract assets and contract liabilities are recognised under fracturing service, drilling engineering service and sales of land drilling rigs segments. The contract assets primarily relate to the Group's right to consideration for work completed and not billed because the rights are conditioned on the Group's future performance. The contract assets are transferred to trade receivables when the rights become unconditional.

The Group also recognised a loss allowance for contract assets in accordance with IFRS 9, see Note 36.3.2 for further information.

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4. Segment information (Continued)

Assets and liabilities related to contracts with customers (Continued)

(b) Revenue recognised in relation to contract liabilities

The following table shows how much of the revenue recognised in current reporting period relates to carried-forward contract liabilities:

	Year ended	31 December
	2022	2021
	RMB'000	RMB'000
Revenue recognised that was included in the contract		
liabilities balance at the beginning of the year		
Sales of goods	74,738	67,569

(c) Unsatisfied performance

As at 31 December 2022, the aggregate amount of the transaction price allocated to contracts that are partially or fully unsatisfied is RMB3,504,564,000 (2021: RMB2,931,877,000).

The management estimates that 80% or RMB2,803,651,000 (2021: 74% or RMB2,169,071,000) of the transaction price allocated to unsatisfied performance obligations as at 31 December 2022 will be recognised as revenue during the next reporting period. The remaining will be recognised in the 2024 financial year and afterwards.

5. Other income

	Year ended 31 December	
	2022	2021
	RMB'000	RMB'000
Government grants	38,103	56,828
Sales of scrap materials	24,235	25,391
Others	6,029	7,089
	68,367	89,308

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6. Expenses by nature

	Year ended 31 December	
	2022	2021
	RMB'000	RMB'000
Raw materials and consumables used	2,066,659	1,462,495
Employee benefit expenses	539,592	490,001
Service fee	536,003	320,760
Depreciation and amortisation		
- Property, plant and equipment	290,853	149,022
- Intangible assets	27,982	22,252
- Right of use assets	12,259	9,579
- Investment properties	2,906	2,004
Transportation	65,893	66,877
Changes in inventories of finished goods and work in progress	198,462	(266,196)
Provision for inventory write-down	85,569	38,647
Provision for contract costs	60,285	14,184
Research and development costs (Note)	43,804	57,527
Less: amount capitalised into intangible assets	(19,988)	(20,438)
Utilities	87,298	82,656
Short-term lease expenses	469,896	568,791
Travelling expenses	85,287	59,498
(Reversal of)/provision for impairment of prepayments	(4,346)	88
Repairs and maintenance expenditure on property, plant and equipment	10,651	14,505
Other taxes	10,092	20,502
Provision for warranty	15,310	3,074
Auditors' remuneration	3,190	4,979
Impairment provision of property, plant and equipment	18,112	14,196
Other expenses	105,375	101,193
Total cost of sales, distribution costs, research and		
development expenses and administrative expenses	4,711,144	3,216,196

Note: The amount does not include staff costs of the research and development department of approximately RMB70,524,000 (2021: RMB93,377,000) and relevant amortisation and depreciation of approximately RMB29,247,000 (2021: RMB28,837,000), which are included in the total staff costs as disclosed in Note 9 and total depreciation and amortisation in Notes 15 and 17, respectively.

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7. Other gains or losses, net

	Year ended 31 December	
	2022	2021
	RMB'000	RMB'000
Insurance compensation	-	2,698
Net foreign exchange gains/(losses)	36,302	(59,545)
Gains on disposals of property, plant and equipment	1,060	3,264
Legal claims	-	(13,256)
Loss on derecognition of a subsidiary (Note)	(15,533)	_
Others	10,834	10,010
	32,663	(56,829)

Note: During the year ended 31 December 2022, Russia Touhey Motor Drilling Service Limited ("TNG"), a subsidiary located in Russia, filed for bankruptcy liquidation to the local governmental authority and was derecognised from the Group's consolidated financial statements. The Group recorded a loss on derecognition of approximately RMB15,533,000 during the year ended 31 December 2022.

8. Benefits and interests of directors

(a) Directors' emoluments

The remuneration of the directors and the chief executive is set out below:

For the year ended 31 December 2022

		Basic salaries,			Equity- settled	
		allowances and other	to defined contribution		settled share-based	
		benefits	retirement	Discretionary	payment	
Name	Fees	in kind	scheme	bonuses	expenses	Total
Name	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
	111110 000		11110 000	11110 000		
Chairman and Executive Director						
Wang Xu (i)	-	54	7	-	-	61
Jin Liliang (ii)	-	667	113	653	-	1,433
Executive Directors						
Zhu Hua (iii)	-	239	41	-	-	280
Ren Jie (iv)	-	536	78	59	-	673
Non-executive Directors						
Zhang Mi (v)	-	-	-	-	-	-
Yang Yong (vi)	-	-	-	-	-	-
Chen Wenle (vii)	-	-	-	-	-	-
Wang Xiuchang (viii)	-	-	-	-	-	-
Independent Non-executive Directors						
Chen Guoming	103	-	-	-	-	103
Su Mei	103	-	-	-	-	103
Chang Qing	103	-	-	-	-	103
Wei Bin	206	-	-	-	-	206
Zhang Shiju (ix)	52	-	-	-	-	52
Total	567	1,496	239	712	-	3,014

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8. Benefits and interests of directors (Continued)

(a) Directors' emoluments (Continued)

For the year ended 31 December 2021

		Basic salaries,	Contributions		Equity-	
		allowances	to defined		settled	
		and other	contribution		share-based	
		benefits	retirement	Discretionary	payment	
Name	Fees	in kind	scheme	bonuses	expenses	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Chairman and Executive Director						
Jin Liliang (ii)	-	711	73	-	-	784
Executive Directors						
Ren Jie (iv)	-	532	73	363	-	968
Zhang Mi (v)	-	641	-	-	-	641
Non-executive Directors						
Chen Wenle (vii)	-	-	-	-	-	-
Wang Xiuchang (viii)	-	-	-	-	-	-
Han Guangrong (x)	-	-	-	-	-	-
Independent Non-executive Directors						
Chen Guoming	100	-	-	-	-	100
Su Mei	100	-	-	-	-	100
Liu Xiaofeng (xi)	176	-	-	-	-	176
Poon Chiu Kwok (xii)	137	-	-	-	-	137
Chang Qing	100	-	-	-	-	100
Wei Bin	199				_	199
Total	812	1,884	146	363	_	3,205

FOR THE YEAR ENDED 31 DECEMBER 2022

8. Benefits and interests of directors (Continued)

(a) Directors' emoluments (Continued)

For the year ended 31 December 2021 (Continued)

Notes:

- Mr. Wang Xu was appointed as the Chairman and Executive Director of the Company with effect from 25 November 2022.
- (ii) Mr. Jin Liliang tendered his resignation as the Chairman and Executive Director of the Company with effect from 25 November 2022.
- (iii) Mr. Zhu Hua was appointed as the Executive Director of the Company with effect from 4 July 2022.
- (iv) Mr. Ren Jie tendered his resignation as Executive Director of the Company with effect from 4 July 2022.
- (v) Mr. Zhang Mi was re-designated as the Non-Executive Director from an Executive Director on 1 January 2022.
- (vi) Mr. Yang Yong was appointed as the Non-Executive Director of the Company with effect from 4 July 2022.
- (vii) Mr. Chen Wenle tendered his resignation as the Non-Executive Director of the Company with effect from 4 July 2022.
- (viii) Mr. Wang Xiuchang was appointed as the Non-Executive Director of the Company with effect from 28 October 2021 and tendered his resignation as the Non-Executive Director of the Company with effect from 4 July 2022.
- (ix) Mr. Zhang Shiju was appointed as the Independent Non-Executive Director of the Company with effect from 4 July 2022.
- (x) Mr. Han Guangrong tendered his resignation as the Non-Executive Director of the Company with effect from 28 October 2021.
- (xi) Mr. Liu Xiaofeng tendered his resignation as an Independent Non-Executive Director, Chairman of Remuneration Committee, a member of the Remuneration Committee, Audit Committee and Strategic Investment and Risk Control Committee of the Company with effect from 19 November 2021.
- (xii) Mr. Poon Chiu Kwok tendered his resignation as an Independent Non-Executive Director, and a member of Remuneration Committee, Audit Committee and Strategic Investment and Risk Control Committee of the Company with effect from 1 December 2021.

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8. Benefits and interests of directors (Continued)

(a) Directors' emoluments (Continued)

For the year ended 31 December 2021 (Continued)

The executive directors' emoluments shown above were for their services in connection with the management of the affairs of the Company and the Group.

The non-executive directors' emoluments shown above were for their services as directors of the Company and its subsidiaries, if applicable.

The independent non-executive directors' emoluments shown above were for their services as directors of the Company.

(b) Directors' retirement benefits and termination benefits

For the years ended 31 December 2022 and 2021, no special retirement and termination benefits plans to the directors for the year except for the plans to all the Group's employees mentioned in Note 9. No other retirement and termination benefits were paid to or receivable by those directors in respect of their other services in connection with the management of the affairs of the Company or its subsidiary undertaking.

(c) Consideration provided to third parties for making available directors' services

During the year ended 31 December 2022, the Company did not provide any consideration to any third party for making available director's services (2021: nil).

(d) Information about loans, quasi-loans and other dealings in favour of directors, controlled bodies corporate by and connected entities with such directors

During the year ended 31 December 2022, no loans, quasi-loans or other dealings in favour of directors of the Company, controlled bodies corporate by and connected entities with such directors (2021: nil).

(e) Directors' material interests in transactions, arrangements or contracts

Save for contracts amongst group companies and the interests in transactions, arrangements or contracts mentioned in Note 34, no other significant transactions, arrangements and contracts in relation to the Group's business to which the Company was a party and in which a director of the Company had a material interest, whether directly or indirectly, subsisted at the end of the year or at any time during the year.

9. Employee benefit expense

	Year ended 31 December	
	2022	2021
	RMB'000	RMB'000
Contributions to defined contribution retirement schemes	50,619	36,491
Salaries, wages and other benefits	488,973	453,510
	539,592	490,001

Five highest paid individuals

The five individuals whose emoluments were highest in the Group for the year ended 31 December 2022 did not include any director (2021: nil). The emoluments of the directors are reflected in the analysis disclosed as Note 9. The emoluments payable to the five (2021: five) individuals for the years ended 31 December 2022 and 2021 are as follows:

	Year ended 31 December	
	2022	2021
	RMB'000	RMB'000
Basic salaries, allowances and other benefits in kind	7,079	4,144
Discretionary bonuses	2,685	4,899
Contributions to defined contribution retirement schemes	295	356
	10,059	9,399

The emoluments of the above individual fell within the following bands:

	Number of individuals		
	2022	2021	
HKD1,500,001 to HKD2,000,000	1	2	
HKD2,000,001 to HKD2,500,000	2	2	
HKD2,500,001 to HKD3,000,000	2	1	

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10. Finance expenses, net

	Year ended 3	Year ended 31 December		
	2022	2021		
	RMB'000	RMB'000		
Finance expenses				
Interest on borrowings wholly repayable within five years	209,280	224,038		
Interest expense from lease liabilities	2,685	4,715		
Other	198	3		
Net foreign exchange loss	45,111	-		
Less: interest expense capitalised into assets under construction (Note 15)	(492)	(406)		
	256,782	228,350		
Finance income				
Interest income on bank deposits	(59,891)	(27,208)		
Interest income from non-current receivables	(7,642)	(14,723)		
Net foreign exchange gain	-	(53,748)		
	(67,533)	(95,679)		
Financial expenses, net	189,249	132,671		

11. Particulars of subsidiaries

The following is a list of the principal subsidiaries as at 31 December 2022 and 2021:

	Place of	Place of	Particulars of issued	Attributable e	quity interest	
Name of company	incorporation	operation	and paid-up capital	2022	2021	Principal activities
<i>Directly held:</i> Honghua Holdings Limited ("Honghua Holdings")	Hong Kong	Hong Kong	1 ordinary share	100%	100%	Investment holding
<i>Indirectly held:</i> Honghua (China) Investment Co., Ltd. ("Honghua China") ((a), (b) and (c))	The PRC	The PRC	Registered capital United States Dollars ("USD") 320,000,000	100%	100%	Investment holding
Sichuan Honghua Petroleum Equipment Co., Ltd. ("Honghua Company") ((a) and (c))	The PRC	The PRC	Registered capital RMB2,200,000,000	100%	100%	Manufacturing of petroleum equipment
Sichuan Honghua Electric Co., Ltd. ("Honghua Electric") ((a) and (c))	The PRC	The PRC	Registered capital RMB100,000,000	84%	84%	Manufacturing of panel of drilling rigs
Honghua International Co., Ltd. ("Honghua International") ((a) and (c))	The PRC	The PRC	Registered capital RMB51,200,000	91%	91%	Trading of drilling rigs and related parts
Honghua Oil & Gas Engineering Technology Services Limited ("Sichuan Oil & Gas Services") ((a) and (c))	The PRC	The PRC	Registered capital RMB732,600,000	100%	100%	Drilling engineering service and fracturing service
Gansu Hongteng Oil & Gas Equipment Co., Ltd. ("Gansu Hongteng") ((a) and (c))	The PRC	The PRC	Registered capital RMB120,000,000	70%	70%	Manufacturing of related parts of drilling rigs
Honghua Oil & Gas Engineering Services Limited ("Hongkong Oil & Gas Services")	Hong Kong	Iraq	Registered capital USD41,080,000	100%	100%	Drilling engineering service and fracturing service

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11. Particulars of subsidiaries (Continued)

	Place of	Place of	Particulars of issued	Attributable e	quity interest	
Name of company	incorporation	operation	and paid-up capital	2022	2021	Principal activities
Newco (H.K.) Limited	Hong Kong	Hong Kong	1,000 ordinary shares	100%	100%	Trading of drilling rigs and related parts
Honghua America, LLC	United States of America	United States of America	Registered capital USD3,414,000	100%	100%	Trading of drilling rigs and related parts
TNG	Russia Federation	Russia Federation	Registered capital Russia Rouble ("RUB") 489.297.000	N/A	51%	Drilling engineering service
Han Zheng Testing Technology Co., Ltd. ("Han Zheng Testing")	The PRC	The PRC	Registered capital RMB11,103,000	100%	100%	Testing service
Honghua Golden Coast Equipment FZE	United Arab Emirates	United Arab Emirates	Registered capital Arab Emirates Dirham 1,000,000	100%	100%	Trading of drilling rigs and related parts
Honghua Energy Equipment Limited	Russia Federation	Russia Federation	Registered capital RUB13,340,000	100%	100%	Trading of drilling rigs and related parts
Honghua Offshore Oil and Gas Equipment (Jiangsu) Co., Ltd. ("Honghua (Jiangsu)") ((a) and (c))	The PRC	The PRC	Registered capital RMB874,993,000	100%	100%	Manufacturing of wind power equipment

Notes:

(a) These entities are domestic limited liability companies established in the PRC.

(b) The entity is a wholly-owned foreign invested company established in the PRC.

(c) The official names of these companies are in Chinese. The English translation of the company name is for reference only.

11. Particulars of subsidiaries (Continued)

Material non-controlling interests

The total non-controlling interests as at 31 December 2022 was approximately RMB230,201,000 (2021: RMB208,760,000), of which approximately RMB202,751,000 (2021: RMB198,731,000) is attributed to Honghua Electric, approximately RMB21,891,000 (2021: RMB16,887,000) is attributed to Honghua International and approximately RMB5,559,000 (2021: RMB5,276,000) is attributed to Gansu Hongteng. The amounts disclosed for each subsidiary are before inter-company eliminations.

Summarised financial information on subsidiaries with material non-controlling interests

Set out below are the summarised financial information for each subsidiary that has non-controlling interests that are material to the Group. The amounts disclosed for each subsidiary are before inter-company eliminations.

