中石化煉化工程(集團)股份有限公司
SINOPEC Engineering (Group) Co., Ltd.*

(a joint stock limited liability company incorporated in the People's Republic of China)

(Stock Code: 2386)

Annual Results Announcement for the Year ended 31 December 2022

The Board of Directors ("**Directors**") (the "**Board**") of SINOPEC Engineering (Group) Co., Ltd. (the "**Company**") is pleased to announce the audited results of the Company and its subsidiaries for the year ended 31 December 2022. This announcement, containing the full text of the 2022 Annual Report of the Company, complies with the relevant content requirements of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited in relation to preliminary announcements of annual results. The full text of the 2022 Annual Report of the Company is also published on the website of The Stock Exchange of Hong Kong Limited (www.hkexnews.hk) and on the website of the Company (www.segroup.cn). The printed version of the 2022 Annual Report of the Company will be delivered to the shareholders of H shares of the Company in April 2023.

Publication of the Results Announcement

The Chinese and English versions of this Results Announcement are available on the website of the Company (www.segroup.cn) and on the website of The Stock Exchange of Hong Kong Limited (www.hkexnews.hk). In the event of any discrepancies between the English version and the Chinese version, the Chinese version shall prevail.

By Order of the Board
SINOPEC ENGINEERING (GROUP) CO., LTD.
JIA Yiqun
Chief Financial Officer, Secretary to the Board and Company Secretary

Beijing, the PRC
19 March 2023

As at the date of this announcement, directors of the Company are: SUN Lili#, XIANG Wenwu#, WANG Zizong, Li Chengfeng*, WU Wenxin*, JIANG Dejun#, HUI Chiu Chung, Stephen+, JIN Yong+ and YE Zheng+.*

Executive Directors
* *Non-executive Directors*
\+ *Independent Non-executive Directors*

This announcement is available on the website of Hong Kong Exchanges and Clearing Limited(www.hkex.com.hk) and on the website of the Company (www.segroup.cn).

* *For identification purposes only*

IMPORTANT NOTICE

The board of directors (the "**Board**") and the directors (the "**Directors**") of SINOPEC ENGINEERING (GROUP) CO., LTD. ("**SINOPEC SEG**" or the "**Company**") warrant that there are no false representations, misleading statements or material omissions contained in this annual report and are hereby jointly and severally liable for the authenticity, accuracy and completeness of the content hereof. Director Mr. Li Chengfeng could not attend the Tenth meeting of the Fourth Session of the Board (the "**Meeting**") due to official duties. Director Mr. Li Chengfeng authorised Chairwoman Mdm. Sun Lili to attend the Meeting, and to vote on his behalf. Mdm. SUN Lili (Chairwoman of the Board), Mr. JIANG Dejun (Director and President), Mr. JIA Yiqun (Chief Financial Officer) and Mr. WANG Yi (Head of the Finance Department) warrant the authenticity and completeness of the financial statements contained in this annual report.

The annual financial statements as at 31 December 2022 (the "**Reporting Period**") of SINOPEC SEG and its subsidiaries (the "**Group**"), prepared in accordance with the International Financial Reporting Standards, were audited by BDO Limited, which has issued a standard unqualified audit report.

This annual report contains forward-looking statements. All statements (other than statements of historical facts) that address business activities, events or developments that the Company expects or anticipates will or may occur in the future (including but not limited to projections, goals, estimates and business plans) are forward-looking statements. The future actual results or development trends may differ materially from those indicated by the forward-looking statements due to various factors. The forward-looking statements contained in this annual report were made by the Company as at 19 March 2023 and, unless otherwise required by the relevant regulatory authorities, the Company undertakes no obligation or responsibility to update these statements.

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COMPANY PROFILE

The Group is a leading energy and chemical engineering company in the PRC with strong international competitiveness and can provide domestic and overseas clients with overall solutions for petrol refining, petrochemicals, aromatics, coal chemicals, inorganic chemicals, pharmaceutical chemicals, clean energy, storage and transportation facilities, environmental protection and energy saving, among other industry sectors. The Group is an integrated service provider for the whole industry chain and the whole life cycle in energy and chemical industry and can provide overall industry chain services including engineering consulting, technology licensing, project management contracting, financing assistance, EPC (engineering, procurement and construction) contracting, as well as design, procurement, construction and installation, lifting and transportation of large equipment, pre-commissioning and start-up.

After 70 years of continuous development, the Group currently has one academician of the Chinese Academy of Sciences, three academicians of the Chinese Academy of

Engineering and nearly 10,000 professionals. The Group has extensive experience in project management and implementation, and owns and co-owns advanced patents and know-how in core business areas. The Group has delivered on schedule hundreds of modern factories with enormous investment, complicated process, advanced technology and high quality to clients in more than 20 countries and regions around the world, established long-term and steady cooperative relationships with large energy and chemical enterprises at home and abroad, maintained an extensive and stable client base, and enjoys remarkable industrial influence and social reputation.

In the future, adhering to the development orientation of "Integrated Service Provider with Whole Industry Chain and Whole Life Cycle in Energy and Chemical Industry", the Group will base itself on the energy and petrochemical engineering construction industry, continuously broaden its business scope and extend its value chain, and comprehensively improve the level of safe, efficient, green and low-carbon service in the business chain, to create a new momentum in achieving the corporate vision of "Building the World's Leading Technology-oriented Engineering Company".

BASIC INFORMATION OF THE COMPANY

LEGAL NAME
中石化煉化工程(集團)股份有限公司

CHINESE ABBREVIATION
中石化煉化工程

ENGLISH NAME
SINOPEC ENGINEERING (GROUP) CO., LTD.

ENGLISH ABBREVIATION
SINOPEC SEG

LEGAL REPRESENTATIVE
Mdm. SUN Lili

AUTHORISED REPRESENTATIVES
Mr. JIANG Dejun

Mr. JIA Yiqun

COMPANY SECRETARY
Mr. JIA Yiqun

REGISTERED ADDRESS
Building 8, Shenggujiayuan, Shenggu Middle Road, Chaoyang District, Beijing, the PRC

CORRESPONDENCE ADDRESS
Building 8, Shenggujiayuan, Shenggu Middle Road, Chaoyang District, Beijing, the PRC

Postcode: 100029

Tel: +8610-5673-0525

Website: www.segroup.cn

E-mail: seg.ir@sinopec.com

WEBSITES ON WHICH THIS ANNUAL REPORT IS PUBLISHED
Website designated by The Stock Exchange of Hong Kong Limited (the "Hong Kong Stock Exchange"):

http://www.hkexnews.hk

The Company's website:

http://www.segroup.cn

PLACE WHERE THIS ANNUAL REPORT IS AVAILABLE FOR INSPECTION

Office of the Board

SINOPEC ENGINEERING (GROUP) CO., LTD.

Building 8, Shenggujiayuan, Shenggu Middle Road, Chaoyang District, Beijing, the PRC

PLACE OF LISTING OF SHARES, STOCK NAME AND STOCK CODE

H Shares: Hong Kong Stock Exchange

Stock name: SINOPEC SEG

Stock code: 2386

UNIFORM SOCIAL CREDIT CODE

911100007109349087

NAMES AND ADDRESSES OF AUDITORS

PRC:

BDO China Shu Lun Pan Certified Public Accountants LLP

Room 1410, 14th Floor, Fanli Mansion, No. 22 Chaoyangmenwai Street, Chaoyang District Beijing, the PRC

Overseas:

BDO Limited

25th Floor, Wing On Centre, 111 Connaught Road Central, Hong Kong

NAME AND ADDRESS OF LEGAL ADVISORS

PRC:

King & Wood Mallesons

17th-18th Floor, East Tower, World Financial Center, 1 Dongsanhuan Zhonglu, Chaoyang District, Beijing

Hong Kong:

Herbert Smith Freehills

23rd Floor, Gloucester Tower, 15 Queen's Road Central, Hong Kong

CHAIRWOMAN'S STATEMENT

CHAIRWOMAN'S STATEMENT

Dear shareholders and friends,

On this occasion of SEG's 10th anniversary of listing, on behalf of the Board, I would like to express my heartfelt thanks to all shareholders and friends from all sectors of society for your attention and support to the Group!

Since the listing of the Company ten years ago, we have actively adapted ourselves to the major trend of energy transformation. Taking "To build the world's leading technology-oriented engineering company" as the development vision, we actively contributed to the upgrade of petrochemical industry, and made efforts to become a comprehensive engineering and technical service provider which integrates engineering technology R&D, engineering transformation and engineering implementation, and adapted ourselves to meet the demands of full industrial chain and lifecycle. Over the past decade, the Group have completed a large number of representative key projects successively. The market influence and brand reputation of the Group have been continuously enhanced. The Group won 22 national excellent design achievement awards, 37 national quality engineering awards and 319 science and technology progress awards at national, provincial and ministerial level. Over the past decade, the Group have accumulatively generated income of RMB476.4 billion, made profit of RMB23.9 billion, generated operational cash flow of RMB33.9 billion, and distributed dividend of RMB12.1 billion, creating generous values for the society, industry and shareholders while realizing its sustainable and healthy development.

Mdm. SUN Li Li *Chairwoman of the Board*

In year of 2022, the Group was faced with multiple pressures from turbulent international situations, transformation of energy and petrochemical industry as well as other influence. With focus on the enterprise strategy of "Value-Oriented, Innovation-Driven, Green & Clean, Talent-Based, Globalization-Targeted, Fusion Symbiosis" and firmly following the development target of building the world's leading technology-oriented engineering company, the Board of the Group led all employees in a coordinated effort to propel high-quality development. The Group took upon the responsibilities and successfully completed targets and tasks to reward the society and shareholders with stable business performance. The Group's RMB53.028 billion, net profit RMB2.282 billion, and new orders with a total value of RMB72.525 billion throughout the year. These are all hard-earned achievements. With an overall consideration of the profitability of the Group, return to the shareholders and the needs for sustainable development, the Board proposed a final dividend of RMB0.210 per share for the year of 2022. Taking into account of the interim dividend of RMB0.118 per share, the total dividend for the year was RMB0.328 per share with a dividend payout ratio of 65%, which ensures the stability of dividend payment.

Improvement of corporate governance. We have continuously improved the building of the Board according to the regulatory requirement. The function and power of the Board have been fully performed. We completed the SOE Reform 3-year action plan with high standards and passed the special audit. We strengthened the compliance governance and successfully passed the ISO 37301 compliance management system certification of LRQA, becoming one of the first batch listed companies in China and the first listed company in the petrochemical industry receiving this certification. We continuously propelled integration of management system, and implemented management penetration enhancement action, so as to continuously improve the Group overall coordination ability and resource allocation ability, as well as to reinforce the advantages of complementarity and comprehensive cooperation between the Group members. We also optimized the tracking and monitoring system for major risk events and indicators, which ensured effective prevention and control of major operating risks.

Enhancement of production and operation capability. Throughout the year, we implemented 1,192 projects at home and abroad. There were over 80,000 working headcounts per day, accumulatively reaching 250 million safe-man hours throughout the year. Domestically, by leveraging the organization and construction advantages within the Group, we completed the construction of Zhenhai Project Phase I and Jiujiang Aromatics Project, which now have been put into operation. Hainan Ethylene Project was delivered in high quality. Tianjin Nangang Ethylene Project has speeded up the construction. Huizhou Ethylene Project, Anqing Transformation and Upgrading Project and many other projects are pressing ahead. We are also accelerating the implementation of a cluster of LNG projects and Green Hydrogen projects. In overseas market, we fully carried forward the projects in Saudi Arabia, and the start-up and completion of RAPID project in Malaysia. The overseas business maintained continuous, stable and healthy operation. We build up the lean management in engineering projects to ensure project safety and quality while achieving project delivery on schedule. We strived to ensure reasonable profit margin while saving investment and achieving added value for the clients.

New track record of market exploration. We vigorously explored new markets and the value of new contracts in domestic market throughout the year hit a record high. We undertook the early work of a batch of large-scale petrochemical projects. We signed engineering design, EPC and construction contracts of many remarkable projects in the industry, such as Tianjin Nangang Ethylene Projects, CNOOC Shell Huizhou Project Phase III, CNPC Petrochemical Transformation and Upgrading Project in Jilin and so on. Besides working for SINOPEC, we also actively provided good service of development planning for CNPC, CNOOC, CHN Energy Group, Sinochem Group and Yanchang Group. In the fields of new energy and new material, we speeded up to expand our business presence and signed new contracts of RMB4.65 billion throughout the year. We made a breakthrough in overseas market under adverse situations, marked by exceeding annual contract target of USD1 billion. We entered the Algerian market for the first time, continued to consolidate the Middle East market, and successfully started to provide "technology +" high-end engineering services in the Central Asian market.

New results of innovative development. A large number of key energy and petrochemical technologies R & D programs have been carried out smoothly, represented by 24 state-level programs. We totally won 35 scientific and technological progress awards at the provincial and ministerial level and higher throughout the year. Several projects tackling core technologies in new fields have completed construction and been put into operation. We actively promoted our independently developed technologies, the technology licensing contract amount of which reached RMB399 million, with an increase of 40% year-on-year. We also worked on transformation reservation focusing on "carbon peaking and carbon neutrality" targets. The research regarding the carbon sources in the petrochemical industry was carried out with carbon neutrality strategy and implementation method in order to develop and reserve related technologies in parallel from the source, to the process and till the end.

New stage of digital empowerment. We continued to deepen the application of digital technology. Nearly 40 large-scale projects have achieved digital delivery, which strengthened the foundation of smart plant construction. Aiming at the advanced capability of digital engineering in the industry, we have continued to promote the application of digital technology in close alignment with the needs of domestic and overseas project execution. The system base platform, digital service platform and integrated design platform have been established and improved to continuously support the efficiency and quality of engineering design. In response to clients' new needs to digital delivery and intelligent management, we developed an integrated delivery application platform based on the industrial Internet platform to realize the integration of design, construction, delivery, smart plant construction and production consulting services. The digital delivery empowers the plant operation and maintenance, thus promoting the digital engineering to be extended towards smart plant.

New achievements of green and low-carbon development. We provided clients with a full range of services for environmental protection. Resource conservation and utilization were fully implemented in the consultation planning and overall design of more than 10 major petrochemical plants, such as in Maoming, Luoyang, Jilin and Huizhou, and so on. Our service helps to enhance energy, water and land utilization efficiency from the very beginning of the petrochemical plants, life cycle, which promoted clean production. We further reduced the energy consumption and main pollutant emissions of devices by using a new generation independently-developed technology, reaching the international advanced level. These devices are from several representative projects, such as Gulei Ethylene Project, Jiujiang Aromatics Project and so on. A series of environmental protection core technologies, such as sewage treatment technology using new petrochemical materials, PTA wastewater anaerobic expansion granular sludge bed technology, and freezing crystallization technology treating wet air oxidized alkali waste from ethylene unit were respectively applied in projects such as Zhenhai Project Phase II, Yizheng Chemical Fiber Project and Nangang Ethylene Project. We provided energy-saving consultation and diagnosis for equipment in operation. We also offered companies integrated solutions covering investment, construction and project implementation, through which the energy-saving and consumption-reduction projects invested and implemented by Energy Management Company have saved 170,000 tons of standard coal per year and reduced carbon dioxide equivalent to nearly 410,000 tons per year. The three hydrogen fueling stations designed by us supplied hydrogen for 2022 Beijing Winter Olympics and light up the Olympics torch with high-purity hydrogen, which guaranteed clean energy supply for the "Green Winter Olympics".

As we served the society and promoting high-quality development, our talent team were fully fostered and trained. Throughout the year, we gained 1 winner of "SINOPEC Scientific and Technical Meritorious Service Award", 7 SINOPEC Outstanding Contribution Experts, 8 Min-Enze Young Scientific and Technical Talents and 35 persons with principal senior professional title. Technical and management professionals have created value on their positions, brought added value for customers, and played a leading role in the industry. We held a Summit Forum of High-quality Development of Petrochemical Industry under the Target of "Carbon Peaking and Carbon Neutrality". The Forum invited academicians and experts to discuss green development and contributed wisdom and strength to industrial development together. The Forum attracted 1.8 million audiences online.

Looking forward to the future, under the target of "carbon peaking and carbon neutrality", the constraint of resources and environment will have a profound impact on the development of the energy and petrochemical industry. The development of the industry will enter into a period requiring transformation and qualitative change, at same time of which the Group's high-quality development will also come into a critical stage. At the beginning of 2023, SINOPEC Group brought forward a new strategic plan for high-quality development, following which we will strive our best along the road towards premium products, reputable brand, leading innovation and modern governance. We will coordinate and make overall plan to effectively carry out the high-quality development of the Group, striding towards the goal of making the Group world's leading technology-oriented engineering company.

Enhance service capability to accelerate on the road towards premium products. We will pool superior resources to provide high-end consultation and reliable engineering service for the green transformation and development of the energy and petrochemical industry, in order to realize the target of "carbon peaking and carbon neutrality". Every major project is of vital importance for clients' long-term development. We will enhance intrinsic safety in the process of engineering design with focus on project progress, quality, profit and process control, so as to meet the higher request of customers at home and abroad. We will pursue practical actions to effectively enhance the construction guarantee and capability for major projects to build high quality projects. Smart design to be continuously improved to extend the digital engineering towards smart plant, through which we will accelerate the creation of full lifecycle digital engineering value chain.

Coordinate soft power and hard power to accelerate on the road towards reputable brand. We will firmly pursue the practice of using advanced technology under scientific and standardized management to ensure reliable product quality, which will not only create value for clients, but also facilitate us to win a broader market. We will actively participate in the "Belt and Road Initiative". While winning important projects, we will promote our equipment, technology and standards going global to create an outstanding name card known for our excellent petrochemical engineering capability. In professional, highly-sophisticated, specialized and advanced areas, we will sharp the strength of our sub-brands to strive for the top position in their fields. We will actively participate in public service to give back to the society. We will fulfill our social responsibility to establish a good image and improve our brand reputation. We will put the concept of green, environmental protection and low-carbon into real practice to together build a beautiful homeland. We are committed to build a responsibility value chain to share benefits with relevant parties, fully unleash our brand influence, and continue to build an integrated and harmonious engineering ecosystem.

Take advantage of our unique strengths to accelerate on the road towards leading innovation. We will focus on the development demands of the industry and fully leverage our own engineering and technological advantages. With focus on the fields such as oil transformed to chemicals, oil producing chemicals, oil to special materials, new petrochemical materials and the whole hydrogen energy industrial chain, we will enhance our capability in original innovation and integrated innovation, and pursue a faster pace in developing new refining and petrochemical integrated process and achieve process flow optimization so as to explore deeper in more advanced and more extensive area of scientific and technological innovation.

Release development momentum to accelerate on the road towards modern governance. We will continue to enhance corporate governance, strengthen the construction of management system, consolidate the management foundation, and improve the management penetration throughout the whole petrochemical engineering business chain. We will stress on risk-oriented management and promote the integration and fusion of process system, internal risk control and compliance management. We will give greater support targeted to introduce more high-caliber personnel, and implement training plans for outstanding engineers and executive managers to ensure that more outstanding individuals could be continuously attracted in a long run. We will deepen the reform of the internal allocation system by highlighting benefit-oriented, and optimize a flexible and efficient market-oriented motivation and guarantee mechanism.

The roadmap has been drawn, and we are embarking on a long journey with heavy responsibility. SINOPEC Engineering Group will remain true to our original aspiration and commit ourselves to the responsibility and mission entrusted by the era. With the persistent efforts of the Board, executive staffs and all employees, under the strong support of shareholders and people from all walks of life, I believe that SINOPEC Engineering Group will make concerted effort on high-standard corporate governance, production and operation, transformation and development, scientific and technological innovation, reform management, risk prevention and control, so as to create stronger momentum for the high-quality development of petrochemical industry. We will present more quality service and bring greater value to shareholders, society and employees. We are committed to reward our investors for your support and attention with excellent business achievement and performance!

SUN Lili

Chairwoman of the Board

Beijing, the PRC

19 March 2023

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Integrated Development

Quality Products

Technological Innovations

Digital Empowerment

Illustration:
Zhenhai Refining and Chemical Ethylene Expansion Project

Integrated Development

Sound Governance Structure

2013

Listed on the Hong Kong Stock Exchange on 23 May

1,460 million H Shares were issued at Initial Public Offering and raised HK$**13.94** billion of proceeds

2023 *

* As at the end of the reporting period

Size of assets	Cumulative revenue	Cumulative net profit	Cumulative total distribution of dividends
increased by RMB**41.6** billion as compared with the size at the beginning of listing	RMB**476.4** billion	RMB**23.9** billion	RMB**12.1** billion

The picture shows the Anqing Refining Reconstruction and Expansion Project

Focus on return of shareholders

- Since listing, the Company has been focusing on the return to shareholders, and sharing the fruits of development with shareholders
- The Company maintained the continuity and stability of profit distribution policy, while looking after the long-term interest of the Company, interests of all shareholders as a whole and sustainable development of the Company
- Since listing, the cumulative total amount of dividends distributed reached RMB12.1 billion

Value the importance of communication with capital market

- True, accurate, complete, timely and fair disclosure of information was provided to satisfy the requirements of the relevant regulatory authorities
- Two results announcements and road shows per year were organized by the management
- Timely contact and communication with regulatory authorities and investors were conducted through various channels to understand the regulatory requirements and satisfy the information needs of investors

Quality Products

Adhere to the development goals of “Building the world’ s leading technology-oriented engineering company” by focusing on “value-oriented, innovation-driven, green and clean, talent-based, global development, fusion and symbiotic” corporate strategies, promote high-quality development with dedicated efforts, and make contributions to society and reward shareholders with sound and solid operating results and practicably undertaking responsibilities.

17,642 domestic contracts were signed

Total value of domestic contracts was RMB**452.5** billion

260 overseas contracts were signed

Total value of overseas contracts Was USD$**15.3** billion

8,310 domestic and overseas projects were completed

22 awards for national excellent design achievements

37 awards for national quality engineering projects

2 awards for FIDIC engineering projects

The picture shows the CNOOC Huizhou Project

List of representative projects in the recent decade

2022
- Hainan Refining and Chemical Integration Project was delivered
- Saudi SABIC GAS Phase-9 Air Separation Project was completed

2021
- Zhenhai Refining and Chemical Ethylene Expansion Project was delivered
- Fujian Gulei Refining and Chemical Integration Project was delivered
- SINOPEC SABIC Polycarbonate Project was delivered
- Shandong LNG Project (Phase II) was delivered
- Saudi IBB Ammonia Production Project was completed

2020
- Zhongke Refining and Chemical Integration Project was delivered
- Sinochem Quanzhou Ethylene Project was delivered

2019
- Zhong An Coal Chemical Integration Project was delivered
- Malaysia RAPID Oil Refining Project Start-up of the Atmospheric Distillation Unit was completed
- US Formosa Plastics Project was delivered
- Saudi Fadhili Natural Gas Processing Project was completed

2018
- FCC Project of Kazakhstan Atyrau Refinery was commissioned

2017
- Tianjin LNG Project was delivered
- Thailand IRPC Polypropylene Project was delivered

2016
- Zhongtian Hechuang Coal Chemical Project was delivered
- Guangxi LNG Project was delivered

2015
- Plastics project of Inner Mongolia China Coal Mengda was delivered
- Aromatics Project of Kazakhstan Atyrau Refinery was delivered
- Saudi Yanbu Project was commissioned

2014
- Yuanba Natural Gas Purification Project was delivered
- Sinochem Quanzhou Project was delivered
- Shijiazhuang Oil Refining and Chemical Project (Phase I) was delivered
- Yulin Coal Chemical Project was delivered
- Pucheng DMTO-II device was delivered
- Zhejiang Xingxing DMTO and Polyolefin Projects were delivered

2013
- Wuhan ethylene project was delivered

Domestic representative projects on display

Fujian Gulei Refining and Chemical Integration Project

Zhongke Refining and Chemical Integration Project

Tianjin LNG Project

Zhongtian Hechuang Coal Chemical Project

Yuanba Natural Gas Purification Project

Hainan Polyester Raw Materials Project

Overseas representative projects on display

Malaysia RAPID Oil Refining Project

Saudi SABIC GAS Phase-9 Air Separation Project

Formosa Plastics Project in U.S.

FCC Project of Kazakhstan Atyrau Refinery

Thailand IRPC Polypropylene Project

Saudi Yanbu Project

Technological Innovation

Innovation-driven

Refining sector	We own and co-own the whole process technology of oil refining with independent intellectual property rights, design and build a number of world-class thousand-ton scale refineries, and the overall technology has reached the world-class advanced level, among which the technology of catalytic cracking/catalytic cracking and clean gasoline production has reached the world-class leading level. Through the construction of a large-scale modern integrated refining and chemical plant, we have accumulated rich experience in optimizing the overall process of the whole plant, diversifying ethylene raw materials and maximizing plant efficiency, and our engineering technology level and ability to provide overall solutions have been recognized and improved.
Petrochemical sector	We own and co-own the core petrochemical technologies for the production of ethylene, aromatics, polyolefins and synthetic rubber by steam cracking, and we have designed and constructed a number of world-class large-scale projects with a focus on million-tonne ethylene plants. The complete set of ethylene oxide technology has been applied in industry, and the technology of organic chemical raw materials such as propylene oxide has been successfully developed and has been promoted and applied.
New coal chemical sector	We have jointly developed technologies such as coal gasification, synthesis gas purification, synthesis gas to methanol, and synthesis gas to ethylene glycol to achieve industrial application. We completed the development of the pilot and large-scale demonstration plant process package for coal-based synthesis gas-based SNG, forming a new type of full-process technology for coal chemical industry with the Company's methanol-to-olefin technology, promoting the rapid development of the coal chemical industry.

图示：海南炼化一体化项目

3,621 patent authorizations

90+ Editor-in-Chief National Standards

320+ Editor-in-Chief Industry Standards

New energy and new materials sector

We actively developed hydrogen energy technology breakthrough projects, and initially developed the integration of gas energy production, storage and transportation and terminal utilization, which provided technical support and guarantee for the Company's comprehensive expansion of hydrogen energy business.

An industrial demonstration plant using the 1,000-ton high isotactic polybutene-1 technology has been built, a 10,000-ton 48K large-tow carbon fiber plant has been built and put into operation, and a solution-based polyolefin elastomer (POE) technology pilot plant has been successfully put into production.

Natural gas processing sector

In the field of natural gas processing, we have overcome the key technology of high-acid natural gas purification and solved the problem of ultra-large-scale safe and efficient purification treatment of high-acid natural gas, and formed the deep purification processing technology of natural gas with independent intellectual property rights. We have also developed a series of super large-scale LNG storage tank technology, forming a complete set of large-scale LNG receiving station technology, which has been promoted and applied.

Construction technology and construction ability have been comprehensively improved through practice

We have established "three systems and one platform" for construction technology management of the Company, namely the construction technology standard system, the construction technology visualization system and the efficient tooling system as well as the construction technology management core team, in order to create a new model of construction technology system and comprehensively improve the construction technology level and construction capability.

List of three national awards in the past ten years

Won 319 awards at or above the provincial (ministerial) level

Won 3 National Technology Invention Awards

Won 11 National Science and Technology Progress Awards

2020

First prize of National Science and Technology Progress Award for R&D and industrial application of a complete set of technology for complex material million-ton-level ethylene

2019

Second prize of National Science and Technology Progress Award for development and application of a complete set of technologies for ultra-low sulfur emission and resource utilization of refining and chemical sulfur-containing waste gas

2018

Second prize of National Science and Technology Progress Award for high-efficiency catalysts and complete sets of technologies for value-added conversion of dilute ethylene

2017

First prize of National Science and Technology Progress Award for development and application of a complete set of technologies for large-scale modern coal chemical for coal-to-oil/olefin

First prize of National Science and Technology Progress Award for high-efficiency methanol-to-olefin full process technology

Second Prize of National Science and Technology Progress Award for deep delayed coking technology for improving light oil yield

Second prize of National Science and Technology Progress Award for key technology and engineering application in lightweight design and manufacturing of heavy pressure vessels

2015

Grand prize of National Science and Technology Progress Award for development and application of a complete set of technologies for high-efficiency and environmental-friendly aromatics

2014

First prize of National Technology Invention Award for DMTO technology from methanol

Second prize of National Technology Invention Award for new technologies for the reduction of fine particle pollutants in major chemical plants

First prize of National Science and Technology Progress Award for design, manufacture and maintenance of critical pressure vessels under extreme conditions

Second prize of National Science and Technology Progress Award for technological innovation and industrial application for full and efficient processing of high acid heavy crude oil

2013

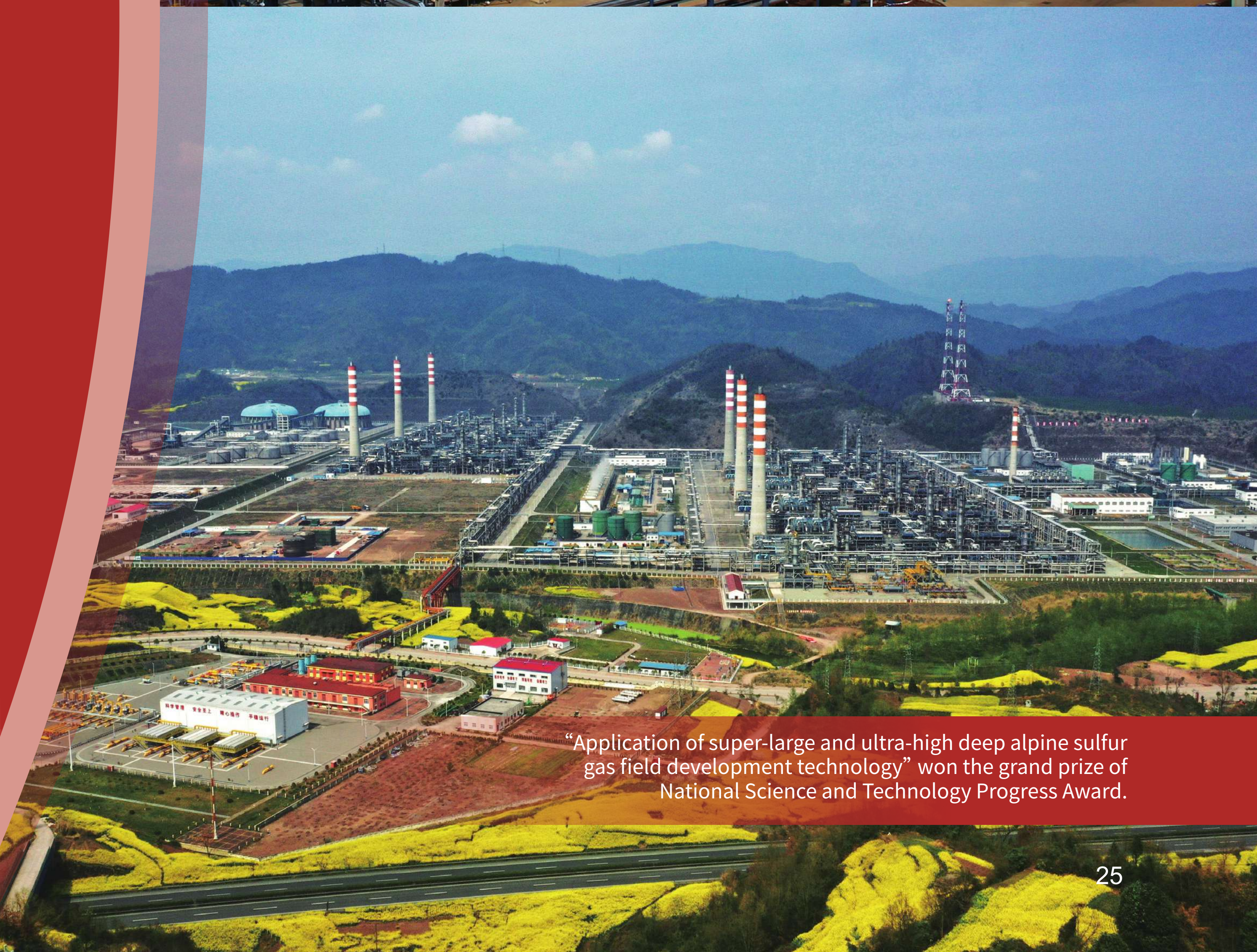
Second prize of National Technology Invention Award for creation and industrial application of new catalytic materials of fully crystalline composite porous molecular sieves

2012

Grand prize of National Science and Technology Progress Award for safe and efficient development technology and industrial application of super-large and ultra-deep high-sulfur gas fields

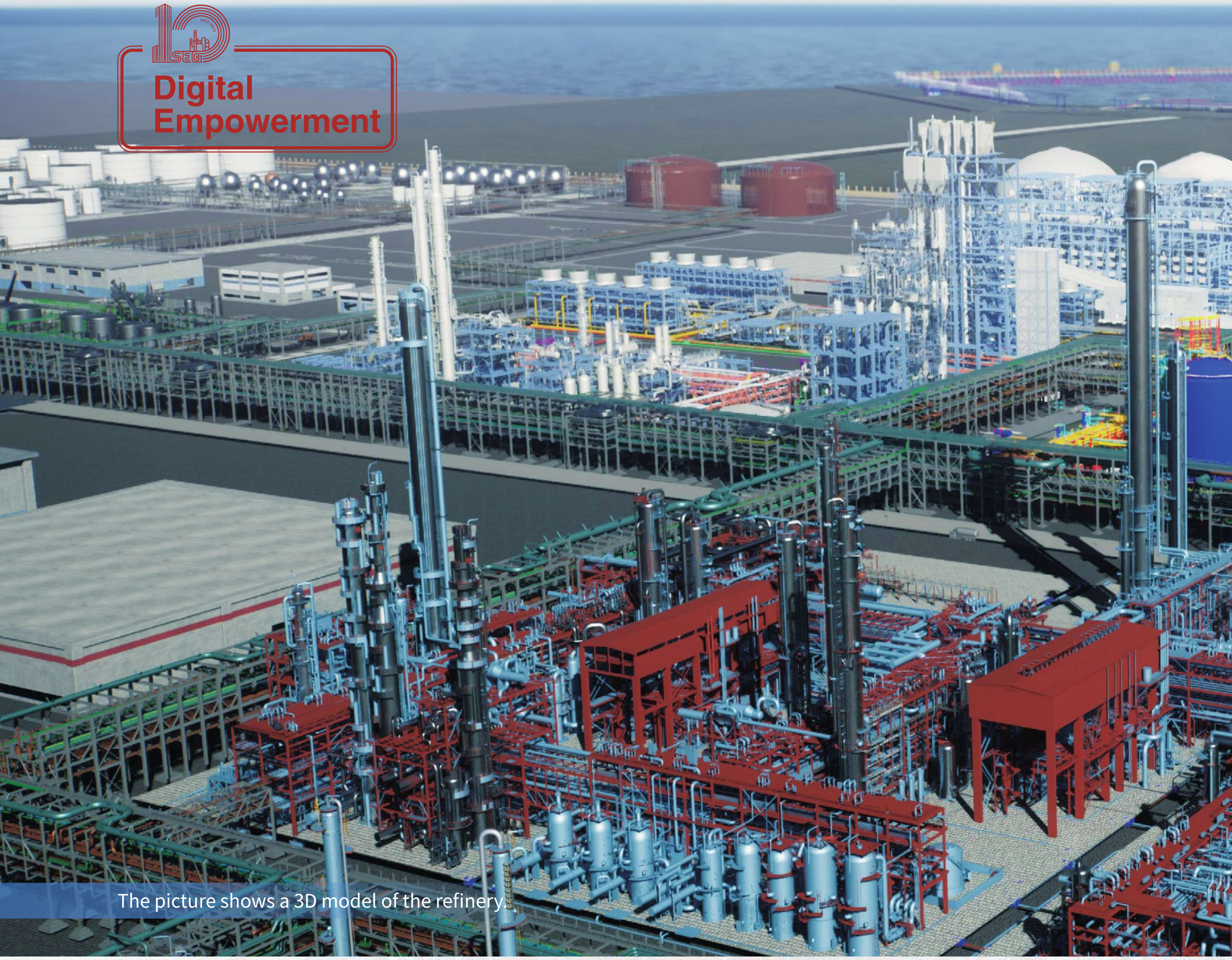
Awarding authority: State Council of the People' s Republic of China

"Development and application of high-efficiency and environmentally friendly aromatics complete sets of technology" won the grand prize of National Science and Technology Progress Award.