Summarised statement of financial position

	-	Honghua Electric As at 31 December		Honghua International As at 31 December		ongteng December	
	2022	2021	2022	2021	2022	2021	
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	
Current							
Assets	2,703,946	2,508,182	1,074,219	913,189	58,252	58,543	
Liabilities	(1,591,677)	(1,563,972)	(901,522)	(821,337)	(93,302)	(90,707)	
Total current net assets/(liabilities)	1,112,269	944,210	172,697	91,852	(35,050)	(32,164)	
Non-current							
Assets	392,925	343,930	59,944	80,411	64,979	57,487	
Liabilities	(191,440)	(11,049)	-	-	(9,376)	(6,146)	
Total non-current net assets	201,485	332,881	59,944	80,411	55,603	51,341	
Net assets	1,313,754	1,277,091	232,641	172,263	20,553	19,177	

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11. Particulars of subsidiaries (Continued)

Summarised financial information on subsidiaries with material non-controlling interests (Continued)

Summarised statement of profit or loss and other comprehensive income

	Honghua Electric		Honghua International		Gansu Hongteng		
	Year ended 3	Year ended 31 December		31 December	Year ended 3	Year ended 31 December	
	2022	2021	2022	2021	2022	2021	
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	
Revenue	1,269,792	1,204,755	415,656	504,477	38,958	41,465	
Profit/(loss) before income tax	41,370	4,681	40,248	(78,097)	(7,903)	(8,961)	
Income tax (expense)/credit	(4,707)	4,023	20,130	(3,093)	9,279	(9,746)	
Profit/(loss) for the year	36,663	8,704	60,378	(81,190)	1,376	(18,707)	
Other comprehensive income for the year	-	-	-	-	-	-	
Total comprehensive income for the year	36,663	8,704	60,378	(81,190)	1,376	(18,707)	
Total comprehensive income allocated							
to non-controlling interests	4,020	1,415	5,004	(7,453)	283	(5,612)	

Summarised cash flows

	Honghua Electric Year ended 31 December		Honghua International Year ended 31 December		Gansu Hongteng Year ended 31 December	
		December		December	Tear ended o	December
	2022	2021	2022	2021	2022	2021
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Cash flows from operating activities						
Cash generated from/(used in) operations	150,996	(124,630)	(182,320)	43,036	37	(3,161)
Income tax paid	(496)	(20,483)	-	-	-	(9)
Net cash generated from/(used in)						
operating activities	150,500	(145,113)	(182,320)	43,036	37	(3,170)
Net cash/(used in) generated from						
investing activities	(63,359)	(3,266)	139,446	(56,760)	(394)	1,685
Net cash/(used in) generated from						
financing activities	(297,272)	261,173	83,554	(78,111)	(394)	1,110

12. Income tax (expense)/credit

Taxation in the consolidated statement of profit or loss represents:

	Year ended 3	Year ended 31 December		
	2022	2021		
	RMB'000	RMB'000		
Current income tax – Hong Kong Profits Tax (a)				
Provision for the year	1,693	2,736		
Over provision in respect of prior years	-	(895)		
	1,693	1,841		
Current income tax – the PRC <i>(b)</i>				
Provision for the year	-	6,808		
Over provision in respect of prior years	(16,009)	(2,962)		
	(16,009)	3,846		
Our set in some tory. Other invitations (s)				
Current income tax – Other jurisdictions (c)	01.004	10 500		
Provision for the year Over provision in respect of prior years	21,024 (193)	12,528		
	(195)			
	20,831	12,528		
Total current income tax	6,515	18,215		
Deferred income tax (Note 28)				
– Current year	(6,187)	(29,558)		
Income tax expense/(credit)	328	(11,343)		

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12. Income tax (expense)/credit (Continued)

(a) Hong Kong

The provision for Hong Kong Profits Tax is calculated at 16.5% of the estimated assessable profits of the subsidiaries of the Group incorporated in Hong Kong for the years ended 31 December 2022 and 2021.

(b) The PRC

Pursuant to the income tax rules and regulations of the PRC, the subsidiaries of the Group in the PRC are subject to PRC enterprise income tax at a rate of 25% for the years ended 31 December 2022 and 2021, except for the following companies:

 Honghua Company, Han Zheng Testing, Gansu Hongteng, Honghua (Jiangsu) and Sichuan Oil & Gas Services

Corporate income tax ("CIT") of Honghua Company, Han Zheng Testing, Honghua (Jiangsu) and Sichuan Oil & Gas Services is accrued at a tax rate of 15% applicable for Hi-tech enterprises pursuant to the relevant PRC tax rules and regulations for the years ended 31 December 2022 and 2021.

(ii) Honghua Electric

On 23 April 2020, State Taxation Administration issued Notice 23(2020) ("the Notice") in respect of favourable CIT policy applicable to qualified enterprises located in western China. Honghua Electric applied and obtained an approval from in-charge tax authority under the policy for the 15% preferential CIT rate and is qualified for the 15% preferential CIT rate from 2021 to 2030.

(c) Others

Taxation for other entities is charged at their respective applicable tax rates ruling in the relevant jurisdictions.

12. Income tax (expense)/credit (Continued)

(d) Withholding tax

Under the PRC tax law and its implementation rules, dividends receivable by non-PRC resident enterprises from PRC enterprises are subject to withholding tax at a rate of 10%, unless reduced by tax treaties or arrangements, for profits earned since 1 January 2008. Pursuant to a tax arrangement between the PRC and Hong Kong, a qualified Hong Kong tax resident will be liable for withholding tax at a reduced rate of 5% for dividend income derived from the PRC.

The Company's directors revisited the dividend policy of the Group in 2022 and 2021. In order to retain the fundings for operations and future development, it was resolved that the Group's PRC subsidiaries will not distribute dividend to the offshore holding companies in the foreseeable future. Any dividends to be declared by the Company will be distributed from the share premium account.

The tax on the Group's loss before tax differs from the theoretical amount that would arise using the tax rate applicable to the group entities as follows:

	Year ended 3	Year ended 31 December		
	2022	2021		
	RMB'000	RMB'000		
Loss before income tax	(624,783)	(745,344)		
Tax calculated at statutory tax rates applicable to each group entities	(71,288)	(104,393)		
Tax effect of non-deductible expenses	931	1,268		
Tax effect of income not taxable	(319)	_		
Tax effect of changing tax rate	600	532		
Additional deduction of research and development expense	(7,784)	(4,599)		
Tax effect of losses not recognised	83,786	4,326		
Utilisation of tax losses not recognised in previous years	-	(6,880)		
Tax effect of deductible temporary differences not recognised	21,481	46,120		
Utilisation of deductible temporary differences previously not recognised	(43,017)	_		
Reversal of previously recognised deferred income tax assets of				
deductible temporary differences	-	45,214		
Write off of previously recognised deferred income tax assets of tax losses	32,140	10,926		
Over provision in respect of prior years	(16,202)	(3,857)		
Income tax expense/(credit)	328	(11,343)		

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12. Income tax (expense)/credit (Continued)

Amounts recognised directly in other comprehensive income

Aggregate deferred tax arising in the reporting period and not recognised in net profit or loss but charged to other comprehensive income:

	Year ended 3	31 December
	2022	2021
	RMB'000	RMB'000
Deferred tax: Changes in the fair value of equity investments at FVTOCI	1,077	(2,549)

13. Dividends

No dividend was approved or paid in respect of the previous financial years for the years ended 31 December 2022 and 2021.

No dividend was proposed for the year ended 31 December 2022.

14. Loss per share

Basic loss per share

The calculation of basic loss per share is based on the loss attributable to owners of the Company by the weighted average number of ordinary shares in issue during the year.

	Year ended 3	1 December
	2022	2021
Loss attributable to owners of the Company (RMB'000)	(634,418)	(717,191)
Weighted average number of ordinary shares in issue (in thousands)	5,355,995	5,355,995
Effect of the share award scheme (in thousands)	(61,089)	(61,089)
Adjusted weighted average number of ordinary shares in issue		
(in thousands)	5,294,906	5,294,906
Basic loss per share (RMB cents per share)	(11.98)	(13.54)

14. Loss per share (Continued)

Diluted loss per share

The calculation of diluted loss per share is based on adjusting the weighted average number of ordinary shares outstanding to assume conversion of all dilutive potential ordinary shares. The Company has one category of dilutive potential ordinary shares: share options. For the share options, a calculation is done to determine the number of shares that could have been acquired at fair value (determined as the average annual market share price of the Company's shares) based on the monetary value of the subscription rights attached to outstanding share options. The number of shares calculated as above is compared with the number of shares that would have been issued assuming the exercise of the share options.

	Year ended 31 December		
	2022	2021	
Loss attributable to owners of the Company (RMB'000)	(634,418)	(717,191)	
Weighted average number of ordinary shares in issue (in thousands) Effect of deemed issue of shares under the share option scheme (in thousands)	5,294,906 –	5,294,906	
Adjusted weighted average number of ordinary shares (diluted) in issue (thousands)	5,294,906	5,294,906	
Diluted loss per share (RMB cents per share)	(11.98)	(13.54)	

The computation of diluted loss per share in 2022 and 2021 does not assume the exercise of all share options because the adjusted exercise price of those options was higher than the average market price for shares for both years.

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15. Property, plant and equipment

	Freehold land RMB'000	Buildings held for own use RMB'000	Plant and machinery RMB'000	Furniture, fittings and equipment RMB'000	Motor vehicles RMB'000	Construction in progress RMB'000	Total RMB'000
At January 2021							
Cost	479	703,616	1,478,349	611,319	94,072	95,460	2,983,295
Accumulated depreciation and impairment		(272,201)	(517,678)	(400,417)	(55,503)	(891)	(1,246,690)
Closing net book amount	479	431,415	960,671	210,902	38,569	94,569	1,736,605
Year ended 31 December 2021							
Opening net book amount	479	431,415	960,671	210,902	38,569	94,569	1,736,605
Additions	-	3,310	50,474	17,082	481	12,700	84,047
Transfer from construction in progress	-	2,060	71,656	8,951	-	(82,667)	-
Transfer from inventories	-	-	191,488	27,530	-	-	219,018
Acquisition of a subsidiary (Note 35)	-	1,029,376	384	2,598	1,583	103,062	1,137,003
Disposals	(471)	(962)	(10,100)	(723)	(446)	-	(12,702)
Transfer to inventories	-	-	(9,850)	-	-	-	(9,850)
Transfer to investment properties	-	(59,092)	-	-	-	-	(59,092)
Depreciation charge	-	(32,702)	(55,502)	(60,743)	(1,837)	-	(150,784)
Currency translation difference	(8)	(312)	(5,025)	(2,156)	(27)	(657)	(8,185)
Impairment provision	-	-	(14,196)	-	-	-	(14,196)
Closing net book amount	-	1,373,093	1,180,000	203,441	38,323	127,007	2,921,864
At 31 December 2021							
Cost	-	1,667,865	1,750,982	659,191	93,956	127,898	4,299,892
Accumulated depreciation and impairment		(294,772)	(570,982)	(455,750)	(55,633)	(891)	(1,378,028)
Net book amount	-	1,373,093	1,180,000	203,441	38,323	127,007	2,921,864

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15. Property, plant and equipment (Continued)

Depreciation charge Currency translation difference	-	(101,316) 466	(32,872) (4,313)	(154,243) 44,401	(2,422) (693)	- (2)	(290,853) 39,859
Disposals Transfer to inventories Transfer from investment properties	-	- - 608	(49,178) (95,611) –	(2,192) (73,891) –	(39) - -	-	(51,409) (169,502) 608
Transfer from construction in progress Transfer from inventories	-	72	1,257 73,232 (49,178)	43,505 88,798 (2,192)	- - (30)	(44,834) 	- 162,030 (51,409)
Year ended 31 December 2022 Opening net book amount Additions Acquisition of a subsidiary (Note 35)	- -	1,373,093 938 -	1,180,000 13,906 -	203,441 17,673 198	38,323 127 161	127,007 29,508 -	2,921,864 62,152 359
	Freehold land RMB'000	Buildings held for own use RMB'000	Plant and machinery RMB'000	Furniture, fittings and equipment RMB'000	Motor vehicles RMB'000	Construction in progress RMB'000	Total RMB'000

Depreciation expense of approximately RMB235,939,000 (2021: RMB108,995,000) has been charged in cost of sales, RMB12,183,000 (2021: RMB7,573,000) in distribution expenses, RMB39,761,000 (2021: RMB32,454,000) in administrative expenses and RMB2,970,000 (2021: RMB1,762,000) in research and development expenses.

As at 31 December 2022, the Group was in the process of obtaining the legal title of buildings with carrying amount of approximately RMB144,972,000 (2021: RMB157,316,000).

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15. Property, plant and equipment (Continued)

The Group has capitalised borrowing costs amounting to approximately RMB492,000 (2021: RMB406,000) on qualifying assets. Borrowing costs were capitalised at the weighted average rate of its general borrowings at 4.86% (2021: 2.76%).

For the years ended 31 December 2021, inventories were transferred to property, plant and equipment for researching of new products, and property, plant and equipment was transferred out to inventories for rebuild and future sale.

Net rental income amounting to approximately RMB2,318,000 (2021: RMB31,140,000) relating to the lease of plant and machinery is included in profit or loss.

The category of plant and machinery leased by the Group to third parties under operating leases with the following carrying amount:

	Year ended 31 December	
	2022	2021
	RMB'000	RMB'000
Cost	468,906	468,023
Accumulated depreciation at 1 January	(125,248)	(103,674)
Additions	73,232	144,862
Deduction	(33,682)	(18,731)
Depreciation charge for the year	(29,330)	(21,574)
Net book amount	353,878	468,906

16. Leases

This note provides information for leases where the Group is a lessee.

(a) Amounts recognised in the consolidated statement of financial position

The consolidated statement of financial position shows the following amounts relating to leases:

	As at 31 December	
	2022	2021
	RMB'000	RMB'000
Right of use assets		
Lease prepayments for land use rights	320,162	321,775
Buildings and equipment	2,463	1,786
	322,625	323,561
Lease liabilities		
Current	28,490	18,783
Non-current	37,504	49,697
	65,994	68,480

Additions to the right of use assets during the year ended 31 December 2022 was approximately RMB11,323,000 (2021: RMB150,889,000). In addition, in 2021, included in additions of lease prepayments for land use rights represented an amount of RMB150,230,000 was due to the acquisition of a subsidiary as disclosed in Note 35.

Lease liabilities is payable at the followings:

	As at 31 December	
	2022	2021
	RMB'000	RMB'000
Within one year	28,490	18,783
Within a period of more than one year but not exceeding two years	26,054	20,410
Within a period of more than two years but not exceeding five years	11,450	29,287
	65,994	68,480

The incremental borrowing rates applied to lease liabilities range from 4.25% to 4.29% (2021: from 4.25% to 4.29%).

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16. Leases (Continued)

(b) Amounts recognised in the statement of profit or loss

The statement of profit or loss shows the following amounts relating to leases:

	Note	2022	2021
		RMB'000	RMB'000
Depreciation charge of right of use assets			
Lease prepayments for land use rights		10,593	7,502
Buildings and equipment		1,666	2,077
Interest expense (included in finance cost)	10	2,685	4,715
Expense (included in cost of goods sold and			
distribution expenses) relating to:			
- short-term leases		289,929	227,758
- variable lease payment (not included in short-term leases)		179,967	341,033

The total cash outflow for leases in 2022 was RMB485,475,000 (2021: RMB591,871,000).

(c) The Group's leasing activities and how these are accounted for

The Group leases various offices, warehouses and equipment. Rental contracts are typically made for fixed periods of 1 to 3 years without extension or termination options. Lease terms are negotiated on an individual basis. The lease agreements do not impose any covenants in relation to security interests in the leased assets that are held by the lessor. Leased assets are not used as security for borrowing purposes.

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17. Intangible assets

	Technical know-how RMB'000	Development cost and others RMB'000	Total RMB'000
At January 2021			
Cost	348,839	295,154	643,993
Accumulated amortisation and impairment	(348,839)	(64,331)	(413,170)
Net book amount		230,823	230,823
Year ended 31 December 2021			
Opening net book amount	-	230,823	230,823
Additions	_	40,136	40,136
Amortisation charge	-	(22,475)	(22,475)
Disposals		(1,954)	(1,954)
Closing net amount	_	246,530	246,530
At 31 December 2021			
Cost	348,839	333,336	682,175
Accumulated amortisation and impairment	(348,839)	(86,806)	(435,645)
Net book amount	-	246,530	246,530
Year ended 31 December 2022			
Opening net book amount	-	246,530	246,530
Additions	-	56,854	56,854
Amortisation charge	-	(27,982)	(27,982)
Closing net amount	-	275,402	275,402
At 31 December 2022			
Cost	_	390,190	390,190
Accumulated amortisation and impairment	-	(114,788)	(114,788)
Net book amount	-	275,402	275,402

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17. Intangible assets (Continued)

The above intangible assets have finite useful lives. Such intangible assets are amortised on a straight line basis over the following years.

Development cost and others

5 to 10 years

Most of the amortisation of the Group's intangible assets was charged to profit or loss.

18. Investments accounted for using the equity method

The amounts recognised in the consolidated statement of financial position are as follows:

	As at 31 December	
	2022	2021
	RMB'000	RMB'000
Investment in an associate and joint ventures	35,624	34,037

The amounts recognised in profit or loss are as follows:

	Year ended 31 December	
	2022	2021
	RMB'000	RMB'000
Investment in an associate and joint ventures	(2,331)	(2,460)

Movement of investment in an associate and joint ventures are as follows:

	Year ended 31 December	
	2022	2021
	RMB'000	RMB'000
At 1 January	34,037	28,785
Share of losses	(2,331)	(2,460)
Currency translation differences	3,918	7,712
At 31 December	35,624	34,037

18. Investments accounted for using the equity method (Continued)

Investment in an associate

Set out below is the associate of the Group as at 31 December 2021, which is held directly by the Group.

Name of company	Place of establishment	% of ownership interest	Measurement method
- Shanghai Honghua Offshore Oil & Gas Equipment Co., Ltd. ("Honghua (Shanghai)")	The PRC	49%	Equity

The associate is unlisted company and there is no quoted market price available for its equity. There are no contingent liabilities relating to the Group's interest in the associate.

On 31 July 2022, the Group acquired the remaining 51% of Honghua (Shanghai) and Honghua (Shanghai) becomes a wholly-owned subsidiary of the Group. Details of the acquisition is set out in Note 35.

Set out below are the summarised financial information for Honghua (Shanghai) which are accounted for using the equity method. The information disclosed reflects the amounts presented in the financial statements of the associate and not the Group's share of those amounts in 2021. They have been amended to reflect adjustments made by the Group when using the equity method, including fair value adjustments and modifications for differences in accounting policy.

Share of financial results of Honghua (Shanghai) from 1 January 2022 to the acquisition date is not presented as the management is of the opinion that the financial performance of Honghua (Shanghai) is not material compared to the Group's result as a whole.

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18. Investments accounted for using the equity method (Continued)

Investment in an associate (Continued)

Honghua (Shanghai)

Summarised statement of financial position

	As at
	31 December
	2021
	RMB'000
Current assets	17,015
Non-current assets	333
Current liabilities	(160,008)
Net liabilities	(142,660)
	(1.12,000)
Summarised statement of comprehensive income	
	Year ended
	31 December
	2021 RMB'000
Revenue	249
Interest income	30
Depreciation and amortisation	(129)
Interest expense	(3,977)
Loss for the year	(63,254)
Total comprehensive income	(63,254)

18. Investments accounted for using the equity method (Continued)

Investment in an associate (Continued)

Honghua (Shanghai) (Continued)

Reconciliation of summarised financial information

Reconciliation of the summarised financial information presented to the carrying amount of its interest in the associate.

RMB'000
(149,406)
70,000
(63,254)
(142,660)
49%
(69,903)
69,903
_

(i) As at 31 December 2021, Honghua (Shanghai) was still suffered from losses and the net assets were negative, thus the share of loss of Honghua (Shanghai) was zero as at 31 December 2021.

(ii) During the year ended 31 December 2021, Jiangsu Hongjieding Energy Technology Co., Ltd. ("Jiangsu Hongjieding"), another shareholder of Honghua (Shanghai) exempted the shareholder loan to Honghua (Shanghai) of RMB70,000,000.

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18. Investments accounted for using the equity method (Continued)

Investments in joint ventures

Set out below are the joint ventures of the Group as at 31 December 2022, which are held directly by the Group.

Nature of investments in joint ventures as at 31 December 2022 and 2021:

		% of	Nature	
	Place of	ownership	of the	Measurement
Name of company	establishment	interest	relationship	method
Honghua Financial Leasing (Shenzhen) Co., Ltd. ("Honghua (Shenzhen)")	The PRC	41%	(i)	Equity
Egyptian Petroleum HH Rigs Manufacturing Co. S.A.E. ("HH Egyptian Company")	Egypt	50%	(ii)	Equity

- (i) Honghua (Shenzhen) was incorporated in 2014 and mainly engages in providing leasing services. On 29 June 2020, the Group increased the investment in Honghua (Shenzhen) by RMB9,350,000. As a result, the equity interests in Honghua (Shenzhen) increased to 41%. The Group's voting rights in the board of directors of Honghua (Shenzhen) is 50%, and Honghua (Shenzhen) is accounted as a joint venture.
- (ii) HH Egyptian Company was established in 2006 by the Group and three other entities ("JV Partners") and is mainly engages in the manufacturing and sale of drilling rigs, parts and components. According to the joint venture agreement, HH Egyptian Company consists of 8 directors and each of the Group and JV Partners are entitled to nominate 4 directors to HH Egyptian Company. The Group's voting rights in the board of directors of HH Egyptian Company is 50%, and HH Egyptian Company is accounted as a joint venture.

The joint ventures are unlisted companies and there is no quoted market price available for its equity.

There are no contingent liabilities relating to the Group's interest in these joint ventures.

Honghua (Shenzhen) and HH Egyptian Company are joint ventures of the Group as at 31 December 2022 and 2021, which, in the opinion of the directors, are material to the Group.

Set out below are the summarised financial information for Honghua (Shenzhen) and HH Egyptian Company which are accounted for using the equity method. The information disclosed reflects the amounts presented in the financial statements of the joint ventures and not the Group's share of those amounts. They have been amended to reflect adjustments made by the Group when using the equity method, including fair value adjustments and modifications for differences in accounting policy.

18. Investments accounted for using the equity method (Continued)

Investments in joint ventures (Continued)

Honghua (Shenzhen)

Summarised statement of financial position

	As at 31 December	
	2022	2021
	RMB'000	RMB'000
Current assets	348,323	267,423
Non-current assets	224,165	753,230
Current liabilities	(232,939)	(531,593)
Non-current liabilities	(427,523)	(590,716)
Net liabilities	(87,974)	(101,656)

Summarised statement of comprehensive income

	Year ended 31 December	
	2022	2021
	RMB'000	RMB'000
Revenue	780,516	970,787
Depreciation and amortisation	(356,171)	(454,341)
Profit (loss) for the year	13,682	(122,920)
Total comprehensive income/(expense)	13,682	(122,920)

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18. Investments accounted for using the equity method (Continued)

Investments in joint ventures (Continued)

Honghua (Shenzhen) (Continued)

Reconciliation of summarised financial information

Reconciliation of the summarised financial information presented to the carrying amount of its interest in the joint venture.

	2022	2021
	RMB'000	RMB'000
Opening net assets 1 January	(101,656)	21,264
Profit (loss) for the year	13,682	(122,920)
Closing net liabilities	(87,974)	(101,656)
Proportion of the Group's interest in Honghua (Shenzhen)	41%	41%
The Group's share of net liabilities of Honghua (Shenzhen)	(36,069)	(41,679)
Adjustment (i)	36,069	41,679
Carrying value	-	_

(i) As at 31 December 2022 and 2021, Honghua (Shenzhen) was still suffered from losses and the net assets were negative, thus the carrying value of the investment is zero at both period end date. Cumulative unrecognised share of loss of Honghua (Shenzhen) was RMB86,844,000 as at 31 December 2022 (2021: RMB92,453,000).

HH Egyptian Company

Summarised statement of financial position

	As at 31 December	
	2022 2021	
	RMB'000	RMB'000
Current assets	23,646	15,092
Non-current assets	110,636	102,610
Current liabilities	(63,035)	(49,628)
Net assets	71,247	68,074

18. Investments accounted for using the equity method (Continued)

Investments in joint ventures (Continued)

HH Egyptian Company (Continued)

Summarised statement of comprehensive income

	Year ended 31 December	
	2022	2021
	RMB'000	RMB'000
Revenue	19,686	15,037
Loss for the year	(4,661)	(4,921)
Other comprehensive income	7,834	15,425
Total comprehensive income	3,173	10,504

Reconciliation of summarised financial information

Reconciliation of the summarised financial information presented to the carrying amount of its interest in the joint venture.

	2022	2021
	RMB'000	RMB'000
Opening net assets 1 January	68,074	57,570
Post-tax loss for the year	(4,661)	(4,921)
Currency translation differences	7,834	15,425
Closing net assets	71,247	68,074
Proportion of the Group's interest in HH Egyptian Company	50%	50%
The Group's share of net assets of HH Egyptian Company	35,624	34,037

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19. Debt investments at amortised cost

	As at 31 December	
	2022	2021
	RMB'000	RMB'000
Loan to a joint venture	-	52,094
Current portion	-	28,799
Non-current portion	-	23,295
	-	52,094

The loan to a joint venture, Honghua (Shenzhen), is for a period of 4 years, repayable in quarterly instalments at effective annual interest rate of 7.51% per annum. The loan was fully received during the year ended 31 December 2022.

20. Other non-current assets

	As at 31 December	
	2022	2021
	RMB'000	RMB'000
Investment properties (Note)	58,881	66,340
Right of use assets improvements	12,320	5,623
Others	15,794	28,602
	86,995	100,565

Note: The Group leases out various offices under operating leases with rentals payable monthly. The leases typically run for an initial period of 1 to 2 years (2021: 1 to 2 years). Majority of the lease contracts contain market review clauses in the event the lessee exercises the option to extend.

The Group is not exposed to foreign currency risk as a result of the lease arrangements, as all leases are denominated in the respective functional currencies of group entities. The lease contracts do not contain residual value guarantee and/or lessee's option to purchase the property at the end of lease term.

20. Other non-current assets (Continued)

Note: (Continued)

Movement of the investment properties is as below:

	RMB'000
COST	
At 1 January 2021	13,615
Transfer	72,497
At 31 December 2021	86,112
Transfer	(9,135
At 31 December 2022	76,977
DEPRECIATION AND AMORTISATION	
At 1 January 2021	(6,629
Transfer	(11,139
Charge for the year	(2,004
At 31 December 2021	(19,772
Transfer	4,582
Charge for the year	(2,906
At 31 December 2022	(18,096
	50.001
At 31 December 2022	58,881
At 31 December 2021	66,340

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21. Inventories

	As at 31 December	
	2022	2021
	RMB'000	RMB'000
Raw materials	532,145	460,396
Work in progress	567,785	840,086
Finished goods	390,957	372,127
Revolving materials and others	411	21,451
	1,491,298	1,694,060

For the year ended 31 December 2022, the cost of inventories recognised as the Group's expense and included in 'cost of sales' amounted to approximately RMB1,631,702,000 (2021: RMB1,196,299,000).

Movement on the provision for inventory is as follows:

	2022	2021
	RMB'000	RMB'000
At 1 January	163,571	143,152
Addition	85,569	38,647
Write off	(25,054)	(17,824)
Currency translation difference	(2,356)	(404)
At 31 December	221,730	163,571

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22. Trade and other receivables

	As at 31 December	
	2022	2021
	RMB'000	RMB'000
Trade receivables (Notes (a & b))	3,628,254	3,008,452
Bills receivables	404,350	574,413
Less: provision for impairment of trade receivables and bills receivables	(614,276)	(466,121)
	3,418,328	3,116,744
Amount due from related parties (Note 34(c))		
- Trade	338,272	319,116
– Non-trade	283,938	222,457
- Less: provision for impairment of trade receivables for amount		
due from related parties	(9,195)	(17,947)
	613,015	523,626
Finance lease receivables	432,263	160,763
Less: provision for impairment of finance lease receivables	(81,461)	(78,123)
Value-added tax recoverable	116,985	140,689
Prepayments	684,456	399,466
Less: provision for impairment of prepayments	(28,333)	(32,679)
Other receivables	412,286	316,673
Less: provision for impairment of other receivables	(198,188)	(136,740)
	5,369,351	4,410,419
Representing by:		
- Current portion (Note (c))	4,656,550	3,501,182
- Non-current portion (Note (d))	712,801	909,237
	5,369,351	4,410,419

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22. Trade and other receivables (Continued)

Notes:

(a) As at 31 December 2022 and 2021, the ageing analysis of the net amount of trade receivables and bills receivables (including amounts due from related parties of trading in nature), based on the invoice date (trade receivables) or issuance date (bills receivables) is as follows:

	As at 31	As at 31 December	
	2022 RMB'000	2021 RMB'000	
Within 3 months 3 to 12 months Over 1 year	2,502,538 753,852 491,015	2,325,772 782,534 309,607	
	3,747,405	3,417,913	

(a) The Group maintains different billing policies for different customers based on the negotiated terms with each of the customers. The Group issues progress billings at different stages such as upon the signing of contracts and upon the delivery of products. The exact percentage of each part of payment varies from contract to contract. Trade receivables are generally due for payment within 90 days from the date of billing.

Bills receivables of the Group are held for future settlement of trade receivables, of which certain bills were further discounted/endorsed by the Group. The Group continue to recognise in their full carrying amounts at the end of the reporting period.

The following were the Group's bills receivables as at 31 December 2022 and 2021 that were transferred to banks or suppliers by discounting/endorsing on a full recourse basis. As the Group has not transferred the significant risks and rewards, it continues to recognise the full carrying amount and has recognised the cash received on the transfer as borrowing.

As at 31 December 2022	Bills discounted to banks with full recourse RMB'000	Bills endorsed to suppliers with full recourse RMB'000	Total RMB'000
Carrying amount of transferred assets Carrying amount of associated liabilities	111,415 (111,415)	89,232 (89,232)	200,647 (200,647)
Net position	-	-	_

22. Trade and other receivables (Continued)

Notes: (Continued)

	Bills	Bills	
	discounted to	endorsed to	
	banks with	suppliers with	
	full recourse	full recourse	Total
As at 31 December 2021	RMB'000	RMB'000	RMB'000
Carrying amount of transferred assets	280,010	194,805	474,815
Carrying amount of associated liabilities	(280,010)	(194,805)	(474,815)
Net position	-	_	-

(b) Included in trade receivables represented balance due from a customer domicile in Ukraine amounting to approximately USD93,123,000 (equivalent to approximately RMB648,562,000) (2021: RMB838,491,000), net of impairment loss of approximately RMB243,655,000 (2021: RMB12,956,000). During the previous years, the Group made instalment sales of drilling rigs to such Ukrainian customer and the balance was receivable between 2022 and 2024. Balance that is expected to be received over one year after the end of the reporting period was discounted at the rate which discounts with the nominal amount of the promised consideration to the price that customer would pay in cash for the goods or services when or as the Group transfers to the customer.

Due to the current conflict between Russia and Ukraine, the National Bank of Ukraine has imposed certain restrictions over the payments of foreign currencies to foreign entities starting from 24 February 2022. Therefore, the Ukrainian customer was unable to repay part of the instalments which was originally due in 2022. The management has been taking active measures to closely monitor the credit risk exposures of such balance by holding periodic meetings with such customer to understand the latest development of the conflict and to collect the latest information regarding the physical status of the drilling rigs sold, and also the latest status on the national restrictions, etc. In view of the potential credit-impaired characteristics, the management has individually assessed the recoverability of the balance. During the year ended 31 December 2022, the Group provided expected credit loss of approximately RMB230,698,000 (2021: RMB12,957,000). Note 36.3.2(i) provides details about the impairment assessment.

- (c) Except for the non-current trade and other receivables, all of the other trade and other receivables are expected to be recovered within one year.
- (d) Non-current trade and other receivables as at 31 December 2022 included (1) finance lease receivables of approximately RMB219,468,000 (2021: RMB48,917,000); (2) receivables of approximately RMB363,505,000 (2021: RMB737,587,000) arising from installment sale; (3) deposit receivable of approximately RMB24,880,000 (2021: RMB17,785,000) which is due for receipt over one year after the end of reporting period and is discounted at the loan interest rate stipulated by the People's Bank of China for the corresponding period; (4) prepayments for land use rights of approximately RMB104,948,000 (2021: RMB104,948,000) which the Group expect to obtain the land use right in 2023.

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22. Trade and other receivables (Continued)

As at 31 December 2022 and 2021, the Group's maximum exposure to credit risk was the carrying value of each class of receivables mentioned above.

The carrying amounts of the current portion of trade and other receivables approximate their fair value.

The creation and release of provision for prepayments has been included in "administrative expenses" and provision for impaired receivables has been included in "net impairment losses on financial assets and contract assets" in profit or loss respectively.

As at 31 December 2022, bills receivables of approximately RMB159,396,000 (2021: RMB152,856,000), trade receivables of RMB409,745,000 (2021: RMB463,651,000) were secured for borrowings (Note 25).