"Application of super-large and ultra-high deep alpine sulfur gas field development technology" won the grand prize of National Science and Technology Progress Award.

Digital Empowerment



The picture shows a 3D model of the refinery.

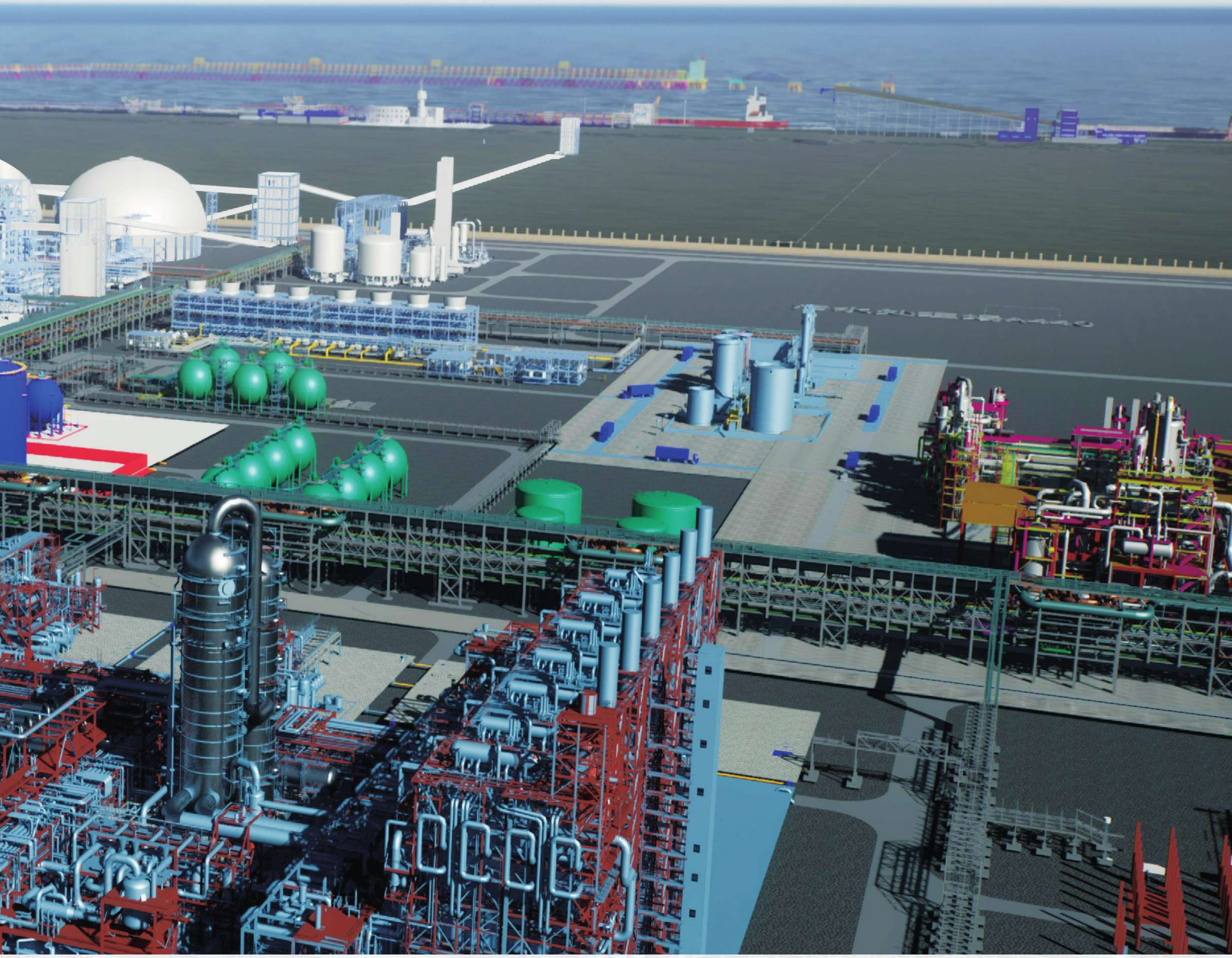
Digital transformation empowered by digital engineering

- Establishing digital delivery and other platforms to improve systems such as process design, engineering design and 3D collaborative design
- Improving the national standards for digital delivery of projects in the petrochemical industry and the implementation rules for digital delivery of projects
- Achieved the first simultaneous construction and delivery of physical and digital plants for domestic refining and chemical integration projects

Nearly 40 digital delivery of large-scale projects

Zhongke Refining and Chemical Integration Project
Gulei Refining and Chemical Integration Project
Zhenhai Refining and Chemical Ethylene Project
Hainan Refining and Chemical Ethylene Project
Tianjin Nangang Ethylene Project
Anqing Oil Conversion Project
Baling Petrochemical Caprolactam Project
Guangdong Petrochemical Refining and Chemical Integration Project
Shenghong Refining and Chemical Integration Project
New refinery project in Kuwait
Malaysia RAPID Project
......

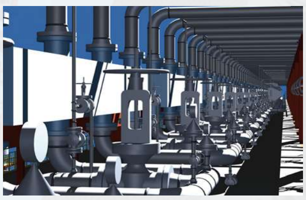
Covering 479 sub-sectors of all domain business process basic database



The Digital Delivery Standard of Petrochemical Engineering won the **first prize** of Standard Technology Innovation of China Engineering Construction Standardization Association.

The Group was awarded **9** outstanding engineering survey and design computer software by China Survey and Design Association.

2016 Golden Valve Award
(Intergraph Smart 3D rendering and special tracks)



2021 Global Elite Awards
(Intergraph Smart Review Excellence in 3D Design)

PRINCIPAL FINANCIAL DATA AND INDICATORS


CONNECTION
ANALYSIS
DATA
SEARCHING
VERIFICATION
CODING
SENDING
20%

PRINCIPAL FINANCIAL DATA AND INDICATORS

Summary of Financial Data and Indicators Prepared in Accordance with International Financial Reporting Standards ("IFRS")

Unit: RMB'000

Items	As at 31 December 2022	As at 31 December 2021	As at 31 December 2020	As at 31 December 2019	As at 31 December 2018	Changes from the end of 2021 (%)
Non-current assets	8,312,570	7,979,567	7,409,911	7,256,957	7,034,787	4.2
Current assets	70,369,169	64,937,676	64,055,416	60,616,791	63,837,953	8.4
Current liabilities	46,475,288	41,370,338	40,672,278	37,791,658	41,998,840	12.3
Non-current liabilities	2,166,941	2,423,569	2,537,011	2,811,549	2,890,751	(10.6)
Consolidated equity attributable to equity holders of the Company	30,034,207	29,118,084	28,251,172	27,265,976	25,978,646	3.1
Net assets per share of equity holders of the Company (RMB)	6.78	6.58	6.38	6.16	5.87	3.1

Unit: RMB'000

Items	Year ended 31 December					Changes over the same period of 2021 (%)
	2022	2021	2020	2019	2018	
Revenue	53,028,139	57,759,590	52,352,584	52,261,051	47,019,024	(8.2)
Gross profit	5,612,325	6,468,189	5,714,072	5,482,733	5,195,574	(13.2)
Operating profit	1,810,813	1,701,898	2,204,379	2,017,007	1,435,534	6.4
Profit before taxation	2,762,276	2,592,407	3,010,562	2,827,400	2,121,515	6.6
Profit attributable to equity holders of the Company	2,281,800	2,129,589	2,381,905	2,183,457	1,679,472	7.1
Basic earnings per share (RMB)	0.52	0.48	0.54	0.49	0.38	7.1
Net cash flow generated from operating activities	6,809,048	2,943,228	2,956,836	300,047	6,104,192	131.3
Net cash flow generated from operating activities per share (RMB)	1.54	0.66	0.67	0.07	1.38	131.3

Items	Year ended 31 December				
	2022	2021	2020	2019	2018
Gross profit margin (%)	**10.6**	11.2	10.9	10.5	11.0
Net profit margin (%)	**4.3**	3.7	4.6	4.2	3.6
Return on assets (%)(1)	**3.0**	3.0	3.4	3.1	2.6
Return on equity (%)(2)	**7.6**	7.3	8.4	8.0	6.5
Return on invested capital (%)(3)	**7.8**	7.5	8.6	8.3	6.7

Items	**As at 31 December 2022**	As at 31 December 2021	As at 31 December 2020	As at 31 December 2019	As at 31 December 2018
Asset-liability ratio (%)(4)	**61.8**	60.1	60.5	59.8	63.3

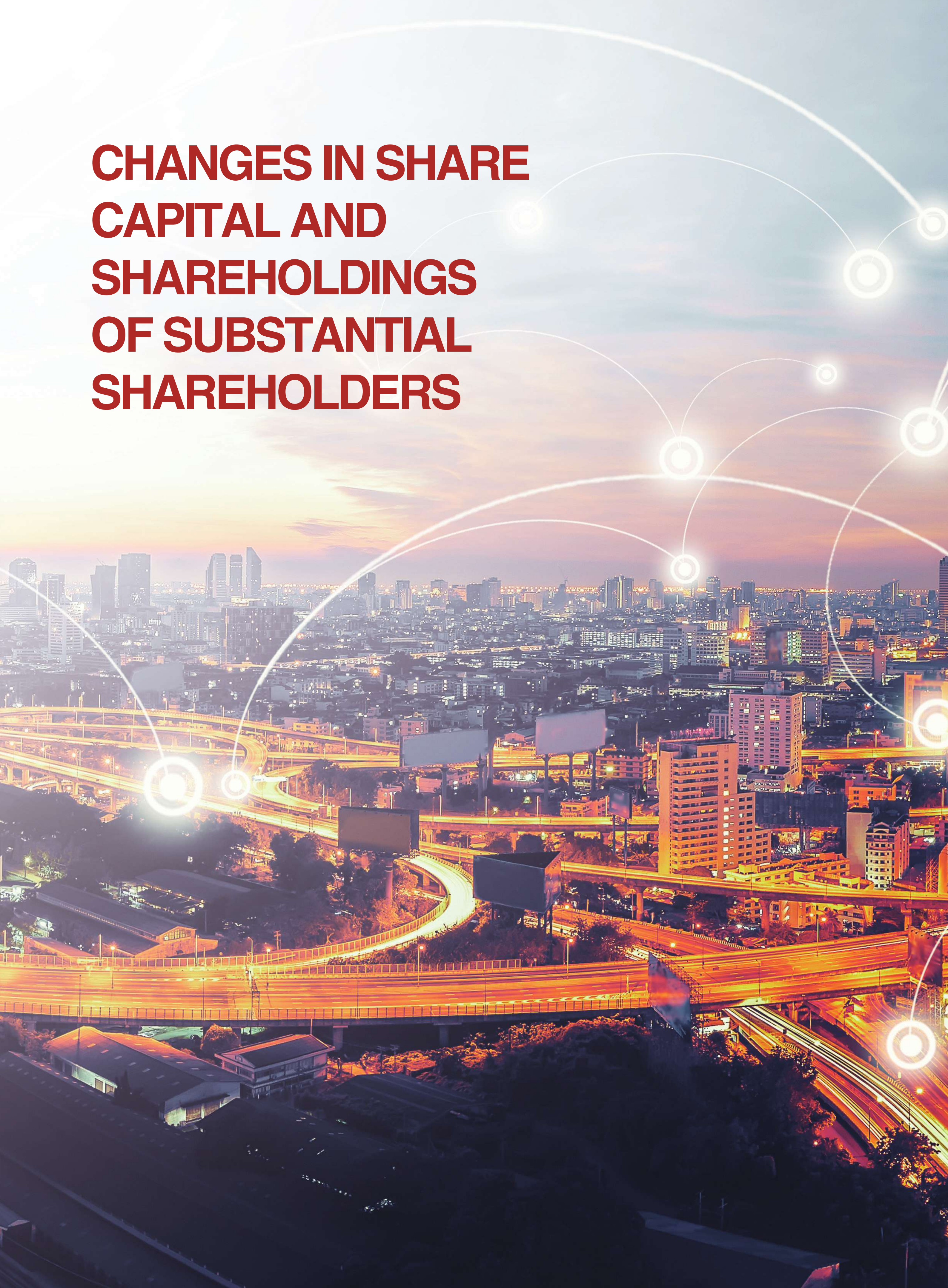
(1) Return on assets = $\dfrac{\text{Profit for the period}}{\text{(The opening total assets + The closing total assets)/2}}$

(2) Return on equity = $\dfrac{\text{Profit for the period}}{\text{Total equity at the end of the period}}$

(3) Return on invested capital = $\dfrac{\text{Earnings before interest and tax (EBIT) for the period x (1 – effective income tax rate)}}{\text{Interest-bearing liabilities at the end of the period – Credit loans + Total equity at the end of the period}}$

(4) Asset-liability ratio = $\dfrac{\text{Total liabilities at the end of the period}}{\text{Total assets at the end of the period}}$

CHANGES IN SHARE CAPITAL AND SHAREHOLDINGS OF SUBSTANTIAL SHAREHOLDERS



CHANGES IN SHARE CAPITAL AND SHAREHOLDINGS OF SUBSTANTIAL SHAREHOLDERS

1 Changes in the Share Capital of the Company

Unit: Share

	As at 31 December 2021		Increase/Decrease during the Reporting Period (+, -)			As at 31 December 2022	
	Number	Percentage (%)	New shares issued	Others	Subtotal	Number	Percentage (%)
Promoter shares (Domestic Shares)	2,967,200,000	67.01	–	–	–	2,967,200,000	67.01
Foreign shares listed overseas (H Shares)	1,460,800,000	32.99	–	–	–	1,460,800,000	32.99
Total number of shares	4,428,000,000	100.00	–	–	–	4,428,000,000	100.00

2 Shareholdings of Substantial Shareholders

As at the end of the Reporting Period, there were a total of 921 shareholders of the Company. As at 19 March 2023, the public float of the Company satisfied the minimum requirements under the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "Hong Kong Listing Rules") according to the information publicly available to the Company and to the knowledge of the Directors.

(1) Shareholdings of the top ten shareholders

Unit: Share

Name of Shareholders	Increase/ Decrease during the Reporting Period (+, -)	Number of Domestic Shares held as at the end of the Reporting Period	Number of H Shares held as at the end of the Reporting Period	Percentage as at the end of the Reporting Period	
				In total share capital (%)	In relevant class of shares (%)
China Petrochemical Corporation[(1)]	0	2,967,200,000	–	67.01	100.00
HKSCC NOMINEES LIMITED	-515,000	–	1,453,229,280	32.83	99.52
ZHANG SAIYU	0	–	2,900,000	0.07	0.20
HUI MO CHEE	0	–	870,000	0.01	0.06
HUI SIU SHUN WAN	0	–	340,000	0.01	0.02
WONG CHOK SHUN	0	–	300,000	0.01	0.02
WONG CHUI CHUNG	0	–	295,000	0.01	0.02
WONG SIU JUNK	+200,000	–	200,000	0.00	0.01
CHAN LAI KUEN SELINA	0	–	195,500	0.00	0.01
WONG CHUI CHUNG	0	–	195,500	0.00	0.01
LAM YICK KEUNG GEORGE	+150,000	–	150,000	0.00	0.01
Statement on the connected relationship or acting in concert among or between the aforementioned shareholders	The Company is not aware of any connection or acting in concert among or between the aforementioned top ten shareholders				

(2) Information disclosed according to the Securities and Futures Ordinance

In accordance with the archiving notice submitted through Disclosure of Interests Online System, save as the information disclosed below, as at the end of the Reporting Period, to the knowledge of the Board, no person(s) had an interest or short position in the shares or underlying shares or debentures of the Company (other than a Director, chief executive of the Company or supervisor of the Company (the "Supervisor")) which would fall to be disclosed under the provisions of Divisions 2 and 3 of Part XV of the Securities and Futures Ordinance (the "SFO") or, who was, directly or indirectly, interested in 5% or more of the nominal value of any class of share capital carrying the rights to vote in all circumstances at general meetings of the Company:

Name of Shareholders	Class of share	Capacity	Number of shares with interests held or regarded as being held (Share)	Percentage in shares of the Company of the same class (%)[6]	Percentage in the total share capital of the Company (%)[7]
China Petrochemical Corporation[1]	Domestic Share	Beneficial owner/Interests of controlled corporation	2,967,200,000 (L)	100.00 (L)	67.01 (L)
FMR LLC[2]	H Share	Interests of controlled corporation	132,185,946 (L)	9.05 (L)	2.99 (L)
Brown Brothers Harriman & Co.[3]	H Share	Agent	117,005,232 (L)	8.01 (L)	2.64 (L)
			117,005,232 (P)	8.01 (P)	2.64 (P)
Pandanus Associates Inc.[4]	H Share	Interests of controlled corporation	88,066,353 (L)	6.03 (L)	1.99 (L)
Pandanus Partners L.P.[4]	H Share	Interests of controlled corporation	88,066,353 (L)	6.03 (L)	1.99 (L)
FIL Limited[4]	H Share	Interests of controlled corporation	88,066,353 (L)	6.03 (L)	1.99 (L)
BlackRock, Inc.[5]	H Share	Interests of controlled corporation	73,123,691 (L)	5.01 (L)	1.65 (L)

Notes: (L): long position; (S): short position; (P): lending pool.

Notes:

(1) China Petrochemical Corporation (the "Sinopec Group") directly and/or indirectly holds 2,967,200,000 domestic shares of the Company ("Domestic Shares"), representing 100% of the Domestic Shares and approximately 67.01% of the total share capital of the Company, respectively. Sinopec Assets Management Co., Ltd. is a wholly-owned subsidiary of Sinopec Group and directly holds 59,344,000 Domestic Shares, representing 2.00% of the Domestic Shares and approximately 1.34% of the total share capital of the Company, respectively. For the purposes of the SFO, Sinopec Group is also deemed to be interested in the Domestic Shares held by Sinopec Assets Management Co., Ltd.

(2) The information is based on the Corporate Substantial Shareholders Notice dated 8 July 2022 and filed by FMR LLC with the Hong Kong Stock Exchange.

(3) The information is based on the Corporate Substantial Shareholders Notice dated 25 August 2022 and filed by Brown Brothers Harriman & Co. with the Hong Kong Stock Exchange.

(4) The information is based on the Corporate Substantial Shareholders Notices dated 22 August 2022 and filed by Pandanus Associates Inc., Pandanus Partners L.P. and FIL Limited with the Hong Kong Stock Exchange. According to these notices, Pandanus Associates Inc. holds 100% interest in Pandanus Partners L.P. and Pandanus Partners L.P. holds 36.86% interest in FIL Limited.

(5) The information is based on the Corporate Substantial Shareholders Notice dated 24 March 2022 and filed by BlackRock, Inc. with the Hong Kong Stock Exchange.

(6) It is calculated on the basis that the Company has issued 2,967,200,000 Domestic Shares and 1,460,800,000 H Shares.

(7) It is calculated on the basis that the Company has issued 4,428,000,000 Shares in total.

BUSINESS REVIEW AND PROSPECTS

BUSINESS REVIEW AND PROSPECTS

1 Business Review

(1) Operating Environment

In 2022, China's economy was subject to repeated impact of multiple unexpected factors. Facing the severe and complex situations, the Chinese government adhered to the general keynote of seeking progress while maintaining stability, efficiently made overall plans for economic and social development, effectively made response to internal and external challenges, and maintained sustainable development of the national economy despite pressure, realizing GDP growth of 3.0% in 2022.

Mr. Jiang Dejun *Director of the Board and the President*

2022 is an extraordinary and challenging year. The downward pressure on the global economy increased, geopolitical fluctuations intensified, energy prices fluctuated substantially, and the unexpected changes of domestic and international situations occurred one after another. Facing enormous pressure and great challenge, under the strong leadership of the Board, the Group did the best to stabilize operation and explore market, seek innovation to promote development, focus efforts on reform and strengthen management, prevent risks and insist on the bottom line, firmly brought the basic situations of production and operation under control, and made hard-won business achievements.

From the point of view of industrial development, domestically, the construction of large refining and chemical integration projects has been promoted with high quality, the pace of transformation and upgrading of "conversion from oil to chemical products" and "conversion from oil to special products" has been accelerated, the layout of high-end new material projects has been accelerated, and the level of intensification, integration, high-end trend and cleanliness of the petrochemical industry has been continuously improved; a large batch of LNG receiving terminal projects have entered the peak period of construction and delivery, and satisfied the growth of relevant demand; in terms of new energy, the development was prosperous, the proportion of related investment continued to rise, and the coupled and integrated development of hydrogen production by wind and solar power generation and traditional energy has become a trend.

Overseas, geopolitical conflicts led to a significant increase of global demand for oil from the Middle East, multiple large-size integrated petrochemical projects have been restarted and entered substantive bidding phase; the economy of Southeast Asia continued to resume in terms of domestic demand and export, the refining and chemical industry has entered a prosperity cycle, and the willingness to increase production capacity has been significantly enhanced; the petroleum production of Africa remained stable generally; although limited by the lack of funds and backward infrastructure, it still has great potential.

(2) Operation Overview

During the Reporting Period, the Group's total revenue was RMB53.028 billion, profits attributable to equity holders of the Company was RMB2.282 billion. As at the end of the Reporting Period, the Group's backlog was RMB112.231 billion, representing an increase of 21.0% on a year-on-year basis; the value of new contracts entered into by the Group during the Reporting Period was RMB72.525 billion, representing an increase of 14.8% on a year-on-year basis.

The business of the Group mainly comprises four segments: (1) engineering, consulting and licensing; (2) engineering, procurement and construction contracting ("EPC Contracting"); (3) construction and (4) equipment manufacturing.

The following table sets forth the revenue generated from each of the segments and their respective percentage of the Group's total revenue (before inter-segment elimination) during the periods indicated:

	Year ended 31 December				
	2022		2021		
	Revenue	Percentage of total revenue	Revenue	Percentage of total revenue	Change
	(RMB'000)	(%)	(RMB'000)	(%)	(%)
Engineering, consulting and licensing	3,370,136	5.7	3,863,479	5.8	(12.8)
EPC Contracting	29,586,178	49.8	35,704,443	54.0	(17.1)
Construction	25,600,495	43.1	25,539,549	38.6	0.2
Equipment manufacturing	829,751	1.4	1,036,860	1.6	(20.0)
Subtotal	59,386,560	100.0	66,144,331	100.0	(10.2)
Total (after inter-segment elimination)[1]	53,028,139	N/A	57,759,590	N/A	(8.2)

Note:

(1) "Total (after inter-segment elimination)" means the aggregate revenue generated from each business segment after inter-segment elimination to exclude the impact of inter-segment transactions. Inter-segment elimination mainly arises from the inter-segment sales to the EPC Contracting segment made by the engineering, consulting and licensing, engineering construction and equipment manufacturing segments.

During the Reporting Period, the Group's revenue from the engineering, consulting and licensing business reached RMB3.370 billion, representing a decrease of 12.8% on a year-on-year basis, it was mainly caused by the decrease of design business volume; the revenue from the EPC Contracting business reached RMB29.586 billion with a year-on-year decrease of 17.1%, which was mainly attributable to the impact of project implementation cycle, the closure of large projects such as Zhenhai Base project, Crude Oil Storage Facility Project Cluster and Gulei Refinery and Chemical integration project, projects such as Huizhou Ethylene were at initial stage of construction, showing year-on-year decrease of revenue; the construction business revenue amounted to RMB25.600 billion, which was flat year-on-year; the equipment manufacturing business revenue amounted to RMB830 million, representing a decrease of 20.0% on a year-on-year basis, which was mainly due to the decreased business volume in the manufacturing and the impact of temporary suspension of work.

The following table sets forth the revenue generated from different industries in which the Group's clients operate for the periods indicated:

	Year ended 31 December				
	2022		2021		
	Revenue	Percentage of total revenue	Revenue	Percentage of total revenue	Change
	(RMB'000)	(%)	(RMB'000)	(%)	(%)
Oil refining	**7,421,327**	**14.0**	13,142,234	22.8	(43.5)
Petrochemicals	**31,606,768**	**59.6**	30,022,255	52.0	5.3
New coal chemicals	**912,927**	**1.7**	1,353,656	2.3	(32.6)
Storage & transportation and others	**13,087,117**	**24.7**	13,241,445	22.9	(1.2)
Total	**53,028,139**	**100.0**	57,759,590	100.0	(8.2)

The Group's revenue mainly comes from providing services to customers in oil refining, petrochemicals, new coal chemicals, storage and transportation and other industries. During the Reporting Period, contributed by the revenue of large-scale petrochemical projects such as Hainan Refining Ethylene and Huizhou Ethylene, the Group's revenue from the petrochemical industry was RMB31.607 billion, representing a year-on-year increase of 5.3%. Due to the decrease of current contracts in the oil refining and new coal chemical industry, the revenue from the oil refining industry was RMB7.421 billion, representing a decrease of 43.5% on a year-on-year basis, the revenue from new coal chemicals industry was RMB913 million, representing a decrease of 32.6% on a year-on-year basis. The revenue from storage and transportation and other industries was RMB13.087 billion, which remained broadly stable on a year-on-year basis.

The following table sets forth the Group's revenue generated in the PRC and overseas for the periods indicated:

	Year ended 31 December				Change
	2022		2021		
	Revenue	Percentage of total revenue	Revenue	Percentage of total revenue	
	(RMB'000)	(%)	(RMB'000)	(%)	(%)
PRC	48,837,100	92.1	53,120,489	92.0	(8.1)
Overseas	4,191,039	7.9	4,639,101	8.0	(9.7)
Subtotal	53,028,139	100.0	57,759,590	100.0	(8.2)

During the Reporting Period, the Group's revenue generated in the PRC was RMB48.837 billion, representing a decrease of 8.1% on a year-on-year basis, which was mainly due to the impact of construction cycle of domestic projects; the revenue generated from overseas was RMB4.191 billion, representing a decrease of 9.7% on a year-on-year basis, it was mainly affected by the decrease in newly signed contracts and insufficient backlogs of overseas projects.

The following table sets forth the Group's new contract and backlog for the periods indicated:

	Year ended 31 December 2022 For the twelve-month period	Year ended 31 December 2021 For the twelve-month period	Change
	(RMB'000)	(RMB'000)	(%)
New contract	72,524,941	63,150,160	14.8

	As at 31 December 2022	As at 31 December 2021	Change
	(RMB'000)	(RMB'000)	(%)
Backlog	112,231,153	92,734,351	21.0

As at the end of the Reporting Period, the backlog of the Group amounted to RMB112.231 billion, representing an increase of 21.0% as compared to that as at 31 December 2021, and was 2.1 times of the total revenue of RMB53.028 billion in 2022. During the Reporting Period, the value of new contracts amounted to RMB72.525 billion, representing an increase of 14.8% on a year-on-year basis.

The following table sets forth the Group's capital expenditure for the periods indicated:

	As at 31 December 2022	As at 31 December 2021	Change
	(RMB'000)	(RMB'000)	(%)
Capital expenditure	**1,099,491**	1,341,166	(18.0)

During the Reporting Period, the Group's capital expenditure was approximately RMB1.099 billion, representing a decrease of 18.0% on a year-on-year basis. During the Reporting Period, the Group's capital expenditure was mainly used for contract energy management, purchase of large-scale lifting and transportation equipment and specialized construction equipment informatization construction office facilities and other supporting auxiliary construction, etc.

The discussions on the Group's environmental policies, relationships with its major stakeholders and compliance with applicable laws and regulations are set out in the "28. Report on Corporate Environmental, Social and Governance" on page 107 of this report.

(3) Business Highlights

Powerful promotion of major projects

Hainan Refining and Chemical Integration Project: please refer to the 2020 annual report dated 21 March 2021 and announcement dated 16 April 2021 published by the Company for further details. As at the end of the Reporting Period, the project has been delivered, devices have been brought into commission production in succession.

Tianjin Nangang Ethylene Project: please refer to the announcement dated 19 April 2022 published by the Company for further details. As at the end of the Reporting Period, the project was in the stage of rapid construction, and the overall progress was over 60%.

Baling Caprolactam Project: please refer to the announcement dated 22 October 2021 published by the Company for further details. As at the end of the Reporting Period, the project was in the final stage of construction, and the overall progress was about 90%.

Xinjiang Kuqa Green Hydrogen Demonstration Project: please refer to the 2021 annual report dated 20 March 2022 published by the Company for further details. As at the end of the Reporting Period, the project was in the stage of rapid construction, and the overall progress was over 80%.

Tianjin LNG Project (Phase II): please refer to the 2020 annual report dated 21 March 2021 published by the Company for further details. As at the end of the Reporting Period, the project was in the final stage of construction, and the overall progress was about 90%.

Shandong LNG Project (Phase II): please refer to the 2021 annual report dated 20 March 2022 and announcement dated 19 April 2022 published by the Company for further details. During the Reporting Period, the project was in the final stage of construction, and the overall progress was over 90%.

Wenzhou LNG Project: please refer to the announcement dated 16 April 2021 published by the Company for further details. As at the end of the Reporting Period, the project was in the final stage of construction, and the overall progress was over 90%.

Longkou LNG Project: please refer to the announcement dated 24 February 2022 published by the Company for further details. As at the end of the Reporting Period, the project entered the peak period of construction, and the overall progress was about 50%.

Russia AGCC Project: during the Reporting Period, some relevant work in the Russian AGCC project was rescheduled according to the owner's requirements, and the backlog of the project remained in the Group's current contract.

Market development has made further success

During the Reporting Period, the value of new contracts signed by the Group was RMB72.525 billion, representing an increase of 14.8% on a year-on-year basis.

During the Reporting Period, the Group has made a new record of value of domestic contracts newly signed, reaching RMB65.324 billion, with a year-on-year increase of 19.9%. Newly signed contracts include the BEPC contract for the Huizhou Ethylene Project with a total contract value of approximately billions of dollars; EPC contract for the Tianjin Nangang Ethylene and Downstream High-end New Material Industry Cluster Project with a total contract value of approximately RMB10.033 billion; EPC contract for the Zhenhai Refining and Chemical, and High-end Synthetic New Materials Project with a total contract value of approximately RMB7.945 billion; EPC contract for the Longkou LNG Receiving Terminal of Sinopec, with a total contract value of approximately RMB2.310 billion; EPC contract for the Receiving Terminal of Guangxi LNG Expansion Project (Phase III), with a total contract value of approximately RMB2.357 billion. During the reporting period, the Group has signed 129 contracts in the field of "three-new" (new energy, new materials and new economy), the value of contracts newly signed has reached RMB4.65 billion, and the Group has accelerated new business development.

During the Reporting Period, the Group has explored and opened up a new horizon in international market. The Group has made new breakthrough in African market, signed two EPCC general contracts of LNG storage tank project and MTBE project of Algerian National Oil Company, with the contract value of USD182 million and USD315 million respectively; continued to consolidate Middle East market, signed a series of engineering service contracts with Saudi Aramco and SABIC, and made breakthroughs in new countries and new fields in Iraq, the United Arab Emirates and Qatar; has activated the "technology+" high-end engineering services in Central Asian market, successfully signed the design, purchase and equipment manufacturing contracts of MTO project in Uzbekistan; and has successfully obtained certain front-end design consulting business in Southeast Asia, laying a solid foundation for the subsequent EPC project development.

Technical innovation guiding industrial development

During the Reporting Period, the Group has made prominent achievements in research and development of science and technology. The Group signed 301 new technology development contracts and 92 new technology licensing contracts in the entire year, with a technology development and technology license amount of RMB855 million, reaching historical high; all of the engineering technology innovations closely focused on the Company's strategic development and technical requirements of the engineering market, the key scientific research projects were steadily advanced, and new progress was made in tackling key core technologies.

During the Reporting Period, the Group completed 771 new patent applications, among which, 540 were invention patents, accounting for 70%; the Group also had 543 newly licensed patents, 284 of which were invention patents, patent quality has been continuously optimized.

During the Reporting Period, the Group received a total of 62 science and technology progress awards in scientific and technical innovation and engineering construction fields at the provincial and above level. Among these awards, we won 8 first prizes, 7 second prizes and 5 third prizes of Sinopec Science and Technology Progress Award; 15 prizes of other provincial and ministerial level awards for scientific and technological progress; 5 prizes of the national high quality projects award; 4 prizes of the national excellent design award.

During the Reporting Period, the Group has optimized transformation reservation focusing on Carbon Peaking and Carbon Neutrality target, completed feasibility research for in-depth coupled application of high temperature gas cooled reactor in petrochemical industry, and propelled carbon reduction from the source in petrochemical industry; carried out summary and research of carbon sources in the petrochemical industry, proposed carbon neutrality strategies and implementation routes, and concurrently organized development and reservation of related technologies from the source, in process and at terminal.

During the Reporting Period, the Group has continued to optimize scientific and technical innovation mechanism, and formulated administration method of "public offer of reward for scientific and technical innovation", taking an important step in exploration of scientific and technical innovation mechanism.

Enable intelligent factories with digital engineering technology

During the Reporting Period, the Group has completed digital delivery of nearly 40 large-size projects, laying an important foundation for construction of intelligent factories. Aiming at advanced level of digital engineering capability in the industry, the Group has continued to deepen the application of digital technology, closely adapted itself to the implementation demand of domestic and foreign projects, established and optimized the system basic platform, digital service platform and integrated design platform, and continuously enhanced the efficiency and quality of engineering design; on the basis of the new demand of digital delivery and intelligent management of customers in the industry, the Group has developed integrated platform for delivery and application based on the industrial Internet platform, realized the integrated collaboration of design, construction, delivery, intelligent factory construction and production consultation services, enabled factory operation and maintenance with digital delivery, and propelled the extension of digital engineering construction towards intelligent factories.

During the Reporting Period, the Group has continuously optimized the application architecture and implementation program in business field of oil refining and petrochemical, brought business management platform online, deployed data service platform, and established low-code development platform, making initial achievements of data governance and fusion of data and industry.

Continuous enhancement of production and operation capability

During the Reporting Period, the Group has continuously strengthened lean management, and optimized full-cycle revenue and cost plan of projects. The Group has promoted enhancement of efficiency and benefit of projects through standardization of design and optimization of design, formed 61 achievements for optimization of design which can be promoted and applied and 74 standardized design achievements in the entire year, and propelled saving of design resources and project cost. The Group has optimized subcontracting management, dynamically adjusted contractor evaluation, and effectively enhanced project implementation quality. The Group has organized management benchmarking, and optimized purchase program, so that purchase price negotiation and project supply assurance capability have been continuously enhanced. The Group has propelled application of advanced tools setup, strengthened application of automatic welding technology and equipment in 29 projects, so that the proportion of application of automatic welding has showed 7% year-on-year growth. The Group has further enhanced large-size equipment manufacturing capability, the maximum diameter of reaction settling vessel shell manufactured on the site of Anqing transformation and update project has reached 18m, making a record of non-standard equipment in China. The Group has brought into play the integration advantages of technology research and development, engineering design, equipment manufacturing and construction, has efficiently and collaboratively tackled technical problems of several new material projects, and opened up full procedure of engineering technology transformation. During the Reporting Period, the Group has executed 1,192 projects in China and foreign countries, and energetically ensured project operation.

Maintenance of excellent state of safety, quality and environmental protection

During the Reporting Period, the Group has mitigated major risks and enhanced inherent quality and aesthetic quality through comprehensive governance and special action focusing on the main line of promotion of system development, optimization of capability, paying close attention on implementation and construction of shelter. The Group has continued to propel the implementation of the QHSE management system, optimize intrinsic safety and technological support, and propel green enterprise actions, so as to ensure that the safety, quality and clean production situation of the Company are continuously stable and under control.

During the Reporting Period, the Group has obtained more than 20 provincial and ministerial design and welding quality awards, 73 projects have passed green construction site evaluation, and 9 units have successfully passed review for creation of green enterprises. As of the end of this report period, the Group has completed 250 million man/hours of safe production, and realized annual goals on quality improvement, environmental protection, etc.

Continuous enhancement of management effectiveness through reform and development

During the Reporting Period, the Group has continued to optimize international business organization architecture, management mechanism and operation mode, integrated advantageous resources and exerted the overall composition of force, laying a solid foundation for high-quality development of the overseas business; the Group has compiled and issued "Major Operation Risks Control Manual of SINOPEC SEG", continuously optimized major risk events and indicators follow-up monitoring system, and further enhanced the risk management capability of the Company.

During the Reporting Period, benchmarking our work with international leading standards, the Company has strengthened compliance governance, and successfully passed the ISO 37301 compliance management system certification of LRQA, becoming one of the first batch of professional companies in China and the first professional company in the petrochemical industry to pass this certification, creating a new mode of compliance management control featuring our own business characteristics; meanwhile, we have actively implemented management penetration enhancement action, clarified the management interface of the entire business chain, and continued to propel the integration of management system.

Development on the foundation of talent team construction

During the Reporting Period, the Group has energetically propelled the development strategy of "talent-based development of enterprise" and optimized talent cultivation mode. The Group has established "Future Scientist" platform to carry out Young Scientific and Technical Elites Contest. A batch of young scientific and technical talents with development potential and forward-looking innovation projects have become eminent, in which 2 outstanding young persons were honored with the title of "Outstanding Young Scientific and Technical Innovation Talents of Sinopec".

During the Reporting Period, the Group has implemented the "Young Talents Cultivation Plan" for the first time, selected 34 outstanding young talents for serving temporary positions in other units and other posts, and strengthened source cultivation, practice cultivation and accurate cultivation of young cadre by providing stage and assigning responsibilities to them, so as to enhance the comprehensive capability and qualification and achieve collaborative development of talents and enterprise.

During the Reporting Period, the Group has continuously optimized the construction of talent growth channel, and established database of 267 experts of 41 fields such as factory design, engineering construction and functional management. 1 winner of "Sinopec Scientific and Technical Meritorious Service Award", 7 Sinopec Outstanding Contribution Experts, 8 Min Enzhe Young Scientific and Technical Talents and 35 persons with principal senior professional title have been added in the year.

2 Business Prospects

2023 will be a key year acting as a connecting link between the preceding and the following for implementation of the "14th five-year" plan. Even though the external environment is complicated and tough, but the fundamental state that Chinese economy has high resilience, huge potential, sufficient vitality, and long-term good trend have not changed. As various policies have been implemented and refined continuously, the endogenous driving force of economic growth will be continuously accumulated and strengthened, and China's economy will hopefully improve as a whole.

Opportunities and challenges coexist on the road ahead. From the point of view of opportunities, the essential requirements and strategic arrangements of Chinese modernization have created an excellent macro-environment and provided a larger development space for the high-quality development of the petrochemical industry. From the point of view of challenges, the world economic recovery is weak, and technological changes have reshaped comparative advantages of competition; the petrochemical industry should adjust the energy structure to promote emission reduction, propel low-carbon energy utilization, and explore new green and low-carbon businesses such as hydrogen energy, this imposes higher requirements on technological innovation of the Company in related fields.

Looking forward to the future, the Group will always take "building high-quality factory genes and creating high-quality projects" as its own responsibility, focus on engineering innovation and value creation, guide continuous progress of petrochemical industry, make every effort to propel high-quality development in the process to benefit human society and try the best to build the Group into a world's leading technology-oriented engineering company.

In 2023, the Group's target for new contracts signed in China is RMB50 billion and target for new overseas contracts is USD1.5 billion.

In terms of the scientific and technical innovation, the Group will focus on the development target of "becoming more premium, more intensive and more differentiated", strengthen and optimize technologies in traditional advantages fields, and speed up integration, innovation and engineering transformation of new energy and new material technology at the same time, and continuously enhance independent innovation capability through continuous optimization of innovation system and mechanism. Firstly, explore the reform of system and mechanism of scientific research, further optimize the mechanism of "public offer of reward" for major technical problems tackling projects of the Company, enhance scientific resources innovation effectiveness, optimize overall planning and coordination, and continue to strengthen scientific and technical innovation capability. Secondly, profoundly study and interpret "Carbon Peaking and Carbon Neutrality" target and strategy deployment, find out new opportunities for technical development of the Company under the restriction of "Carbon Peaking and Carbon Neutrality" target, carry out research of coupled application of nuclear power and oil refining and chemical industry, put forth efforts on development of core technical competitive power, and continue to strengthen innovation capability for engineering technology. Thirdly, actively propel the progress of several major hydrogen energy projects, accelerate the formation of integrated R&D layout of hydrogen energy production, storage and transportation and terminal utilization, and form the technical characteristics of the Company. Fourthly, focus on tackling technical problems of "bottleneck" materials in new material field, and strengthen original innovation capability, so as to make new breakthrough in fields, and lay a solid foundation for high-quality development of the Company.

In terms of the market development, domestically, the Group will grasp the strategic opportunity period for the transformation and upgrading of the energy and chemical industry, make overall plan for internal and external advantageous resources, actively make efforts to obtain large-scale refining and chemical engineering projects, and accelerate implement of work in the fields such as LNG, green power and green hydrogen, clean and efficient utilization of coal, CCUS and soil treatment along the coastal and riverside regions, so as to expand market share. The Group will accelerate the future market layout, pay close attention to the medium-term and long-term engineering market of petrochemical bases and oil refining transformation and upgrading, and actively explore the market of large-scale industrial park projects, so as to provide new power for the sustainable development of the Company. The Group will actively explore emerging fields such as new energy, new materials, new processes, new technologies and new equipment, and accelerate the establishment of new strategic support points.

Overseas, the Group will continue to strengthen the comprehensive analysis and judgment of the international political and economic situations, the development trend of the global energy and chemical industry, the change of key target markets and overseas business risks, cultivate the markets of key countries along “Belt and Road”, promote the market development of key overseas projects as per high-quality standard, continuously consolidate the construction of relationship with key overseas customers, continue to deepen all-round cooperation with international engineering companies, and improve and optimize overseas marketing network. At the same time, the Group will strengthen the development of localization business operation capability in overseas market, put forth efforts to cultivate implementation capability for overseas projects investment and financing as well as new mode, explore new development route for international operation and cultivate new kinetic energy for development, and systematically enhance the comprehensive competitiveness of international business. The Group will continue to consolidate the large-scale sustainable development trend in advantageous markets, strengthen training in emerging regional markets, seek to expand business fields, and work hard for making more substantive breakthroughs.

In terms of the project implementation, the Group will take project cost as cardinal line, and focus on full process cost-benefit management and control of projects; continue to optimize project management mode, strengthen close cooperation between all procedures and units of design, purchase and construction, and enhance efficiency and quality; propel standardization construction of organization structure of projects, clarify standard for construction of organization structure of projects of the Company, and enhance project implementation capability; bring the leading role of design into play, continue to propel the optimal design and standardized design of the device, enhance the design quality and work efficiency, continue to carry out enhancement of purchase management by benchmarking advanced standard, propel strategic purchase, and continuously enhance the ability of purchase and supply assurance; strengthen subcontracting management, ensure to give priority to use of high-quality resources, and continuously enhance the ability to guarantee construction resources; put forth efforts to propel the application of advanced tool setup equipment such as automatic welding and welding robots, strengthen prefabrication, and enhance the level of tool setup in construction business.

In terms of the development of talents team, the Group will grasp the key period of scientific and technical talents growth and golden innovation period to speed up optimization of talent development mechanism featuring the characteristics of petrochemical industry and international competitiveness on the basis of six major talent projects, and realize high-quality development of talent work. Launch the training plan of “Getting Closer to Scientists” and “Approach Advanced Enterprises”, adopt the method of “localization and globalization”, strengthen professional qualification training, enhance the comprehensive qualification and ability of cadres and employees, accelerate the cultivation of a batch of strategic scientists, leading talents of engineering technology, outstanding engineers, masters with superb skill and young person of outstanding scientific and technological ability, realize a high degree of compatibility between talent growth and enterprise development, and make contribution to construction of talent centers and innovation hubs of global importance for China.

MANAGEMENT'S DISCUSSION AND ANALYSIS


7%
24%

MANAGEMENT'S DISCUSSION AND ANALYSIS

The following discussion and analysis should be read in conjunction with the Group's audited financial statements and the accompanying notes contained in this annual report. The relevant financial data below, unless otherwise stated, are extracted from the Group's audited financial statements prepared according to the IFRS.

1 Consolidated Results of Operations

The following table sets forth the consolidated comprehensive income and comprehensive income statement of the Group for the indicated years.

	Year ended 31 December				
	2022		2021		
	Revenue	Percentage of total revenue	Revenue	Percentage of total revenue	Change
	(RMB'000)	(%)	(RMB'000)	(%)	(%)
Revenue	53,028,139	100.0	57,759,590	100.0	(8.2)
Cost of sales	(47,415,814)	(89.4)	(51,291,401)	(88.8)	(7.6)
Gross profit	5,612,325	10.6	6,468,189	11.2	(13.2)
Other income	314,175	0.6	111,613	0.2	181.5
Selling and marketing expenses	(156,816)	(0.3)	(144,504)	(0.3)	8.5
Administrative expenses	(1,273,588)	(2.4)	(1,293,004)	(2.2)	(1.5)
Research and development costs	(2,577,892)	(4.9)	(2,379,149)	(4.1)	8.4
Other operating expenses	(110,024)	(0.2)	(1,118,375)	(1.9)	(90.2)
Other gains – net	2,633	0.0	57,128	0.1	(95.4)
Operating profit	1,810,813	3.4	1,701,898	2.9	6.4
Finance income	1,008,528	1.9	954,622	1.7	5.6
Finance expenses	(73,491)	(0.1)	(82,796)	(0.1)	(11.2)
Finance income – net	935,037	1.8	871,826	1.5	7.3
Share of (losses)/profits of joint arrangements	(76)	(0.0)	1,448	0.0	(105.2)
Share of profit of associates	16,502	0.0	17,235	0.0	(4.3)
Profit before taxation	2,762,276	5.2	2,592,407	4.5	6.6
Income tax expense	(480,425)	(0.9)	(462,432)	(0.8)	3.9
Profit for the year	2,281,851	4.3	2,129,975	3.7	7.1

(1) Revenue

During the Reporting Period, the Group's total revenue decreased by 8.2% from RMB57.760 billion for the year ended 31 December 2021 to RMB53.028 billion for the year ended 31 December 2022, which was mainly due to the impact of construction cycle of projects, the revenue decreased year-on-year.

(2) Cost of sales

The cost of sales of the Group decreased by 7.6% from RMB51.291 billion for the year ended 31 December 2021 to RMB47.416 billion for the year ended 31 December 2022, which was mainly due to the decrease of the purchase of relevant materials and equipment and the decrease of subcontracting business value with the decrease of revenue.

(3) Gross profit

The gross profit of the Group decreased by 13.2% from RMB6.468 billion for the year ended 31 December 2021 to RMB5.612 billion for the year ended 31 December 2022, the gross profit margin decreased from 11.2% for the same period of last year to 10.6%, which was mainly due to the year-on-year decrease of total revenue amount and proportion of engineering, consulting and licensing and the EPC Contracting segment.

(4) Other income

Other income of the Group increased from RMB112 million for the year ended 31 December 2021 to RMB314 million for the year ended 31 December 2022, which was mainly due to the impact of the change in exchange rate, and the realization of exchange gains of RMB230 million during the Reporting Period.

(5) Selling and marketing expenses

The selling and marketing expenses of the Group increased from RMB145 million for the year ended 31 December 2021 to RMB157 million for the year ended 31 December 2022.

(6) Administrative expenses

The administrative expenses of the Group decreased from RMB1.293 billion for the year ended 31 December 2021 to RMB1.274 billion for the year ended 31 December 2022.

(7) Research and development costs

The research and development costs of the Group increased by 8.4% from RMB2.379 billion for the year ended 31 December 2021 to RMB2.578 billion for the year ended 31 December 2022, mainly due to the Group's increased R&D investment in "conversion from oil to chemical products", "manufacture of chemical products from oil" and "conversion from oil to special products" technology, high-end new materials, new energy and hydrogen energy, energy conservation and environmental protection, digitization and construction automation, etc.

(8) Other operating expenses

Other operating expenses of the Group decreased from RMB1.118 billion for the year ended 31 December 2021 to RMB110 million for the year ended 31 December 2022, which was mainly due to the year-on-year decrease of the provision for impairment during the Reporting Period.

(9) Other gains – net

The net other gains of the Group were RMB3 million.

(10) Operating profit

Due to the above reasons, the operating profit of the Group increased by 6.4% from RMB1.702 billion for the year ended 31 December 2021 to RMB1.811 billion for the year ended 31 December 2022.

(11) Finance income – net

The net finance income of the Group increased by 7.3% from RMB872 million for the year ended 31 December 2021 to RMB935 million for the year ended 31 December 2022, which was mainly due to the increase in deposit interest income.

(12) Income tax expense

The Group's income tax expense increased by 3.9% from RMB462 million for the year ended 31 December 2021 to RMB480 million for the year ended 31 December 2022, the effective income tax rate decreased from 17.8% to 17.4% on a year-on-year basis. The change in the effective income tax rate was mainly due to the profit fluctuation of certain subsidiaries with different tax rates.

(13) Profit for the year

Due to the above reasons, the profit for the year increased by 7.1% from RMB2.130 billion for the year ended 31 December 2021 to RMB2.282 billion for the year ended 31 December 2022.

2 Discussion on the Results by Business Segments

The following table sets forth the revenue, gross profit, gross profit margin, operating profit and operating profit margin of each of our business segments for the periods indicated:

	Segment revenue		Segment gross profit		Segment gross profit margin		Segment operating profit		Segment operating profit margin	
	Year ended 31 December		Year ended 31 December		Year ended 31 December		Year ended 31 December		Year ended 31 December	
	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021
	(RMB'000)		(RMB'000)		(%)		(RMB'000)		(%)	
Engineering, consulting and licensing	3,370,136	3,863,479	1,046,112	1,269,322	31.0	32.9	104,380	106,695	3.1	2.8
EPC Contracting	29,586,178	35,704,443	2,528,013	3,169,287	8.5	8.9	955,023	814,711	3.2	2.3
Construction	25,600,495	25,539,549	1,981,773	1,955,469	7.7	7.7	609,936	645,392	2.4	2.5
Equipment manufacturing	829,751	1,036,860	56,427	74,111	6.8	7.1	7,570	14,386	0.9	1.4
Unallocated	N/A	N/A	N/A	N/A	N/A	N/A	133,904	120,714	N/A	N/A
Subtotal	59,386,560	66,144,331	5,612,325	6,468,189	N/A	N/A	1,810,813	1,701,898	N/A	N/A
Total after inter-segment elimination (3)	53,028,139	57,759,590	5,612,325	6,468,189	10.6(1)	11.2(1)	1,810,813	1,701,898	3.4(2)	2.9(2)

Notes:

(1) Total gross profit margin is calculated based on total gross profit divided by total revenue, and total revenue is the gross earnings generated after inter-segment elimination in all the business segments.

(2) Total operating profit margin of the segment is calculated based on the total operating profit of the segment divided by total revenue, and total revenue is the gross earnings generated after inter-segment elimination in all the business segments.

(3) Inter-segment elimination is mainly caused by the inter-segment sales made by the engineering, consulting and licensing, engineering construction and equipment manufacturing segments to the EPC Contracting segment. Other information on inter-segment sales is set out in Note 7 to the financial statements contained in this annual report.

Engineering, Consulting and Licensing

The operating results of the Group's engineering, consulting and licensing business are as follows:

	Year ended 31 December			
	2022		2021	
	Amount	Percentage of segment revenue	Amount	Percentage of segment revenue
	(RMB'000)	(%)	(RMB'000)	(%)
Revenue	3,370,136	100.0	3,863,479	100.0
Cost of sales	(2,324,024)	(69.0)	(2,594,157)	(67.1)
Gross profit	1,046,112	31.0	1,269,322	32.9
Selling and marketing expenses	(38,747)	(1.1)	(34,987)	(0.9)
Administrative expenses	(246,856)	(7.3)	(253,334)	(6.6)
Research and development costs	(715,614)	(21.2)	(738,621)	(19.1)
Other income and expenses	59,485	1.8	(135,685)	(3.5)
Operating profit	104,380	3.1	106,695	2.8

(1) Revenue

During the Reporting Period, the revenue generated from the Group's engineering, consulting and licensing segment decreased by 12.8% from RMB3.863 billion for the year ended 31 December 2021 to RMB3.370 billion for the year ended 31 December 2022, which was mainly due to the decrease in engineering business volume.

(2) Cost of sales

The cost of sales of the Group's engineering, consulting and licensing segment decreased by 10.4% from RMB2.594 billion for the year ended 31 December 2021 to RMB2.324 billion for the year ended 31 December 2022, which was mainly due to the cost decrease corresponding to the decrease of business volume.

(3) Gross profit

The gross profit of the Group's engineering, consulting and licensing segment decreased by 17.6% from RMB1.269 million for the year ended 31 December 2021 to RMB1.046 billion for the year ended 31 December 2022, mainly due to the decrease in revenue. The gross profit margin was 31.0%, which remained broadly stable on a year-on-year basis.

(4) Selling and marketing expenses

The selling and marketing expenses of the Group's engineering, consulting and licensing segment increased from RMB35 million for the year ended 31 December 2021 to RMB39 million for the year ended 31 December 2022, which remained broadly stable on a year-on-year basis.

(5) Administrative expenses

The administrative expenses of the Group's engineering, consulting and licensing segment decreased from RMB253 million for the year ended 31 December 2021 to RMB247 million for the year ended 31 December 2022, which remained broadly stable on a year-on-year basis.

(6) Research and development costs

The research and development costs of the Group's engineering, consulting and licensing segment decreased from RMB739 million for the year ended 31 December 2021 to RMB716 million for the year ended 31 December 2022, which remained broadly stable on a year-on-year basis.

(7) Operating profit

Due to the above reasons, the operating profit of the Group's engineering, consulting and licensing segment decreased from RMB107 million for the year ended 31 December 2021 to RMB104 million for 2022.

EPC Contracting

The operating results of the Group's EPC Contracting business are as follows:

	Year ended 31 December			
	2022		2021	
	Amount	Percentage of segment revenue	Amount	Percentage of segment revenue
	(RMB'000)	(%)	(RMB'000)	(%)
Revenue	29,586,178	100.0	35,704,443	100.0
Cost of sales	(27,058,165)	(91.5)	(32,535,156)	(91.1)
Gross profit	2,528,013	8.5	3,169,287	8.9
Selling and marketing expenses	(61,238)	(0.2)	(57,216)	(0.2)
Administrative expenses	(426,460)	(1.4)	(436,966)	(1.2)
Research and development costs	(1,153,146)	3.9	(1,008,688)	(2.8)
Other income and expenses	67,854	0.2	(851,706)	(2.4)
Operating profit	955,023	3.2	814,711	2.3

(1) Revenue

During the Reporting Period, the revenue generated from the Group's EPC Contracting segment decreased by 17.1% from RMB35.704 billion for the year ended 31 December 2021 to RMB29.586 billion for the year ended 31 December 2022, which was mainly subject to the impact of project implementation cycle, the closure of large projects such as Zhenhai Base project, Crude Oil Storage Facility Project Cluster and Gulei Refining and Chemical Integration project, projects such as Huizhou Ethylene were at initial stage of construction, showing year-on-year decrease of revenue to a certain extent.

(2) Cost of sales

The cost of sales of the Group's EPC Contracting segment decreased by 16.8% from RMB32.535 billion for the year ended 31 December 2021 to RMB27.058 billion for the year ended 31 December 2022, which was mainly due to the corresponding decrease in costs with the revenue decrease.

(3) Gross profit

The gross profit of the Group's EPC Contracting segment decreased by 20.2% from RMB3.169 billion for the year ended 31 December 2021 to RMB2.528 billion for the year ended 31 December 2022, and the gross profit margin decreased from 8.9% to 8.5% on a year-on-year basis, which was mainly due to the impact of total revenue decrease and the labour price increase such as sub-contracting.

(4) Selling and marketing expenses

The selling and marketing expenses of the Group's EPC Contracting segment increased from RMB57 million for the year ended 31 December 2021 to RMB61 million for the year ended 31 December 2022, which remained broadly stable on a year-on-year basis.

(5) Administrative expenses

The administrative expenses of the Group's EPC Contracting segment decreased from RMB437 million for the year ended 31 December 2021 to RMB426 million for the year ended 31 December 2022, which remained broadly stable on a year-on-year basis.

(6) Research and development costs

The research and development costs of the Group's EPC Contracting segment increased by 14.3% from RMB1.009 billion for the year ended 31 December 2021 to RMB1.153 billion for the year ended 31 December 2022, which were mainly due to the Group's increased R&D investment in "conversion from oil to chemical products", "manufacture of chemical products from oil" and "conversion from oil to special products" technology, high-end new materials, new energy and hydrogen energy, energy conservation and environmental protection, digitization and other fields.

(7) Operating profit

Due to the above reasons and the impact of year-on-year decrease in impairment provision, the operating profit of the Group's EPC Contracting segment increased by 17.2% from RMB815 million for the year ended 31 December 2021 to RMB955 million for the year ended 31 December 2022.

Construction

The operating results of the Group's construction business are as follows:

	Year ended 31 December			
	2022		2021	
	Amount	Percentage of segment revenue	Amount	Percentage of segment revenue
	(RMB'000)	(%)	(RMB'000)	(%)
Revenue	25,600,495	100.0	25,539,549	100.0
Cost of sales	(23,618,722)	(92.3)	(23,584,080)	(92.3)
Gross profit	1,981,773	7.7	1,955,469	7.7
Selling and marketing expenses	(50,836)	(0.2)	(46,640)	(0.2)
Administrative expenses	(580,057)	(2.3)	(582,115)	(2.3)
Research and development costs	(703,429)	(2.7)	(630,099)	(2.5)
Other income and expenses	(37,515)	(0.1)	(51,223)	(0.2)
Operating profit	609,936	2.4	645,392	2.5

(1) Revenue

During the Reporting Period, the revenue generated from the Group's construction segment was RMB25.600 billion, which remained broadly stable on a year-on-year basis.

(2) Cost of sales

The cost of sales of the Group's construction segment was RMB23.619 billion, which remained broadly stable on a year-on-year basis.

(3) Gross profit

The gross profit of the Group's construction segment was RMB1.982 billion, and the gross profit margin was 7.7%, which remained broadly stable on a year-on-year basis.

(4) Selling and marketing expenses

The selling and marketing expenses of the Group's construction segment increased from RMB47 million for the year ended 31 December 2021 to RMB51 million for the year ended 31 December 2022, which remained broadly stable on a year-on-year basis.

(5) Administrative expenses

The administrative expenses of the Group's construction segment decreased from RMB582 million for the year ended 31 December 2021 to RMB580 million for the year ended 31 December 2022, which remained broadly stable on a year-on-year basis.

(6) Research and development costs

The research and development costs of the Group's construction segment increased by 11.6% from RMB630 million for the year ended 31 December 2021 to RMB703 million for the year ended 31 December 2022, which were mainly due to the Group's increased R&D investment in construction automation and other fields.

(7) Operating profit

Due to the above reasons, the operating profits of the Group's construction segment decreased by 5.5% from RMB645 million for the year ended 31 December 2021 to RMB610 million for the year ended 31 December 2022.

Equipment Manufacturing

The operating results of the Group's equipment manufacturing business are as follows:

	Year ended 31 December			
	2022		2021	
	Amount	Percentage of segment revenue	Amount	Percentage of segment revenue
	(RMB'000)	(%)	(RMB'000)	(%)
Revenue	829,751	100.0	1,036,860	100.0
Cost of sales	(773,324)	(93.2)	(962,749)	(92.9)
Gross profit	56,427	6.8	74,111	7.1
Selling and marketing expenses	(5,995)	(0.7)	(5,660)	(0.5)
Administrative expenses	(20,215)	(2.4)	(20,589)	(2.0)
Research and development costs	(5,703)	(0.7)	(1,741)	(0.2)
Other income and expenses	(16,944)	(2.0)	(31,735)	(3.1)
Operating profit	7,570	0.9	14,386	1.4

(1) Revenue

During the Reporting Period, the revenue generated from the Group's equipment manufacturing segment decreased by 20.0% from RMB1.037 billion for the year ended 31 December 2021 to RMB830 million for the year ended 31 December 2022, which was mainly due to the impact of manufacturing business volume decrease and temporary suspension of production.

(2) Cost of sales

The cost of sales of the Group's equipment manufacturing segment decreased by 19.7% from RMB963 million for the year ended 31 December 2021 to RMB773 million for the year ended 31 December 2022, which was mainly due to the cost decrease in line with the decrease of business volume.

(3) Gross profit

The gross profit of the Group's equipment manufacturing segment decreased by 23.9% from RMB74 million for the year ended 31 December 2021 to RMB56 million for the year ended 31 December 2022, which was mainly due to the decrease in revenue, and gross profit margin was 6.8%, which remained broadly stable on a year-on-year basis.

(4) Selling and marketing expenses

The selling and marketing expenses of the Group's equipment manufacturing segment were RMB6 million, which remained broadly stable on a year-on-year basis.

(5) Administrative expenses

The administrative expenses of the Group's equipment manufacturing segment were RMB20 million, which remained broadly stable on a year-on-year basis.

(6) Research and development costs

The research and development costs of the Group's equipment manufacturing segment were RMB6 million.

(7) Operating profit

Due to the above reasons, the operating profit of the Group's equipment manufacturing segment was RMB8 million, representing a decrease of 47.4% on a year-on-year basis.

3 Discussion on the results by other classification

The following table sets forth the revenue generated from different industries in which the Group's clients operate:

	Year ended 31 December				
	2022		2021		
	Revenue	Percentage of total revenue	Revenue	Percentage of total revenue	Change
	(RMB'000)	(%)	(RMB'000)	(%)	(%)
Oil refining	7,421,327	14.0	13,142,234	22.8	(43.5)
Petrochemicals	31,606,768	59.6	30,022,255	52.0	5.3
New coal chemicals	912,927	1.7	1,353,656	2.3	(32.6)
Other industries	13,087,117	24.7	13,241,445	22.9	(1.2)
Total	53,028,139	100.0	57,759,590	100.0	(8.2)

During the Reporting Period, contributed by the increase of revenue of large-scale petrochemical projects such as Hainan Refining Ethylene and Huizhou Ethylene, the Group's revenue from the petrochemical industry was RMB31.607 billion, representing a year-on-year increase of 5.3%. Due to the decrease of current contracts in the oil refining and new coal chemical industry, the revenue from the oil refining industry was RMB7.421 billion, representing a decrease of 43.5% on a year-on-year basis, the revenue from new coal chemicals industry was RMB913 million, representing a decrease of 32.6% on a year-on-year basis. The revenue from storage and transportation and other industries was RMB13.087 billion, which remained broadly stable on a year-on-year basis.