Finance lease receivables

The Group entered into finance leases to lease its machineries to third parties and earn finance income from leasing activities. As at 31 December 2022 and 2021, the Group had receivables under finance lease as follows:

	As at 31 D	As at 31 December	
	2022	2021	
	RMB'000	RMB'000	
Non-current receivables			
Finance leases – gross receivables	223,484	53,808	
Unearned finance income	(6,927)	(3,815)	
	216,557	49,993	
Current receivables			
Finance leases – gross receivables	235,153	118,378	
Unearned finance income	(19,447)	(7,608)	
	215,706	110,770	
	,		
Gross receivables from finance leases:			
 No later than 1 year 	235,153	118,378	
 Later than 1 year and no later than 5 years 	223,484	53,808	
	458,637	172,186	
	100,001	112,100	
Unearned future finance income on finance leases	(26,374)	(11,423)	
Net investment in finance leases	432,263	160,763	

22. Trade and other receivables (Continued)

Finance lease receivables (Continued)

The net investment in finance leases is analysed as follows:

	As at 31 December	
	2022	2021
	RMB'000	RMB'000
No later than 1 year	215,706	110,770
Later than 1 year and no later than 5 years	216,557	49,993
Total	432,263	160,763

Impairment and risk exposure

The Group applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables, finance lease receivables and contract assets. Note 36.3.2 provides details about the calculation of the allowance.

23. Cash and cash equivalents/pledged bank deposits/term deposits

Cash and cash equivalents

	As at 31 December	
	2022	2021
	RMB'000	RMB'000
Cash on hand	2,879	1,453
Cash at bank	598,122	701,964
Cash and cash equivalents	601,001	703,417

Pledged bank deposits

As at 31 December 2022 and 2021, the deposits are pledged to banks as security against letters of guarantee for bills payable (Note 24) and for borrowings (Note 25).

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23. Cash and cash equivalents/pledged bank deposits/term deposits (Continued)

Term deposits

As at 31 December 2022, the Group had term deposits with amounts of RMB90,000,000 (2021: RMB90,000,000). The interest rate of the term deposits ranging from 2.85% to 3.6% (2021: 2.85% to 3.6%) per annum and will be due to recover in 2023.

The fair value of the term deposit is approximately RMB88,392,000 (2021: RMB89,667,000) as at 31 December 2022.

24. Trade and other payables

	As at 31 [As at 31 December	
	2022	2021	
	RMB'000	RMB'000	
Trade payables	1,667,336	1,354,667	
Amounts due to related companies (Note 34(d))			
- Trade	472,170	57,929	
– Non-trade	10,505	3,610	
Bills payable	553,179	590,496	
Receipts in advance	-	633	
Other payables	574,305	523,851	
	3,277,495	2,531,186	
Depresenting by			
Representing by:	2 100 000	0.004.001	
- Current portion	3,199,298	2,394,391	
- Non-current portion	78,197	136,795	
	3,277,495	2,531,186	

24. Trade and other payables (Continued)

At 31 December 2022 and 2021, the ageing analysis of the trade payables and bills payable (including amounts due to related parties of trading in nature) based on invoice date or bills issuance date is as follows:

	As at 31 December	
	2022	2021
	RMB'000	RMB'000
Within 3 months	1,094,224	746,413
3 to 6 months	497,773	353,430
6 to 12 months	366,480	344,259
Over 1 year	734,208	558,990
	2,692,685	2,003,092

As at 31 December 2022 and 2021, all the trade payables, bills payable and other payables of the Group were non-interest bearing and their fair value approximated their carrying amounts due to their short maturities.

As at 31 December 2022 and 2021, all the current trade and other payables are expected to be settled within one year or are repayable on demand.

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25. Borrowings

	As at 31 December	
	2022	2021
	RMB'000	RMB'000
Bank loans		
Secured (i)		
- Current portion	962,282	1,359,083
- Non-current portion	419,102	
	1,381,384	1,359,083
Unsecured		
- Current portion	3,362,138	2,480,264
- Non-current portion	204,072	_
	3,566,210	2,480,264
Other loans		
Senior notes (ii)		
- Current portion	-	1,306,491
Total borrowings	4,947,594	5,145,838
Analysed as:		
- Current portion (iii)	4,324,420	5,145,838
- Non-current portion	623,174	-

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25. Borrowings (Continued)

Notes:

- (i) As at 31 December 2022, the bank loans were secured by pledged bank deposits as collateral of RMB88,392,000 (2021: RMB83,592,000), term deposit as collateral of RMB90,000,000 (2021: RMB90,000,000), bills receivables as collateral of RMB159,396,000 (2021: RMB152,856,000), trade receivables as collateral of RMB409,745,000 (2021: RMB463,651,000). In addition, the bank loans were also secured by 20% equity interest of Honghua Company, a subsidiary of the Group, for both years.
- (ii) On 1 August 2019, the Company issued listed senior notes in the aggregate principal amount of USD200,000,000 ("Senior Notes"). The Senior Notes are guaranteed by the Group's existing subsidiaries, Honghua Holdings, Newco (H.K.) Limited, Hongkong Oil & Gas Services, Honghua Golden Coast Equipment FZE as stated in the Company's offering memorandum on 25 July 2019. The Senior Notes bear interest at 6.375% per annum, payable semi-annually in arrears and was due and fully repaid in 2022.
- (iii) As of 31 December 2021, current borrowings included borrowings with principal amounts of RMB1,136,318,000 due after 31 December 2022 as agreed in original loan contracts which have been reclassified as current liabilities as the Group had breached certain borrowing covenants. During the year ended 31 December 2022, the Group had re-negotiated loan arrangement with the relevant bank and the financial performance related covenants had been removed.

The borrowings at 31 December 2022 bore annual interest ranging from 1.91% to 5.61% annually (2021: 1.00%-5.70% annually).

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25. Borrowings (Continued)

The maturities of the Group's borrowings at respective end of the year are set out as follows:

	As at 31 December	
	2022	2021
	RMB'000	RMB'000
Within 1 year	4,324,420	5,145,838
Between 1 and 2 years	202,028	_
Between 2 and 5 years	421,146	
	4,947,594	5,145,838

The carrying amount of current borrowings approximated their fair value, as the impact of discounting was not significant.

The carrying amounts of the Group's borrowings are denominated in the following currencies:

	As at 31 December		
	2022	2021	
	RMB'000	RMB'000	
RMB	3,742,387	2,799,305	
USD	1,205,207	2,346,533	
	4,947,594	5,145,838	

At each balance sheet date, the Group had the following undrawn borrowing facilities:

	As at 31 December		
	2022 2021		
	RMB'000	RMB'000	
Expiring within 1 year	2,096,306	3,381,860	

These facilities have been arranged for financing daily operations.

In addition, during the year 31 December 2022, the Group had entered into a financial service framework agreement with Dongfang Electric Finance and Dongfang Electric Finance agreed to provide RMB1,800,000,000 credit facility to the Company available for drawdown during the year ending 31 December 2023.

26. Provision for other liabilities and charges

	Compensation to ex-shareholder RMB'000 (Note)	Legal claims RMB'000	Product warranties RMB'000	Others RMB'000	Total RMB'000
At 1 January 2021	15,919	2,610	14,713	_	33,242
Provisions during the year	_	2,550	3,074	3,386	9,010
Utilised during the year		(2,610)	(11,664)	-	(14,274)
At 31 December 2021	15,919	2,550	6,123	3,386	27,978
Provisions during the year	-	-	15,310	240	15,550
Utilised during the year	-	-	(13,780)		(13,780)
At 31 December 2022	15,919	2,550	7,653	3,626	29,748

Note: Pursuant to the agreement signed in 2020 between the Company and Kehua Technology, the Company will compensate CASIC for certain litigations and issues which cause losses. At 31 December 2022, as some issues have not been settled, the Group estimated that about RMB15,919,000 may need to be compensated to CASIC upon those issues are finalised. The Group recorded such estimated compensation amount as "Provision for other liabilities and charges" and recognised in the profit or loss as other losses.

27. Deferred income

Deferred income of the Group represented the grant received from the government in relation to the acquisition of certain property, plant and equipment and costs incurred for certain operating projects. Movement on the deferred income is as follows:

	2022	2021
	RMB'000	RMB'000
At 1 January	31,807	52,113
Government grants received during the year	3,772	6,263
Credited to profit or loss	(16,080)	(26,569)
At 31 December	19,499	31,807
Representing by:		
- Current portion	6,949	10,028
- Non-current portion	12,550	21,779

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28. Deferred taxation

The analysis of deferred tax assets/(liabilities) is as follows:

	As at 31 December		
	2022	2022 2021	
	RMB'000	RMB'000	
Deferred tax assets	343,000	341,122	
Deferred tax liabilities	(79,006)	(84,392)	
Deferred tax assets, net	263,994	256,730	

Movement in deferred tax assets and liabilities during the year, without taking into consideration the offsetting of balances within the same tax jurisdiction, is as follows:

Deferred tax assets

				Impairment							
				losses on							
	Provision			financial					Impairment	Provision	
	for	Provision		assets,					provision	for	
	inventories	for	Unrealised	contract					of property,	investment	
	and contract	product	profit on	assets and		Government	Tax	Depreciation	plant and	in	
	cost	warranties	inventories	prepayments	Accruals	grants	losses	difference	equipment	associates	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
At 1 January 2021	24,510	2,207	2,446	114,301	11,857	7,775	87,536	1,605	6,938	54,754	313,929
Credited to profit or loss	(7,551)	(1,289)	(1,574)	(4,683)	955	(3,034)	46,151	(1,605)	(6,938)	6,880	27,312
Currency translation											
differences	-	-	-	(119)	-	-		-	-	-	(119)
At 31 December 2021	16,959	918	872	109,499	12,812	4,741	133,687	_	-	61,634	341,122
Credited to profit or loss	17,112	648	2,562	51,469	(5,742)	(1,787)	(62,384)	_		- 01,004	1,878
Currency translation	11,112	040	2,002	01,400	(0,142)	(1,101)	(02,004)				1,070
differences	-	-	-	-	-	-	_	-	-	-	
At 31 December 2022	34,071	1,566	3,434	160,968	7,070	2,954	71,303	-	-	61,634	343,000

28. Deferred taxation (Continued)

Deferred tax liabilities

	Changes in				
	fair value of		Changes in		
	property, plant	Instalment	fair value		
	and equipment	sales	of FVOCI	Total	
	RMB'000	RMB'000	RMB'000	RMB'000	
At 1 January 2021	_	(24,093)	(1,936)	(26,029)	
Credited to profit or loss	_	1,949	_	1,949	
Acquisition of a subsidiary	(57,765)	-	-	(57,765)	
Debited to other comprehensive income			(2,547)	(2,547)	
At 31 December 2021	(57,765)	(22,144)	(4,483)	(84,392)	
Credited/(debited) to profit or loss	5,358	(1,049)	-	4,309	
Credited to other comprehensive income	_		1,077	1,077	
At 31 December 2022	(52,407)	(23,193)	(3,406)	(79,006)	

The Group has not recognised deferred income tax assets in respect of tax losses of approximately RMB1,937,660,000 as at 31 December 2022 (2021: RMB1,409,204,000) as it is not probable that future taxable profits against which the losses can be utilised in the relevant tax jurisdictions of those entities. These tax losses will be expired in 5 to 10 years.

As at 31 December 2022, deferred income tax liabilities of approximately RMB65,525,000 (2021: RMB68,910,000) had not been recognised for the withholding tax that would be payable on the unremitted earnings of certain subsidiaries. Unremitted earnings totalled approximately RMB1,310,509,000 as at 31 December 2022 (2021: RMB1,378,199,000). The Group does not intend to remit these unremitted earnings from the relevant subsidiaries in the foreseeable future.

29. Share capital

Ordinary shares, issued and fully paid:

	Number of Shares (thousands)	Amount RMB'000
At 1 January 2021, 31 December 2021 and 31 December 2022	5,355,995	488,023

The total authorised number of ordinary shares is 10,000,000,000 shares (2021: 10,000,000,000 shares) with a par value of HKD0.1 per share (2021: HKD0.1 per share).

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30. Share-based payments

Share Option Scheme

The Company adopted a share option scheme ("the Share Option Scheme") on 21 January 2008 for any eligible employees of the entities within the Group. The terms and conditions of the grants that existed during the year are as follows, whereby all options are settled by physical delivery of shares:

Options granted date	Number of share options (thousands)	Vesting conditions	Contractual life of options
On 20 June 2011	7,600 (a)	 (i) 30% on 19 July 2011 (ii) 30% on 19 June 2012 (iii) 40% on 20 June 2013 	10 years
On 5 April 2012	15,400	 (i) 30% on 5 April 2013 (ii) 30% on 5 April 2014 (iii) 40% on 5 April 2015 	10 years
On 24 March 2014	3,200 (b)	 (i) 30% on 24 April 2014 (ii) 30% on 24 April 2015 (iii) 40% on 24 April 2016 	10 years
On 2 July 2014	40,575 (c)	Vesting of the share options is conditional upon the achievement of corporate goals of the company and the individual performance of the respective grantees. The share options of any portion thereof shall lapse if the relevant corporate goals cannot be achieved. Up to 30% of the share options granted to each grantee after April 2015; up to 60% of the share options granted to each grantee after April 2016; all the remaining share options granted to each grantee after April 2017	10 years
On 21 September 2016	41,350 (d)	 (i) 30% on 21 September 2017 (ii) 30% on 21 September 2018 (iii) 40% on 21 September 2019 	10 years
Total share options	108,125		

30. Share-based payments (Continued)

Share Option Scheme (Continued)

Notes:

- (a) 5,200,000 shares are granted to the directors of the Company.
- (b) 3,200,000 shares are granted to the directors of the Company.
- (c) 4,577,000 shares are granted to the directors of the Company.
- (d) 8,450,000 shares are granted to the directors of the Company.

The number and weighted average exercise prices of share options are as follows:

	2022		2021	
	Weighted	Number of	Weighted	Number of
	average	share options	average	share options
	exercise price	(thousands)	exercise price	(thousands)
At 1 January	HKD1.22	63,266	HKD1.18	73,542
Lapsed	HKD1.12	(12,920)	HKD0.88	(10,276)
At 31 December	HKD0.97	50,346	HKD1.22	63,266

Number of share options outstanding as at 31 December 2022 and 2021 are as below:

	Number of outstanding options		
	2022	2021	
Options grant date			
On 5 April 2012	-	10,621,000	
On 24 March 2014	3,200,000	3,200,000	
On 2 July 2014	14,125,308	14,694,368	
On 21 September 2016	33,021,000	34,751,000	
	50,346,308	63,266,368	

The share options outstanding at 31 December 2022 had an exercise price in the range of HKD0.44 to HKD2.02 (2021: HKD0.44 to HKD2.02) and a weighted average remaining contractual life of 2.93 years (2021: 3.32 years).

No share options were exercised during the year ended 31 December 2022 and 2021.

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30. Share-based payments (Continued)

Share Award Scheme

On 30 December 2011, the board of directors approved to adopt a Restricted Share Award Scheme (the "Scheme"). Under the Scheme, the Company may grant shares of the Company to certain selected participants at specified consideration.

Pursuant to the Scheme rules, existing issued shares will be purchased by the trustee of the Scheme (the "Trustee") from the market out of funds provided by the Company in accordance with the Scheme rules.

During the year ended 31 December 2012, 47,817,000 shares were acquired by the Trustee through purchases from the open market, at a total cost of approximately RMB49,973,000 (equivalent to HKD61,518,000).

During the year ended 31 December 2013, the Trustee acquired 50,000,000 shares of the Company through purchase from the open market according to the instructions of the board of directors, at a total cost of approximately RMB146,233,000.

During the year ended 31 December 2013, the Company granted restricted shares in respect of a total of 35,917,700 ordinary shares of the Company to selected participants at a price of HKD1.27 each, of which 190,000 restricted shares granted were subsequently cancelled. 17,428,850 of the restricted shares were vested on 20 May 2013 and 18,298,850 of the restricted shares were vested on 20 December 2013.

During the year ended 31 December 2014, the Company granted restricted shares in respect of a total of 1,000,000 ordinary shares of the Company to a selected participant at a price of HKD0.99 each and the selected participant exercised all the granted shares on 19 December 2017.

No shares were acquired by the Trustee under the Scheme for the years ended 31 December 2022 and 2021. As at 31 December 2022, 61,089,300 shares were held by the Trustee under the Scheme (2021: 61,089,300 shares).

The fair value of restricted shares granted to employees is measured with reference to the closing price of the ordinary share of the Company at the grant date and recognised as staff costs with a corresponding increase in the capital reserve within equity.