The following table sets forth the revenue generated from different regions where the Group's clients operate:

	Year ended 31 December				Change
	2022		2021		
	Revenue	Percentage of total revenue	Revenue	Percentage of total revenue	
	(RMB' 000)	(%)	(RMB' 000)	(%)	(%)
PRC	**48,837,100**	**92.1**	53,120,489	92.0	(8.1)
Overseas	**4,191,039**	**7.9**	4,639,101	8.0	(9.7)
Total	**53,028,139**	**100.0**	57,759,590	100.0	(8.2)

During the Reporting Period, the Group's revenue generated in the PRC was RMB48.837 billion, representing a decrease of 8.1% on a year-on-year basis, mainly due to the influence of construction cycle of domestic projects; the revenue generated from overseas was RMB4.191 billion, representing a decrease of 9.7% on a year-on-year basis, it was mainly affected by the decrease in newly signed contracts and insufficient backlogs of overseas projects.

The following table sets forth the revenue generated from services provided by the Group for (i) Sinopec Group and its associates; and (ii) non-Sinopec Group and its associates:

	Year ended 31 December				Change
	2022		2021		
	Revenue	Percentage of total revenue	Revenue	Percentage of total revenue	
	(RMB' 000)	(%)	(RMB' 000)	(%)	(%)
Sinopec Group and its associates	**31,366,296**	**59.2**	37,700,873	65.3	(16.8)
Non-Sinopec Group and its associates	**21,661,843**	**40.8**	20,058,717	34.7	8.0
Total	**53,028,139**	**100.0**	57,759,590	100.0	(8.2)

During the Reporting Period, the Group's the revenue generated from Sinopec Group and its associates was RMB31.366 billion, accounting for 59.2%, representing a decrease of 16.8% on a year-on-year basis, mainly due to the fact that most of the large-scale projects from Sinopec Group and its associates were in the closing and new opening stages; the revenue generated from non-Sinopec Group and its associates was RMB21.662 billion, representing an increase of 8.0% on a year-on-year basis, mainly due to contributions from projects such as Huizhou Ethylene and Shenghong Refining and Chemical Integration.

4 Discussion on the backlog and new contracts

Backlog represents the total estimated contract value of work that remains to be completed pursuant to outstanding contracts as at a certain date, net of estimated value added tax, and is calculated based on the Group's assumption that the relevant contracts will be performed in accordance with their terms. Backlog is not a measure defined by generally accepted accounting principles. Any modification, termination or suspension of these contracts by the Group's clients may have a substantial and immediate effect on the Group's backlog. Projects may also remain in the Group's backlog for an extended period of time beyond what is initially anticipated due to various factors beyond the Group's control.

In order to more accurately reflect the Group's backlog, the Group has re-stated the segments in which some backlogs are located; and on the basis of prudence principle, in accordance with the situations of change and adjustment of current contracts of new coal chemicals, storage & transportation and other projects, the relevant backlog has been adjusted.

The following table sets forth the total value of backlog for each business segment of the Group as at the dates indicated:

	As at 31 December 2022 (RMB'000)	As at 31 December 2021 (RMB'000)	Change (%)
Engineering, consulting and licensing	10,955,159	10,776,048	1.7
EPC Contracting	76,579,262	56,478,233	35.6
Construction	23,395,035	24,604,101	(4.9)
Equipment manufacturing	1,301,697	875,969	48.6
Total	112,231,153	92,734,351	21.0

The following table sets forth the total value of backlog categorised by the industries in which the Group's clients operate as at the dates indicated:

	As at 31 December 2022 (RMB'000)	As at 31 December 2021 (RMB'000)	Change (%)
Oil refining	17,779,006	18,305,346	(2.9)
Petrochemicals	60,479,006	38,068,384	58.9
New coal chemicals	2,104,056	2,695,801	(22.0)
Storage & transportation and others	31,869,085	33,664,820	(5.3)
Total	112,231,153	92,734,351	21.0

The following table sets forth the total value of the backlog by regions as at the dates indicated:

	As at 31 December 2022 (RMB'000)	As at 31 December 2021 (RMB'000)	Change (%)
PRC	91,504,079	75,016,763	22.0
Overseas	20,727,074	17,717,588	17.0
Total	112,231,153	92,734,351	21.0

The following table sets forth the total value of backlog categorised by the clients of each of (i) Sinopec Group and its associates, and (ii) non-Sinopec Group and its associates as at the dates indicated:

	As at 31 December 2022 (RMB'000)	As at 31 December 2021 (RMB'000)	Change (%)
Sinopec Group and its associates	63,131,277	60,855,275	3.7
Non-Sinopec Group and its associates	49,099,876	31,879,076	54.0
Total	112,231,153	92,734,351	21.0

As at 31 December 2022, the Group's backlog was RMB112.231 billion, representing an increase of 21.0% compared to that as at 31 December 2021, and 2.1 times of the total revenue of RMB53.028 billion in 2022.

The following table sets forth the total value of new contracts entered into categorised by the Group's each business segment in the periods indicated:

	Year ended 31 December		
	2022	2021	Change
	(RMB'000)		(%)
Engineering, consulting and licensing	3,403,683	5,919,716	(42.5)
EPC Contracting	49,687,207	28,194,050	76.2
Construction	18,579,079	28,165,412	(34.0)
Equipment manufacturing	854,972	870,982	(1.8)
Total	72,524,941	63,150,160	14.8

The following table sets forth the total value of new contracts entered into by the Group categorised by the industries in which the Group's clients operate in the periods indicated:

	Year ended 31 December		
	2022	2021	Change
	(RMB'000)		(%)
Oil refining	6,894,988	10,621,260	(35.1)
Petrochemicals	54,144,751	31,018,691	74.6
New coal chemicals	321,182	777,522	(58.7)
Storage & transportation and others	11,164,020	20,732,687	(46.2)
Total	72,524,941	63,150,160	14.8

The following table sets forth the total value of new contracts entered into by the Group by regions in the periods indicated:

	Year ended 31 December		
	2022	2021	Change
	(RMB'000)		(%)
PRC	65,324,416	54,470,927	19.9
Overseas	7,200,525	8,679,233	(17.0)
Total	72,524,941	63,150,160	14.8

The following table sets forth the total value of new contracts entered into by the Group with the clients of each of (i) Sinopec Group and its associates, and (ii) non-Sinopec Group and its associates in the periods indicated:

	Year ended 31 December		
	2022	2021	Change
	(RMB'000)		(%)
Sinopec Group and its associates	33,642,298	45,967,046	(26.8)
Non-Sinopec Group and its associates	38,882,643	17,183,114	126.3
Total	72,524,941	63,150,160	14.8

During the Reporting Period, the value of the Group's new contracts was RMB72.525 billion, representing an increase of 14.8% on a year-on-year basis.

5 Assets, Liabilities, Equity and Cash Flows

The Group's funds mainly came from operating activities and were primarily used for working capital, capital expenditure and dividend distribution.

(1) Assets, Liabilities and Equity

Unit: RMB'000

	As at 31 December 2022	As at 31 December 2021	Changes
Total assets	78,681,739	72,917,243	5,764,496
Current assets	70,369,169	64,937,676	5,431,493
Non-current assets	8,312,570	7,979,567	333,003
Total liabilities	48,642,229	43,793,907	4,848,322
Current liabilities	46,475,288	41,370,338	5,104,950
Non-current liabilities	2,166,941	2,423,569	(256,628)
Net assets	30,039,510	29,123,336	916,174
Share capital	4,428,000	4,428,000	0
Reserves	25,606,207	24,690,084	916,123
Consolidated equity attributable to equity holders of the Company	30,034,207	29,118,084	916,123
Non-controlling interests	5,303	5,252	51

As at the end of the Reporting Period, the total assets of the Group were RMB78.682 billion, the total liabilities were RMB48.642 billion, and the equity attributable to the equity holders of the Company was RMB30.040 billion. The changes in the assets and liabilities as compared with those as at the end of 2021 and the main reasons are as follows:

As at the end of the Reporting Period, the total assets were RMB78.682 billion, representing an increase of RMB5.764 billion as compared with that as at the end of 2021. In particular, the current assets were RMB70.369 billion, representing an increase of RMB5.431 billion as compared with that as at the end of 2021, which was mainly due to an increase of RMB4.668 billion in cash and cash equivalents, an increase of RMB1.742 billion in notes and trade receivables, an increase of RMB696 million in time deposits with financial institutions, an increase of RMB278 million in inventories, a decrease of RMB1.398 billion in prepayments and other receivables, a decrease of RMB527 million in contract assets; non-current assets amounted to RMB8.313 billion, representing an increase of RMB333 million as compared with that as at the end of 2021, which was mainly due to an increase of RMB265 million in property, plant and equipment, representing an increase of RMB250 million in fair value through other comprehensive income investment and a decrease of RMB113 million in right-of-use asset.

As at the end of the Reporting Period, the total liabilities were RMB48.642 billion, representing an increase of RMB4.848 billion as compared with that as at the end of 2021. In particular, the current liabilities were RMB46.475 billion, representing an increase of RMB5.105 billion as compared with that as at the end of 2021, which was mainly due to the increase of contract liabilities by RMB5.443 billion, an increase of RMB207 million in other payables, a decrease of RMB598 million in notes and trade payables. The non-current liabilities were RMB2.167 billion, representing a decrease of RMB257 million as compared with that as at the end of 2021, which was mainly due to a decrease of RMB240 million in retirement and other supplementary benefit obligations.

The consolidated equity attributable to equity holders of the Company was RMB30.040 billion, an increase of RMB916 million as compared with that as at the end of 2021, which was mainly due to the increase in retained earnings.

(2) Cash Flows

During the Reporting Period, the net increase in cash and cash equivalents was RMB4.376 billion and net cash generated from operating activities was RMB6.809 billion. The following table sets forth the main items and their changes in the Group's consolidated cash flow statements for the year ended 31 December 2022 and 2021, respectively.

Unit: RMB'000

Major items of cash flow	Year ended 31 December	
	2022	2021
Net cash generated from operating activities	**6,809,048**	2,943,228
Net cash (used in)/generated from investing activities	**(905,076)**	503,375
Net cash (used in) financing activities	**(1,527,590)**	(1,389,437)
Net increase in cash and cash equivalents	**4,376,382**	2,057,166

During the Reporting Period, the profit before taxation was RMB2.762 billion, and the profit was RMB2.571 billion after adjusting the items in expenses that did not affect the cash flow in operating activities. Major non-cash expense items included net interest income and expenditure of RMB935 million, depreciation and amortisation of RMB916 million, impairment provision of RMB77 million, exchange grains of RMB230 million. Changes in working capital increased cash inflows was RMB4.154 billion, which were mainly shown in: the increase in contract liabilities which caused cash inflow from operating activities of RMB5.443 billion; the decrease in contract assets which caused the cash inflow from operating activities of RMB471 million; the decrease in trade and other payables balance which caused the cash outflow from operating activities of RMB897 million; the increase in trade and other receivables balance which caused the cash outflow from operating activities of RMB584 million; the increase in inventory balance which caused the cash outflow from operating activities of RMB305 million.

After adjusting non-cash expense items, receivables and payables for the profit before taxation, deducting the income tax paid amounting to RMB416 million, and increasing inflow of received interest by RMB500 million, the net cash generated from operating activities was RMB6.809 billion.

Net cash used in investing activities was RMB905 million, which was mainly due to the equipment acquisition expenses and an increase in time deposits.

Net cash used in financing activities was RMB1.528 billion, which was mainly due to the dividend distribution expenses.

Based on the cash flows during the Reporting Period, the Group has adequate working capital at present. In the next step, the Group will continue to strengthen the settlement of trade debts and control the use of working capital in operating activities. The Group will also continue to effectively manage the investment risk, as well as to expand the scale of investment and increase the return on capital.

(3) Summary of Financial Ratios

The following table sets forth the Group's key financial ratios for the periods indicated:

Main financial ratios	Year ended 31 December	
	2022	2021
Net profit margin (%)	**4.3**	3.7
Return on assets (%)[(1)]	**3.0**	3.0
Return on equity (%)[(2)]	**7.6**	7.3
Return on invested capital (%)[(3)]	**7.8**	7.5

Main financial ratios	As at 31 December 2022	As at 31 December 2021
Gearing ratio (%)[(4)]	**0.9**	0.8
Net debt to equity ratio (%)[(5)]	**Net cash**	Net cash
Current ratio[(6)]	**1.5**	1.6
Quick ratio[(7)]	**1.5**	1.6

(1) Return on assets = $\dfrac{\text{Profit for the year}}{\text{(Opening balance of total assets + Closing balance of total assets)/2}}$

(2) Return on equity = $\dfrac{\text{Profit for the year}}{\text{Total equity at the end of the period}}$

(3) Return on invested capital = $\dfrac{\text{Earnings before interest and tax (EBIT) for the year x (1 – effective income tax rate)}}{\text{Total interest bearing debt at the end of the year – Credit loans + Total equity at the end of the year}}$

(4) Gearing ratio = $\dfrac{\text{Total interest bearing debt at the end of the year}}{\text{Total interest bearing debt at the end of the year + Total equity at the end of the year}}$

(5) Net debt to equity ratio = $\dfrac{\text{Net debt at the end of the year}}{\text{Total equity at the end of the year}}$

(6) Current ratio = $\dfrac{\text{Current assets}}{\text{Current liabilities}}$

(7) Quick ratio = $\dfrac{\text{Current assets – Inventories}}{\text{Current liabilities}}$

Return on assets

During the Reporting Period, the Group's return on assets was 3.0%, which remained broadly stable on a year-on-year basis.

Return on equity

The Group's return on equity increased to 7.6% from 7.3% for the same period in 2021, mainly due to the year-on-year increase in the profit during the Reporting Period.

Return on invested capital

The Group's return on invested capital increased to 7.8% from 7.5% for the same period in 2021 for the same reason as the increase in return on equity.

Gearing ratio

The Group's gearing ratio increased to 0.9% from 0.8% at the end of 2021, due to the increase in interest-bearing borrowings at the end of the Reporting Period.

Net debt to equity ratio

The Group maintained positive net cash as at 31 December 2022 and as at 31 December 2021.

Current ratio

The Group's current ratio was 1.5, which remained broadly stable on a year-on-year basis.

Quick ratio

The Group's quick ratio was 1.5, which remained broadly stable on a year-on-year basis.

6 Foreign exchange risk

There were accounts receivable and payable and cash balances in relation to our overseas projects, which are settled in foreign currencies. During the Reporting Period, our foreign currencies mainly consist of U.S. dollars, Euros Saudi riyal, Kuwaiti dinar and Malaysian ringgit. In the future, exchange rates will affect the pricing of our services as well as our material procurement costs settled in foreign currencies, fluctuation in exchange rates may affect our business performance and financial status. During the Reporting Period, the Group has not carried out hedging transaction related to foreign exchange fluctuation.

SIGNIFICANT EVENTS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SIGNIFICANT EVENTS

1 Corporate Governance

During the Reporting Period, the Company was in compliance with the code provisions of the Corporate Governance Code set out in Appendix 14 to the Hong Kong Listing Rules and did not deviate from any code provision.

2 The Annual Dividend Distribution Plan as at 31 December 2022

The tenth meeting of the fourth session of the Board approved the dividend distribution plan for the year ended 31 December 2022. A final cash dividend of RMB0.210 (inclusive of applicable taxes) per share would be distributed based on 4,428,000,000 shares (including 1,460,800,000 H Shares and 2,967,200,000 Domestic Shares), being the total share capital of the Company as at 31 December 2022. The above dividend distribution plan will be submitted to the Company's annual general meeting to be held on 12 May 2023 for review and approval before implementation.

The final dividend of 2022 will be paid on or before Wednesday, 19 July 2023 to all Shareholders whose names appear on the register of members of the Company at the close of business on Tuesday, 23 May 2023. In order to qualify for the final dividend, the holders of H Shares must lodge all share certificates accompanied by the transfer documents with Computershare Hong Kong Investor Services Ltd. (address: Shops 1712-1716, 17/F, Hopewell Centre, 183 Queen's Road East, Wan Chai, Hong Kong) before 4:30 p.m. on Wednesday, 17 May 2023 for registration. For the purpose of ascertaining Shareholders who qualify for the dividend, the register of members for H Shares will be closed from Thursday, 18 May 2023 to Tuesday, 23 May 2023 (both days inclusive).

The dividend will be denominated and declared in Renminbi. The holders of Domestic Shares will be paid in Renminbi and the holders of H Shares will be paid in Hong Kong dollars. The exchange rate for the dividend to be paid in Hong Kong dollars will be the average of the exchange rates of Renminbi to Hong Kong dollars as announced by the People's Bank of China during the five business days preceding the date of approval of the final dividend by the annual general meeting to be convened on 12 May 2023.

In accordance with the Enterprise Income Tax Law of the People's Republic of China (中華人民共和國企業所得税法) and its implementation regulations, the Company is required to withhold and pay enterprise income tax at the rate of 10% on behalf of the non-resident enterprise Shareholders whose names appear on the register of members for H Shares when distributing the cash dividends. Any H Shares not registered under the name of an individual Shareholder, including HKSCC Nominees Limited, other nominees, agents or trustees, or other organisations or groups, shall be deemed as shares held by non-resident enterprise shareholders. Therefore, enterprise income tax shall be withheld from dividends payable to such Shareholders. If holders of H Shares intend to change their shareholder status, please enquire about the relevant procedures with their agents or trustees. The Company will strictly comply with the law and the requirements of the relevant government authority and withhold and pay enterprise income tax on behalf of the relevant Shareholders based on the register of members for H Shares as at Tuesday, 23 May 2023.

If the individual holders of H Shares are Hong Kong or Macau residents or residents of the countries which had an agreed tax rate of 10% for the cash dividends given to them under the relevant tax agreement with the PRC, the Company should withhold and pay individual income tax on behalf of the relevant Shareholders at a rate of 10%. Should the individual holders of H Shares be residents of the countries which had an agreed tax rate of less than 10% under the relevant tax agreement with the PRC, the Company shall withhold and pay individual income tax on behalf of the relevant shareholders at a rate of 10%. In that case, if the relevant individual holders of H Shares wish to reclaim the extra amount withheld due to the application of 10% tax rate, the Company can apply for the relevant agreed preferential tax treatment provided that the relevant Shareholders submit the information required by the notice of the tax agreement to the H share registrar of the Company. The Company will assist with the tax refund of the extra amount withheld after obtaining the approval of the competent tax authority. Should the individual holders of H Shares be residents of the countries which had an agreed tax rate of over 10% but less than 20% under the tax agreement with the PRC, the Company shall withhold and pay the individual income tax at the agreed actual rate in accordance with the relevant tax agreement. In the case that the individual holders of H Shares are residents of the countries which have had an agreed tax rate of 20% under the relevant tax agreement with the PRC, or which has not entered into any tax agreement with PRC, or otherwise, the Company shall withhold and pay the individual income tax at a rate of 20%.

For investors investing in the H Shares of the Company listed on the Hong Kong Stock Exchange through the Shanghai Stock Exchange or Shenzhen Stock Exchange (including enterprises and individuals) (the "Southbound Trading"), the Company has entered into the Agreement on Appropriation of Cash Dividends of H Shares for Southbound Trading《港股通H股股票現金紅利派發協議》with China Securities Depository and Clearing Corporation Limited, pursuant to which, China Securities Depository and Clearing Corporation Limited, as the nominee of the holders of H Shares for Southbound Trading, will receive all cash dividends distributed by the Company and distribute the cash dividends to the relevant investors of H Shares of Southbound Trading through its depositary and clearing system. The cash dividends for the investors of H Shares of Southbound Trading will be paid in Renminbi.

Pursuant to the relevant requirements under the "Notice on the Tax Policies Related to the Pilot Program of the Shanghai-Hong Kong Stock Connect" (Caishui [2014] No. 81)《關於滬港股票市場交易互聯互通機制試點有關稅收政策的通知》(財稅[2014]81號) and the "Notice on the Tax Policies Related to the Pilot Program of the Shenzhen-Hong Kong Stock Connect" (Caishui [2016] No. 127)《關於深港股票市場交易互聯互通機制試點有關稅收政策的通知》(財稅[2016]127號)), for dividends received by domestic investors from investing in H shares listed on the Hong Kong Stock Exchange through Shanghai-Hong Kong Stock Connect or Shenzhen-Hong Kong Stock Connect, the company of such H shares shall withhold and pay individual income tax at the rate of 20% on behalf of the investors. For dividends received by domestic securities investment funds from investing in H shares listed on the Hong Kong Stock Exchange through Shanghai-Hong Kong Stock Connect or Shenzhen-Hong Kong Stock Connect, the tax payable shall be the same as that for individual investors. The company of such H shares will not withhold and pay the income tax of dividends for domestic enterprise investors and those domestic enterprise investors shall report and pay the relevant tax themselves.

3 Connected Transactions

Continuing Connected Transactions between the Group and Sinopec Group

During the Reporting Period, the Group entered into a series of continuing connected transactions or agreements with Sinopec Group, including the following:

(1) the Engineering and Construction Services Framework Agreement and the supplemental agreement;

(2) the Financial Services Framework Agreement and the supplemental agreement;

(3) the Technology R&D Framework Agreement and the supplemental agreement;

(4) the General Services Framework Agreement and the supplemental agreement;

(5) the Land Use Right and Property Lease Framework Agreement;

(6) the Counter-guarantees provided by Sinopec Group;

(7) the Safe Production Insurance Fund; and

(8) the Trademark Licensing Agreement.

For further details, please refer to the section headed "Connected Transactions" in the Company's prospectus published on 10 May 2013, the Company's announcement entitled "Continuing Connected Transactions — Financial Services Framework Agreement" published on 19 August 2013, the contents related to the Financial Services Framework Agreement in the Company's circular to its shareholders published on 10 September 2013, the Company's announcement entitled "Adjustments to Annual Caps for Continuing Connected Transactions under the Technology R&D Framework Agreement" published on 17 March 2014, the contents in relation to the Financial Services Framework Agreement and the Engineering Services Framework Agreement in the Company's circular to its shareholders published on 15 September 2015, the Company's announcement entitled "Renewal of Technology R&D Framework Agreement, Financial Services Framework Agreement and Engineering and Construction Services Framework Agreement and the Annual Caps" published on 31 August 2015, the Company's announcement entitled "Renewal of Technology R&D Framework Agreement, Financial Services Framework Agreement and Engineering and Construction Services Framework Agreement and the Annual Caps and the Continuing Connected Transactions and Major Transactions under the Financial Services Framework Agreement" published on 15 September 2015, the Company's announcement entitled "Renewal of the General Services Framework Agreement, the Technology R&D Framework Agreement, the Financial Services Framework Agreement and Engineering and Construction Services Framework Agreement and the Annual Caps and Major Transactions and the Continuing Connected Transactions under the Financial Services Framework Agreement and the Engineering and Construction Services Framework Agreement" published on 21 August 2018 and the contents in relation to the Financial Services Framework Agreement and the Engineering Services Framework Agreement in the Company's circular to its shareholders published on 19 September 2018, the Company's announcement entitled "Renewal of the General Services Framework Agreement, the Technology R&D Framework Agreement, the Financial Services Framework Agreement and Engineering and Construction Services Framework Agreement and the Annual Caps and the Continuing Connected Transactions and Major Transactions under the Financial Services Framework Agreement and the Engineering and Construction Services Framework Agreement" published on 22 August 2021 and the contents in relation to the Financial Services Framework Agreement and the Engineering Services Framework Agreement in the Company's circular to its shareholders published on 15 September 2021.

Connected Transaction between the Group and Sinopec Group

During the Reporting Period, the Group formed a joint venture with the associates of Sinopec Group, namely China Petroleum & Chemical Corporation, Sinopec Nanjing Chemical Industries Corporation, China International United Petroleum & Chemicals Co., Ltd., Sinopec Oil Engineering and Construction Corporation. For further details, please refer the Company's announcement entitled "Connected Transaction – Formation of Joint Venture" published on 28 July 2022.

The Group's Connected Transactions

During the Reporting Period, the aggregate value of the continuing connected transactions entered into by the Group was RMB37.661 billion. In particular, the expenses amounted to RMB5.401 billion and the revenue amounted to RMB32.260 billion (including RMB31.478 billion from the sale of products and services and RMB781 million from interest income). The Group and Sinopec Group jointly formed a joint venture, and the Group contributed RMB250 million in cash.

During the Reporting Period, the engineering and construction services (supply of equipment and materials, procurement of services and equipment leasing, technology licensing and other engineering-related services) provided by Sinopec Group to the Group amounted to RMB5.329 billion, which was within the annual cap. The engineering and construction services (engineering consulting, technology licensing, engineering design, EPC contracting, construction and equipment manufacturing, etc.) provided by the Group to Sinopec Group amounted to RMB31.246 billion, which was within the annual cap.

During the Reporting Period, the service fees in relation to the settlement and other financial services between the Group and Sinopec Finance Co., Ltd. and Sinopec Century Bright Capital Investment Limited were RMB3 million, which was within the annual cap. The maximum daily balance of deposits and interest income was RMB7.676 billion, which was within the annual cap. The maximum daily balance of entrustment loans was RMB20.500 billion, which was within the annual cap.

During the Reporting Period, the technology R&D services provided by the Group to Sinopec Group amounted to RMB214 million, which was within the annual cap.

During the Reporting Period, the general services provided by the Group to Sinopec Group amounted to RMB7 million, which was within the annual cap.

During the Reporting Period, the general services provided by Sinopec Group to the Group amounted to RMB48 million, which was within the annual cap.

During the Reporting Period, the land use and property lease contract provided by the Group to Sinopec Group amounted to RMB11 million, which was within the annual cap.

During the Reporting Period, the land use and property lease contract provided by Sinopec Group to the Group amounted to RMB15 million, which was within the annual cap.

In terms of the premium payable under the documents on safe production funds, the amount payable by the Group shall not be less than the amount specified in these documents.

During the Reporting Period, the Group and Sinopec Group jointly formed a joint venture, and the Group contributed RMB250 million in cash.

The external auditor of the Company was engaged to report on the Group's continuing connected transactions in accordance with Hong Kong Standard on Assurance Engagements 3000 (Revised) "Assurance Engagement Other Than Audits or Reviews of Historical Financial Information" and Practice Note 740 "Auditor's Letter on Continuing Connected Transactions" under the Hong Kong Listing Rules" issued by Hong Kong Institute of Certified Public Accountants. The auditor has issued an unqualified letter containing the conclusions in respect of the above-mentioned continuing connected transactions in accordance with Rule 14A.56 of the Hong Kong Listing Rules and submitted a copy of the auditor's letter to the Hong Kong Stock Exchange.

For more information on the major related-party transactions (including the above-mentioned connected transactions) during the Reporting Period, please refer to Note 42 of the consolidated financial statements prepared in accordance with the IFRS in this annual report, among which the above transactions constitute connected transactions, and the Company has complied with the relevant requirements under Chapter 14A of the Hong Kong Listing Rules in relation to these connected transactions.

Opinions of Independent Non-executive Directors on the Above-mentioned Continuing Connected Transactions (including Deposits and Entrustment Loan Transactions under the Financial Services Framework Agreement)

The independent non-executive Directors reviewed the nature, implementation of annual caps, pricing policy and internal control procedure of the above-mentioned continuing connected transactions, and confirmed as follows:

(a) The transactions were entered into in the ordinary and usual course of business of the Group;

(b) One of the following items was met:

  i The transactions were entered into on normal commercial terms;

  ii If there were not sufficient comparable transactions to decipher whether the transactions were on normal commercial terms, the transactions under the relevant agreements were entered into on terms no less favourable to the Company than terms available to or from independent third parties (as the case may be); or

  iii If there were no appropriate assessments to determine whether the transactions met the conditions under (i) and (ii) above, the transactions were entered into on terms that were fair and reasonable to the shareholders of the Company; and

(c) The transactions were conducted in accordance with the relevant agreements and the terms are fair and reasonable and in the interests of the shareholders of the Company as a whole.

4 Material Litigation or Arbitration Events

The Group was involved in claims which arose in connection with the collapse of a partially completed oil storage tank of the oil and gas storage tank project in Alberta, Canada on 24 April 2007, which resulted in the deaths of two workers and injuries of four others. The case has not progressed for a long time. The Group submitted a formal application for withdrawal of the case to the court and was approved, the other party has filed an appeal, on 6 September 2022, the Group submitted factual statements to the Court of Appeal in accordance with the statutory procedures, and the Albert Province Court of Appeal of Canada notified that the case is scheduled to be heard on 12 October 2023. There were no other material litigation or arbitration events during the Reporting Period.

5 Other Material Contracts

Save as disclosed in this annual report, the Group had no other contracts of significance which should be disclosed during the Reporting Period.

6 Repurchase, Sale and Redemption of Shares

During the Reporting Period, the Group did not repurchase, sell or redeem any securities of the Company.

7 Reserves

During the Reporting Period, movements in the reserves of the Group were set out in the consolidated statement of changes in equity of the financial report, which was prepared in accordance with IFRS in this annual report.

8 Use of IPO Proceeds

During the Reporting Period, the Group used a total of RMB81 million net proceeds from the global offering, which was mainly used for the purchase of large-scale lifting and transportation equipment and specialized construction equipment. As at the end of the Reporting Period, the total amount of net proceeds from the global offering used by the Group amounted to RMB4.721 billion, and the remaining balance of the net proceeds from the global offering was approximately RMB6.437 billion (approximately RMB580 million of the unused net proceeds for establishing an engineering and technological R&D center, modular construction base and machinery manufacturing projects; approximately RMB300 million of the unused net proceeds for improving and developing overseas marketing networks; approximately RMB445 million of the unused net proceeds for information technology development projects; approximately RMB218 million of the unused net proceeds for purchasing large lifting and transport equipment and specialised construction equipment; approximately RMB1.035 billion of the unused net proceeds for newly added long-term equity investment; and approximately RMB3.859 billion of the unused net proceeds for mergers and acquisitions of engineering companies, purchase of patents and proprietary technologies and other item). The expected timeline for the use of net proceeds will be subject to the business development of the Company.

The use of proceeds from the global offering by the Company is in consistence with that previously disclosed in the announcement. For details of the use of proceeds, please refer to the announcements of the Company entitled “Adjustment in Use of Proceeds from the Global Offering” dated 13 December 2013 and the “Adjustment in the Allocations of the Use of Proceeds from the Global Offering” dated 26 October 2018. During the Reporting Period, there was no material change to the use of proceeds from the global offering of the Group.

9 Assets Transactions

During the Reporting Period, the Group has no material assets transactions other than in the ordinary and usual course of business.

10 Insolvency and Restructuring

During the Reporting Period, the Group was not involved in any insolvency or restructuring matters.

11 Material Trusteeship, Contracting and Lease

During the Reporting Period, the Group was not involved in any material trusteeship, contracting or lease of any asset of other companies, nor placing its assets to or under any other companies’ trusteeship, contracting or lease which were required to be disclosed.

12 Material Acquisitions and Disposal

During the Reporting Period, the Group has not made any material acquisition or disposal of subsidiaries, associates and joint ventures.

13 Financial Derivatives for Hedging Purposes

During the Reporting Period, the Group did not use any financial derivative for hedging purposes.

14 Pledged Assets

During the Reporting Period, the Group has no pledged assets.

15 Debt

The Group had USD20 million (about RMB142 million) loans to the fellow subsidiaries as at the end of the Reporting Period.

16 Contingent Liabilities

For details of the contingent liabilities of the Group, please refer to Note 41 to the financial statements contained in this annual report.

17 Review of Annual Report

The audit committee of the Company has reviewed this annual report. The audit committee did not have any disagreement concerning the financial statements contained in this annual report.

The audit committee is comprised of all independent non-executive Directors, namely, Mr. YE Zheng, Mr. HUI Chiu Chung, Stephen and Mr. JIN Yong. Among them, Mr. YE Zheng has the appropriate professional qualifications (including being a member of the Hong Kong Institute of Certified Public Accountants) and more than 25 years of experience in auditing, internal control and consultancy.

18 Significant Events Affecting the Group After the Reporting Periods

From 31 December 2022 and up to the date of this annual report, the Group has no other significant events.

19 Other Important Matters

During the Reporting Period, none of the Company, the Board, any Director or any Supervisor was punished by administrative means or public sanctioned by Hong Kong Securities and Futures Commission, or publicly condemned by the Hong Kong Stock Exchange.

CORPORATE GOVERNANCE


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CORPORATE GOVERNANCE

1 Enhancement of Corporate Governance during the Reporting Period

During the Reporting Period, the Company was strictly in compliance with the domestic and foreign laws and regulations on securities regulation and continuously improved its corporate governance.

During the Reporting Period, in accordance with relevant domestic and foreign laws and regulations and its actual situation, the Company strictly standardised corporate governance based on the working rules, systems and norms such as the Rules and Procedures for the Shareholders Meetings, the Rules and Procedures for the Board Meetings and the Rules and Procedures for the Supervisory Committee and updated the internal documents in accordance with the Hong Kong Listing Rules and other applicable laws and regulations in a timely manner; continuously improved the quality of investor relations and information disclosure, receiving the recognition of the capital market; modified its internal control system to intensify the execution thereof.

During the Reporting Period, the Company further enhanced on-the-job trainings to enhance the awareness of responsibility of all Directors, Supervisors and its senior management (the "Senior Management"), optimised the procedures and detailed services. The Company also provided Directors with reports of "Company Information" every month, which provided the Directors with relevant data and information to make reasonable decisions. The Company also continued to enhance voluntary information disclosure and the relationship with investors by strengthening two-way communication and increasing the transparency of the Company. The Company actively performed its social responsibilities and promoted its sustainable development.