31. Other reserves

Share premium

The application of the share premium account is governed by the Companies Law (Revised) of the Cayman Islands. The balance in the share premium account of the Company is distributable to the shareholders of the Company provided that immediately following the date on which the dividend is proposed to be distributed, the Company will be in a position to pay off its debts as they fall due in the ordinary course of business.

31. Other reserves (Continued)

Other reserve

The other reserve represents the difference between the nominal value of share of the subsidiaries acquired over the nominal value of the shares issued by the Company in exchange; the difference between acquisitions of non-controlling interests and entities under common control over the consideration given in previous years; and the contribution of technology licenses by a shareholder during the year ended 31 December 2021.

Capital reserve

Capital reserve represents the value of employee services in respect of the equity-settled share-based payments as set out in Note 30, waiver of debts by the immediate holding company and capital contribution arising on shareholders' indemnity.

Surplus reserve

Surplus reserve comprises of the statutory reserve and maintenance and production reserve.

Statutory reserve

Pursuant to the applicable PRC regulations, PRC entity is required to appropriate 10% of its profit after tax (after offsetting prior year losses) to the reserve until such reserve reaches 50% of the registered capital. The transfer to the reserve must be made before distribution of dividends to shareholders. The surplus reserve can be utilised, upon approval by the relevant authorities, to offset accumulated losses or to increase registered capital of the PRC subsidiaries, provided that the balance after such issue is not less than 50% of its registered capital.

Maintenance and production reserve

Pursuant to the relevant PRC regulations, the Group is required to transfer maintenance and production funds at fixed rates based on relevant bases, such as revenue amount, to a specific reserve account. The maintenance and production funds could be utilised when expenses or capital expenditures on production maintenance and safety measures are incurred. The amount of maintenance and production funds utilised would be transferred from the specific reserve account to retained earnings.

Exchange reserve

The exchange reserve comprises all foreign exchange differences arising from the translation of the financial statements of operations outside the PRC which are dealt with in accordance with the accounting policies as set out in Note 2.6.

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31. Other reserves (Continued)

Fair value reserve

The fair value reserve comprises the cumulative net change in the fair value of equity investments at FVTOCI held at the end of the reporting period and is dealt with in accordance with the accounting policies in Note 2.11.

32. Cash used in operations

Reconciliation of loss before income tax to net cash used in operations:

	Year ended 31 December	
	2022	2021
	RMB'000	RMB'000
Loss before income tax	(624,783)	(745,344)
Adjustments for:		
- Depreciation of property, plant and equipment and investment properties	293,759	149,022
- Depreciation of right use of assets	12,259	9,579
- Amortisation of intangible assets	27,982	22,252
- Interest income	(67,533)	(5,179)
- Interest expense	211,671	228,753
- Share of net losses from joint ventures and associates	2,331	2,460
- Loss (gain) on disposal of property, plant and equipment	(1,060)	(3,264)
- Foreign exchange gain	(192,416)	(77,970)
- Provision for impairment of property, plant and equipment	18,112	14,196
- Release of deferred income	(16,080)	(32,832)
- Loss on derecognition of a subsidiary	15,533	_
Operating cash flows before movements in working capital	(320,225)	(438,327)
Changes in working capital:		
- Decrease (increase) in inventories and contract costs	154,453	(560,337)
- (Increase) decrease in trade and other receivables	(1,283,060)	152,843
 Increase in pledged bank deposits 	(5,609)	(124,477)
- Increase (decrease) in trade and other payables	827,908	(261,353)
- (Increase) decrease in contract assets	(182,549)	238,966
- Increase in contract liabilities	597,579	14,740
- Increase (decrease) in provisions for other liabilities and charges	1,770	(5,264)
Cash used in operations activities	(209,733)	(983,209)

32. Cash used in operations (Continued)

Proceeds from disposal of property, plant and equipment

In the consolidated statements of cash flows, proceeds from disposal of property, plant and equipment comprise:

	Year ended 31 December	
	2022	2021
	RMB'000	RMB'000
Net book amount (Note 15)	51,409	12,702
Gain on disposal of property, plant and equipment	1,060	3,264
Non-cash investing activities	-	(892)
Proceeds received/receivable from disposal of property,		
plant and equipment	52,469	15,074

Net debt reconciliation

This section sets out an analysis of net debt and the movements in net debt for each of the periods presented.

	As at 31 December	
	2022	2021
	RMB'000	RMB'000
Cash and cash equivalents (Note 23)	601,001	703,417
Borrowings - repayable within one year (Note 25)	(4,324,420)	(5,145,838)
Borrowings – repayable after one year (Note 25)	(623,174)	_
Net debt	(4,346,593)	(4,442,421)
Cash and cash equivalents (Note 23)	601,001	703,417
Gross debt - fixed interest rates	(3,246,956)	(3,699,812)
Gross debt - variable interest rates	(1,700,638)	(1,446,026)
Net debt	(4,346,593)	(4,442,421)

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32. Cash used in operations (Continued)

Net debt reconciliation (Continued)

		Liabilitie	s from	
	Assets financing activities			
	Cash	Borrowings	Borrowings	
	and cash	due within	due after	
	equivalents	one year	one year	Total
	RMB'000	RMB'000	RMB'000	RMB'000
At 1 January 2021	952,384	(2,255,142)	(2,229,719)	(3,532,477)
Cashflows	(243,997)	(13,316)	(767,914)	(1,025,227)
Foreign exchange adjustments	(4,970)	19,016	33,838	47,884
Other non-cash movements		(2,896,396)	2,963,795	67,399
At 31 December 2021	703,417	(5,145,838)	_	(4,442,421)
Cashflows	(129,309)	21,800	(261,479)	(368,988)
Foreign exchange adjustments	26,893	190,935	12,319	230,147
Other non-cash movements	-	608,683	(374,014)	234,669
At 31 December 2022	601,001	(4,324,420)	(623,174)	(4,346,593)

During the year, the Group discounted bills receivables to banks amounted to RMB236,043,000. The relevant cash inflows form banks have been presented under financing activities.

During the year, settlement of the relevant bills receivables received by the banks directly amounting to RMB234,669,000 are non-cash transactions and have not been reflected in the consolidated statement of cash flows.

33. Commitments

Capital commitments

Capital expenditure contracted for or authorised but not contracted for at the date of consolidated statement of financial position but not yet incurred is as follows:

	As at 31 December	
	2022	2021
	RMB'000	RMB'000
Contracted for	5,747	21,198

Operating lease commitments

The future aggregate minimum lease payments under non-cancellable operating leases are as follows:

	As at 31 December	
	2022	2021
	RMB'000	RMB'000
Within 1 year	53,709	83,648

The Group was the lessee in respect of a number of buildings held under operating leases. None of the leases include contingent rentals.

34. Related parties disclosure

Related parties are those parties that have the ability to control the other party or exercise significant influence in making financial and operating decisions. Parties are also considered to be related if they are subject to common control.

The following is a summary of the significant transactions carried out between the Group and its related parties in the ordinary course of business during the years ended 31 December 2022 and 2021, and balances arising from related party transactions as at 31 December 2022 and 2021.

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34. Related parties disclosure (Continued)

(a) Related parties relationship

Name of related party	Relationship
Guanghan Hongtai Business Trading Co., Ltd. 廣漢市宏泰商貿有限公司("Hongtai")	Hongtai is a party of which a director has equity interests
Sichuan Deep & Fast Oil Drilling Tools Co., Ltd. 四川深遠石油鑽井工具有限公司("Sichuan Shenyuan")	Sichuan Shenyuan is a party of which the spouse of a director has equity interests
Aerospace Science & Industry Financial Leasing Co,. Ltd. 航天科工金融租賃有限公司("ASIFL")	Joint venture of CASIC (Note i)
Aerospace Science & Industry Finance CORP 航天科工財務有限責任公司("ASIFC")	Subsidiary of CASIC (Note i)
HH Egyptian Company	Joint venture of the Group
Honghua (Shenzhen)	Joint venture of the Group
Honghua (Jiangsu)	Associate of the Group (Note ii)
Honghua (Shanghai)	Associate of the Group (Note iii)
Jiangsu Hongjieding	Controlled by a director of the Group
Hong Kong Tank Tek Limited ("HK Tank")	HK Tank is a subsidiary of Jiangsu Hongjieding
Aerospace Information System Engineering (Beijing) Co., Ltd. 航天信息系統工程(北京)有限公司("AISE")	Subsidiary of CASIC (Note i)
Aerospace Jiangnan Group Co., Ltd. 航天江南集團有限公司("AJG")	Subsidiary of CASIC (Note i)

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34. Related parties disclosure (Continued)

(a) Related parties relationship (Continued)

Name of related party	Relationship
Aerospace Sanjiang Group Co., Ltd. 中國航天三江集團有限公司("ASG")	Subsidiary of CASIC (Note i)
Aerospace Cloud Technology Development Co., Ltd. 航天雲網科技發展有限責任公司("ACTD")	Subsidiary of CASIC (Note i)
Aerospace Construction Group Co., Ltd. 中國航天建設集團有限公司("ACG")	Subsidiary of CASIC (Note i)
Sanjiang Watt Special Vehicles Co., Ltd. 三江瓦力特特種車輛有限公司("SWSV")	Subsidiary of CASIC (Note i)
Wuhan Sanjiang Hangtai Technology Co., Ltd. 武漢三江航太遠方科技有限公司("WSHT")	Subsidiary of CASIC (Note i)
Hubei Sanjiang Hangtai Machine Engineering Co., Ltd. 湖北三江航太江北機械工程有限公司("WSHME")	Subsidiary of CASIC (Note i)
China Changfeng Electric Technology Research & Design Institute 中國長峰機電技術研究設計院("Changfeng R&D")	Subsidiary of DEC (Note iv)
Guizhou Kaixingyeli Transmission Machine Co., Ltd. 貴州凱星液力傳動機械有限公司("Transmission Machine")	Subsidiary of DEC (Note iv)
Dongfang Electric Corporation International Cooperation Co., Ltd. 東方電氣集團國際合作有限公司("International Cooperation")	Subsidiary of DEC (Note iv)
Dongfang Electric Cooperation Dongfang Furnace Share Co., Ltd. 東方電氣集團東方鍋爐股份有限公司("Dongfang Furnace")	Subsidiary of DEC (Note iv)

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34. Related parties disclosure (Continued)

(a) Related parties relationship (Continued)

Name of related party	Relationship
Dongfang Electric Corporation Dongfang Turbine Co., Ltd. 東方電氣集團東方汽輪機有限公司("Dongfang Turbine")	Subsidiary of DEC (Note iv)
Dongfang Electric Corporation (Sichuan) Property Co., Ltd. 東方電氣集團(四川)物產有限公司("Sichuan Property")	Subsidiary of DEC (Note iv)
Dongfang Electric Shares Co., Ltd. 東方電氣股份有限公司("Dongfang Shares")	Subsidiary of DEC (Note iv)
Dongfang Toshiba (Chengdu) Electric Control Equipment Co., Ltd. 東方日立(成都)電控設備有限公司("Electric Control")	Subsidiary of DEC (Note iv)
Dongfang Electric Auto Control Engineering Co., Ltd. 東方電氣自動控制工程有限公司("Auto Control Engineering")	Subsidiary of DEC (Note iv)
Dongfang Electric Corporation Dongfang Electric Machine Co., Ltd. 東方電氣集團東方電機有限公司("Dongfang Electric Machine")	Subsidiary of DEC (Note iv)
Dongfang Electric Wind Power Share Co., Ltd. 東方電氣風電股份有限公司("Wind Power")	Subsidiary of DEC (Note iv)
Dongfang Electric Jieneng Technology Chengdu Co., Ltd. 東方電氣潔能科技成都有限公司("Jieneng Technology")	Subsidiary of DEC (Note iv)
Dongfang Electric (Deyang) Electric Auto Technology Co., Ltd. 東方電氣(德陽)電動機技術有限責任公司 ("Deyang Electric Auto Technology")	Subsidiary of DEC (Note iv)

34. Related parties disclosure (Continued)

(a) Related parties relationship (Continued)

Name of related party	Relationship
Dongfang Electric Corporation Science Technology Research Institute 東方電氣集團科學技術研究院有限公司 ("Science Technology Research")	Subsidiary of DEC (Note iv)
Dongfang Electric (Guangzhou) Heavy Machine Co., Ltd. 東方電氣(廣州)重型機器有限公司("GZ Heavy Machine")	Subsidiary of DEC (Note iv)
Dongfang Electric New Energy Technology (Chengdu) Co., Ltd. 東方電氣新能科技(成都)有限公司("New Energy Chengdu")	Subsidiary of DEC (Note iv)
Dongfang Electric (Deyang) Motor Technology Co., Ltd. 東方電氣(德陽)電動機技術有限責任公司 ("Motor Technology")	Subsidiary of DEC (Note iv)

Notes:

- (i) On 29 June 2022, Kehua Technology ceased to become the shareholder of the Company. Accordingly, these entities ceased to become the related parties of the Group with effect from 29 June 2022.
- (ii) On 16 December 2021, the Group acquired the remaining interest in Honghua (Jiangsu) and it becomes the wholly-owned subsidiary of the Group since then.
- (iii) On 31 July 2022, the Group acquired the remaining interest in Honghua (Shanghai) which becomes the wholly-owned subsidiary of the Group.
- (iv) On 29 June 2022, Dongfang Investment becomes the shareholder of the Company. According, these entities, being the subsidiary of DEC, become the related parties of the Group with effect from 29 June 2022.

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34. Related parties disclosure (Continued)

(b) Significant related party transactions

Purchases of parts and components and others

	Year ended 31 December	
	2022	2021
	RMB'000	RMB'000
Honghua (Jiangsu)	-	290,406
Honghua (Shenzhen)	-	42,009
International Cooperation	93,501	-
Electric Control	5,018	-
Other related companies	3,337	2,612
	101,856	335,027

Sales of drilling rigs, parts and components and others

	Year ended 31 December	
	2022	2021
	RMB'000	RMB'000
Honghua (Shenzhen)	294,167	326,011
Dongfang Electric Machine	21,526	-
Dongfang Furnace	19,361	-
HH Egyptian Company	12,675	6,586
Science Technology Research	7,792	-
Wind Power	4,159	-
Auto Control Engineering	3,284	-
Dongfang Turbine	3,022	-
Honghua (Jiangsu)	-	5,413
Other related companies	399	1,130
	366,385	339,140

34. Related parties disclosure (Continued)

(b) Significant related party transactions (Continued)

Service income

	Year ended 31 December	
	2022	2021
	RMB'000	RMB'000
Auto Control Engineering	20,291	-
GZ Heavy Machine	5,453	-
Other related companies	127	-
	25,871	_

Consulting service provided

	Year ended 31 December	
	2022	2021
	RMB'000	RMB'000
Honghua (Shenzhen)	1,519	24,196
Other related companies	1,307	74
	2,826	24,270

Rental income

Year ended 31 December 2022 2021 RMB'000 RMB'000 New Energy Chengdu 1,970 Other related companies 447 2,417

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34. Related parties disclosure (Continued)

(b) Significant related party transactions (Continued)

Miscellaneous expenses

	Year ended 31 December	
	2022	2021
	RMB'000	RMB'000
Other related company	479	_

Short-term lease expenses

	Year ended 31 December	
	2022	2021
	RMB'000	RMB'000
Honghua (Shenzhen)	179,967	341,033

Leasing activities

According to the tripartite agreements signed by the Group, Honghua (Shenzhen) and third party leasing companies, for the year ended 31 December 2019, the Group sold products amounted to approximately RMB960,177,000 to those third party leasing companies, meanwhile, those third party leasing companies have provided finance lease on these products to Honghua (Shenzhen), and the risk and rewards of those products have been transferred to Honghua (Shenzhen).

After the completion of the above transactions, Honghua (Shenzhen) and the subsidiaries of the Group have entered into operating lease agreements which leased the above-mentioned products to the subsidiaries of the Group under variable lease payments arrangement, and then the subsidiaries of the Group have leased those products to third party companies.

For the year ended 31 December 2022, the total operating lease expense incurred charged to the profit or loss in respect of these lease agreements entered by the Group stated above approximately RMB179,967,000 (2021: RMB341,033,000).

34. Related parties disclosure (Continued)

(b) Significant related party transactions (Continued)

Financing activities

	Year ended 31 December	
	2022	2021
	RMB'000	RMB'000
Receipts of loan to		
– Honghua (Jiangsu) (Note)	-	40,000
– Honghua (Shenzhen) (Note 19)	53,949	26,786
	53,949	66,786
Receipt of loan from		
– Honghua (Shenzhen)	20,000	_
	,	
Repayments of loans from		
– Honghua (Shenzhen)	20,000	_
– ASIFC		110,037
		<u>.</u>
	20,000	110,037
	,	
Financial income		
Financial income	2 000	4.010
– Honghua (Shenzhen)	3,932	4,619

Note: For year ended 31 December 2021, the loan to an associate and other related parties from Honghua (Jiangsu) was settled by the deposit of RMB40,000,000 which was paid by Jiangsu Hongjieding pursuant to debt repayment agreements entered in 2018 (Note 35).

	Year ended 31 December	
	2022	2021
	RMB'000	RMB'000
Financial expenses		
– Honghua (Shenzhen)	750	-
- ASIFC	-	1,110
	750	1,110

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34. Related parties disclosure (Continued)

(c) Amounts due from related companies

	As at 31 E	As at 31 December	
	2022	2021	
	RMB'000	RMB'000	
Trade-related (Note 22)			
- Joint ventures	199,507	299,670	
- International Cooperation	31,471	-	
– Dongfang Furnace	30,292	-	
 Dongfang Electric Machine 	25,164	-	
 Auto Control Engineering 	22,751	-	
- Wind Power	7,137	-	
- Dongfang Turbine	4,715	-	
 Science Technology Research 	7,751	-	
- New Energy Chengdu	2,220	-	
- Deyang Electric Auto Technology	1,341	-	
- GZ Heavy Machine	1,208	-	
- Other related companies	740	1,499	
	334,297	301,169	
Non trade-related (Note)			
– Joint ventures	278,084	274,192	
– Associates		60	
- Other related companies	634	12,814	
	278,718	287,066	

Note: As at 31 December 2021, the debt from HK Tank is RMB102,425,000 and the Group recorded this debt as "loan to an associate and other related party" and the Group made a provision for the credit risk of RMB87,781,000 (Note 36.3.2) for the year ended 31 December 2021.

The other amounts due from other related companies are unsecured, interest-free and repayable on demand (Note 22).

34. Related parties disclosure (Continued)

(d) Amounts due to related companies

	As at 31 December	
	2022	2021
	RMB'000	RMB'000
Trade (Notes 4 and 24)		
- Joint ventures	385,744	7,707
- Associates	-	44,964
- International Cooperation	90,017	-
- Dongfang Furnace	12,491	-
- Other related companies	4,709	5,258
	492,961	57,929
Non-trade (Note 24)		
- Joint ventures	10,336	3,182
– Associates	-	123
- Other related companies	169	305
	10,505	3,610

The amounts due to related companies are unsecured, interest-free and have no fixed repayment terms.

FOR THE YEAR ENDED 31 DECEMBER 2022

34. Related parties disclosure (Continued)

(e) Cash and cash equivalents

	As at 31 December	
	2022	2021
	RMB'000	RMB'000
– ASIFC	-	11,962

According to the financial cooperation agreement entered into between the Group and ASIFC, ASIFC provides the Group with financial services including deposit services, lending and other comprehensive credit facilities services and free settlement services. As a non-bank financial institution invested and established by CASIC and its affiliates, it is principally engaged in financial services for various units within CASIC, such as deposits and loans, fund settlement, bill acceptance and discounting as well as entrusted loans. Balance as at 31 December 2021 represented the bank balance deposited by the Group.

(f) Key management compensation

	Year ended 31 December	
	2022	2021
	RMB'000	RMB'000
Basic salaries, allowances and other benefits in kind	5,359	6,533
Contributions to defined contribution retirement schemes	816	709
Discretionary bonus	4,129	2,165
	10,304	9,407

35. Business combination

Acquisition of subsidiary in 2022

On 31 July 2022, the Group signed agreement with Jiangsu Hongjieding to acquire the additional 51% equity interest in Honghua (Shanghai) for a consideration of RMB1. After the acquisition, Honghua (Shanghai) becomes a wholly-owned subsidiary of the Group. Honghua (Shanghai) is acquired to diversify the Group's business into ocean drilling segment.

Details of the purchase consideration and the net assets acquired of Honghua (Shanghai), excluding the amounts due to the Group at the acquisition date, are as follow:

	RMB'000
Purchase consideration	
Cash paid	-
Amount due from Honghua (Shanghai)	442
Investment in Honghua (Shanghai) as an associate at acquisition date	
Total purchase consideration	442
	442
	Fair value
	RMB'000
Cash	6,741
Trade and other receivables	8,800
Tax recoverable	1,568
Property, plant and equipment	359
Trade and other payables	(16,826)
Contract liabilities	(200)
Net identifiable assets acquired	442

Acquisition-related costs are immaterial and are recognised as administrative expenses when they are incurred.

Trade and other receivables acquired represents its fair value, of which in the opinion of the directors of the Company is expected to be fully recoverable within one year.

No goodwill arose from the acquisition of Honghua (Shanghai).

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35. Business combination (Continued)

Acquisition of subsidiary in 2021

In 2018, the Group signed agreements with Jiangsu Hongjieding and Honghua (Shanghai) with the following key transaction terms and disposed offshore drilling rigs segment accordingly:

- The Group agreed to sell its 51% equity interests in both Honghua (Jiangsu) and Honghua (Shanghai) for a cash consideration of RMB1 respectively;
- ii) The Group agreed to sell its 25% equity interests in FSP LNG B.V. and 70% equity interests in HK Tank for a cash consideration of USD1 respectively;
- iii) The Group agreed to sell its 30% equity interests in Prime FSP, LLC for a cash consideration of USD1.

The Group also entered debt repayment agreements with Honghua (Jiangsu) and HK Tank respectively, pursuant to which Honghua (Jiangsu) and HK Tank shall repay the existing debt, together with relevant interest to the Group after the completion of the above equities transfer. These debts were secured by the interests of above entities held by Jiangsu Hongjieding, as well as the total assets of Honghua (Jiangsu) and HK Tank are 4.75% and 6% respectively.

According to the announcement dated 21 November 2021, Honghua (Jiangsu) and HK Tank informed the Group that they would be unable to repay the debts due on 31 December 2021 (the "Expected Debt Default"). As the Expected Debt Default occurred, the Group decided to exercise its security rights to acquire the 51% equity interests in Honghua (Jiangsu) held by Jiangsu Hongjieding pursuant to the debt repayment agreements mentioned above.

On 16 December 2021, the acquisition was completed at a cash consideration of RMB1 and Honghua (Jiangsu) became a wholly-owned subsidiary of the Group. On the same date, the Group had amounts due from Honghua (Jiangsu) amounted to RMB1,555,368,000 with provisions for the credit risk, including the debts amounted to RMB1,272,699,000 which were secured by 51% equity interests in Honghua (Jiangsu) held by Jiangsu Hongjieding. Up to 16 December 2021, Honghua (Jiangsu) had accumulated losses and the book value of net assets was negative, thus the carrying amount of investment in Honghua (Jiangsu) was zero. The pre-existing debtor/creditor relationship between the Group and Honghua (Jiangsu) was effectively settled and the Group increased the consideration transferred for the acquisition by RMB1,555,368,000, to account for the effective settlement of amounts due from Honghua (Jiangsu).

35. Business combination (Continued)

Acquisition of subsidiary in 2021 (Continued)

Details of the purchase consideration and the net assets acquired of Honghua (Jiangsu), excluding the amounts due to the Group as at 16 December 2021 are as follow:

	RMB'000
Purchase consideration	
Cash paid	-
Amounts due from Honghua (Jiangsu)	1,555,368
Investment in Honghua (Jiangsu) as an associate before 16 December 2021	
Total purchase consideration	1,555,368
	Fair value
	RMB'000
Cash	162
Trade and other receivables	290,497
Inventory	169,125
Property, plant and equipment	1,137,003
Right of use assets	150,235
Trade and other payables	(65,539)
contract liabilities	(68,053)
Deferred income tax liabilities	(58,062)
Net identifiable assets acquired	1,555,368

Acquisition-related costs are immaterial and are recognised as administrative expenses when they are incurred.

Trade and other receivables acquired represents its fair value, of which in the opinion of the directors of the Company is expected to be fully recoverable within one year.

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36. Financial instruments

36.1 Capital risk management

The Group's primary objectives when managing capital are to safeguard the Group's ability to continue as ageing concern, so that it can continue to provide returns for shareholders and to maintain an optimal capital structure to reduce the cost of capital.

The Group's capital structure is regularly reviewed and managed in accordance with the capital management practices of the Group and in light of changes in economic conditions affecting the Group, to the extent that these do not conflict with the directors' fiduciary duties towards the Group.

Consistent with others in the industry, the Group monitors capital risk on the basis of the gearing ratio. This ratio is calculated as net debt divided by total capital. Net debt is calculated as total borrowings (including "current and non-current borrowings" as shown in the consolidated statement of financial position) less cash and cash equivalents. Total capital is calculated as "equity" as shown in the consolidated statement of financial position plus net debt. The Group aims to maintain the gearing ratio at a reasonable level.

For the year ended 31 December 2022, the Group's strategy, which was unchanged from 2021, was to maintain sufficient capital to cover any net debt position by adjusting the amount of dividends paid to shareholders or issue new shares. The gearing ratios as at 31 December 2022 and 2021 were as follows:

	As at 31 December	
	2022	2021
	RMB'000	RMB'000
Total borrowings (Note 25)	4,947,594	5,145,838
Less: cash and cash equivalents (Note 23)	(601,001)	(703,417)
Net debt	4,346,593	4,442,421
Total equity	3,193,995	3,746,396
Total capital	7,540,588	8,188,817
Gearing ratio	58%	54%

36. Financial instruments (Continued)

36.2 Categories of financial instruments

	As at 31 December	
	2022	2021
	RMB'000	RMB'000
Financial Assets		
Financial assets at amortised cost	5,146,691	4,691,364
Financial assets at FVTOCI	112,837	119,273
	5,259,528	4,810,637
Financial liabilities		
Financial liabilities at amortised cost	8,106,663	7,615,827
Lease liabilities	65,994	68,480
	8,172,657	7,684,307

The Group's exposure to various risks associated with the financial instruments is discussed in this note. The maximum exposure to credit risk at the end of the reporting period is the carrying amount of each class of financial assets mentioned above.

36.3 Financial risk factors

The Group's activities expose to a variety of financial risks: market risk (including foreign exchange risk, cash flow and fair value interest rate risk), credit risk and liquidity risk. The Group's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's financial performance.

Risk management is carried out by the senior executive management of the Group. The senior executive management of the Group identifies, evaluates and hedges financial risks in close cooperation with the Group's operating units. The board provides principles for overall risk management, as well as policies covering specific areas, such as foreign exchange risk, interest rate risk, credit risk, use of derivative financial instruments and non-derivative financial instruments, and investment of excess liquidity.

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36. Financial instruments (Continued)

36.3 Financial risk factors (Continued)

36.3.1 Market risk

Foreign exchange risk

The Group is exposed to foreign exchange risk arising from various currency exposures, primarily with respect to the USD, Euros ("EUR") and RMB. Foreign exchange risk arises when future commercial transactions or recognised assets or liabilities are denominated in a currency that is not the entity's functional currency. Management has set up a policy to require the Group companies to manage their foreign exchange risk against their functional currency.

RMB is not freely convertible into foreign currencies. All foreign exchange transactions involving RMB must take place through the People's Bank of China or other institutions authorised to buy and sell foreign currencies. The exchange rate adopted for the foreign exchange transactions are the rates of exchange quoted by the commercial banks that are based on the middle price quoted by People's Bank of China and determined largely by supply and demand.

The following tables detailed the Group's exposure at 31 December 2022 and 2021 to currency risk arising from recognised assets or liabilities denominated in a currency other than the functional currency of the entity to which they relate. For presentation purposes, the amounts of the exposure are shown in RMB, translated using the spot rate at 31 December 2022 and 2021.

	Exposure to foreign currency				
	USD items	RMB items			
	RMB'000	RMB'000	RMB'000		
At 31 December 2022					
Cash and cash equivalents	412,678	642	1,510		
Trade and other receivables	633,828	-	-		
Borrowings	(1,205,207)	-	-		
Trade and other payables	(31,227)	-	-		
Lease liabilities	(56,897)	-	-		
Overall net exposure	(246,825)	642	1,510		

36. Financial instruments (Continued)

36.3 Financial risk factors (Continued)

36.3.1 Market risk (Continued)

Foreign exchange risk (Continued)

	Exposure to foreign currency				
	USD items	EUR items	RMB items		
	RMB'000	RMB'000	RMB'000		
At 31 December 2021					
Cash and cash equivalents	153,192	758	1,851		
Trade and other receivables	553,456	58	_		
Borrowings	(1,028,368)	-	-		
Trade and other payables	(79,647)	(13)	(295)		
Lease liabilities	(67,400)	-			
Overall net exposure	(468,767)	803	1,556		

As at 31 December 2022 and 2021, the Group did not have any forward exchange contracts to hedge its exposure to foreign exchange risk.

As at 31 December 2022, if RMB had weakened/strengthened by 5% (2021: 5%) against the USD with all other variables held constant, the Group's post-tax loss for the year then ended would have been approximately RMB10,492,000 higher/lower (2021: RMB19,922,000 higher/ lower), mainly as a result of foreign exchange (losses)/gains on translation of USD-denominated assets and liabilities.

The sensitivity analysis above represents an aggregation of the instantaneous effects on each of the group entities loss after tax measured in the respective functional currencies, translated into RMB at the exchange rate ruling at the end of the reporting period for presentation purposes.

FOR THE YEAR ENDED 31 DECEMBER 2022

36. Financial instruments (Continued)

36.3 Financial risk factors (Continued)

36.3.1 Market risk (Continued)

Cash flow and fair value interest rate risk

The Group's interest rate risk arises primarily from borrowings. Borrowings obtained at variable rates expose the Group to cash flow interest rate risk which is partially offset by cash held at variable rates. All borrowings including senior notes obtained at fixed rates expose the Group to fair value interest rate risk. The Group's policy is to manage its interest rate risk to ensure there are no undue exposures to significant interest rate movements. The Group does not use derivative financial instruments to hedge its fixed and variable rate debt obligations.

As at 31 December 2022, it is estimated that a general increase/decrease of 50 basis points in interest rates, with all other variables held constant, would have increased/decreased the Group's loss after tax by approximately RMB6,868,000 (2021: RMB5,784,000).

The sensitivity analysis above indicates the instantaneous change in the Group's loss after tax that would arise assuming that the change in interest rates had occurred as at 31 December 2022 and 2021, the impact on the Group's loss after tax is estimated as annualised impact on interest expense of such a change in interest rates.

36.3.2 Credit risk

Credit risk arises from cash and cash equivalents, contractual cash flows of debt instruments carried at amortised cost and at FVTOCI and deposits with banks, as well as credit exposures to customers, including outstanding receivables.

Risk management

Credit risk is managed on a group basis. Management has a credit policy in place and the exposures to these credit risks are monitored on an on-going basis.

Risk control assesses the credit quality of the customer, taking into account its financial position, past experience and other factors. Individual risk limits are set based on internal or external ratings in accordance with limits set by the management. The compliance with credit limits by customers is regularly monitored by line management.

FOR THE YEAR ENDED 31 DECEMBER 2022

36. Financial instruments (Continued)

36.3 Financial risk factors (Continued)

36.3.2 Credit risk (Continued)

Risk management (continued)

The Group's exposure to credit risk is influenced mainly by the individual characteristics of each customer and the industry in which the customers operate. Significant concentration of credit risk primarily arises when the Group has significant exposure to individual customers. As at 31 December 2022, 18% (2021: 21%) and 33% (2021: 43%) of the total trade receivables was due from the Group's largest customer and the five largest customers respectively. The Group also has significant concentration of credit risk on customers in the oil drilling industry and the volatility in global oil prices may affect the financial results and ability of customers to make payments.

The credit risk on cash at bank, pledged bank deposits and term deposit is limited as the counterparties are banks with sound credit standing. Majority of the Group's cash and cash equivalents at bank and pledged bank deposits were deposited at the state owned commercial banks in the PRC.

Impairment of financial assets

The Group has the following types of financial assets and contract assets that are subject to the expected credit loss model:

- trade receivables (including bills receivables and amount due from related parties) for sales of goods and from the provision of services
- contract assets for sales of goods and from the provision of services
- loan to an associate and other related party carried at amortised cost
- debt investments carried at amortised cost
- bank acceptance bill receivables carried at FVTOCI
- finance lease receivables
- other financial assets (including amount due from related parties) at amortised cost
- pledged bank deposits
- term deposit, and
- cash and cash equivalents

FOR THE YEAR ENDED 31 DECEMBER 2022

36. Financial instruments (Continued)

36.3 Financial risk factors (Continued)

36.3.2 Credit risk (Continued)

Impairment of financial assets (Continued)

While pledged bank deposits, term deposit and cash and cash equivalents are also subject to the impairment requirements of IFRS 9, the identified impairment loss was immaterial.