During the Reporting Period, the Supervisory Committee had no disagreement to any supervised matters. Furthermore, none of the Company, the Board, any Director, any Supervisor, any senior management member, any of the controlling shareholders or de facto controllers was punished by administrative means or public sanctioned by Hong Kong Securities and Futures Commission, or publicly condemned by the Hong Kong Stock Exchange.

2 Equity Interests of Directors, Supervisors and the Senior Management Members

During the Reporting Period, none of the Directors, Supervisors or any member of the Senior Management, as well as their respective associates had any interests or short positions in any Shares, underlying Shares or debentures of the Company or any associated corporations (as defined under Part XV of the SFO) which were required to be notified to the Company and the Hong Kong Stock Exchange pursuant to Divisions 7 and 8 of Part XV of the SFO (including interests or short positions which they are taken or deemed to have under such provisions of the SFO), or which were required, pursuant to section 352 of the SFO, to be entered in the register maintained by the Company referred to therein, or which are required, pursuant to the Model Code for Securities Transactions by Directors of Listed Issuers (the "Model Code") in Appendix 10 to the Hong Kong Listing Rules, to be notified to the Company and the Hong Kong Stock Exchange that are regarded, or treated as being held, in accordance with the SFO in the shares of the Company or any associated corporation. Based on specific enquiries to all Directors and Supervisors, all Directors and Supervisors have confirmed that they complied with the standards stipulated in the Model Code during the Reporting Period.

3 Confirmation of Independence of Independent Non-executive Directors and Overview of their Performance

The Company has a sufficient number of independent non-executive Directors with appropriate professional qualifications or accounting or related financial management expertise in accordance with the Hong Kong Listing Rules. The Company appointed three independent non-executive Directors, namely Mr. HUI Chiu Chung, Stephen, Mr. JIN Yong and Mr. YE Zheng. The Company received an annual confirmation letter from each of independent non-executive Directors regarding their compliance with relevant independence requirements set out in Rule 3.13 of the Hong Kong Listing Rules. The Company considers all of its independent non-executive Directors to be independent.

During the Reporting Period, the independent non-executive Directors earnestly fulfilled their responsibilities prescribed by relevant laws, regulations and the Articles of Association and made positive contributions to the development of the Group. They actively attended the meetings of the Board and its special committees (for details about the attendance of the meetings, please refer to the Report of the Board in this annual report), carefully reviewed relevant documents, and made judgment with their own expertise in offering advices and suggestions on the development strategy, production and operation, internal control, risk management and social responsibility of the Company. The independent non-executive Directors also provided independent opinions according to regulations on connected transactions, external guarantee, dividend distribution plan and appointment of senior management members of the Company. The independent non-executive Directors maintained timely and effective communications with the executive Directors, management, external auditors and internal supervision and audit department and conducted several domestic and overseas investigations or surveys to better understand the Company's practice on internal control, internal audit, risk management, environmental protection and social responsibility, information disclosure and oversea project implementation. The independent non-executive Directors also independently and objectively safeguarded the legitimate rights and interests of the Company and investors, especially the medium and minority investors, during the performance of their duties.

4 The Company's Independence from the Controlling Shareholder

After obtaining confirmations from the Company and Sinopec Group, the following statements are declared:

From 1 January 2022 to 31 December 2022, Sinopec Group complied with the principles and terms of the Non-Competition Agreement and the undertakings therein, fulfilled obligations and responsibilities in accordance with the Non-Competition Agreement and the undertakings therein, and did not violate the Non-Competition Agreement and the undertakings therein. The aforesaid was concluded based on Sinopec Group's overall review of the compliance with each provision (including but not limited to the provision of options for new business opportunities, options for acquisitions and pre-emptive rights) under the Non-Competition Agreement and the undertakings therein.

Opinions of the independent non-executive Directors of the Company regarding the compliance with the Non-Competition Agreement of Sinopec Group are as follows:

Based on the review of relevant situations, the independent non-executive Directors of the Company are of the view that during the Reporting Period, Sinopec Group performed and complied with the Non-Competition Agreement entered into with the Company.

5 Construction and Implementation of Internal Control System of the Group

Internal Control Construction

During the Reporting Period, the Company continued to improve the "Internal Control Manual of the Company" (the "Internal Control Manual"). Internal Control Manual regulates internal management, prevents operational risks and guarantees the realisation of the development strategies and operation goals of the Company. The Internal Control Manual was in compliance with domestic and overseas regulatory requirements such as the "Basic Standard for Internal Control of Enterprises", the "Implementation Guidelines for Internal Control of Enterprises", and the "Guidelines for Assessment of Internal Control of Enterprises", which was jointly issued by five ministries and commissions including the Ministry of Finance of PRC, as well as the requirements under the SFO and the Hong Kong Listing Rules, and established a comprehensive internal control system. The risk-oriented Internal Control Manual has realised the top-down integrated management of business processes, unification of internal management standards in business control, business management has realised the integration of risk, internal control and system. The Company pays high attention to the level of internal control and risk prevention. The Internal Control Manual has further taken effective measures to strengthen internal control, leading to all-round enhancement of internal control.

Working Plans for Establishment and Improvement of Internal Control System and Implementation

The Company prepares annual goals and working plans with regard to internal control, and conducts comprehensive trainings, daily management and evaluation. Under the uniform deployment of the Company, the subsidiaries of the Company, through summary, revision and organisation of their respective management systems and implementation of various internal control requirements, has realised effective fusion of internal control, business and system. The Company has established an effective risk management mechanism. The Corporate Risk Management Committee and the Enterprise Comprehensive Risk Management Leading Group have ultimate responsibility for the activities of the unit's first and second lines of defense. The first line of defense: core business departments such as market, operation, and overseas business at all levels, as the first responsible body for risk prevention; the second line of defense: legal, risk, compliance, and financial, human, quality, safety, technology, information and other support functional departments assist the first line of defense to prevent risks from different business areas; the third line of defense: as the assurance functional department, the supervision and audit departments at all levels independently conduct audit evaluations on the Company's risk and internal control system.

Setup of Internal Control Examination and Supervision Department

The Corporate Reform and Legal Department of the Company, which is assigned to administer the overall supervision of internal control, is responsible for the daily supervision of internal control and the organisation of individual inspection. The Supervision and Audit Department is in charge of internal control evaluations and independent comprehensive inspections and evaluation of internal control. The Company and its subsidiaries have established a two-level internal control inspection and evaluation system where the subsidiaries of the Company conduct self-inspections and evaluate internal control annually and the Company inspects the evaluation of internal control annually in a comprehensive manner.

Improvement of the Internal Control System Associated with Financial Accounting

The Internal Control Manual of the Company specifies the internal control requirements with regard to the financial statements and establishes connections with the professional management system. Fund and asset management, costs and expenses accounting and management, financial analysis and budget, connected transactions and the preparation of financial statements, are respectively included in the related work flow, control procedures and control points. At the same time, items and matters in accounting statements are connected with control measures, so that the internal control measures can provide reasonable assurance that the disclosed financial statements are authentic and reliable.

Internal Control Deficiencies and Rectification

During the Reporting Period, no material internal control deficiency was identified. For the other general deficiencies of internal control discovered during the inspection, the management of the Company has designed and adopted various rectification measures, and discussed these measures with external auditors of the Company. After a follow-up examination, all internal control issues relating to financial reporting were rectified during the Reporting Period. Other management deficiencies were rectified or addressed by adopting the relevant rectification measures. The rectification was in compliance with relevant requirements.

Businesses with Sanctioned Countries

In 2016 and 2017, the Group entered into the engineering, procurement and construction ("EPC") contract with National Iranian Oil Engineering and Construction Company in relation to Iranian Abadan Refinery Product Upgrading Project Phase I and Phase II, respectively (the "Pertinent Projects"). For details, please refer to the announcements published by the Company on 22 February 2017, 27 December 2017 and 23 February 2018.

In order to monitor the possible sanction risks faced by the Company and ensure compliance with the related undertakings made to the Hong Kong Stock Exchange, the Company has adopted sufficient and effective internal control measures, including renewal of the appointment of outsourced international legal counsels with necessary expertise and experience in dealing with legal matters related with sanction and convening the risk management committee meetings to evaluate and monitor sanction risks faced by the Group. From 2016 to 2022, the Group completed evaluations on the legal and operating risks related with the Pertinent Projects and sanctions according to the internal control procedures and the relevant information. During the Reporting Period, the Company did not violate the related undertakings.

Arrangement for Internal Control by the Board

The Board will review the updated Internal Control Manual annually. The Board is responsible for the communication, supervision and inspection of internal and external auditing through the Audit Committee, as well as the inspection and supervision of the effectiveness of self-evaluation of internal control.

Inside information management system

During the Reporting Period, with due consideration of the information disclosure requirements under the Hong Kong Listing Rules and the Guideline for Disclosure of Inside Information issued by the Securities and Futures Commission in June 2012, the Group instructed special institution and staff to take responsibilities for the registration and management of persons who are aware of inside information. The Company also established the management archive of persons who are aware of inside information, updated the archive regularly and conducted regular trainings to persons who are aware of inside information and management staff, so as to strengthen their consciousness to comply with the relevant law.

The Group prohibits senior management members and employees who are likely to be aware of the Group's unpublished inside information or other information about the Group from using confidential or inside information without authorisation in accordance with the relevant stipulations of the Inside Information Disclosure Guideline. At the same time, in case of any enquiry about the affairs of the Group, only the secretary to the Board and the relevant authorised personnel are responsible for communicating with external persons.

6 Corporate Governance Report (pursuant to the Hong Kong Listing Rules)

(1) Compliance with Corporate Governance Code

From the listing date of the Company to 31 December 2022, the Company was in compliance with the code provisions of the Corporate Governance Code set out in Appendix 14 to the Hong Kong Listing Rules and did not deviate from any code provision.

A Board

A.1 Board

a. The Board is the decision-making body of the Company, and all decisions made by the Board are carried out by the management of the Company. The Board follows sound corporate governance practices and procedures, operates standardly, and commits itself to improving the corporate governance of the Company.

b. The Board holds at least four meetings annually. The Board communicates the time and subject matters 14 days prior to the meeting. The documents and materials for the meeting will usually be distributed 10 days in advance to each Director. In 2022, the Company held 7 Board meetings. For details of the attendance of each Director, please refer to the Report of the Board in this annual report.

c. Each member of the Board may submit proposals to be included in the agenda for Board meetings, and each Director is entitled to request other related information.

d. The Board reviewed and evaluated its performance for the past year. The Board was of the view that the composition of the Board was appropriate and balanced. The Board made decisions in compliance with domestic and foreign laws and regulations and the Company's internal rules, prudently listened to the opinion of the Supervisory Committee, and safeguarded the rights and interests of the Company and its Shareholders. The Directors and the Senior Management diligently fulfilled their responsibilities and actively took part in trainings and continuing professional development, which led to the improvement of governance of the Company.

e. The secretary to the Board and company secretary will assist the Directors in handling the routine tasks of the Board and continuously provide the Directors with and keep them informed of the regulations, policies and other requirements of domestic and overseas regulatory bodies in relation to corporate governance, and ensure that in performing their duties and responsibilities, the Directors comply with domestic and foreign laws and regulations as well as the Articles of Association. The Company has purchased liability insurance for all the Directors to minimise any risk which may arise from the performance of their duties.

A.2 Chairwoman of the Board and President

a. Mdm. SUN Lili serves as the Chairwoman of the Board, Mr. JIANG Dejun serves as the President. The Chairwoman of the Board is elected by the majority of the Directors, while the President is nominated and appointed by the Board. The duties and responsibilities of the Chairwoman of the Board and the President are clearly distinguished from each other and the scope of their respective duties and responsibilities are set out in the Articles of Association.

b. The Chairwoman of the Board highly values the communication with the independent non-executive Directors and holds meetings with them at least once each year without the presence of other Directors.

c. The Chairwoman of the Board encourages open and active discussions. Directors may speak freely and actively participate in discussions on production and operation, corporate governance and material investments of the Company in Board meetings.

A.3 Board Composition

a. As at the date of this annual report, the Board consists of nine members, with one female Director (for details, please refer to the section headed "Directors, Supervisors, Other Members of Senior Management and Employees" of this annual report). All Directors have rich experience in specialties and governance. Among the nine (9) members, there are 3 executive Directors, 3 non-executive Directors and 3 independent non-executive Directors. The independent non-executive Directors represent at least one-third of the Board. The executive Directors and non-executive Directors of the Company are experienced in the management of refining and chemical engineering, or petroleum and petrochemical enterprise. The independent non-executive Directors are well-known technological experts of chemical engineering, financial and accounting, respectively, and have experiences in managing large corporations, capital operation and finance investments, respectively. The composition of the Board is reasonable and diversified.

b. There is no financial, business, family or other material/relevant relationship between the board members of the Company (especially between the Chairwoman of the Board and the President) except for the working relationship.

c. The Company received the confirmation letter for the year 2022 from each of the independent non-executive Directors regarding his compliance with relevant independence requirements as set out in Rule 3.13 of the Hong Kong Listing Rules. The Company considers each of the independent non-executive Directors to be independent.

A.4 Appointment, Re-election and Dismissal

a. The term of office of each Director (including non-executive Directors) is 3 years, and the term of office (excluding the first tenure) of any independent non-executive Director may not be renewed for more than 6 years. If an independent non-executive Director has already served 9 years, his further appointment shall be subject to a separate resolution to be approved at the Shareholders meeting.

b. All Directors will be elected through legal procedures, and the Board has no power to appoint temporary Directors.

c. For newly appointed Directors, the Company will engage professional consultants to prepare detailed materials, inform such Directors of regulatory requirements of the place where the Company is listed and remind such Directors of their rights, obligations and responsibilities.

A.5 Nomination Committee

a. The Company has established a nomination committee (the “Nomination Committee”). Mdm. SUN Lili, the Chairwoman of the Board and executive Director, is the chairwoman of the Nomination Committee. Mr. HUI Chiu Chung, Stephen, an independent non-executive Director, is the vice chairman of the Nomination Committee. Mr. XIANG Wenwu, the Vice Chairman of the Board and executive Director, and Mr. JIN Yong and Mr. YE Zheng, each an independent non-executive Director, are members of the Nomination Committee. The terms of reference of the Nomination Committee have been established and are available on the websites of the Company and the Hong Kong Stock Exchange. The Nomination Committee will recommend the appointment or re-election of the Directors as well as the succession plan of Directors (especially the Chairwoman of the Board and the President of the Company), seek candidates for directorship with appropriate qualifications and competence; elect and nominate relevant personnel to be appointed as Directors, and propose recommendations thereof to the Board. The Nomination Committee is also responsible for evaluating the independence of independent non-executive directors.

b. After discussions and consideration, the Nomination Committee was of the view that the structure, number of members and composition of the Board in 2022 were reasonable and in consistence with the strategies of the Group.

c. Nomination Committee members may engage independent professionals when performing duties. Reasonable costs arising from or in connection with such consultation are borne by the Group. The expenses of the Nomination Committee will be included in the budget of the Company.

d. Please refer to the “Report of the Board – Meetings Held by the Special Committees of the Board” of this annual report for information about meetings held by the Nomination Committee.

e. The Board has established the Board Diversity Policy, which provides that the nomination and appointment of Board members should be based on the skills and experience necessary for the overall sound operation of the Board, with due considerations given to the goal and requirement for the diversification of Board members. When determining the composition of Board members, the Company should consider their diversity from multiple aspects, including but not limited to sex, age, culture, educational background, race, professional experience, skills, knowledge and length of service.

f. Board Diversity Policy has set up two measurable objectives, (1) to consider candidates for appointment as directors from a wide pool of talents taking into account the culture, educational background, expertise and professional experience, skills, experience, and other contributions that would complement the current needs of the Board, and (2) to review whether the composition and structure of the Board is suitable for the overall development strategy of the Group based on its business operation and the developmental need on an annual basis and to propose adjustment and implementation plans where appropriate.

During the Reporting Period, the progress made by the Group regarding such measurable objectives are as follows: (1) selection and appointment of the Directors of the Company is in compliance with the requirements of the Board Diversity Policy and in line with the overall development strategy of the Group. The Board currently already has one female director and will maintain or further improve such diversity going forward. The Nomination Committee will identify the candidates for directorships and make recommendation to the Board according to the Board Diversity Policy of the Company for any replacement of Director or an addition to the Board. The Board would also appoint suitable candidates for directorship based on the overall development of the Group and the Board Diversity Policy of the Company; and (2) the current composition and structure of the Board of the Company is appropriate for the development need of the existing business operation of the Group and is conducive for providing the Company with extensive valuable advice and supervision on decision-making. The Company will continually assess the diversity of the Board and objectively consider the composition and effectiveness of the Board.

A.6 Responsibility of Directors

a. All the non-executive Directors of the Company have the same duties and authorities as executive Directors. In addition, the non-executive Directors, especially the independent non-executive Directors, are vested certain specific powers. The rights and obligations of Directors and non-executive Directors (including the independent non-executive Directors) are clearly defined in the Articles of Association and the Rules and Procedures for the Board Meetings.

b. All Directors were able to devote sufficient time and effort in handling the matters of the Company.

c. The Company has adopted Model Code as code of conduct regarding the Directors' securities transactions. All Directors of the Company have confirmed that they have been in compliance with the Model Code during the Reporting Period.

d. The Company is responsible for arranging trainings for Directors and providing for the corresponding expenses. The Directors actively participated in continuing professional development. The Company has received the training records from Directors. For details, please refer to the Report of the Board in this annual report.

A.7 Provision for and Access to Information

a. The meeting agenda as well as other reference documents of the Board and each special committee will be distributed prior to the meetings so that each member will have sufficient time to review, which enables them to have comprehensive discussions at the meetings. Each Director can obtain all related information in a comprehensive and timely manner, and may seek advice from professional consultants if needed.

b. The secretary to the Board is responsible for organising and preparing materials for the Board meetings, including the explanation for each proposal to ensure thorough understanding by each Director. The management of the Group shall provide the Directors with necessary information and materials. The Director may request the President, or request, via the President, relevant departments to provide necessary information of the Group or related explanations.

B Remuneration of Directors and the Senior Management

a. The Company has established a remuneration committee (the "Remuneration Committee"). Mr. HUI Chiu Chung, Stephen, an independent non-executive Director, is the chairman of the Remuneration Committee, and Mr. YE Zheng and Mr. JIN Yong, each an independent non-executive Director, are members of the Remuneration Committee. The terms of reference of the Remuneration Committee are available on the websites of the Company and the Hong Kong Stock Exchange. The Remuneration Committee is responsible for studying the compensation structures and policies of all Directors, Supervisors and Senior Management members and making recommendations to the Board or determining the compensation and welfare of individual executive Director and Senior Management members as authorised by the Board or making recommendations to the Board. The remuneration of Directors shall be determined in accordance with relevant laws and regulations of the PRC and the internal measures on remuneration of the Company. The Remuneration Committee appointed the advisory member to assist the Remuneration Committee in carrying out daily works. The expenses of the Remuneration Committee are included in the budget of the Company.

b. The Remuneration Committee consults the Chairman and Vice Chairman of the Board regarding the remuneration recommendations for other executive Directors. The Remuneration Committee has regularly assessed the performance of the executive directors, it considered that for the year 2022, each of the executive Directors has fulfilled his/her responsibilities as stipulated under the service contract entered into with the Company.

c. Please refer to "Report of the Board – Meetings Held by the Special Committees of the Board" of this annual report for information about meetings held by the Remuneration Committee.

C Accountability and Auditing

C.1 Financial Reporting

a. The Directors are responsible for supervising the compilation of accounts in each financial period, which shall be prepared on a going concern basis, and should ensure that the accounts can authentically and fairly reflect the business conditions, operating results and cash flows of the Group during the corresponding period. The Board approved the financial statements for the year 2022 and warranted that there were no misrepresentations, misleading statements or material omissions contained in this annual report, and take jointly and severally responsibility for the authenticity, accuracy and integrity of the contents therein.

b. The Company provides financial information, production and operation status to the Directors every month to ensure that the Directors are informed of the Company's latest developments in a timely manner.

c. The Company adopted an internal control mechanism to ensure that the management and relevant departments provide sufficient financial data and related explanations to the Board and the Audit Committee.

d. The external auditors of the Company issued a statement about their reporting responsibilities in the financial statements contained in the independent auditors' report.

C.2 Risk Management and Internal Control

a. The Company has established a comprehensive and basic process for risk management that is composed of target setting, risk identification, risk assessment, risk response, supervision and improvement. At the beginning of each year, the Company and its subsidiaries will take into account then production and operation situation to analyse the changes and impact of the internal and external environment, identify the risk factors and major risk areas confronting various professional fields, rank and evaluate the identified risks, work out countermeasures and indicators of monitoring and early warning, to address the major and principal risks and place operation risks under dynamic monitoring.

b. The Company has deeply integrated risk management with internal control. In the internal control matrix, risks are described according to the Company's list of risks and, on this basis, the internal control measures have been modified and improved to take risk prevention counter-measures in daily business management activities. The Company has clarified the responsible parties and strengthened supervision and inspection through means including internal control evaluation to ensure that its internal risks are controllable and being under control.

c. The Board is the highest decision-making authority for the Company's overall risk control measures. The Board acknowledges that it is its responsibility to ensure that the Company has established and maintained appropriate and effective risk management and internal control systems, and has the responsibility to review the effectiveness of these systems. Such systems are designed to manage rather than eliminate risks such as failure to achieve business objectives, and can only provide reasonable, but not absolute, assurance against material misstatement or loss. The Company has established the Risk Management Committee to organise and lead the comprehensive risk management and internal control efforts of the Company. The departments and subsidiaries of the Company specifically implement overall risk management and internal control measures. They are responsible for promptly identifying, analysing and evaluating the risks in production and operations to put forward the counter-measures and solutions for internal control that are to be implemented afterwards.

d. For the purpose of inspecting and evaluating the internal risk control measures of the Company, the risk management departments of the Company and its subsidiaries will test on the implementation of internal control on a quarterly basis. The supervision and audit department of the Company will carry out comprehensive annual inspections and evaluations on the effectiveness of the risk-oriented internal control design and operation of the Company. The general procedures of inspection and evaluation mainly include drawing up a plan for inspection and evaluation of internal control, setting up a working group for inspection and evaluation of internal control, implementing online testing of the internal control system or onsite inspection and evaluation, identifying the deficiencies in internal control, re-checking and confirming the deficiencies, arriving at a conclusion based on onsite evaluation, summarising and analysing the results of inspection and evaluation, compiling the seasonal test report of internal control as well as the annual and interim work report on risk management and internal control, and regularly reporting to the management members and the Board.

e. The Company prepares and issues regular reports such as annual reports and interim reports in accordance with the requirements of the place where the Company is listed. The regular reports are reviewed by the executives and considered by the management of the Company before being submitted to the Board and the Supervisory Committee for approval. The office of the Board the Company will finalise the regular reports according to the opinions of the Board and disclose the reports together with other relevant documents required to be submitted and disclosed on the designated websites within the given timeframe. The Company has established procedures on disclosure of inside information to ensure that inside information is promptly identified, assessed and submitted, where applicable, for the attention of the Board. In case of the occurrence of any significant event that needs to be disclosed, the office of the Board the Company will organise the drafting of a report according to the actual conditions and go through the relevant approval procedures according to the Articles of Association and rules and procedures of the Company before disclosing the information.

f. Statement of risk management and internal control: Internal risk control departments of the Company and its subsidiaries carry out risk management and internal control inspection and evaluation at least quarterly, and supervision and audit departments organise and implement risk-oriented internal control comprehensive inspection evaluation at least annually. During the Reporting Period, risk management and internal control inspection of the Company cover the Reporting Period, and the scope of inspection covers all major control aspects (including finance, business operation, compliance control and risk management function). In particular, the Board considers that the Company has adequacy of resources, staff qualifications and experience in accounting, internal audit and financial reporting functions, and the training courses received by the staff and relevant budget are also sufficient. The risk management and internal control evaluation results of the Company indicated that the Company has gradually enhanced consciousness on internal control as well as risk prevention from top down, revised internal control manual and realised online publication, further adopted effective measures to strengthen internal control management, and comprehensively increased internal control management level. The Company is not aware of any material deficiency, and the internal control of the Company (including financial report and compliance procedures according to the Hong Kong Listing Rules) is effective in general.

C.3 Audit Committee

a. The Company has established the Audit Committee. Mr. YE Zheng, an independent non-executive Director, is the chairman of the Audit Committee, and Mr. HUI Chiu Chung, Stephen and Mr. JIN Yong, each an independent non-executive Director, are members of the Audit Committee. Terms of reference of the Audit Committee have been established, and are available on the websites of the Company and the Hong Kong Stock Exchange. The Audit Committee advises on the appointment, re-appointment, termination of the independent auditors and their remuneration, reviews the financial statements to be submitted to the Board, and examines the Company's financial policies, internal audit system, internal control system and risk management system. As confirmed, none of the members of the Audit Committee had served as a partner or former partner in the Company's existing auditing firm.

According to the Letter to Issuers released by the Hong Kong Stock Exchange dated 19 December 2014 and relevant amendments to the "Corporate Governance Code" set out in Appendix 14 to the Hong Kong Listing Rules, and in order to improve the corporate governance practice and reinforce the risk management and internal control functions of the Board, the third meeting of the Second Session of the Board held by the Company on 18 March 2016 has resolved to incorporate the risk management function into the scope of authority of the Audit Committee and also to amend the terms of reference of the Audit Committee as appropriate. Such amendment was aimed to add and specify the description of risk management function. This resolution has been implemented after the approval by the Board.

b. Please refer to "Report of the Board – Meetings Held by the Special Committees of the Board" of this annual report for information about meetings held by the Audit Committee. Review opinions signed by the members of the Audit Committee were issued at such meetings and submitted to the Board. During the Reporting Period, there was no disagreement between the Board and the Audit Committee.

c. Members of the Audit Committee may engage independent professionals when performing duties. Reasonable costs arising from or in connection with such consultation are borne by the Group. Meanwhile, the Audit Committee appointed the advisory member to assist the Audit Committee in specific daily routines. The expenses of the Audit Committee are included in the budget of the Group.

d. During the Reporting Period, the Audit Committee held meetings with the auditors twice without the presence of the management members, either in writing or through meeting in person, discussing the audit situations of financial reports and the auditors' fees for the year as well as coordinating the work allocation between the internal and external auditors. The Audit Committee considered the adequacy of resources, staff qualifications and experiences, as well as the training programmes provided to the relevant staffs and the budget of the Company's accounting, internal audit and financial reporting functions during the Reporting Period. The Audit Committee considers that the Company's management performed their duties and established an effective internal control system. In addition, the Audit Committee also considered the adequacy of the resource of the Company's internal audit function, reviewed and monitored the effectiveness of the internal audit function on a constant basis. According to the Company's internal control mechanism, the Company has established whistle-blowing mechanism, whereby the staff and stakeholders may have a channel, such as online reporting, reporting through letters, meeting with reporters, complaint mail box, to report and complain on their discovered activities that have breached the Company's internal control system. The Audit Committee has reviewed and approved such system.

D Delegation of Power by the Board

a. The Board, the management and the special committees of the Board have clear terms of references. The Articles of Association, the Rules and Procedures for the Shareholders Meetings, the Rules and Procedures for the Board Meetings, and the Working Rules for the President specify clear scopes of duties, authorities and authorisations of the Board and the management.

b. In addition to the Nomination Committee, Audit Committee and Remuneration Committee, the Board has also established the Strategy and Development Committee and the ESG Committee. The Chairwoman and executive Director, Mdm. SUN Lili, serves as the chairwoman of the Strategy and Development Committee. Mr. JIN Yong, an independent non-executive Director, serves as the vice chairman of the Strategy and Development Committee. Mr. XIANG Wenwu (the executive Director and Vice Chairman of the Board), Mr. WANG Zizong (a non-executive Director), Mr. LI Chengfeng (a non-executive Director), Mr. WU Wenxin (a non-executive Director) and Mr. JIANG Dejun (an executive Director and the President), serve as members of the Strategy and Development Committee. The Strategy and Development Committee is responsible for studying the long-term development strategies as well as major decisions on capital expenditure, investment and financing of the Company. The ESG Committee comprises Chairwoman and executive Director Mdm. SUN Lili, executive Director Mr. JIANG Dejun, non-executive director Mr. LI Chengfeng, independent non-executive Directors Mr. JIN Yong and YE Zheng. The ESG Committee is responsible for deliberating and decision-making on ESG related matters. Please refer to "Report of the Board – Meetings Held by the Special Committees of the Board" of this annual report for information about meetings held by the Strategy and Development Committee and the ESG Committee.

c. All special committees under the Board have clear written scope of responsibilities. The terms of reference of all special committees under the Board specify that such committees should report its decisions or recommendations to the Board.

d. The Board confirms that corporate governance should be joint responsibilities of directors, and corporate governance functions include:

(i) to develop and review the policies and practices on corporate governance of the Company;

(ii) to review and monitor the training and continuous professional development of Directors, Supervisors and Senior Management;

(iii) to review and monitor the policies and practices on compliance with legal and regulatory requirements of the Company;

(iv) to develop, review and monitor the code of conduct and compliance manual (if any) applicable to employees, Directors and Supervisors; and

(v) to review the compliance with Corporate Governance Code and disclosure in the Corporate Governance Report of the Company.

E Shareholder Communication and Investor Relationship

a. The Company places great emphasis on investor relations. The Senior Management conducts road shows for investors every year to introduce matters that investors may be concerned about, such as development strategies, production and business performance of the Company. The Company office (office of the Board) is responsible for communicating with investors in compliance with regulatory requirements through meetings with, site visits by and setting up email accounts for investors, which enhanced communications with investors.

b. During the Reporting Period, for each substantially separate issue at a general meeting, a separate resolution was proposed. All resolutions were voted by poll to safeguard the interests of all the shareholders of the Company. A meeting notice was delivered to each shareholder at least 45 days (exclusive of the day of the meeting) prior to shareholders meetings.

c. The Company attaches great importance to the communication with shareholders to ensure that shareholders can obtain the information of the company equally and timely, so that shareholders can exercise their rights as shareholders and allow shareholders to actively participate in the affairs of the company. The communication with shareholders is mainly through the company's website, company mailbox, financial reports, annual general meeting and other potential extraordinary general meetings, and other disclosure materials submitted to the Hong Kong Stock Exchange. Shareholders can reach the Company via telephone (+8610-5673-0525) or email (seg.ir@sinopec.com) to express opinions on various matters of the company. The Chairwoman of the Board hosted the shareholders meetings as the chairman of such meeting. Members of the Board and the Senior Management also attended shareholders meetings, answered questions raised by the shareholders of the Company and listened to suggestions of the Shareholders. The Company has reviewed the implementation of the policies related to shareholder communication during the Reporting Period, and is of the opinion that the relevant policies are appropriate and effective.

F Company Secretary

a. The company secretary of the Company is recognised by the Hong Kong Stock Exchange as the professional, and is nominated by the Chairwoman of the Board and appointed by the Board. Company secretary is a Senior Management and reports to the Company and the Board. The company secretary of the Company gives opinions on corporate governance to the Board and arranges orientation training and professional development of the Directors.

b. The company secretary of the Company actively participated in professional development training and has taken no less than 15 hours of relevant professional training during the Reporting Period.

G Shareholders' Rights

a. Shareholders who individually or collectively hold 10% or more of the total voting shares issued by the Company may request in writing for the Board to convene extraordinary shareholders meeting or class meetings. If the Board fails to grant the request to call the meeting according to the Rules and Procedures for Shareholders Meetings, shareholders may call and hold the meeting at their discretion according to laws, and reasonable expenses arising therefrom are to be borne by the Company. The aforesaid provisions are subject to the following conditions: the proposals proposed at the shareholders meeting shall fall within the scope of authorities of the shareholders meetings, with specified proposals and resolutions, and in compliance with the relevant laws, administrative regulations and the Articles of Association.

b. When the Company holds a shareholders meeting, shareholders who individually or collectively hold 3% or more of the total voting shares issued by the Company may propose a provisional proposal 10 days before the date of the meeting.

c. The eligibility for attending the general meeting, the shareholders' rights and the meeting agenda are clearly stated in the notices to the shareholders of the Company.

d. The Company requires that the Company secretary is responsible for establishing an effective communication channel between the Company and its shareholders, setting up a special organisation for contacting shareholders, and passing their opinions and advice to the Board and the management members in a timely manner. Contact details of the Company can be found under the "Investor Center" section on the website of the Company.