The Group applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables and contract assets.

If the balances are significant and/or credit-impaired, the credit losses of those trade receivables are assessed separately. If not, to measure the expected credit losses, trade receivables and contract assets have been grouped based on shared credit risk characteristics and the days past due. The contract assets relate to unbilled work in progress and have substantially the same risk characteristics as the trade receivables for the same types of contracts. The Group has therefore concluded that the expected loss rates for trade receivables are a reasonable approximation of the loss rates for the contract assets.

The expected loss rates are based on the payment profiles of sales over a period of 24 months before 31 December 2022 or 1 January 2022, respectively, and the corresponding historical credit losses experienced within this period. The historical loss rates are adjusted to reflect current and forward-looking information on macroeconomic factors affecting the ability of the customers to settle the receivables. The Group has identified the GDP of the countries in which it sells its goods and services and the international crude oil price index to be the most relevant factors, and accordingly adjusts the historical loss rates based on expected changes in these factors.

36. Financial instruments (Continued)

36.3 Financial risk factors (Continued)

36.3.2 Credit risk (Continued)

Impairment of financial assets (Continued)

On that basis, the loss allowance as at 31 December 2022 and 2021 was determined as follows for both trade receivables and contract assets:

(i) As at 31 December 2022 and 2021, receivables with amounts subject to separate assessment for impairment are as below:

	More than 90 days	
31 December 2022	past due	Total
Expected loss rate	47.26%	
Gross carrying amount		
- trade receivables (RMB'000)	1,209,315	1,209,315
- contract assets (RMB'000)	15,707	15,707
Loss allowance (RMB'000)	(578,888)	(578,888)
	More than	
	90 days	
31 December 2021	past due	Total
Expected loss rate	65.21%	_
Gross carrying amount		
- trade receivables (RMB'000)	514,920	514,920
Loss allowance (RMB'000)	(335,771)	(335,771)

FOR THE YEAR ENDED 31 DECEMBER 2022

36. Financial instruments (Continued)

36.3 Financial risk factors (Continued)

36.3.2 Credit risk (Continued)

Impairment of financial assets (Continued)

(i) As at 31 December 2022 and 2021, receivables with amounts subject to separate assessment for impairment are as below: (Continued)

As the above debtors suffered in several lawsuits, operation difficulty or payment restriction due to current conflict between Russia and Ukraine, the Group estimated it is not able to collect these amount under the original terms, provisions for impairment on those receivables were made.

As set out in Note 22, the Group made individual assessment on trade receivables due from a customer domicile in Ukraine. During the year ended 31 December 2022, the Group made expected credit loss of approximately RMB230,698,000 (2021: RMB12,957,000) for such customer. The provision is made based on the key assumptions that: (1) 50% of the receivable from such customer will be covered and reimbursed by the insurance company if these balances are ratified to be uncollectible by the insurance company; and (2) the management expect to recover 40% of the remaining uncollectible balance after insurance coverage upon necessary collection action being taken.

- (ii) As at 31 December 2022 and 31 December 2021, trade receivables and contract assets that are not separately assessed have been grouped on the basis of shared credit risk characteristics and the days past due for the measurement of expected credit losses:
 - bank acceptance bill receivables group at amortised cost

As at 31 December 2022, the total amount of bank acceptance bills was RMB172,607,000 (As at 31 December 2021: RMB104,883,000), these bills will be accepted by large state-owned banks or commercial banks. The Group believes that there is no significant credit losses due to the bank default.

36. Financial instruments (Continued)

36.3 Financial risk factors (Continued)

36.3.2 Credit risk (Continued)

Impairment of financial assets (Continued)

(ii) As at 31 December 2022 and 31 December 2021, trade receivables and contract assets that are not separately assessed have been grouped on the basis of shared credit risk characteristics and the days past due for the measurement of expected credit losses: (Continued)

		1 - 30 days	31 – 60 days	61 - 90 days	More than 90 days	
31 December 2022	Current	past due	past due	past due	past due	Total
Expected loss rate	0.93%	0.97%	8.49%	10.34%	11.23%	N/A
Gross carrying amount – trade receivables (RMB'000)	153,127	2,254	216	77	13,011	168,685
- contract assets (RMB'000)	243,700	-	-	-	-	243,700
Loss allowance (RMB'000)	(3,682)	(22)	(18)	(8)	(1,462)	(5,192)
		1-30		31 - 60	More than	
		days		days	90 days	
31 December 2021	Current	past due	F	oast due	past due	Total
Expected loss rate	1.53%	3.64%		7.58%	8.33%	N/A
Gross carrying amount						
- trade receivables (RMB'000)	984,663	14,378		1,095	82,409	1,082,545
Loss allowance (RMB'000)	(15,030)	(523)		(83)	(6,865)	(22,501)

• revenue of land drilling rigs group

FOR THE YEAR ENDED 31 DECEMBER 2022

36. Financial instruments (Continued)

36.3 Financial risk factors (Continued)

36.3.2 Credit risk (Continued)

Impairment of financial assets (Continued)

 (ii) As at 31 December 2022 and 31 December 2021, trade receivables and contract assets that are not separately assessed have been grouped on the basis of shared credit risk characteristics and the days past due for the measurement of expected credit losses: (Continued)

		1-30 days	31 - 60 days	61 - 90 days	More than 90 days	
31 December 2022	Current	past due	past due	past due	past due	Total
Expected loss rate	0.44%	0.49%	4.15%	7.89%	8.03%	N/A
Gross carrying amount						
- trade receivables (RMB'000)	769,830	44,271	1,369	6,398	64,057	885,925
Gross carrying amount						
- contract assets (RMB'000)	153,323	-	-	-	-	153,323
Loss allowance (RMB'000)	(4,081)	(218)	(57)	(505)	(5,146)	(10,007)
		1-30	3	31 - 60	More than	
		days		days	90 days	
31 December 2021	Current	past due	pa	ast due	past due	Total
Expected loss rate	2.67%	4.12%		8.56%	11.41%	N/A
Gross carrying amount						
- trade receivables (RMB'000)	668,403	25,212		9,330	15,750	718,695
Gross carrying amount						
- contract assets (RMB'000)	334,296	-		-	-	334,296
Loss allowance (RMB'000)	(26,767)	(1,038)		(799)	(1,797)	(30,401)

revenue of fracturing group

36. Financial instruments (Continued)

36.3 Financial risk factors (Continued)

36.3.2 Credit risk (Continued)

Impairment of financial assets (Continued)

- (ii) As at 31 December 2022 and 31 December 2021, trade receivables and contract assets that are not separately assessed have been grouped on the basis of shared credit risk characteristics and the days past due for the measurement of expected credit losses: (Continued)
 - revenue of parts and components and others group

		1-30 days	31 – 60 days	61 – 90 days	More than 90 days	
31 December 2022	Current	past due	past due	past due	past due	Total
Expected loss rate	1.01%	1.05%	1.45%	3.99%	6.26%	N/A
Gross carrying amount						
- trade receivables (RMB'000)	892,134	207,876	210,040	10,644	445,464	1,766,158
Loss allowance (RMB'000)	(8,995)	(2,175)	(3,048)	(425)	(27,877)	(42,520)
					·	
		1-30	31 - 60	61 - 90	More than	
		days	days	days	90 days	
31 December 2021	Current	past due	past due	past due	past due	Total
Expected loss rate	4.47%	10.33%	10.71%	13.56%	14.26%	N/A
Gross carrying amount						
- trade receivables (RMB'000)	599,419	234,246	74,487	5,509	289,756	1,203,417
Gross carrying amount						
- contract assets (RMB'000)	12,634	-	-	-	-	12,634
Loss allowance (RMB'000)	(27,389)	(24,193)	(7,980)	(747)	(41,330)	(101,639)

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36. Financial instruments (Continued)

36.3 Financial risk factors (Continued)

36.3.2 Credit risk (Continued)

Impairment of financial assets (Continued)

- (ii) As at 31 December 2022 and 31 December 2021, trade receivables and contract assets that are not separately assessed have been grouped on the basis of shared credit risk characteristics and the days past due for the measurement of expected credit losses: (Continued)
 - revenue of drilling engineering services group

		1-30 days	31 – 60 days	61-90 Days	More than 90 days	
31 December 2022	Current	past due	past due	past due	past due	Total
Expected loss rate	0.90%	0.95%	1.14%	2.04%	4.73%	N/A
Gross carrying amount						
- trade receivables (RMB'000)	162,637	52,628	26,411	23,117	76,000	340,793
Gross carrying amount						
- contract assets (RMB'000)	240,269	-	-	-	-	240,269
Loss allowance (RMB'000)	(3,620)	(500)	(300)	(471)	(3,598)	(8,489)
		1-3	0	31 - 60	More than	
		day	S	days	90 days	
31 December 2021	Current	past du	e	past due	past due	Total
Expected loss rate	1.72%	2.569	6	4.31%	11.46%	N/A
Gross carrying amount						
- trade receivables (RMB'000)	96,384	78	2	348	12,063	109,577
Gross carrying amount						
- contract assets (RMB'000)	113,160		-	-	-	113,160
Loss allowance (RMB'000)	(3,603)	(2	0)	(15)	(1,383)	(5,021)

36. Financial instruments (Continued)

36.3 Financial risk factors (Continued)

36.3.2 Credit risk (Continued)

Impairment of financial assets (Continued)

(ii) As at 31 December 2022 and 31 December 2021, trade receivables and contract assets that are not separately assessed have been grouped on the basis of shared credit risk characteristics and the days past due for the measurement of expected credit losses: (Continued)

The closing loss allowances for trade receivables and contract assets as at 31 December 2022 and 2021 reconcile to the opening loss allowances as follows:

	Contract assets		Trade receivables	
	2022	2021	2022	2021
	RMB'000	RMB'000	RMB'000	RMB'000
Opening loss allowance as at 1 January	(11,265)	(18,511)	(484,068)	(504,198)
(Increase) decrease in loss allowance recognised				
in profit or loss during the year	(9,819)	7,246	(227,962)	(159,824)
Decrease in loss allowance during the year due to the				
acquisition of a subsidiary (Note 35) (Note)	-	-	126,884	168,242
Receivables written off during the year as uncollectible	-	-	531	6,941
Exchange rate changes	(541)		(38,856)	4,771
Closing loss allowances as at 31 December	(21,625)	(11,265)	(623,471)	(484,068)

Note: For movement related to the acquisition of subsidiaries, the loss allowance was fully eliminated at the consolidation level after the acquisition was completed.

Trade receivables and contract assets are written off where there is no reasonable expectation of recovery. Indicators that there is no reasonable expectation of recovery include, amongst others, the failure of a debtor to engage in a repayment plan with the Group, and a failure to make contractual payments.

Impairment losses on trade receivables and contract assets are presented as net impairment losses within operating profit. Subsequent recoveries of amounts previously written off are credited against the same line item.

FOR THE YEAR ENDED 31 DECEMBER 2022

36. Financial instruments (Continued)

36.3 Financial risk factors (Continued)

36.3.2 Credit risk (Continued)

Impairment of financial assets (Continued)

Loan to an associate and other related party and debt investments

Loan to an associate and other related party is considered credit-impairment on origination. For such assets, impairment is determined based on full lifetime expected credit loss on initial recognition. However, lifetime expected credit losses are included in the estimated cash flows when calculating the effective interest rate on initial recognition. The effective interest rate for interest recognition throughout the life of the asset is a credit-adjusted effective interest rate.

For measuring expected credit losses, the estimate of expected cash shortfalls reflects the cash flows expected from collateral and other credit enhancements that are part of the contractual terms and are not recognised separately by the entity.

As at 31 December 2021, loan to an associate and other related party subject to separate assessment for impairment is as below:

31 December 2021	Current	Total
Expected loss rate	87.78%	_
Gross carrying amount		
- Loan to an associate and other related party (RMB'000)	102,425	102,425
Loss allowance (RMB'000)	(89,910)	(89,910)

Debt investments at amortised cost are considered to have low credit risk, and the loss allowance recognised during the period was therefore limited to 12 months' expected losses.

Financial assets at FVTOCI

Bank acceptance bill receivables carried at FVOCI are considered to have low credit risk, and the loss allowance recognised during the period was therefore limited to 12 months expected losses. Management considers 'low credit risk' for the instruments as the issuers have strong capacity to meet its contractual cash flow obligations in the near term.

36. Financial instruments (Continued)

36.3 Financial risk factors (Continued)

36.3.2 Credit risk (Continued)

Impairment of financial assets (Continued)

Finance lease receivables

The Group applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for finance lease receivables.

To measure the expected credit losses, finance lease receivables have been grouped based on shared credit risk characteristics and the days past due.

The expected loss rates are based on the payment profiles of revenue over a period of 24 months before 31 December 2022 or 1 January 2022, respectively, and the corresponding historical credit losses experienced within this period. The historical loss rates are adjusted to reflect current and forward-looking information on macroeconomic factors affecting the ability of the customers to settle the receivables. The Group has identified the GDP of the countries in which it rents its inventory out through financing lease and the International crude oil price index to be the most relevant factors, and accordingly adjusts the historical loss rates based on expected changes in these factors.

On that basis, the loss allowance as at 31 December 2022 and 2021 was determined as follows for finance lease receivables:

 As at 31 December 2022 and 2021, finance lease receivables with amounts subject to separate assessment for impairment are as below:

31 December 2022	Credit-impaired
Expected loss rate	100%
Gross carrying amount	
- finance lease receivables (RMB'000)	76,410
Loss allowance (RMB'000)	(76,410)
31 December 2021	Credit-impaired
Expected loss rate	100%
Gross carrying amount	
- finance lease receivables (RMB'000)	77,047
Loss allowance (RMB'000)	(77,047)

FOR THE YEAR ENDED 31 DECEMBER 2022

36. Financial instruments (Continued)

36.3 Financial risk factors (Continued)

36.3.2 Credit risk (Continued)

Impairment of financial assets (Continued)

Finance lease receivables (Continued)

As the above debtors suffered in several lawsuits or operation difficulty, the Group cannot be able to collect the amount under the original terms, provisions for impairment on those receivables were made.

(ii) As at 31 December 2022 and 2021, finance lease receivables, which are not credit impaired, have been grouped on the basis of shared credit risk characteristics and the days past due for the measurement of expected credit losses:

31 December 2022	Current	Total
Expected loss rate	1.42%	-
Gross carrying amount		
 – finance lease receivables (RMB'000) 	355,853	355,853
Loss allowance (RMB'000)	(5,051)	(5,051)
31 December 2021	Current	Total
Expected loss rate	1.29%	_
Gross carrying amount		
- finance lease receivables (RMB'000)	83,716	83,716
Loss allowance (RMB'000)	(1,076)	(1,076)

36. Financial instruments (Continued)

36.3 Financial risk factors (Continued)

36.3.2 Credit risk (Continued)

Impairment of financial assets (Continued)

Other financial assets at amortised cost

Other financial assets at amortised cost include other receivables. The closing loss allowances for other financial assets as at 31 December 2022 and 2021 reconcile to the opening loss allowances as follows:

	2022	2021
	RMB'000	RMB'000
Opening loss allowance as at 1 January	(136,740)	(126,101)
Increase in the allowance recognised in profit or		
loss during the year	(58,074)	(12,034)
Exchange rate changes	(3,374)	1,395
Closing loss allowance as at 31 December	(198,188)	(136,740)

Net impairment losses on financial and contract assets recognised in profit or loss

During the year, the following losses were recognised in profit or loss in relation to impaired financial assets and contract assets:

	Year ended 31 December		
	2022	2021	
	RMB'000	RMB'000	
Impairment loss on:			
- trade receivables and contract assets	(237,781)	(152,579)	
- finance lease receivables	(3,338)	(2,841)	
- other financial assets at amortised cost	(58,074)	(116,949)	
- loan to an associate and other related party	-	(88,874)	
- debt investments	-	(1,857)	
	(299,193)	(363,100)	

FOR THE YEAR ENDED 31 DECEMBER 2022

36. Financial instruments (Continued)

36.3 Financial risk factors (Continued)

36.3.3 Liquidity risk

Individual operating entities within the Group are responsible for their own cash management, including the short-term investment of cash surpluses and the raising of loans to cover expected cash demands, subject to approval by the Company's management when the borrowings exceed certain predetermined levels of authority.

The Group's policy is to regularly monitor its liquidity requirements and its compliance with lending covenants, to ensure that it maintains sufficient reserves of cash and adequate committed lines of funding from major financial institutes to meet its liquidity requirements in the short and long term.

The Group has significant concentration of credit risk on customers in the oil and gas industry. The volatility in global oil prices may affect the ability of customers to make payments and demand of the Group's goods and services and hence may affect the liquidity of the Group.

The table below analyses the Group's non-derivative financial liabilities into relevant maturity groupings based on the remaining period from the balance sheet date to the contractual maturity date. The amounts disclosed in the table are the contractual undiscounted cash flows. Balances due within 12 months equal their carrying balances, as the impact of discounting is not significant.

	On demand	Between	Between	•	Total
	or less than	1 and	2 and	Over	contractual
31 December 2022	1 year	2 years	5 years	5 years	cash flows
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Trade and other payables (Note)	3,080,873	64,841	17,657	-	3,163,371
Borrowings	4,323,310	255,754	436,274	-	5,015,338
Lease liabilities	30,228	26,429	11,490	-	68,147
Total financial liabilities	7,434,411	347,024	465,421	-	8,246,856

36. Financial instruments (Continued)

36.3 Financial risk factors (Continued)

36.3.3 Liquidity risk (Continued)

	On demand	Between	Between		Total
	or less than	1 and	2 and	Over	contractual
31 December 2021	1 year	2 years	5 years	5 years	cash flows
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
		·	·		
Trade and other payables (Note)	2,397,708	111,085	30,296	-	2,539,089
Senior notes	1,356,430	-	-	_	1,356,430
Borrowings	3,911,741	-	-	-	3,911,741
Lease liabilities	22,574	21,698	31,556	_	75,828
Total financial liabilities	7,688,453	132,783	61,852	_	7,883,088

Note: Trade and other payables include trade payables, bills payable, amounts due to related companies and other payables.

36.4 Fair value estimation

36.4.1 Fair value hierarchy

This section explains the judgements and estimates made in determining the fair values of the financial instruments that are recognised and measured at fair value in the financial statements. To provide an indication about the reliability of the inputs used in determining fair value, the Group has classified its financial instruments into the three levels prescribed under the accounting standards. An explanation of each level follows underneath the table.

The Group has an established control framework with respect to the measurement of fair values. Management of the Group has overall responsibility for overseeing all significant fair value measurements, including level 3 fair values and reports directly to the management.

Management of the Group regularly reviews significant unobservable inputs and valuation adjustments. If third-party information is used to measure fair values, then management of the Group assesses the evidence obtained from the third parties to support the conclusion that such valuations meet the requirements of IFRS, including the level in the fair value hierarchy in which such valuations should be classified.

FOR THE YEAR ENDED 31 DECEMBER 2022

36. Financial instruments (Continued)

36.4 Fair value estimation (Continued)

36.4.1 Fair value hierarchy (Continued)

The following table presents the Group's financial assets that are measured at fair value at 31 December 2022 and 2021.

31 December 2022	Level 1 RMB'000	Level 2 RMB'000	Level 3 RMB'000	Total RMB'000
Financial asset at FVTOCI				
- Investment in unlisted companies	-	-	109,312	109,312
- Bank acceptance bill receivables	-	-	3,525	3,525
	-	-	112,837	112,837
31 December 2021	Level 1	Level 2	Level 3	Total
	RMB'000	RMB'000	RMB'000	RMB'000
Financial asset at FVTOCI				
- Investment in unlisted companies	_	_	117,902	117,902
- Bank acceptance bill receivables	_	_	1,371	1,371
	_	_	119,273	119,273

There were no transfers among levels 1, 2 and 3 during 2022 and 2021. There were no other changes in valuation techniques during 2022 and 2021.

36. Financial instruments (Continued)

36.4 Fair value estimation (Continued)

36.4.1 Fair value hierarchy (Continued)

The Group's policy is to recognise transfers into and transfers out of fair value hierarchy levels as at the end of the reporting period.

Level 1: The fair value of financial instruments traded in active markets is based on quoted market prices at the balance sheet date. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis.

Level 2: The fair value of financial instruments that are not traded in an active market (for example, over-the-counter derivatives) is determined by using valuation techniques. These valuation techniques maximise the use of observable market data where it is available and rely as little as possible on entity specific estimates. If all significant inputs required to fair value an instrument are observable, the instrument is included in level 2.

Level 3: If one or more of the significant inputs is not based on observable market data, the instrument is included in level 3. This is the case for unlisted equity securities.

36.4.2 Valuation techniques used to determine fair values

Specific valuation techniques used to value financial instruments include:

- Quoted market prices or dealer quotes for similar instruments.
- The fair value of interest rate swaps is calculated as the present value of the estimated future cash flows based on observable yield curves.
- The fair value of forward foreign exchange contracts is determined using forward exchange rates at the balance sheet date, with the resulting value discounted back to present value.
- Other techniques, such as discounted cash flow analysis, are used to determine fair value for the remaining financial instruments.

FOR THE YEAR ENDED 31 DECEMBER 2022

36. Financial instruments (Continued)

36.4 Fair value estimation (Continued)

36.4.3 Fair value measurements using significant unobservable inputs (level 3)

	Investments in unlisted companies RMB'000 (Note)	Bank acceptance bill receivables RMB'000	Total RMB'000
Opening balance 1 January 2021	106,338	54,937	161,275
Acquisitions	-	100,693	100,693
Disposals	-	(154,259)	(154,259)
Changes in fair value	11,564		11,564
Closing balance 31 December 2021	117,902	1,371	119,273
Acquisitions	-	102,019	102,019
Disposals	-	(99,865)	(99,865)
Changes in fair value	(8,590)		(8,590)
Closing balance 31 December 2022	109,312	3,525	112,837

Note: The above unlisted equity investments represent the Group's equity interest in a private entity established in the PRC. The directors of the Company have elected to designate these investments in equity instruments as at FVTOCI as they believe that recognising short-term fluctuations in these investments' fair value in profit or loss would not be consistent with the Group's strategy of holding these investments for long-term purposes and realising their performance potential in the long run.

There is no unrealised gains or losses recognised in profit or loss attributable to balances held at the end of the reporting period.

36. Financial instruments (Continued)

36.4 Fair value estimation (Continued)

36.4.3 Fair value measurements using significant unobservable inputs (level 3) (Continued)

The carrying amounts of the Group's financial assets and liabilities including cash and cash equivalents, pledged bank deposits, trade and other receivables, trade and other payables and borrowings, approximate their fair values due to their short maturities. The face values less any estimated credit adjustments for financial assets and liabilities with a maturity of less than one year are assumed to approximate their fair values. The fair value of term deposit and non-current financial liabilities for disclosure purposes is estimated by discounting the future contractual cash flows at the current market interest rate available to the Group for similar financial instruments.

36.4.4 Valuation inputs and relationships to fair value

	Fair value at 31 December			Relationship of unobservable inputs
Description	2022	2021	Unobservable inputs	to fair value
	RMB'000	RMB'000		
Unlisted companies - current	27,713	25,238	Adjustments (size alignments) to recent transaction price	Positive
Unlisted companies - non-current	81,599	92,664	Adjustments (size alignments) to recent transaction price	Positive
Bank acceptance bill receivables	3,525	1,371	Discount rate	Negative

FOR THE YEAR ENDED 31 DECEMBER 2022

37. Statement of financial position and reserve movement of the company

Statement of financial position of the Company

	As at 31 E	As at 31 December		
	2022	2021		
	RMB'000	RMB'000		
Non-current asset				
Investments in subsidiaries	3,303,812	3,938,691		
Current assets				
Other receivables	_	206		
Amounts due from subsidiaries	51,604	898,043		
Cash and cash equivalents	831	580		
	52,435	898,829		
Total assets	3,356,247	4,837,520		
Current liabilities				
Borrowings	_	1,306,491		
Other payables	5,467	360,271		
	5,467	1,666,762		
FOURTY				
EQUITY Equity attributable to owners of the Company				
Share capital	488,023	488,023		
Other reserves	3,807,721	3,523,516		
Accumulated losses	(944,964)	(840,781)		
	3,350,780	3,170,758		
Total liabilities and equity	3,356,247	4,837,520		

The statement of financial position of the Company was approved by the Board of Directors on 28 March 2023 and was signed on its behalf:

Director

37. Statement of financial position and reserve movement of the company (Continued)

Reserve movement of the Company

	Share capital RMB'000	Share premium RMB'000	Other reserve RMB'000	Capital reserve RMB'000	Exchange reserve RMB'000	Shares held for share award scheme RMB'000	Accumulated losses RMB'000	Total RMB'000
Balance at 1 January 2021	488,023	3,597,179	389,691	99,995	(342,146)	(124,618)	(773,679)	3,334,445
Loss for the year	-	-	-	-	(012,110)	(12 1,0 10)	(69,482)	(69,482)
Other comprehensive income	-			_	(94,205)	_	-	(94,205)
Total comprehensive expense	-	-	-	-	(94,205)	-	(69,482)	(163,687)
Transactions with owners								
Options lapsed under share option schemes		-	-	(2,380)	-	-	2,380	
Total transactions with owners, recognised directly in equity	-	_	_	(2,380)	_	_	2,380	_
Balance at 31 December 2021	488,023	3,597,179	389,691	97,615	(436,351)	(124,618)	(840,781)	3,170,758
Loss for the year Other comprehensive income	-	-	-	-	- 289,097	-	(109,075) –	(109,075) 289,097
Total comprehensive income	-	-	-	-	289,097	-	(109,075)	180,022
Transactions with owners								
Options lapsed under share option schemes	-	-	-	(4,892)	-	-	4,892	-
Total transactions with owners, recognised directly in equity		-	-	(4,892)	-	-	4,892	-
Balance at 31 December 2022	488,023	3,597,179	389,691	92,723	(147,254)	(124,618)	(944,964)	3,350,780

38. Events after reporting period

On 18 January 2023, the Company announced share subscription plans by Dongfang Investment and affiliate of one of its shareholder amounting to approximately HKD1,021,121,000 (equivalent to approximately RMB912,137,000). The share subscription is subject to the approval of independent eligible shareholders which is scheduled to be held on 17 April 2023.

FIVE-YEAR FINANCIAL HIGHLIGHTS

	2022	2021	2020	2019	2018
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Consolidated Statement of profit or loss					
Revenue	4,476,104	2,936,604	3,931,492	4,425,686	4,205,162
Cost of sales	(4,016,211)	(2,573,600)	(2,751,127)	(3,109,852)	(3,122,890)
Gross profit	459,893	363,004	1,180,365	1,315,834	1,082,272
Distribution costs	(215,290)	(161,975)	(177,878)	(357,273)	(313,211)
Administrative expenses(including research and development expenses)	(479,643)	(480,621)	(547,597)	(503,486)	(469,484)
Impairment losses on financial and	(479,043)	(400,021)	(347,397)	(303,400)	(409,404)
contract assets	(299,193)	(363,100)	(267,752)	(190,989)	(93,829)
Other income	68,367	89,308	87,612	(11,954)	90,678
Other gains/(losses), net	32,663	(56,829)	(47,334)	126,259	43,005
Operating (loss)/profit	(433,203)	(610,213)	227,416	378,391	339,431
Finance expenses – net	(189,249)	(132,671)	(126,359)	(208,903)	(163,405)
Share of net losses of associates and joint					
ventures accounted for using	(0.004)	(0, 400)		(0,000)	(00,444)
the equity method	(2,331)	(2,460)	(14,967)	(3,223)	(32,444)
(Loss)/profit before income tax	(624,783)	(745,344)	86,090	166,265	143,582
Income tax (expense)/credit	(024,783) (328)	(743,344)	(25,950)	(33,776)	(33,897)
	(020)	11,010	(20,000)	(00,110)	(00,001)
(loss)/Profit from continuing operations	(625,111)	(734,001)	60,140	132,489	109,685
	(***/ /	(-))			
Discontinued operations					
Loss from discontinued operations	-	_	_	_	(13,063)
(Loss)/profit for the year	(625,111)	(734,001)	60,140	132,489	96,622
(loss)/Profit attributable to:					
Owners of the company	(634,418)	(717,191)	49,660	107,472	82,287
Non-controlling interests	9,307	(16,810)	10,480	25,017	14,335
	(44.00)		0.04	0.00	
Basic (loss)/profit per share	(11.98)	(13.54)	0.94	2.03	1.55
	(((00)		0.04	0.00	
Diluted (loss)/profit per share	(11.98)	(13.54)	0.94	2.03	1.55
Dividend	-	-	-	-	-
Dividends declared and paid	-	-	-	-	-
Dividends declared and paid per share Dividend proposed after balance sheet date	_	_	_	_	_
Dividend proposed after balance sheet date					
date per share	_	_	_	_	_

FIVE-YEAR FINANCIAL HIGHLIGHTS

	2022	2021	2020	2019	2018
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Consolidated Balance Sheet	4 400 000	4 000 400	4 0 4 0 0 7 5	5 000 407	4 770 475
Total non-current assets	4,436,036	4,998,483	4,240,975	5,298,467	4,772,175
Total current assets	7,886,451	6,749,427	7,771,402	6,455,861	5,544,922
Total accesta	40.000.407	11 747 010	10 010 077	11 754 000	10 017 007
Total assets	12,322,487	11,747,910	12,012,377	11,754,328	10,317,097
	0 077 007	7 700 040	F 170 000	5 000 400	F 074 100
Total current liabilities Total non-current liabilities	8,377,067	7,793,243	5,170,292	5,033,409	5,374,100
	751,425	208,271	2,347,458	2,240,542	624,086
Total liabilities	0 100 400	0.001.514	7 617 760	7,273,951	E 000 100
	9,128,492	8,001,514	7,517,750	1,213,901	5,998,186
Total acuity	2 102 005	0 746 006	4 404 607	4 400 077	4 0 1 0 0 1 1
Total equity	3,193,995	3,746,396	4,494,627	4,480,377	4,318,911
Key financial ratios					
Profitability					
Gross margin from continuing operations	10.3%	12.4%	30.0%	29.7%	25.7%
EBITDA (loss margin)/margin	(2.3)%	(14.7)%	10.4%	12.6%	11.7%
Net (loss margin)/margin	(14.2)%	(24.4)%	1.3%	2.4%	2.0%
	. ,		·		
Return					
Return on average equity	(19.5)%	(18.4)%	1.2%	2.6%	2.0%
Return on average assets	(5.3)%	(6.0)%	0.4%	1.0%	0.8%
Liquidity					
Current ratio	0.94	0.87	1.50	1.28	1.03
Quick ratio	0.74	0.63	1.24	1.03	0.74
Turnover					
Turnover of average trade and bills receivable	267	386	297	247	191
Turnover of average trade and bills payable	189	292	292	239	174
Turnover of average inventory	158	225	174	166	198
Gearing					
Total debts/Total assets	40.2%	43.8%	37.3%	34.1%	30.2%
Gearing ratio	74.1%	68.1%	62.6%	61.9%	58.1%
EBIT/Interest expenses	(2.08)	(2.73)	0.98	1.66	2.07

FIVE-YEAR FINANCIAL HIGHLIGHTS

Note:

Profitability

Gross margin EBITDA

EBITDA (loss margin)/margin Net (loss margin)/margin

Return

Return on average assets Return on average equity

Liquidity

Current ratio Quick ratio

Turnover

Turnover of average trade and bills receivable Turnover of average trade and bills payable Turnover of average inventory

Gearing

Total debts/Total assets

Gearing ratio EBIT/Interest expenses

- = Gross profit/Revenue
- (Loss)/profit from operations + Share of net losses of associates and joint ventures accounted for using the equity method + Depreciation + Amortisation
- = EBITDA/Revenue
- = (Loss)/profit attributable to equity shareholders of the Company/Revenue
- = (Loss)/profit attributable to equity shareholders of the Company/Average assets
- (Loss)/profit attributable to equity shareholders of the Company/Average equity attributable to equity shareholders of the Company
- = Current assets/Current liabilities
- = (Current assets Inventory)/Current liabilities
- = 365.25 * Average trade and bills receivable/Revenue
- = 365.25 * Average trade and bills payable/Cost of sales
- = 365.25 * Average inventory/Cost of sales
- = (Long term interest-bearing borrowings + Short term interest-bearing borrowings)/Total assets
- = Total liabilities/Total assets
- = ((Loss)/profit from operations + Share of net losses of associates and joint ventures accounted for using the equity method)/Interest expenses (including capitalised interest)