(2) Auditors

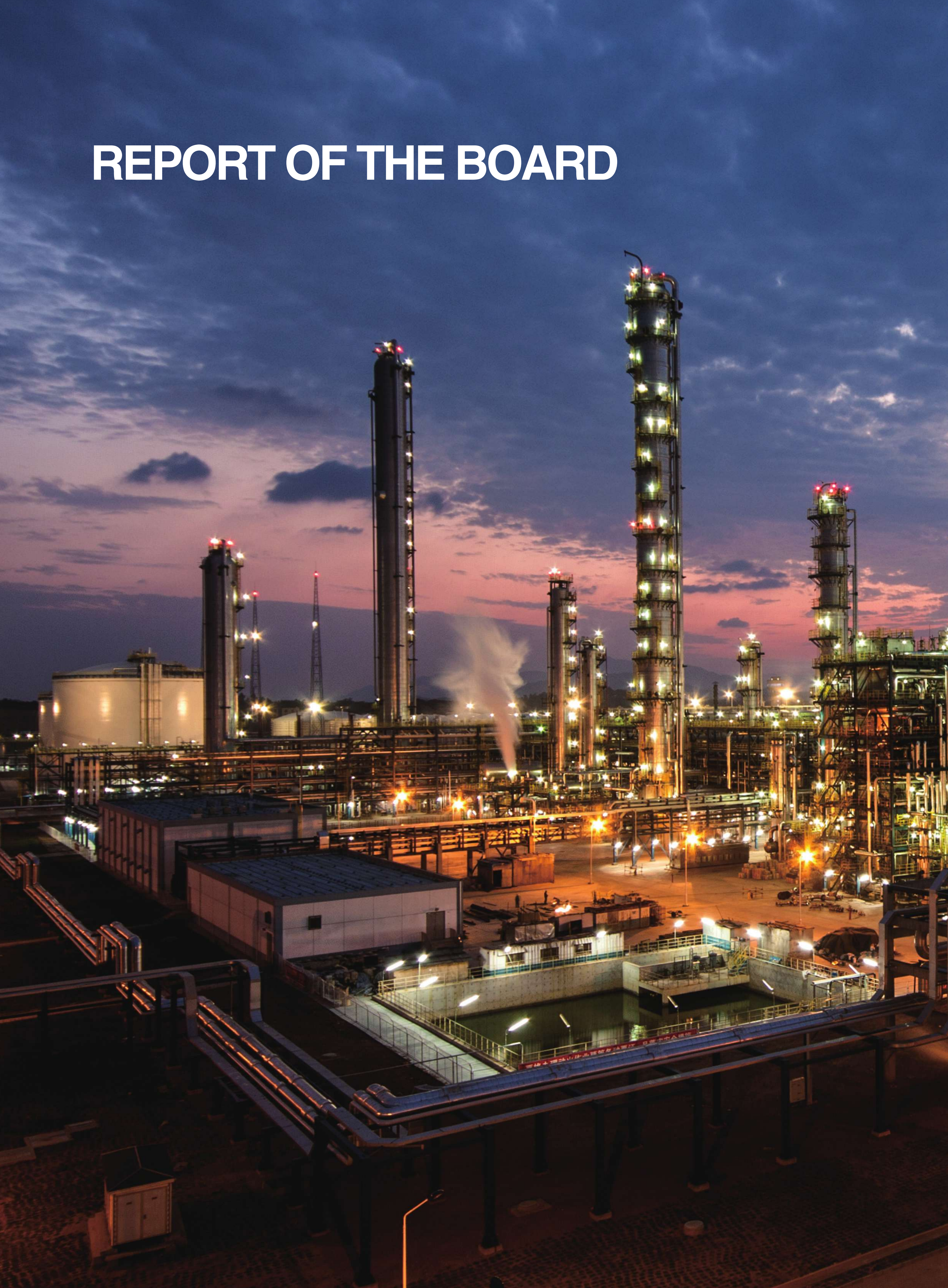
At the 2021 annual general meeting of the Company held on 26 May 2022, the Company approved the appointment of BDO China Shu Lun Pan Certified Public Accountants LLP and BDO Limited as the domestic and international auditors of the Company for the year 2022 and authorised the Board to determine their remuneration for the year 2022. As approved at the fifteenth meeting of the Third Session of the Board, the audit fee for 2022 is RMB4.57 million. The financial statement of 2022 was audited by BDO Limited.

During the Reporting Period, BDO China Shu Lun Pan Certified Public Accountants LLP and BDO Limited did not provide any material non-audit services to the Company.

(3) Other Information about Corporate Governance of the Company

For the composition of the Board, please refer to page 114 to page 118; for information regarding changes in share capital and shareholdings of substantial shareholders, please refer to page 32 to page 35; for information regarding meetings of the Board, please refer to page 92 to page 93; for the attendance of each Director in Board meetings and Shareholders meetings, please refer to page 94; for information regarding the equity interests of Directors, Supervisors and other Senior Management members, please refer to page 76; for information regarding the resume and annual remuneration of Directors, Supervisors and other Senior Management members, please refer to page 112 to page 124.

REPORT OF THE BOARD




建设最具竞争力的世界级大型石油化工企业
BUILD A MOST COMPETITIVEWORLD-CLASS LARGE SCALE PETROCHEMICAL ENTERPRISE

REPORT OF THE BOARD

The Board is pleased to present the report for the year ended 31 December 2022 for Shareholders' review.

1 Board Composition

During the Reporting Period, the composition of the Fourth Session of the Board consists Mdm. SUN Lili, Mr. XIANG Wenwu and Mr. JIANG Dejun, as executive Directors; and Mr. WANG Zizong, Mr. LI Chengfeng and Mr. WU Wenxin, as non-executive Directors; Mr. HUI Chiu Chung, Stephen, Mr. JIN Yong and Mr. YE Zheng, as the independent non-executive Directors.

2 Principal Business Activities

The Group is a leading energy and chemical engineering company in the PRC with strong international competitiveness and can provide domestic and overseas clients with overall solutions for petrol refining, chemical engineering, aromatics, coal chemicals, inorganic chemicals, pharmaceutical chemicals, clean energy, storage and transportation facilities, environmental protection and energy saving, among other industry sectors. The Group is a service provider for the whole life cycle from project planning to project operation and can provide overall industry chain services including engineering consulting, technology licensing, project management contracting, financing assistance, EPC (engineering, procurement and construction) contracting, as well as design, procurement, construction and installation, lifting and transportation of large equipment, pre-commissioning and start-up.

The list of the Company's major subsidiaries as at 31 December 2022, together with (among others) details of their principal countries of operation, places of incorporation or establishment and particulars of their issued share capital, is set out in Note 44 to the financial statements contained in this annual report.

3 Meetings of the Board

During the Reporting Period, the Company held 7 Board meetings. The details are as follows:

The second meeting of the Fourth Session of the Board was held in Beijing, the PRC, on 18 March 2022, whereby the following resolutions were considered and approved: the work report of the Board for the year 2021; the report on the business operation for the year 2021 and the work arrangements for the year 2022; the report on the operating results, financial performance and other relevant matters for the year 2021; proposal on the audited financial statements for the year of 2021; proposal on the 2021 annual report and results announcement; proposal on the environmental, social and governance report for the year 2021; proposal on approval for establishment of ESG Committee of the Board of the Company; proposal on the business operation plan, investment plan and financial budget for the year 2022; the proposed cap for the amount of performance guarantee(s) to be provided by the Company (as the parent company) for the benefit of its subsidiaries for the year 2022; proposal on the final dividend distribution plan for the year 2021 and the authorisation to the Board to determine the interim profit distribution plan for the year 2022 to be put forward for approval at the Company's annual general meeting (the annual general meeting); proposal on the appointment of domestic auditor and international auditor and the authorisation to the Board to fix their remuneration for the year 2022; proposal on the outline of "14th five-year" development plan of the Company; proposal on submitting for approval the "work report on the risk management and internal control" in 2021; proposal on submitting for approval the "internal control manual (2022 version)"; proposal on submitting for approval the "administrative method of the Board regarding license"; proposal on grant of a general mandate to the Board to repurchase domestic shares and/or H shares to be put forward for approval at the annual general meeting, the first class meeting of domestic shares in 2022 and the first class meeting of H shares in 2022 (collectively referred to as the “class meeting”); proposal on grant of a general mandate to the Board to issue domestic shares and/or H shares of the Company to be put forward for approval at the annual general meeting; proposal on approving the convening of 2021 annual general meeting and the class meeting for shareholders.

The third meeting of the Fourth Session of the Board was held in Beijing, the PRC, on 25 April 2022, whereby the proposal on approval of 2021 performance appraisal situations of executive staffs, annual performance-based bonus allocation program and incentive pre-payment scheme during term of office was considered and approved.

The fourth meeting of the Fourth Session of the Board was held in Beijing, the PRC, on 26 May 2022, whereby the proposal on optimization and adjustment of operation management mechanism for overseas institutions of the Company was considered and approved.

The fifth meeting of the Fourth Session of the Board was held in Beijing, the PRC, on 2 June 2022, whereby the proposal on approval of 2022 letter of responsibilities for business performance appraisal of executive staffs was considered and approved.

The sixth meeting of the Fourth Session of the Board was held in Beijing, the PRC, on 28 July 2022, whereby the proposal on participation in noncontinuous connected transaction for joint-venture establishment of Sinopec Carbon Industry Technology Co., Ltd. was considered and approved.

The seventh meeting of the Fourth Session of the Board was held in Beijing, the PRC, on 19 August 2022, whereby the following resolutions were considered and approved: the report on the fulfillment of the key targets for the first half of 2022 and the report on the work arrangements for the second half of 2022, report on the operating results, financial performance and other relevant matters for the first half of 2022, proposal on audited 2022 interim financial statements, proposal on 2022 interim report and results announcement, proposal on 2022 interim dividend distribution plan, proposal on “internal control guidance of SINOPEC SEG (2022 revised edition)”, proposal on “major business risks control manual of SINOPEC SEG (trial edition)”.

The eighth meeting of the Fourth Session of the Board was held in Beijing, the PRC, on 9 December 2022, whereby the proposal on approval of revision of the performance appraisal method and remuneration management method for executive staffs was considered and approved.

4 Implementation of Resolutions Approved at Shareholders Meetings by the Board

During the Reporting Period, in accordance with relevant laws and regulations as well as the Articles of Association, all members of the Board diligently implemented the resolutions approved at the Shareholders meetings, and have completed various tasks delegated to them at the Shareholders meetings.

5 Attendance of Board Meetings and Shareholders Meetings

During the Reporting Period, the attendance of each Director of the Fourth Session of the Board to the Board meetings and Shareholders meetings, and the trainings they received, are as follows:

Name	Board Meetings		Attendance at the general meeting for the year 2022 and the 2021 extraordinary shareholders meeting	Trainings
	Attend in person	Attend by proxy		
SUN Lili	7	0	3	2
XIANG Wenwu	7	0	3	2
WANG Zizong	7	0	3	2
LI Chengfeng	7	0	3	2
WU Wenxin	7	0	3	2
JIANG Dejun	7	0	3	2
HUI Chiu Chung, Stephen	7	0	3	2
JIN Yong	7	0	3	2
YE Zheng	7	0	3	2

6 Meetings held by the Special Committees of the Board

The Board has established five special committees, namely, the Audit Committee, the Remuneration Committee, the Nomination Committee, the Strategy and Development Committee and the ESG Committee. The Company's management has established four special committees, namely, the Risk Control Committee, the Confidentiality Committee, the QHSE Committee and the Sustainable Development Committee. During the Reporting Period, the Strategy and Development Committee held 1 meeting, the Audit Committee held 2 meetings, the Remuneration Committee held 1 meeting. As of the date of this annual report, the Nomination Committee held 1 meeting, the ESG Committee held 1 meeting. The attendance of special committee meetings by members of each committee are as follows:

Name	Number of meetings required to be attended	Number of meetings attended in person	Number of meetings attended by proxy
Strategy and Development Committee			
SUN Lili	1	1	0
XIANG Wenwu	1	1	0
JIANG Dejun	1	1	0
WANG Zizong	1	1	0
LI Chengfeng	1	1	0
WU Wenxin	1	1	0
JIN Yong	1	1	0
Audit Committee			
YE Zheng	2	2	0
HUI Chiu Chung, Stephen	2	2	0
JIN Yong	2	2	0
Remuneration Committee			
YE Zheng	1	1	0
HUI Chiu Chung, Stephen	1	1	0
JIN Yong	1	1	0
Nomination Committee[note]			
SUN Lili	1	1	0
XIANG Wenwu	1	1	0
HUI Chiu Chung, Stephen	1	1	0
JIN Yong	1	1	0
YE Zheng	1	1	0
ESG Committee[note]			
SUN Lili	1	1	0
JIANG Dejun	1	1	0
LI Chengfeng	1	1	0
JIN Yong	1	1	0
YE Zheng	1	1	0

Note: as of the date of this annual report

Specific situations of meetings of each committee are as follows:

The first meeting of the Audit Committee of the Fourth Session of the Board was held in Beijing, the PRC, on 17 March 2022, whereby the following resolutions were considered and approved: the audited opinion of independent auditor on the Company's financial statements of 2021, execution of the continuing connected transactions in 2021, proposal on the appointment of domestic auditor and international auditor and the authorisation to the Board to fix their remuneration for the year 2022, description of 2021 annual report of the Company, description of environmental, social and governance report for the year 2021, description of non-competition situation for the year 2021, work report of internal control audit for the year 2021, proposal on submitting for approval the work report of risk management and internal control in 2021.

The second meeting of the Audit Committee of the Fourth Session of the Board was held in Beijing, the PRC, on 18 August 2022, whereby the following resolutions were considered and approved: audit opinion of the independent auditor on the Company's 2022 interim financial statements, description on the 2022 interim report and results announcement of the Company, work report of comprehensive risk management, internal control and compliance in the first half of 2022, execution of the continuing connected transactions in the first half of 2022.

The first meeting of the Strategy and Development Committee of the Fourth Session of the Board was held in Beijing, the PRC, on 15 March 2022, whereby the proposal on the outline of "14th five-year" development plan of the Company was considered and approved.

The first meeting of the Remuneration Committee of the Fourth Session of the Board was held in Beijing, the PRC, on 9 December 2022, whereby the proposal on approval of revision of the performance appraisal method and remuneration management method for executive staffs was considered and approved.

The first meeting of the Nomination Committee of the Fourth Session of the Board was held in Beijing, the PRC, on 16 March 2023, whereby the resolutions of the resignation of a director and proposed appointment of a director of the Fourth Session of the Board was considered and approved.

The first meeting of the ESG Committee of the Fourth Session of the Board was held in Beijing, the PRC, on 17 March 2023, whereby the introduction of the preparation of the 2022 Environmental, Social and Governance Report was considered and approved.

7 Performance

The financial results of the Group for the year ended 31 December 2022 were prepared in accordance with the IFRS and its financial position as at that date and the corresponding analysis are set out from page 134 to page 212 in this annual report.

8 Dividends

In accordance with the Company Law and other relevant laws and regulations, the Company attaches great importance to the reasonable return on investment to investors and ensures the continuity and stability of the Company's profit distribution policy. The Company's distributable profits in the form of cash each year shall be no less than 30% of the net profits attributable to the Company's shareholders in the year, under the circumstances that there are net profits attributable to the Company's shareholders and accumulated undistributable profits, and that the Company's investment plan and cash expenses can be satisfied. A decision to declare or to pay any dividends in the future, and the amount of any dividends, will depend on, among other things, the Company's results of operations, cash flows and financial condition, operating and capital expenditure requirements, distributable profits as determined under PRC GAAP or IFRS (whichever is lower), the Articles of Association, the Company Law and any other applicable PRC law and regulations and other relevant requirements of the supervisory authorities of the place where the Company is listed.

At the annual general meeting for the year 2021 convened on 26 May 2022, an ordinary resolution was passed to approve the authorisation to the Board to determine the interim profit distribution plan for the year 2022. The dividend distribution plan of RMB0.118 per share (inclusive of applicable tax) for the six months ended 30 June 2022 was approved at the seventh meeting of the Fourth Session of the Board convened on 19 August 2022. The dividend distribution plan was implemented.

The tenth meeting of the Fourth Session of the Board of the Company approved the dividend distribution plan for the year ended 31 December 2022. A final cash dividend of RMB0.210 (inclusive of applicable taxes) per share would be distributed based on 4,428,000,000 shares (including 1,460,800,000 H shares and 2,967,200,000 domestic shares), being the total share capital of the Company as at 31 December 2022. The above dividend distribution plan will be submitted to the Company's annual general meeting to be held on 12 May 2023 for review and approval before implementation.

The final dividend for the year of 2022 will be paid on or before Wednesday, 19 July 2023 to all Shareholders whose names appear on the register of members of the Company at the close of business on Tuesday, 23 May 2023. In order to qualify for the final dividend, the holders of H Shares must lodge all share certificates accompanied by the transfer documents with Computershare Hong Kong Investor Services Ltd. (address: Shops 1712-1716, 17/F, Hopewell Centre, 183 Queen's Road East, Wan Chai, Hong Kong) before 4:30 p.m. on Wednesday, 17 May 2023 for registration. For the purpose of ascertaining Shareholders who qualify for the dividend, the register of members for H Shares will be closed from Thursday, 18 May 2023 to Tuesday, 23 May 2023 (both days inclusive).

The dividend will be denominated and declared in Renminbi. The holders of Domestic Shares will be paid in Renminbi and the holders of H Shares will be paid in Hong Kong dollars. The exchange rate for the dividend to be paid in Hong Kong dollars will be the average of the exchange rates of Renminbi to Hong Kong dollars as announced by the People's Bank of China during the five business days preceding the date of approval of the final dividend by the annual general meeting to be convened on 12 May 2023.

In accordance with the Enterprise Income Tax Law of the People's Republic of China (中華人民共和國企業所得稅法) and its implementation regulations, the Company is required to withhold and pay enterprise income tax at the rate of 10% on behalf of the non-resident enterprise Shareholders whose names appear on the register of members for H Shares when distributing the cash dividends. Any H Shares not registered under the name of an individual Shareholder, including HKSCC Nominees Limited, other nominees, agents or trustees, or other organisations or groups, shall be deemed as shares held by non-resident enterprise shareholders. Therefore, enterprise income tax shall be withheld from dividends payable to such Shareholders. If holders of H Shares intend to change their shareholder status, please enquire about the relevant procedures with their agents or trustees. The Company will strictly comply with the law and the requirements of the relevant government authority and withhold and pay enterprise income tax on behalf of the relevant Shareholders based on the register of members for H Shares as at Tuesday, 23 May 2023.

If the individual holders of H Shares are Hong Kong or Macau residents or residents of the countries which had an agreed tax rate of 10% for the cash dividends given to them under the relevant tax agreement with the PRC, the Company should withhold and pay individual income tax on behalf of the relevant Shareholders at a rate of 10%. Should the individual holders of H Shares be residents of the countries which had an agreed tax rate of less than 10% under the relevant tax agreement with the PRC, the Company shall withhold and pay individual income tax of the dividend on behalf of the relevant shareholders at a rate of 10%. In that case, if the relevant individual holders of H Shares wish to reclaim the extra amount withheld due to the application of 10% tax rate, the Company can apply for the relevant agreed preferential tax treatment provided that the relevant Shareholders submit the information required by the notice of the tax agreement to the H share registrar of the Company. The Company will assist with the tax refund of the extra amount withheld after obtaining the approval of the competent tax authority. Should the individual holders of H Shares be residents of the countries which had an agreed tax rate of over 10% but less than 20% under the tax agreement with the PRC, the Company shall withhold and pay the individual income tax at the agreed actual rate in accordance with the relevant tax agreement. In the case that the individual holders of H Shares are residents of the countries which have had an agreed tax rate of 20% under the relevant tax agreement with the PRC, or which has not entered into any tax agreement with PRC, or otherwise, the Company shall withhold and pay the individual income tax at a rate of 20%.

For investors investing in the H Shares of the Company listed on the Hong Kong Stock Exchange through the Shanghai Stock Exchange or Shenzhen Stock Exchange (including enterprises and individuals) (the "Southbound Trading"), the Company has entered into the Agreement on Appropriation of Cash Dividends of H Shares for Southbound Trading《港股通H股股票現金紅利派發協議》with China Securities Depository and Clearing Corporation Limited, pursuant to which, China Securities Depository and Clearing Corporation Limited, as the nominee of the holders of H Shares for Southbound Trading, will receive all cash dividends distributed by the Company and distribute the cash dividends to the relevant investors of H Shares of Southbound Trading through its depositary and clearing system. The cash dividends for the investors of H Shares of Southbound Trading will be paid in Renminbi.

Pursuant to the relevant requirements under the "Notice on the Tax Policies Related to the Pilot Program of the Shanghai-Hong Kong Stock Connect" (Caishui [2014] No. 81)《關於滬港股票市場交易互聯互通機制試點有關稅收政策的通知》(財稅[2014]81號) and the "Notice on the Tax Policies Related to the Pilot Program of the Shenzhen-Hong Kong Stock Connect" (Caishui [2016] No. 127)《關於深港股票市場交易互聯互通機制試點有關稅收政策的通知》(財稅[2016]127號)), for dividends received by domestic investors from investing in H shares listed on the Hong Kong Stock Exchange through Shanghai-Hong Kong Stock Connect or Shenzhen-Hong Kong Stock Connect, the Company of such H shares shall withhold and pay individual income tax at the rate of 20% on behalf of the investors. For dividends received by domestic securities investment funds from investing in H shares listed on the Hong Kong Stock Exchange through Shanghai-Hong Kong Stock Connect or Shenzhen-Hong Kong Stock Connect, the tax payable shall be the same as that for individual investors. The company of such H shares will not withhold and pay the income tax of dividends for domestic enterprise investors and those domestic enterprise investors shall report and pay the relevant tax themselves.

9 Major Suppliers and Clients

During the Reporting Period, the total purchases from the top five suppliers of the Group accounted for 13.9% of the total purchases of the Group, of which the purchases from the largest supplier accounted for 9.0% of the total purchases of the Group.

During the Reporting Period, the total sales to the top five clients of the Group accounted for 58.5% of the total sales of the Group, of which sales to the largest client accounted for 49.5% of the total sales. For details on the Group's relationships with major clients and the risks that the Group's business may face due to such relationships, please see the section headed "Report of the Board – 27 Risk Factors – Risks relating to decreased orders from major clients" in this annual report.

During the Reporting Period, other than the connected transactions with the controlling shareholder, Sinopec Group, and its subsidiaries, as disclosed in the section headed "Connected Transactions" of this annual report, to the knowledge of the Board, none of the Directors, Supervisors and their close associates or any Shareholder holding 5% or more of the share capital of the Company had any interest in any of the above-mentioned major suppliers and clients.

10 Bank Loans and Other Borrowings

The Group had USD20 million (about RMB142 million) loans to the fellow subsidiaries as at the end of the Reporting Period.

11 Fixed Assets

During the Reporting Period, changes to the fixed assets of the Group are set out in Note 17 to the financial statements prepared in accordance with the IFRS in this annual report.

12 Donations

During the Reporting Period, the amount of charity donations made by the Group amounted to approximately RMB1,345,000.

13 Pre-emptive Right

According to the Articles of Association and the applicable PRC laws, the Shareholders are not entitled to any preemptive rights. Therefore, the existing Shareholders cannot request the Company for the right of first refusal in proportion to their shareholdings.

14 Issuance of Equity Securities or Debentures

During the Reporting Period, neither the Company nor any of its subsidiaries has issued any equity securities (including securities convertible into equity securities) or debentures.

15 Management Contract

During the Reporting Period, neither the Company nor any of its subsidiaries has entered into any contract by which a person undertakes the management and administration of the whole or any substantial part of any business of the Company or any of its subsidiaries.

16 Equity-Linked Agreements

During the Reporting Period, neither the Company nor any of its subsidiaries has entered into or there subsisted any equity-linked agreement, or any agreement requiring the Company or any of its subsidiaries to enter into the agreement that will or may result in the issuance of shares by the Company.

17 Resignation of Director and Supervisor

During the Reporting Period, none of the Directors or Supervisors resigned from their positions.

18 Permitted Indemnity Provisions

During the Reporting Period, the Company purchased liability insurance for Directors to reduce their risks in the normal course of performing their duties. Save for this, there has been no permitted indemnity provision being in force for the benefit of any existing directors or the then directors of the Company (whether made by the Company or otherwise) or any associated company of the Company (if made by the Company).

19 Significant Investment

During the Reporting Period, the Company has made no significant investment (including any investment with a value of 5% or more of the Company's total assets as at 31 December 2022).

20 Accounting Standard

The difference between the main accounting policies adopted by the Company for compilation of 2022 audited consolidated financial statement and the main accounting policies for compilation of 2021 audited consolidated financial statement are indicated in details in Note 3.1 to the financial statements.

21 Retirement and Employee Benefit Plan

Details of the Group's retirement and employee benefit plan are set out in Note 33 to the financial statements.

For the disclosures in relation to the employees of the Group, please refer to the section headed "Directors, Supervisors, Other Members of Senior Management and Employees – 6 Employees" in this annual report.

22 Compliance with Laws and Regulations

In 2022, the Group was strictly in compliance with laws and regulations such as the Civil Code of the People's Republic of China, the Company Law of the People's Republic of China, the Securities Law of the People's Republic of China, the Construction Law of the People's Republic of China, the Tendering/Bidding Law of the People's Republic of China and the Safe Production Law of the People's Republic of China and other applicable environmental policies in China; and under the existing system, the Company also continuously increased or improved various systems, established a relatively complete compliance operation mechanism, prevented and avoided the occurrence of major legal risks to the maximum extent, and provided strong compliance guarantee for the Company's operation and development.

23 The Directors and Supervisors Interests in Acquiring Shares or Debentures

During the Reporting Period, there has not subsisted any arrangement to which the Company, a subsidiary of the Company, the parent company of the Company or a subsidiary of the Company's parent company is a party and whose objects are to enable directors, supervisors or any of their respective associates of the Company or any of its subsidiaries to acquire benefits by means of acquisition of shares in, or debentures of, the Company or any other body corporate.

24 Interests of Directors and Supervisors in Material Transactions, Arrangements and Contracts of Significance

During the Reporting Period, for details of the interests of Directors and Supervisors in material transactions, arrangements and contracts of significance, please refer to the section headed "Directors, Supervisors, Other Members of Senior Management and Employees – 5 Contract Benefits of Directors and Supervisors" in this annual report.

25 Change of Auditors

The Company has not changed auditors since the date of preparation for listing to 8 May 2020, when the annual general meeting for the year 2019 was held.

Sinopec Group is a controlling shareholder of the Company, which in turn is a state-owned enterprise under the control of the State-owned Assets Supervision and Administration Commission of the State Council of the People's Republic of China (the "SASAC"). According to the relevant regulations issued by the Ministry of Finance of the People's Republic of China and the SASAC, there are restrictions in respect of the number of years of audit services that an accounting firm can continuously provide to a state-owned enterprise and its subsidiaries. In accordance with such requirements, the annual general meeting for the year 2019 of the Company has approved the appointment of BDO China Shu Lun Pan Certified Public Accountants LLP and BDO Limited as the domestic and international auditors of the Company, respectively. For details of the resolution, please refer to the announcement and circular of the Company dated 23 March 2020, and the resolution of the annual general meeting for the year 2019 issued on 8 May 2020.

The Company has not changed auditors since the annual general meeting for the year 2019 on 8 May 2020.

26 Core Competitiveness Analysis

The Group is a leading energy and chemical engineering company in the PRC. The Group has the legacy of being among very first oil refining and petrochemical engineering enterprises established in the PRC in the 1950s. Leveraging on long operating history and sophisticated industry experiences, we have developed the strong execution capabilities in the PRC with respect to engineering and constructing large-scale oil refining, petrochemical and new coal chemicals complexes, etc., which usually include a series of process units and public utilities, and we are highly competitive in the international engineering markets.

While adhering to the technical advantages in the petrochemical field, the Group focuses on the development of dual-carbon process technology and equipment related to the petrochemical engineering field, forming a group of cutting-edge technologies, standards and guidelines with independent characteristics such as energy saving, carbon reduction and carbon sequestration, and realizing the development of industrial application and process package.

The competitive strengths of the Group are particularly reflected in the large business scale, strong executive capacity, excellent management and technical team, advanced industrialised proprietary and patented technologies, sound management system, advanced software and equipment, rich and reliable suppliers and subcontractors resources, complete service chain in the technology R&D and licensing, preliminary project consulting, financing assistance, engineering, procurement, construction, trial test/commissioning and maintenance services and excellent one-stop engineering service capability.

Given our competitive advantages in industry chain, business chain, technology chain and supply chain, the Group is now a leader in China's oil refining and engineering industry. The Group is also on the cutting edge of the rapidly developing Chinese and international engineering markets.

27 Risk Factors

The trend of the global macro-economic situation is under stress and turbulence

The business performance of the Group is closely related to the economic situation of the PRC as well as the global economic situation. In 2022, the international political landscape and situations underwent drastic turbulence and profound changes. Competition among the great powers became more intense, fierce geopolitics caused more acute conflicts than ever, the overall recovery of the world economy slowed down, and the global supply chain pressure indicator was still at a high level while the fiscal policies of many countries gave certain support to investment. Global inflation had a strong impact on the economies of countries, and inflation in some major economies continued to be at a high level, and if the measures for dealing with inflation are improper, the world economy may fall into greater turmoil. In 2022, although the overall trend of international crude oil price fluctuated but the oil price was generally high, European and American sanctions blocked the export channel of Russian oil and natural gas, resulting in regional imbalance between supply and demand of oil and gas and distorting the market mechanism, and if the geopolitical situation continues to evolve, the global oil and gas landscape will enter a period of deep adjustment. The international engineering industry is still facing the regional public security situation, industrial chain and supply chain, raw material and logistics costs, and a series of unexpected risk factors. The green and low-carbon transformation of the global energy sector brought impacts and challenges to the traditional oil refining and chemical engineering industry. The operation of the Company may also be adversely affected by other various factors, including but not limited to the adverse influence brought by sudden change and unpredictability of international geopolitics, fluctuation in international oil price, and uncertainty in oil products and chemical product demand upon investment in overseas oil refining and chemical engineering projects.

Risks brought by changes in market environment

In 2023, the prospects for global economic recovery are still uncertain, global energy development faced security risks and low-carbon transformation pressure at the same time, the pace of capacity expansion in the refining industry will slow down, the ethylene industrial chain will face excessive pressure, and the integration and substitution of production capacity will accelerate. China still faces a complex external environment. Under the "Carbon Peaking and Carbon Neutrality" target, the substitution of non-fossil energy is increasing, the development environment of energy and chemical industry will face deep adjustment, the pattern of industry supply and demand, operating entities and market layout will be reconstructed, and the refining and chemical industry will face more harsh state of survival of the fittest. As far as the engineering market is concerned, diversified investment subjects, diversified competition subjects, insufficient market capacity, declining contract benefits and rising execution risks will become the new normal faced by engineering companies for a long time.

Risks relating to changes in policies

(1) Nationalisation, cancellation, seizure, confiscation, suspension and other risks with regard to projects undertaken by us

Some of the countries where the Company's overseas projects are located or the target countries where the market is developed have political instability, governmental governing was inefficient or gets into trouble, public liability and credit risk are high, and the resulting policy uncertainty and possible government intervention in investment matters have increased the political risks of project investment and construction. In some regions, government nationalisation, cancellation, seizure, confiscation, and suspension of refinery projects occur from time to time. Little or even no compensation is paid to investors. Thus, relevant project participants may suffer huge losses. Under such circumstances, the risks relating to exploration of new markets and project implementation activities in affected countries are relatively high and this may hinder the development of the international business of the Group. However, as the Group is an asset-light company, which mainly provides engineering services, and has a very low possibility of contracting overseas projects in the form of investment or equity participation, even if it participates in overseas projects involving investment in the future, there will be strict risk review. In general, the above risks have a limited impact on the Group's international business.

(2) Risks relating to host country's inadequate policy and regulation

Certain countries where our projects is located have set restrictions and access, environmental protection, labor protection and public safety policies for the industry where the Group is located, but there are problems such as incomplete and imperfect system, differential management and inefficient execution, and there is substantial uncertainty about whether partial reasonable policies can be continuously and effectively implemented in the future. Once some conditions occur due to imperfect policies and laws, the implementation of the project will be blocked directly, and the project will be involved in disputes or even legal proceedings, which will affect the implementation of the project in the host country and the further exploration of the market.

(3) Risks relating to changes in financial and legal systems

The Group pays taxes in overseas countries and regions where it operates, changes in value-added tax, income tax, customs tax and other aspects of host countries' tax system and tax rate will directly affect the economic results of the projects and may reduce the profitability of the project. In recent years, the taxation and legal systems of third-world countries were gradually improved, tax enforcement became increasingly normalized and strict, and with the increase of the volume of business contracted overseas by Chinese engineering construction enterprises, tax penalty against Chinese enterprises appeared in some countries. In the process of overseas business market development, the Group will fully analyze and evaluate the current fiscal, tax and legal systems of the host country, but it is difficult to predict the possible changes in the tax and legal policies during the implementation of the project, and these changes may have a significant adverse impact on the profitability and financial performance of the Company's overseas business.

Meanwhile, if changes are made in the legal system of the host regions of major overseas projects in the Middle East, Central Asia and Southeast Asia, such as changes in environmental protection law, investment law, labour law and other relevant law, and if regulations and enforcement may become restrictive, the execution of our projects will become more difficult and potentially affect the development of new projects in the host countries; if the current laws and regulations related to environmental protection, safety and health are revised or updated, or standards are raised, the costs of compliance and operating efficiency of overseas businesses will be affected.

Risks relating to project delay and budget overview

(1) Risks relating to inaccurate project quotation and preliminary budget

Insufficient accumulation of basic data required for project quotation and budget (man hour, procurement and construction price), and insufficient efficiency and accuracy of preparing quotations and budget, may affect the decision-making of projects and subsequent project implementation. For large projects with higher complexity, particularly the EPC contracting projects and emerging projects of investment-construction-operation integration, some projects have a long cooperative operation period, inaccurate initial project quotations and estimations may cause difficulties in implementing the projects as planned.

(2) Risks relating to sub-contractor management

The Group usually engages sub-contractors to provide assistance in completing projects; however, if the resource distribution of sub-contractors is inadequate, it will delay current project completion and impede undertaking of other projects. Concurrently, the delay in sub-contractors' progress will increase the risk of project delay. In addition, the Group assumes joint liability for subcontracted projects, which means that the Group may be subject to compensation liability due to quality problems of subcontracted projects and may be subject to lawsuits and compensation claims, may undertake joint liability for the on-site security accidents of the sub-contractors and bear the risk of the losses in project performance and damages to company image. It is possible that our business and financial status as well as our business operations will be adversely affected by these matters.

(3) Risks relating to regular fluctuation of raw material prices for construction

The price of raw materials used in domestic and overseas projects of the Group fluctuates frequently, which directly increases the difficulty of project procurement cost control. Especially in the international market, sub-contractors compete by providing low bids in order to win contracts, leads to a decrease in the contractor's profit. If the price of raw materials increases significantly, the risk of completing a project outside the limits of our budget will be elevated.

(4) Risks relating to inflation, including the increase in cost of human resources

The Middle East and Central Asia are the primary target markets of the Group's international business. Currently, we are vigorously developing the regional markets in Southeast Asia. Considering that the economy in such areas as a whole is unstable with high inflation rates, this may directly lead to increase in price of sub-contracting and labour markets. Concurrently, due to the fluctuation in the exchange rate of Renminbi, the cost of exported labour services increases, which further boosts project costs.

(5) Risk relating to project management

Risks relating to project management are mainly reflected in financing service support, engineering design and capability for claiming indemnity. Some of our on-going overseas projects are financing projects and the project contract amount is large. Insufficient financing service support may lead to delays in construction because we may not solve problems in a timely manner. For projects where international practices such as engineering design standards and industry rules are substantially different from practices of the PRC, the Group's design team's abilities may be hampered. Delay in design implementation will result in difficulties in the execution of procurement and construction. Due to the complexity of the construction projects of the Group, the capability for claiming indemnity may directly affect the profitability of a project. If the project team's experience in claims and counter claims is inadequate to meet the requirements of the undertaken project, especially for our overseas projects, if we fail to properly deal with claims and counter claims in some EPC contracting projects where the conditions are complex and the demand is high, especially for the overseas projects, these will cause a negative impact on the effectiveness and profitability of such projects.

Risks relating to QHSE

In recent years, both the domestic and overseas markets require better QHSE management, and the social media has also become increasingly concerned about QHSE. Thus, the QHSE management ability of a company has become much more important to its survival and future development. The Group is a participant in the petrochemical engineering industry, which has both "petrochemical" and "engineering" production characteristics. The high-risk features of the petrochemical and engineering industries in fact increase the pressure on and difficulty in our QHSE management, the triple pressures of construction timeline, cost and resources are superimposed, and the risk of instability related to safety and quality remains high.

Any non-standard, non-regulated, imperfect situation or insufficient execution in the Group' QHSE management principles, models and system may result in QHSE incidents. On the other hand, the social situation confronted by the Company's overseas projects is relatively unstable, and the overseas public safety risks are under great pressure, which may lead to overseas public safety incidents.

Risks relating to exchange rate

During the Reporting Period, there were accounts receivable and payable and cash balances in relation to our overseas projects, which are settled in foreign currencies. During the Reporting Period, our foreign currencies mainly consist of U.S. dollars, Euros Kuwaiti dinar, Saudi riyal, and Malaysian ringgit. Exchange rates will affect the pricing of our services as well as our material procurement costs settled in foreign currencies. Thus, fluctuation in exchange rates may affect our business performance and financial status. Moreover, the exchange and remittance of foreign currencies are subject to PRC laws and regulations on foreign currency, and therefore, it cannot be guaranteed that foreign trade policies of current accounts and capital accounts will remain unchanged. Foreign currency policies may limit our ability to obtain adequate foreign currencies. We cannot ensure that we have enough foreign currencies to meet the demand of the Group under certain exchange rates. This will affect the execution of our projects settled in foreign currencies.

During the Reporting Period, relevant hedge transactions implemented by the Company regarding exchange rate fluctuation are set out in the section headed “SIGNIFICANT EVENTS – 12 Financial Derivatives For Hedging Purposes” in this annual report.

Risks relating to the uncertainty of obtaining new projects

The Group’s revenue mainly comes from offering services in refining, petrochemical, new coal chemical and storage & transportation industries. Client demands are affected by periodic variation of traditional resources and overall business levels. Resource supply and price variations will significantly affect our ability to obtain new projects. At the same time, the competitiveness of traditional resources in the resource market is the prerequisite of ensuring service demand. If government subsidies or other economic stimulating measures are implemented to lower the prices of substitute resources, and if technological breakthroughs for substitute resource suppliers and users may be achieved, the cost advantages of traditional resources will diminish. This will decrease our new business volume on a large scale.

Risks relating to decreased orders from major clients

The industries in which our clients are involved are capital and technology-intensive with high entrance thresholds. Our major clients are relatively concentrated, resulting in the Group being dependent on a small group of clients, especially on the largest client which is SINOPEC SEG’s controlling shareholder (and its associates). If our major clients choose to switch to a competitor of the Group, or reduce orders because of financial difficulties and other factors, we will face severe business fluctuations or revenue decreases. We endeavour to attract more new clients for both our domestic and international businesses. However, it is likely that the majority of our clients and revenue will continue to come from our current major clients. Therefore, we cannot guarantee stability and growth of our revenue due to potential risks which may result in significant negative impact on our business performance.

Risks relating to changes in investment strategies and tactics

In recent years, the international situations changed beyond expectations, and the global energy market fluctuated sharply. These factors had certain adverse impact to the implementation of investment strategies such as acquisition, sales and new market exploration of domestic and international engineering companies. With the gradually stable operation of the domestic economy, the Company will still promote the high-quality development of the enterprise through the implementation of investment strategies such as acquisition, sales and new market exploration. Entering a new business domain by acquisition may result in additional business risks which differ from our previous risk factors. There might be great difficulties in how to recognise all significant risks during our due diligence investigation, how to achieve synergy and resource integration, and how to successfully operate an expanded company after acquisition. We will strive to assist potential buyers to assume liabilities of the business, and execute the contracts and other rights should we sell any part of the Group or pursue acquisitions in the future. The Group plans to accelerate the promotion of new technological innovation, new product research and development and new business transformation focusing on the domestic and overseas markets, and may increase investment in technology and R&D in the field of alternative energy sources and alternative chemical raw materials, the future development of relevant investments and transactions is mainly subject to influence of uncontrollable government policies superposed with huge downward pressure and potential financial risks in the world, this may result in a significant negative impact on the business and financial status of the Group.

Risks relating to new business segments

When the Group expands new businesses such as new coal chemicals, energy saving and environmental protection, LNG, hydrogen energy, photovoltaic, wind power, faced with the intricate market environment, the Group’s technical reserves in new fields may not be perfect enough, project engineering and constructional experience may be insufficient, if it has little knowledge of the credit status of the clients, it is very difficult for the Group to fully identify and avoid major risks existing in the new businesses.

Risks relating to the new business models

The Group proactively explores new business models such as contract environmental protection management and contract energy management. The Group will invest in the whole process of a project, and scale back on costs and earn profits by sharing environmental protection and energy saving benefits with its clients. As it involves the corporate operation and project operation of its clients, the Group will face, for instance, credit risks due to the transferring of project benefits by the clients, the risks brought about by improper corporate operation of the clients or by legal disputes, the project risks in failure to achieve expected targets in terms of energy saving and environmental protection benefits and failures in timely pay-back of investments.

Risks associated with pursuit of petroleum and natural gas projects in sanctioned countries

The United States and other jurisdictions or organizations, including the European Union and the United Nations, have, through executive orders, passing of legislation or other governmental means, implemented measures that impose economic sanctions against certain countries or jurisdictions, or against targeted industry sectors, groups of companies or persons, and/or organizations within these countries or jurisdictions. The sanctions imposed on certain relevant jurisdictions may continue and the implementation and interpretation of such sanctions and policies may evolve, as a result of which there is still scrutiny on the Group's business or result in one of or more of the Group's business activities may be deemed to violate sanctions laws. In view of this, the Group can provide no assurances that its future business will be free of risk under U.S. sanctions or sanctions from other countries or organizations, or that the Group will conform its business to the expectations and requirements of U.S. authorities or the authorities of any other government or organization that does not have jurisdiction over the Group's business but may impose sanctions on an extraterritorial basis. Shareholders and potential investors should consider (1) if investment in the Company would expose them to any OFAC or sanctions law risk arising from their nationality or residency, and (2) the risk that, if the Group engages in oil, gas and refining chemical engineering business in sanctioned countries, such business may result in reduction of the marketability of the shares of the Company and may have an adverse effect on the share price of the Company.

28 Report on Corporate Environmental, Social and Governance

For details of the Group' environmental, social and governance practices, please refer to the 2022 environmental, social and governance report to be issued by the Company on 19 March 2023.

By Order of the Board

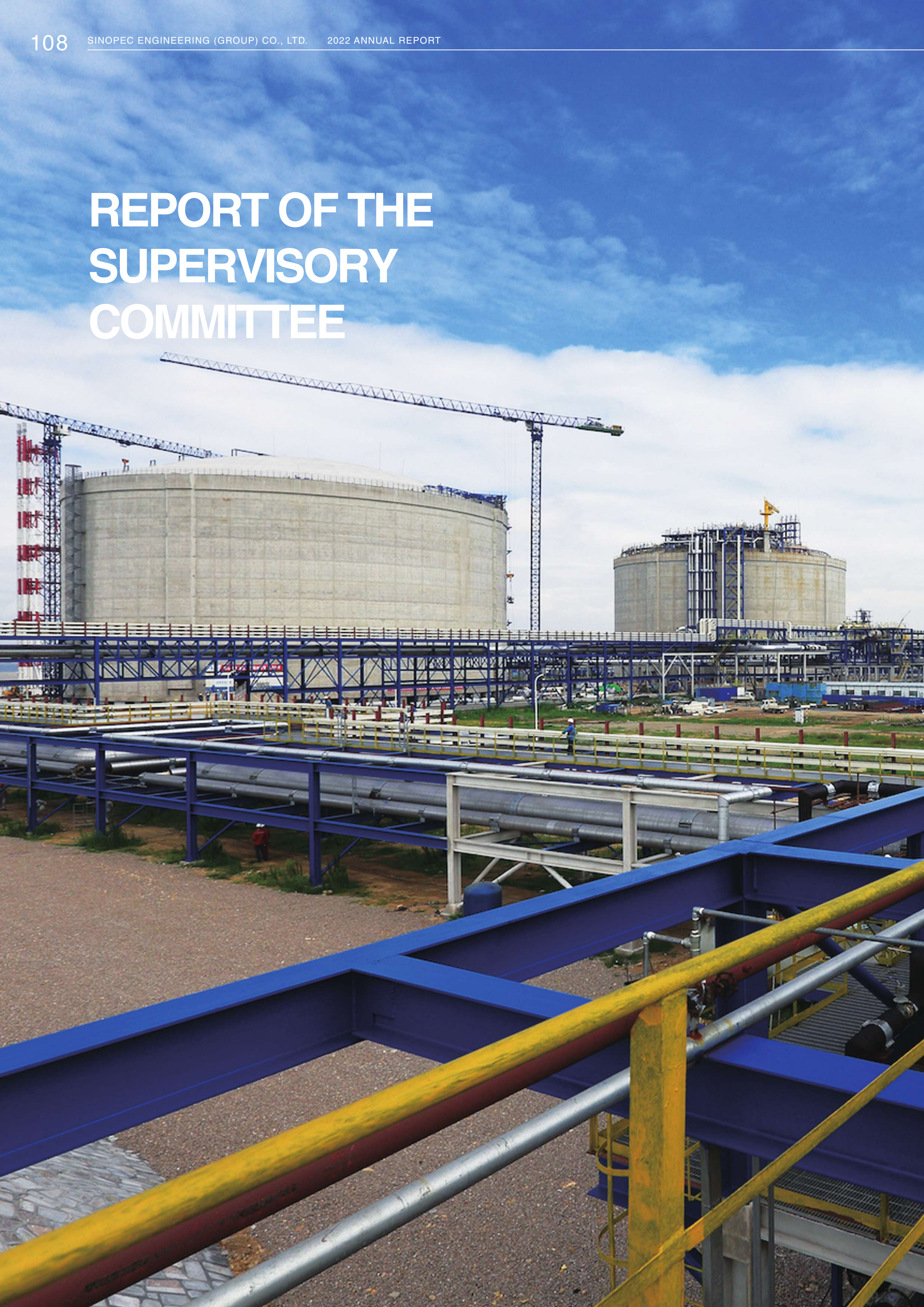
SUN Lili

Chairwoman of the Board

Beijing, the PRC

19 March 2023

REPORT OF THE SUPERVISORY COMMITTEE



REPORT OF THE SUPERVISORY COMMITTEE

ZHU Fei ***Chairman of the Supervisory Committee***

Dear Shareholders,

Under the leadership of shareholders' general meetings of the Company and under the support of the Board, the Supervisory Committee and all supervisors of the Company earnestly perform the duties required by relevant laws and regulations, Articles of Association of the Company, and the shareholders general meetings. The Supervisory Committee's responsibilities mainly include timely inspecting the financial status of the Company, supervising directors and senior management members of the Company to perform duties in the Company, convening meetings of the Supervisory Committee as scheduled, verifying and reviewing relevant proposals to be submitted by the Board to the shareholders general meetings, exercising the powers of Supervisory Committee in accordance with relevant laws and regulations as well as the Articles of Association and submitting proposals to shareholders general meetings at appropriate time, to remain true to our original aspiration and mission, adhering to work in a honest, diligent and pious manner, combining normalised supervision with good service, and supporting the Chairwoman of the Board, President and other senior management members of the Company to sufficiently exercise their lawful rights and exert the functions of Supervisory Committee for the sustainable development of the Company.

During the Reporting Period, the Supervisory Committee held two meetings, in which the Company's annual and interim reports, annual and interim financial reports, dividend distribution plan, annual operation investment plan and financial budget, the report of the Supervisory Committee and so on were reviewed and considered.

The second meeting of the Fourth Session of the Supervisory Committee of the Company was held on 18 March 2022. The work report of the Supervisory Committee for the year 2021, the financial statements of 2021, the 2021 annual report, the dividend distribution plan for the year 2021, production and operation plan, investment plan and financial budget for the year 2022 and so on were considered and approved at the meeting.

The third meeting of the Fourth Session of the Supervisory Committee of the Company was held on 19 August 2022. The 2022 interim financial statements, the 2022 interim report, the 2022 interim dividend distribution plan and so on were considered and approved at the meeting.

Furthermore, the Supervisory Committee organised supervisors to attend the shareholders general meetings of the Company and attended the Board meetings as nonvoting delegates, and supervision of the decision-making process for major issues of the Company.

Through the supervision of operation, management and financial of the Company, the Supervisory Committee and all supervisors believe that in 2022, the Board of the Company and senior management members of the Company have faithfully fulfilled the responsibilities and obligations assigned by relevant laws and regulations, the Articles of Association and the shareholders general meetings, further optimised the internal control system of the Company, strengthened risk prevention and control, actively used the Audit Committee of the Board and the Supervision Committee to give play to the functions of supervision and restraint, continued to strengthen the construction of the compliance management system, ISO 37301 compliance management system certification has been approved; and the operational standards, as well as the decision-making procedures of the Company are in compliance with the relevant requirements of the PRC Company Law and the Articles of Association. The Supervisory Committee did not identify any behavior of any Directors and senior management members of the Company in violation of applicable PRC laws, regulations or the Articles of Association or in infringement of the interests of the Company and Shareholders in performing of their duties. The financial statements of the Company are in compliance with the China Business Accounting Standards, the International Financial Reporting Standard and related regulations. The Company's financial operation is in good condition, and the financial statements truly and fairly represented financial status and operating results of the Company. The Company strictly implements relevant stipulations on the use of proceeds, and the actual use of the proceeds were consistent with the previous disclosure. The decision-making procedure for connected transactions of the Company complied with the stipulations of relevant laws, regulations and Articles of Association, and there was no infringement of the interests of the Company and other Shareholders, etc.

This session of the Supervisory Committee will stick to the principle of integrity, perform its supervisory duties, actively participate in the supervision of key decision-making processes of the Company, put greater efforts in inspection and supervision and protect the interests of the Company and its Shareholders.

ZHU Fei

Chairman of the Supervisory Committee

Beijing, the PRC

19 March 2023

DIRECTORS, SUPERVISORS, OTHER MEMBERS OF SENIOR MANAGEMENT AND EMPLOYEES

DIRECTORS, SUPERVISORS, OTHER MEMBERS OF SENIOR MANAGEMENT AND EMPLOYEES

(1) Directors

Mdm.SUN Lili (孫麗麗) – Chairwoman of the Board

Mdm. SUN Lili (孫麗麗), is an expert in petrochemical engineering technology and management, a master of national engineering survey and design, and the academician of Chinese Academy of Engineering. Chairwoman of the Company, and an executive director of Sinopec Engineering Incorporation (中國石化工程建設有限公司). Mdm. SUN is a principal senior engineer with a university diploma. From June 2004 to April 2012, she served as the vice president of Sinopec Engineering Incorporation. From January 2006 to May 2008, she served as the vice president of SINOPEC International Petroleum Exploration and Development Co., Ltd. (中國石化國際石油勘探開發有限公司). From September 2011 to March 2015, she served as the chairwoman of the Project Supervision and Management Committee of Saudi Yanbu Refinery Joint Venture (沙特延布煉廠合資公司). From December 2011 to March 2015, she served as the president of Saudi Yanbu Refinery Project and a member of the remuneration committee and audit committee of the board of directors of Saudi Yanbu Refinery Joint Venture. From April 2012 to October 2013, she served as the vice president of SINOPEC Engineering Incorporation. From November 2013 to October 2019, she served as the president of Sinopec Engineering Incorporation. Since November 2013, she has served as a director of Sinopec Engineering Incorporation. From January 2014 to November 2014, she served as the Vice President of SINOPEC SEG. She served as a Director of SINOPEC SEG since January 2015. Since December 2020, she has been the Chairwoman of SINOPEC SEG.

Mr. XIANG Wenwu (向文武) – Vice Chairman of the Board

Mr. XIANG Wenwu (向文武), is the Vice Chairman of the Board and a Director of SINOPEC SEG, and executive director of Sinopec Group Fourth Construction Company. Mr. XIANG is a principal senior economist and holds a Ph.D. diploma. Mr. XIANG served as deputy manager of Sinopec Group Second Construction Company (中國石化集團第二建設公司) ("Sinopec Group SCC") from June 1999 to March 2004, the manager of Sinopec Group SCC from March 2004 to December 2008, the general manager of Sinopec Group SCC from December 2008 to July 2010, a director and the general manager of Sinopec Group Nanjing Engineering Co., Ltd. (中國石化集團南京工程有限公司) from December 2009 to April 2012, an executive director and the general manager of Sinopec Nanjing Engineering Co., Ltd. (中石化南京工程有限公司) from April 2012 to November 2014, and the vice president of the Company from August 2012 to January 2017. Mr. XIANG has been the President of SINOPEC SEG from January 2017 to December 2020, a Director of SINOPEC SEG since February 2017. He has been the Vice Chairman of the Board of SINOPEC SEG and an executive Director of Sinopec Group Fourth Construction Company since December 2020.

Mr. WANG Zizong (王子宗) – Director

Mr. WANG Zizong (王子宗), is a Director of SINOPEC SEG, and also serves as deputy chief engineer of Sinopec Group, general manager of information and digital management department of Sinopec Group, general manager of information and digital management department of Sinopec Corp., and chairman of Petro-CyberWorks Information Technology Co., Ltd. Mr. WANG is a principal senior engineer with a Ph. D degree. Mr. Wang served as deputy manager of Beijing Petrochemical Engineering Company from October 1998 to July 1999. From July 1999 to May 2001, he undertook different roles at Sinopec Engineering Incorporation (中國石化工程建設有限公司). From May 2001 to April 2012, he was the vice president and chief engineer of Sinopec Engineering Incorporation. From April 2012 to July 2013, he was the vice president and chief engineer of Sinopec Engineering Incorporation. Since July 2013, he has been the deputy chief engineer of Sinopec Group. From March 2019 to December 2019, he was the director of information management department of Sinopec Group. Since March 2019, he has been the Chairman of Petro-CyberWorks Information Technology Co., Ltd. Since December 2019, he has been the general manager of information and digital management department of Sinopec Group and general manager of information and digital management department of Sinopec Corp., and he has been a Director of SINOPEC SEG since October 2021.

Mr. LI Chengfeng (李成峰) – Director

Mr. LI Chengfeng (李成峰) is a Director of SINOPEC SEG, and also serves as deputy chief engineer of Sinopec Corp., general manager of chemical business department of Sinopec Corp., chairman of AGCC (阿穆爾天然氣化工) project joint venture and executive director of Sinopec Asset Management Co., Ltd.. Mr. LI is a senior engineer with a master degree. From December 2004 to September 2005, Mr. Li served as vice president of BASF-YPC Company Limited (BASF-YPC). From September 2005 to March 2008, he served as a director of Sinopec Yangzi Petrochemical Co., Ltd. From September 2005 to October 2006, he served as the vice president of Sinopec Yangzi Petrochemical Corporation. From October 2006 to June 2007, he served as the general manager of Sinopec Yangzi Petrochemical Corporation. From June 2007 to March 2008, he served as the general manager of Sinopec Yangzi Petrochemical Co., Ltd. From October 2006 to March 2008, he served as the chairman of BASF-YPC Company Limited (BASF-YPC). From March 2008 to December 2008, he served as the manager of chemical sales branch of Sinopec Corp. (中國股份有限公司). From December 2008 to March 2012, he served as the general manager of chemical sales branch of Sinopec Corp. From January 2009 to November 2014, he served as the executive director of Sinopec Chemical Commercial Holding Co., Ltd. From April 2009 to November 2014, he served as the general manager of Sinopec Chemical Commercial Holding Co., Ltd. From July 2010 to November 2014, he served as deputy director of chemical business department of Sinopec Corp. From October 2014 to November 2014, he served as chairman of Sinopec Chemical Commercial Holding (Hong Kong) Co., Ltd. From November 2014 to December 2016, he served as the director of Sinopec Wuhan Petrochemical plant, the general manager of Sinopec Wuhan Branch and the chairman of Sino-Korean (Wuhan) Petrochemical Co., Ltd. From November 2014 to May 2016, he served as the general manager of Sino-Korean (Wuhan) Petrochemical Co., Ltd. From December 2016 to June 2018, he served as the chairman of Sinopec Yangzi Petrochemical Co., Ltd., Yangzi Petrochemical Co., Ltd. and chairman of BASF-YPC Company Limited (BASF-YPC). From June 2018 to December 2019, he served as the director of the chemical business department of Sinopec Corp. From September 2018 to October 2022, he has been Vice chairman of ZTHC Energy Co., Ltd. (中天合創能源有限責任公司). From January 2019 to November 2022, he has been chairman of Shanghai SECCO Petrochemical Co., Ltd. (上海賽科有限責任公司). Since December 2019, he has served as the general manager of the chemical business department of Sinopec Corp. and the executive director of Sinopec Asset Management Co., Ltd. (中國石化集團資產經營管理有限公司). Since May 2020, he has served as the chairman of AGCC (阿穆爾天然氣化工) project joint venture. Since December 2020, he has served as the deputy chief engineer of Sinopec Corp. and he has been a Director of SINOPEC SEG since October 2021.

Mr. WU Wenxin (吴文信) – Director

Mr. WU Wenxin (吴文信), is a Director of SINOPEC SEG and also serves as the general manager of the engineering department of Sinopec Group (中國石化集團有限公司工程部), the general manager of the engineering department of Sinopec Corp. (中國股份有限公司工程部), and the director of SINOPEC SABIC Tianjin Petrochemical Co., Ltd. (中沙(天津)石化有限公司). Mr. WU is a principal senior engineer with a Master degree. From May 2007 to September 2010, he served as the deputy general manager of Fujian Petrochemical Company Limited (福建化工有限公司). From December 2007 to September 2010, he was the director of the refining and ethylene integration project of Fujian Refining & Petrochemical Co., Ltd. (福建聯合有限公司). From November 2009 to September 2010, he served as a director of Fujian Petrochemical Co., Ltd. (福建化工有限公司). From July 2010 to March 2018, he served as a deputy director of the engineering department of Sinopec Corp. From September 2013 to March 2018, he was a deputy director of the engineering department of Sinopec Group. From October 2017 to October 2018, he was an executive director and general manager of Sinopec Engineering Quality Supervision Co., Ltd. (中石化工程質量監測有限公司). From March 2018 to December 2019, he served as the director of the engineering department of Sinopec Group (中國石化集團工程部) and the director of the engineering department of Sinopec Corp. (中國股份有限公司工程部). Since June 2018, he served as a director of SINOPEC SABIC Tianjin Petrochemical Co., Ltd. (中沙(天津)石化有限公司). He has been a Director of SINOPEC SEG since October 2018, and has been the general manager of the engineering department of Sinopec Group (中國石化集團工程部) and the general manager of the engineering department of Sinopec Corp. (中國股份有限公司工程部) since December 2019.

Mr. JIANG Dejun (蔣德軍) – Director and President

Mr. JIANG Dejun (蔣德軍), is an executive Director and President of SINOPEC SEG. Mr. JIANG is a principal senior engineer with a Ph. D degree. From November 2001 to September 2003, he was the deputy head of Lanzhou Design Institute of Sinopec Group (中國石化集團蘭州設計院). From September 2003 to June 2007, he was the director and vice president of Sinopec Ningbo Engineering Co., Ltd. (中石化寧波工程有限公司). From June 2007 to December 2008, he was the deputy manager of SINOPEC Engineering Co., Ltd. (中石化集團煉化工程有限公司). From December 2008 to September 2012, he was the Vice President of SINOPEC SEG and deputy Director of Engineering Enterprise Management Department of Sinopec Group. From September 2012 to October 2019, he was the vice president of Sinopec Fifth Construction Co., Ltd. (中石化第五建設有限公司). He was an employee representative Supervisor of SINOPEC SEG from January 2015 to December 2020, and was the general manager of Sinopec Engineering Incorporation from October 2019 to December 2020. Since December 2020, he has been the President of SINOPEC SEG. Since February 2021, he has been a Director of SINOPEC SEG.

Mr. HUI Chiu Chung, Stephen (許照中) – Independent Director

Mr. HUI Chiu Chung (許照中), J.P., is an independent Director of SINOPEC SEG. Mr. HUI is currently the chairman and chief executive officer of Luk Fook Financial Services Limited. He also serves as an independent non-executive director of Zhuhai Holdings Investment Group Limited (Stock Code: 908), Gemdale Properties and Investment Corporation Limited (Stock Code: 535), Lifestyle International Holdings Limited (Stock Code: 1212), China South City Holdings Limited (Stock Code: 1668), Agile Group Holdings Limited (Stock Code: 3383) and FSE Engineering Holdings Limited (Stock Code: 331) and a non-executive director of Luk Fook Holdings (International) Limited (Stock Code: 590), whose shares are listed on the Hong Kong Stock Exchange. Mr. HUI was appointed as the independent non-executive director of Hong Kong Exchanges and Clearing Limited (Stock Code: 388) by the Hong Kong SAR Government since April 2009, at which his term expires in April 2015. Mr. HUI has over 47 years of experience in the securities and investment industry. He was the managing director of UOB Kay Hian (Asia) Limited (大華繼顯(亞洲)有限公司) from 2002 to 2005; group managing director of OSK Asia Holdings Limited (僑豐金融集團有限公司) ("OSK") from August 2005 to March 2007; chief executive officer of OSK from April 2007 to March 2011; and the vice chairman of OSK Asia Holdings Hong Kong Limited (僑豐金融集團(香港)限公司) from April 2011 to September 2011. He served for years as a council member and vice chairman of the Hong Kong Stock Exchange, a member of the Advisory Committee and the Committee on Real Estate Investment Trusts of the Hong Kong Securities and Futures Commission, a director of the Hong Kong Securities Clearing Company Limited, a member of the Listing Committee of the Hong Kong Exchanges and Clearing Limited, an appointed member of the Securities and Futures Appeal Tribunal, a member of the Standing Committee on Company Law Reform, and an appointed member of the Hong Kong Institute of Certified Public Accountants Investigation Panel. Mr. HUI became a senior fellow member of the Hong Kong Securities and Investment Institute and fellow member of the Hong Kong Institute of Directors in 2011 and 2002, respectively. Mr. HUI has been an independent Director of SINOPEC SEG since April 2013.

Mr. JIN Yong (金涌) – Independent Director

Mr. JIN Yong (金涌), is an independent Director of SINOPEC SEG. Mr JIN currently is a member of Chinese Academy of Engineering, the dean of the Chemical Engineering Science and Technology Research Institute of Tsinghua University (清華大學化工科學與技術研究院), a professor of the Chemical Engineering department of Tsinghua University, an executive officer of China Society of Particuology (中國顆粒學會) and an executive officer of Chemical Industry and Engineering Society of China (中國化工學會). Mr. JIN worked as an assistant teacher in Electrical Engineering Research Office in the University of Science and Technology of China ("USTC") (中國科學技術大學電工程教研室) from October 1959 to February 1960. He also served as a teacher engaging in advanced studies in the Chemical Research Office in Tianjin University (天津大學化工教研室) from February 1960 to February 1961, and worked as a teacher in the Chemistry Department in USTC from February 1961 to May 1973. Since 1973, Mr. JIN has been a lecturer, associate professor, professor and tutor of doctoral candidates at the Chemical Engineering Department of Tsinghua University. Mr. Jin has been an independent Director of SINOPEC SEG since April 2013.

Mr. YE Zheng (葉政) – Independent Director

Mr. YE Zheng (葉政), is an independent Director of SINOPEC SEG. Mr. YE is a director of Ace Sustainability & Risk Advisors Limited, and an independent non-executive director of Hainan Meilan International Airport Company Limited (海南美蘭國際空港股份有限公司) (Stock Code: 357) whose shares are listed on the Main Board of The Stock Exchange of Hong Kong Limited. He worked in Shanghai Municipal Finance Bureau (上海市財政局) from October 1982 to January 1989. Mr. YE has over 25 years of experience in audit, internal control and consultancy. He served as an auditor in Ernst & Young (安永會計師事務所) from October 1995 to April 2000; an audit manager in KPMG (畢馬威會計師事務所) from May 2000 to December 2001; a senior audit manager in Grant Thornton (香港均富會計師事務所) from January 2002 to July 2005; a director in Ernst &Young from August 2005 to October 2006, and a practicing director of Mazars CPA Limited from November 2006 to April 2021. Mr. YE obtained a bachelor's degree in accounting and finance in May 1993, and a master's degree in business administration in December 1994, both from California State University, Long Beach. Mr. YE became a member of the American Institute of Certified Public Accountants in September 1998 and a member of the Hong Kong Institute of Certified Public Accountants in May 2003. He has been a director of Ace Sustainability & Risk Advisors Limited since April 2021, an independent Director of SINOPEC SEG since April 2013, and an independent non-executive director of Hainan Meilan International Airport Company Limited (海南美蘭國際空港股份有限公司) (Stock Code: 357) since October 2021. Mr. YE was a consulting expert for the third session of the committee for enterprise internal control standards appointed by the Ministry of Finance of the People's Republic of China from 1 November 2014 to 31 October 2016.

Profile of the Directors of the Fourth Session of the Board as at the date of this annual report

Name	Gender	Age	Position in the Company	Term of Office as Director
SUN Lili	Female	61	Chairwoman of the Board	October 2021 – October 2024
XIANG Wenwu	Male	56	Vice Chairman of the Board	October 2021 – October 2024
WANG Zizong	Male	57	Director	October 2021 – October 2024
LI Chengfeng	Male	58	Director	October 2021 – October 2024
WU Wenxin	Male	59	Director	October 2021 – October 2024
JIANG Dejun	Male	57	Director and President	October 2021 – October 2024
HUI Chiu Chung, Stephen	Male	75	Independent Director	October 2021 – October 2024
JIN Yong	Male	87	Independent Director	October 2021 – May 2023*
YE Zheng	Male	58	Independent Director	October 2021 – October 2024

* The Board was recently notified by Mr. JIN Yong's resignation as Independent Director of the Company, which shall take effect upon the election of a new independent director at the annual general meeting of the Company for the year 2022 proposed to be held on 12 May 2023. For details, please refer to the announcement of the Company dated 19 March 2023.

(2) Supervisors

Mr. ZHU Fei (朱斐) – Chairman of the Supervisory Committee, Chairman of the Trade Union

Mr. ZHU Fei (朱斐), is the Chairman of the Supervisory Committee and the Chairman of the Trade Union of SINOPEC SEG. Mr. ZHU is a senior engineer with a university diploma. From October 1998 to July 1999, he was the deputy head of Beijing Design Institute (北京設計院). From July 1999 to December 2002, he undertook different roles at Sinopec Engineering Incorporation (中國石化工程建設公司). From December 2002 to April 2012, he worked as the vice president of Sinopec Engineering Incorporation. From April 2012 to October 2014, he was the vice president of Sinopec Engineering Incorporation. From November 2014 to April 2017, he was the vice president of Sinopec Fourth Construction Co., Ltd. (中石化第四建設有限公司). He has been an employee representative Supervisor of the SINOPEC SEG since January 2015, has been the Chairman of the Supervisory Committee of SINOPEC SEG since May 2017, and has been the Chairman of the Trade Union of SINOPEC SEG since November 2019.

Mr. ZHANG Xinming (張新明) – Supervisor

Mr. ZHANG Xinming (張新明), is a Supervisor of SINOPEC SEG, as well as the chairman of Sinopec Shanghai Engineering Co., Ltd. (中國石化上海工程有限公司). Mr. ZHANG Xinming is a principal senior engineer with a master's degree in business administration. Mr. Zhang served as the deputy general manager of Sinopec Luoyang Engineering Co., Ltd. and the deputy general manager of Sinopec Guangzhou Engineering Co., Ltd. from August 2013 to March 2015, the deputy director of the development planning department of Sinopec Group from March 2015 to December 2019, the deputy general manager of the development planning department of Sinopec Group from December 2019 to April 2021. Since September 2020, he has been the chairman of Sinopec Shanghai Engineering Co., Ltd. Since May 2021, he has been a Supervisor of SINOPEC SEG.

Mr. ZHOU Yingguan (周贏冠) – Supervisor

Mr. ZHOU Yingguan (周贏冠), is a Supervisor of SINOPEC SEG, as well as an executive director of Sinopec Nanjing Engineering Co., Ltd. (中石化南京工程有限公司). Mr. ZHOU is a principal senior economist with a university diploma. From March 2004 to July 2010, Mr. ZHOU served as the vice president of the Sinopec Group Second Construction Company (中國石化集團第二建設公司). From July 2010 to April 2012, he served as the vice president of Sinopec Group Nanjing Engineering Co., Ltd. (中國石化集團南京工程有限公司). From April 2012 to April 2017, he has been the vice president of Sinopec Nanjing Engineering Co., Ltd. (中石化南京工程有限公司). He was the Supervisor of SINOPEC SEG from January 2015 to October 2018. He was an executive director and president of Sinopec Fourth Construction Co., Ltd. from April 2017 to December 2020. He has been a Director of SINOPEC SEG from October 2018 to December 2020. Since December 2020, he has been an executive director of Sinopec Nanjing Engineering Co., Ltd. (中石化南京工程有限公司). Since February 2021, he has been a Supervisor of SINOPEC SEG.

Mr. ZHOU Chengping (周成平) – Supervisor

Mr. ZHOU Chengping (周成平), is a Supervisor of SINOPEC SEG, as well as an executive director of Sinopec Luoyang Engineering Co., Ltd. and Sinopec Guangzhou Engineering Co., Ltd., and a director of Hainan Refinery Chemical Co., Ltd. Mr. ZHOU is a principal senior engineer with a master degree. Mr. ZHOU served as deputy manager of Luoyang Engineering Company of Sinopec Engineering Incorporation (中國石化集團工程建設公司) from November 2001 to May 2003. From May 2003 to December 2008, he served as deputy manager of Luoyang Engineering Company of Sinopec Group, vice president of Luoyang Engineering Company of Sinopec Group from December 2008 to April 2012. From April 2012 to October 2014, he served as vice president of Sinopec Luoyang Engineering Co., Ltd. and Sinopec Guangzhou Engineering Co., Ltd., general manager of Sinopec Luoyang Engineering Co., Ltd. and Sinopec Guangzhou Engineering Co., Ltd. from October 2014 to May 2020. He was the executive director of Sinopec Luoyang Engineering Co., Ltd. and Sinopec Guangzhou Engineering Co., Ltd. since October 2014. Since October 2021, he has been a supervisor of SINOPEC SEG. Since December 2021, he has been a director of Hainan Refinery Chemical Co., Ltd.

Mr. XU Yijun (許一君) – Employee Representative Supervisor

Mr. XU Yijun (許一君), is an employee representative Supervisor of SINOPEC SEG, who is also an executive director of Sinopec Ningbo Engineering Co., Ltd. (中石化寧波工程有限公司). Mr. XU is a principal senior economist with a Ph. D degree. From April 2001 to September 2003, he was the deputy manager of the Third Construction Company of Sinopec Group (中國石化集團第三建設公司). From September 2003 to April 2012, he was the vice president of Sinopec Group Ningbo Engineering Co., Ltd (中國石化集團寧波工程有限公司). He was the vice president of Sinopec Ningbo Engineering Co., Ltd. from April 2012 to November 2017. He has been an employee representative Supervisor of SINOPEC SEG since January 2015. He has been an executive director of Sinopec Ningbo Engineering Co. Ltd. since November 2017.

Mr. YI Hao (衣浩) – Employee Representative Supervisor

Mr. YI Hao (衣浩), is an employee representative Supervisor of the Company, as well as an executive director of Sinopec Fifth Construction Co., Ltd. (中石化第五建設有限公司). Mr. YI is a principal senior economist with a university diploma. Mr. Yi served as the vice president of Fifth Construction Company of Sinopec Group from July 2000 to April 2012. From April 2012 to April 2015, he served as the vice president of Sinopec Fifth Construction Co., Ltd. (中石化第五建設有限公司). From April 2015 to April 2017, he served as the chairman and supervisor of the trade union of Sinopec Fifth Construction Co., Ltd. From April 2017 to December 2018, he served as the vice president of Sinopec Fifth Construction Co., Ltd., president of Sinopec Fifth Construction Co., Ltd. from December 2018 to December 2019. Since December 2019, he has been the executive director of Sinopec Fifth Construction Co., Ltd. Since October 2021, he has been an employee representative Supervisor of SINOPEC SEG.

Mr. WANG Yi (王毅) – Employee Representative Supervisor

Mr. WANG Yi (王毅), is an employee representative Supervisor of SINOPEC SEG and also serves as an executive director of Sinopec Tenth Construction Company Limited (中石化第十建設有限公司). Mr. WANG is a principal senior engineer with a master degree. From November 2014 to July 2019, Mr. WANG was the vice president of Sinopec Tenth Construction Company Limited; from July 2019 to August 2020, he served as the Vice President of SINOPEC SEG; from August 2020 to December 2022, he was the president of Sinopec Tenth Construction Company Limited; since December 2022, he has been the executive director of Sinopec Tenth Construction Company Limited; he has been an employee representative Supervisor of SINOPEC SEG since January 2023.

Profile of the Supervisors of the Fourth Session of the Supervisory Committee as at the date of this annual report

Name	Gender	Age	Position in the Company	Term of Office as Supervisor
ZHU Fei	Male	58	Chairman of the Supervisory Committee and Chairman of the Trade Union	October 2021 – October 2024
ZHANG Xinming	Male	56	Supervisor	October 2021 – October 2024
ZHOU Yingguan	Male	54	Supervisor	October 2021 – October 2024
ZHOU Chengping	Male	60	Supervisor	October 2021 – March 2023*
XU Yijun	Male	59	Employee Representative Supervisor	October 2021 – October 2024
YI Hao	Male	54	Employee Representative Supervisor	October 2021 – October 2024
WANG Yi	Male	52	Employee Representative Supervisor	January 2023 – October 2024

* Mr. Zhou Chengping tendered his resignation as a non-representative of the employees supervisor of the Company in March 2023.

(3) Other Senior Management

Please refer to the subsection headed "Directors" in this section for biographical details of Mr. JIANG Dejun.

Mr. WANG Guohua (王國華) – Vice President

Mr. WANG Guohua (王國華), is the Vice President of SINOPEC SEG and the president of Sinopec Heavy Lifting & Transportation Co., Ltd. (中石化重型起重運輸工程有限公司). Mr. WANG is a principal senior economist with a bachelor degree. Mr. WANG served as the deputy manager of Sinopec Fourth Construction Company (中石化第四建設公司) (the "FCC") from July 2003 to December 2008, the deputy general manager of FCC from December 2008 to April 2012, the deputy general manager of Sinopec Fourth Construction Co., Ltd (中石化第四建設有限公司) (the "SFCC") from April 2012 to October 2014, an executive director and the president of the SFCC from October 2014 to April 2017, and the vice president of the SFCC from April 2017 to March 2019. Mr. WANG has been the president of Sinopec Heavy Lifting & Transportation Co., Ltd. (中石化重型起重運輸工程有限公司) since March 2019, and has been a Vice President of SINOPEC SEG since April 2019.

Mr. JIA Yiqun (賈益群) – Chief Financial Officer, Secretary to the Board and Company Secretary

Mr. JIA Yiqun (賈益群), is the Chief Financial Officer and Secretary to the Board of SINOPEC SEG, and the chief accountant of Sinopec Engineering Incorporation (中國石化工程建設有限公司). Mr. JIA is a senior engineer with a master degree. From July 1990 to April 2003, Mr. JIA has held positions in Sinopec Research Institute of Petroleum Engineering (中國石化科學研究院), China Petrochemical International Company (中國石化國際事業公司), foreign affairs bureau of Sinopec Group (中國石化集團外事局). Mr. JIA served as deputy chief representative of the Hong Kong representative office of Sinopec Corp. from April 2003 to June 2012, has been the Chief Financial Officer of SINOPEC SEG since August 2012 and the Company Secretary of SINOPEC SEG since July 2019. He has been the chief accountant of Sinopec Engineering Incorporation since April 2021. He has been the Secretary to the Board of SINOPEC SEG since October 2021. Mr. JIA obtained the qualifications of Chartered Financial Analyst issued by CFA Institute in September 2006.

Mr. FENG Di (馮迪) – Vice President

Mr. FENG Di (馮迪), is the vice president of SINOPEC SEG. Mr. FENG is a senior engineer with a master degree. From September 1990 to December 2022, Mr. FENG has consecutively held several positions in Sinopec Luoyang Petrochemical Engineering Company and SINOPEC SEG. Mr. FENG has served as a vice president of SINOPEC SEG since January 2023.

Mr. SUN Baoping (孫寶平) – Vice President

Mr. SUN Baoping (孫寶平), is the vice president of SINOPEC SEG. Mr. SUN a principal senior economist with a master degree. Mr. SUN has consecutively held several positions in Beijing Petrochemical Engineering Company and SINOPEC Engineering Incorporation (中國石化工程建設有限公司) from August 1997 to December 2022. Mr. SUN has served as a vice president of SINOPEC SEG since January 2023.

Profile of other members of the Senior Management as at the date of this annual report

Name	Gender	Age	Position in the Company	Date of Taking Office
JIANG Dejun	Male	57	President	December 2020
WANG Guohua	Male	53	Vice President	March 2019
JIA Yiqun	Male	55	Chief Financial Officer Secretary to the Board Company Secretary	August 2012 October 2021 30 July 2019
FENG Di	Male	54	Vice President	January 2023
SUN Baoping	Male	48	Vice President	January 2023

2 Relationship among Directors, Supervisors and Other Members of the Senior Management

There is no financial, business, family or other material relationship between Directors, Supervisors and other members of the Senior Management except for the working relationship.

3 Positions Held by the Directors and Supervisors in Shareholders and Their Competition Interests during the Reporting Period

During the Reporting Period and as at the date of this annual report, (i) Mr. WANG Zizong served as deputy chief engineer of Sinopec Group, general manager of information and digital management department of Sinopec Group, general manager of information and digital management department of Sinopec Corp., and chairman of Petro-CyberWorks Information Technology Co., Ltd.; (ii) Mr. LI Chengfeng served as deputy chief engineer of Sinopec Corp., general manager of chemical business department of Sinopec Corp., chairman of Shanghai SECCO Petrochemical Co., Ltd. and AGCC project joint venture, executive director of Sinopec Asset Management Co., Ltd., and Vice chairman of ZTHC Energy Co., Ltd.; (iii) Mr. WU Wenxin served as the general manager of the engineering department of Sinopec Group, the general manager of the engineering department of Sinopec Corp, and the director of SINOPEC SABIC Tianjin Petrochemical Co., Ltd.; and (iv) Mr. ZHOU Chengping served as a director of Sinopec Hainan Refining Petrochemical Co., Ltd. Save for the above, to the knowledge of the Board, none of the Directors and Supervisors is a director or employee of a company which has an interest in the shares or 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 Securities and Futures Ordinance, or owns interest in any other business which competes or is likely to compete, directly or indirectly, with the business of the Group.

4 Contract Benefits of Directors and Supervisors

As at 31 December 2022 or any time during the Reporting Period, there is no any transaction, arrangement or contract of significance to which the Company, a parent company of the Company, a subsidiary of the Company or a subsidiary of the Company's parent company is a party, and in which the Directors or Supervisors or any entity connected with any of the Directors or Supervisors is or was materially interested, either directly or indirectly.

All Directors have entered into service agreements with the Company. Such service agreements are effective from the date of approval by the shareholders to the expiry of the term of the Fourth Session of the Board. The service agreements can be renewed in accordance with the Articles of Association and applicable laws and regulations. There is no service contract signed between the Directors and the Company which is not determinable by the Company within one year without payment of compensation (other than statutory compensation).

All Supervisors have entered into agreements with the Company concerning the compliance with relevant laws and regulations, the Articles of Association and arbitration regulations. The term of office for Supervisors starts from the date of their respective appointment to the expiry of the Fourth Session of the Supervisory Committee. The service agreements can be renewed in accordance with the Articles of Association and applicable laws and regulations. There is no service contract signed between the Supervisors and the Company which is not determinable by the Company within one year without payment of compensation (other than statutory compensation).

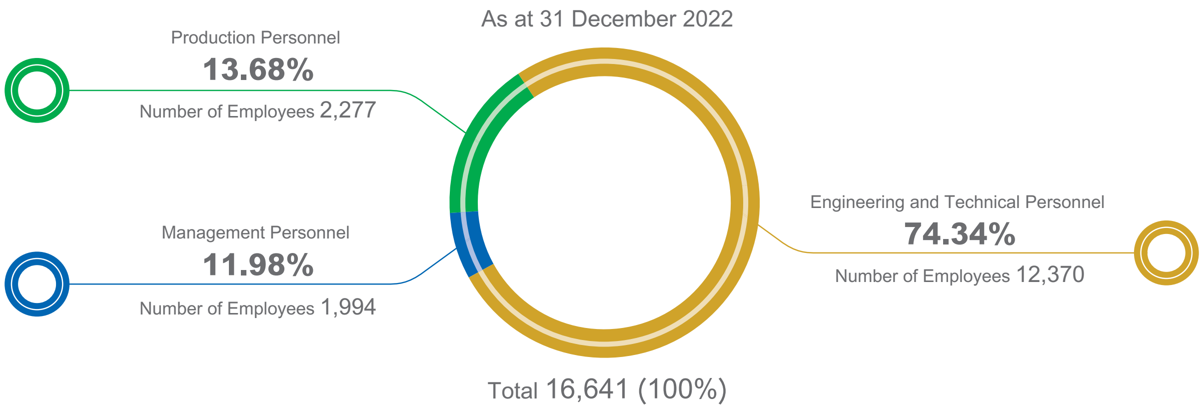
5 Remuneration of Directors, Supervisors and other Senior Management Members

During the Reporting Period, the total number of Directors, Supervisors and other Senior Management members paid by the Company was 19, and the annual total remuneration paid was RMB1,875. For details of the remuneration of Directors, Supervisors and the five highest paid individuals for the year ended 31 December 2022, please see notes 15 and 42(b) to the financial statements in this annual report.

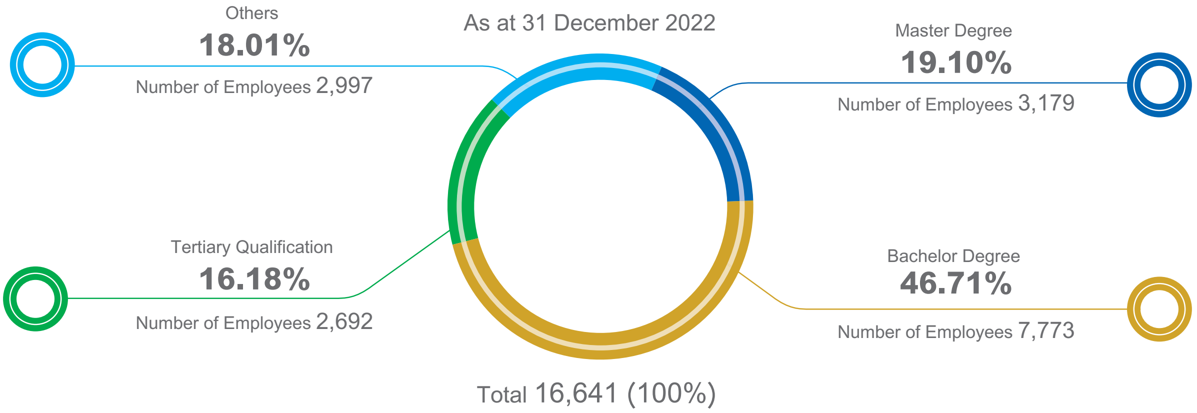
6 Employees

As at 31 December 2022, there were a total of 16,641 employees in the Group.

The following table lists the information of employees classified by business as at 31 December 2022.



The following table lists the information of employees classified based on education background as at 31 December 2022.



7 Gender Diversity of Employees

The table below sets forth the gender ratio of all employees (including senior management) of the Group as of 31 December 2022.

	As of 31 December 2022	
	Number of employees	Percentage of total number of employees (%)
Female	4,503	27.1%
Male	12,138	72.9%
Total	16,641	100.0%

The table below sets forth the gender ratio of senior management of the Group as of 31 December 2022.

	As of 31 December 2022	
	Number of senior management	Percentage of total number of senior management (%)
Female senior management	1	5.3%
Male senior management	18	94.7%
Total	19	100.0%

The Group adheres to the employment principle of "equal treatment and mutual respect", provides equal development opportunities for employees of different genders, and is committed to creating a working environment where employees of different genders cooperate and respect each other. The Group is committed to improving the gender diversity of employees, but due to the unique nature the engineering and construction industry in which the Group operates, it is more challenging to achieve gender diversity for all employees.

8 Employee Remuneration

During the Reporting Period, we maintained good labour relationship. The remuneration of our employees mainly consists of salary, discretionary bonuses and contributions to the compulsory social security funds. In accordance with the laws and regulations of the PRC, the Group participates in different retirement pension related programmes for our employees, including the programmes organised by the provincial and municipal governments of the PRC and other complementary retirement pension related plans. Bonuses are usually determined in accordance with the overall performance of the Group's business. For the years ended 31 December 2021 and 31 December 2022, the employment costs of the Group were approximately RMB6.591 billion and RMB6.797 billion, respectively.

9 Employee Training Programmes

During the Reporting Period, 22 key special trainings was organised by the Group. Throughout the year, a total of 37.8 thousand attendees attended the trainings inside and outside the Group, of which there were 3.9 thousand attendees who were operation management staff, 30.1 thousand attendees who were engineering and technical staff, and 3.8 thousand attendees who were operational staff.

FINANCIAL STATEMENTS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INDEPENDENT AUDITOR'S REPORT

TO THE SHAREHOLDERS OF SINOPEC ENGINEERING (GROUP) CO., LTD.

(中石化煉化工程(集團)股份有限公司)

(Established in the People's Republic of China with limited liability)

OPINION

We have audited the consolidated financial statements of SINOPEC Engineering (Group) Co., Ltd. (the "Company") and its subsidiaries (together the "Group") set out on pages 134 to 212, which comprise the consolidated statement of financial position as at 31 December 2022, and the consolidated statement of profit or loss and other comprehensive income, the consolidated statement of changes in equity and the 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 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 International Standards on Auditing ("ISAs"). 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 Hong Kong Institute of Certified Public Accountants' "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 period. 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.

Revenue recognition of construction contracts

(Refer to notes 3.23, 5(a) and 6 to the consolidated financial statements)

The Group recognised revenue of RMB53,028,139,000 for the year ended 31 December 2022.

Revenue from construction contracts is recognised over the period of the contract by reference to the progress towards complete satisfaction of that performance obligation, depending on the nature of the contract, is measured by reference to the proportion of contract costs incurred for work performed to date to estimated total contract costs for each contract. Management estimates the total contract revenue and total contract costs at the inception of each contract. As the contract progresses, management regularly reviews and revises the estimates of contract revenue and contract costs if circumstances change, such as variations in contract work, claims and incentive payments. The increases or decreases in estimated total contract revenue or total contract costs resulted in the adjustments to the extent of progress toward completion and revenue recognised in the period in which the circumstances that give rise to the revision becomes known by management.

These transactions require individual consideration and involve management's estimates and judgment. We have identified the revenue recognition related to construction contracts as a key audit matter.

Our responses:

Our procedures in relation to the revenue recognition of construction contracts included:

– assessing and testing the related internal control of the management's accounting estimates and judgment of construction contracts;

– obtaining material construction contracts to review key contract terms and verify the total contract revenues;

– checking, on a sample basis, the principal terms set out in the relevant construction contracts and the implementation status and testing on the accuracy of the calculation of percentage of completion and revenue and costs recognised during the year;

– testing, on a sample basis, the amount and timing of the construction contract cost recognised and performing cut-off testing procedures to check that cost had been recognised in the appropriate account period; and

– performing analytical review procedures on the gross margins of material construction contracts of the Group.

KEY AUDIT MATTERS (CONTINUED)

Provision for expected credit losses ("ECL") of trade receivables and contract assets

(Refer to notes 3.9(c), 21 and 23(a) to the consolidated financial statements)

ECL for trade receivables and contract assets are based on management's estimate of the lifetime ECL to be incurred, which is estimated by taking into account the credit loss experience, ageing of overdue trade receivables, customers' repayment history and customers' financial position and an assessment of both the current and forecast general economic conditions, all of which involve a significant degree of management judgment.

We have identified ECL assessment of trade receivables and contract assets as a key audit matter because their assessment is a subjective area as it requires the management's judgment and uses of estimates.

Our responses:

Our procedures in relation to management's ECL assessment on trade receivables and contract assets included:

- reviewing and assessing the application of the Group's policy for calculating the ECL;
- evaluating techniques and methodology in the ECL model against the requirements of IFRS 9;
- assessing the reasonableness of management's loss allowance estimates by examining the information used by management to form such judgments, including testing the accuracy of the historical default data, evaluating whether the expected credit loss rates are appropriately adjusted based on current economic conditions and forward-looking information and examining the actual losses recorded during the current financial year and assessing whether there was an indication of management bias when recognising loss allowances;
- evaluating the design, implementation and operating effectiveness of key internal controls which govern credit control, debt collection and estimation of ECL; and
- discussing with management the estimates of the recoverable amounts for those material trade receivables balances which are past due over 180 days, including customers' payment history and current ability to pay, and take into account information specific to the customer as well as pertaining to the economic environment in which the customer operates.

OTHER INFORMATION

The directors are responsible for the other information. The other information comprises all the information in the annual report of the Company, 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.

DIRECTORS' RESPONSIBILITIES FOR THE CONSOLIDATED FINANCIAL STATEMENTS

The directors 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.

The directors are also responsible for overseeing the Group's financial reporting process. The Audit Committee assists the directors in discharging their responsibility in this regard.

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 the auditor's report that includes our opinion. The report is made solely to you, as a body, in accordance with the terms of our 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 ISAs 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 ISAs, 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 the Audit Committee 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 the Audit Committee 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, related safeguards.

AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

From the matters communicated with the directors, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period 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.

BDO Limited

Certified Public Accountants

Ng Wai Man

Practising Certificate number P05309

Hong Kong, 17 March 2023

CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

FOR THE YEAR ENDED 31 DECEMBER 2022

	Notes	2022 RMB'000	2021 RMB'000
Revenue	6	**53,028,139**	57,759,590
Cost of sales		**(47,415,814)**	(51,291,401)
Gross profit		**5,612,325**	6,468,189
Other income	8	**314,175**	111,613
Selling and marketing expenses		**(156,816)**	(144,504)
Administrative expenses		**(1,273,588)**	(1,293,004)
Research and development costs		**(2,577,892)**	(2,379,149)
Other operating expenses		**(110,024)**	(1,118,375)
Other gains – net	9	**2,633**	57,128
Operating profit		**1,810,813**	1,701,898
Finance income	10	**1,008,528**	954,622
Finance expenses	10	**(73,491)**	(82,796)
Finance income – net		**935,037**	871,826
Share of (loss)/profit of a joint arrangement	20(a)	**(76)**	1,448
Share of profit of associates	20(b)	**16,502**	17,235

	Notes	2022 RMB'000	2021 RMB'000
Profit before taxation	11	**2,762,276**	2,592,407
Income tax expense	12	**(480,425)**	(462,432)
Profit for the year		**2,281,851**	2,129,975
Other comprehensive income/(expense) for the year, net of tax			
Item that may be reclassified subsequently to profit or loss:			
Exchange differences arising on translation of foreign operations		**59,640**	(13,453)
Item that will not be reclassified subsequently to profit or loss:			
Losses/(gains) on revaluation of retirement benefit plans obligations, net of income tax effect		**80,197**	(18,240)
Share of associates' other comprehensive income		**6**	–
Other comprehensive income/(expense) for the year, net of tax		**139,843**	(31,693)
Total comprehensive income for the year		**2,421,694**	2,098,282
Profit attributable to:			
Equity holders of the Company		**2,281,800**	2,129,589
Non-controlling interests		**51**	386
Profit for the year		**2,281,851**	2,129,975
Total comprehensive income attributable to:			
Equity holders of the Company		**2,421,643**	2,097,896
Non-controlling interests		**51**	386
Total comprehensive income for the year		**2,421,694**	2,098,282
		RMB	RMB
Earnings per share for profit attributable to equity holders of the Company during the year (expressed in RMB per share)			
– Basic and diluted	13	**0.52**	0.48

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at 31 December 2022

	Notes	2022 RMB'000	2021 RMB'000
ASSETS			
Non-current assets			
Property, plant and equipment	17	**4,663,369**	4,398,287
Right-of-use assets	18	**2,259,678**	2,372,201
Intangible assets	19	**192,024**	203,079
Investment in a joint arrangement	20(a)	**3,847**	3,923
Investments in associates	20(b)	**174,423**	158,915
Fair value through other comprehensive income investments	25	**250,000**	–
Deferred income tax assets	37	**769,229**	843,162
Total non-current assets		**8,312,570**	7,979,567
Current assets			
Inventories	24	**757,495**	479,931
Notes and trade receivables	21	**8,595,313**	6,853,516
Prepayments and other receivables	22	**6,660,674**	8,058,422
Contract assets	23(a)	**9,745,992**	10,273,333
Loans due from the ultimate holding company	26	**20,500,000**	20,500,000
Restricted cash	27	**82,916**	109,685
Time deposits	28	**9,053,681**	8,357,613
Cash and cash equivalents	29	**14,973,098**	10,305,176
Total current assets		**70,369,169**	64,937,676
Total assets		**78,681,739**	72,917,243

	Notes	2022 RMB'000	2021 RMB'000
Equity			
Share capital	30	**4,428,000**	4,428,000
Reserves		**25,606,207**	24,690,084
Equity attributable to equity holders of the Company		**30,034,207**	29,118,084
Non-controlling interests		**5,303**	5,252
Total equity		**30,039,510**	29,123,336
LIABILITIES			
Non-current liabilities			
Lease liabilities	32	**66,816**	88,241
Retirement and other supplemental benefit obligations	33	**1,913,763**	2,154,036
Provision for litigation claims	34	**184,271**	181,292
Deferred tax liabilities	37	**2,091**	–
Total non-current liabilities		**2,166,941**	2,423,569
Current liabilities			
Notes and trade payables	35	**19,792,197**	20,390,057
Other payables	36	**3,093,433**	2,886,826
Loan due to a fellow subsidiary	38	**141,972**	63,757
Contract liabilities	23(b)	**22,929,193**	17,485,967
Lease liabilities	32	**62,254**	73,489
Current income tax liabilities		**456,239**	470,242
Total current liabilities		**46,475,288**	41,370,338
Total liabilities		**48,642,229**	43,793,907
Total equity and liabilities		**78,681,739**	72,917,243
Net current assets		**23,893,881**	23,567,338
Total assets less current liabilities		**32,206,451**	31,546,905

On behalf of the directors

SUN Lili	**JIANG Dejun**	**JIA Yiqun**
Chairwoman of the Board	*Director, President*	*Chief Financial Officer*

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For the year ended 31 December 2022

	Attributable to equity shareholders of the Company								
	Share capital	Capital reserve	Statutory surplus reserve	Specific reserve	Exchange translation reserve	Retained earnings	Total	Non-controlling interests	Total equity
	RMB'000 (Note 30)	RMB'000 (Note 31(v))	RMB'000 (Note 31(iv))	RMB'000 (Note 31(vi))	RMB'000 (Note 31(vii))	RMB'000	RMB'000	RMB'000	RMB'000
At 1 January 2022	4,428,000	10,098,729	1,506,179	137,354	(67,686)	13,015,508	29,118,084	5,252	29,123,336
Profit for the year	–	–	–	–	–	2,281,800	2,281,800	51	2,281,851
Other comprehensive income:									
Defined benefits obligation revaluation of actuarial gain and loss – gross	–	–	–	–	–	101,157	101,157	–	101,157
Defined benefits obligation revaluation of actuarial gain and loss – tax	–	–	–	–	–	(20,960)	(20,960)	–	(20,960)
Exchange differences arising on translation of foreign operations	–	–	–	–	59,640	–	59,640	–	59,640
Share of associates' other comprehensive income	–	–	–	–	–	6	6	–	6
Total comprehensive income	–	–	–	–	59,640	2,362,003	2,421,643	51	2,421,694
Transactions with owners:									
Final dividends for 2021	–	–	–	–	–	(983,016)	(983,016)	–	(983,016)
Interim dividends for 2022	–	–	–	–	–	(522,504)	(522,504)	–	(522,504)
Appropriation of specific reserve	–	–	–	266,461	–	(266,461)	–	–	–
Utilisation of specific reserve	–	–	–	(218,398)	–	218,398	–	–	–
Appropriation of statutory surplus reserve	–	–	126,609	–	–	(126,609)	–	–	–
Total transactions with owners	–	–	126,609	48,063	–	(1,680,192)	(1,505,520)	–	(1,505,520)
At 31 December 2022	4,428,000	10,098,729	1,632,788	185,417	(8,046)	13,697,319	30,034,207	5,303	30,039,510

	Attributable to equity shareholders of the Company								
	Share capital	Capital reserve	Statutory surplus reserve	Specific reserve	Exchange translation reserve	Retained earnings	Total	Non-controlling interests	Total equity
	RMB'000 (Note 30)	RMB'000 (Note 31(v))	RMB'000 (Note 31(iv))	RMB'000 (Note 31(vi))	RMB'000 (Note 31(vii))	RMB'000	RMB'000	RMB'000	RMB'000
At 1 January 2021	4,428,000	10,098,729	1,470,998	175,048	(54,233)	12,132,630	28,251,172	4,866	28,256,038
Profit for the year	–	–	–	–	–	2,129,589	2,129,589	386	2,129,975
Other comprehensive income:									
Defined benefits obligation revaluation of actuarial gain and loss – gross	–	–	–	–	–	(21,831)	(21,831)	–	(21,831)
Defined benefits obligation revaluation of actuarial gain and loss – tax	–	–	–	–	–	3,591	3,591	–	3,591
Exchange differences arising on translation of foreign operations	–	–	–	–	(13,453)	–	(13,453)	–	(13,453)
Total comprehensive income	–	–	–	–	(13,453)	2,111,349	2,097,896	386	2,098,282
Transactions with owners:									
Final dividends for 2020	–	–	–	–	–	(828,036)	(828,036)	–	(828,036)
Interim dividends for 2021	–	–	–	–	–	(402,948)	(402,948)	–	(402,948)
Appropriation of specific reserve	–	–	–	175,570	–	(175,570)	–	–	–
Utilisation of specific reserve	–	–	–	(213,264)	–	213,264	–	–	–
Appropriation of statutory surplus reserve	–	–	35,181	–	–	(35,181)	–	–	–
Total transactions with owners	–	–	35,181	(37,694)	–	(1,228,471)	(1,230,984)	–	(1,230,984)
At 31 December 2021	4,428,000	10,098,729	1,506,179	137,354	(67,686)	13,015,508	29,118,084	5,252	29,123,336

CONSOLIDATED STATEMENT OF CASH FLOWS

For the year ended 31 December 2022

	Notes	2022 RMB'000	2021 RMB'000
Cash flows from operating activities			
Cash generated from operations	40	**6,725,099**	3,191,890
Income tax paid		**(416,099)**	(481,999)
Interest received		**500,048**	233,337
Net cash generated from operating activities		**6,809,048**	2,943,228
Cash flows from investing activities			
Purchase of property, plant and equipment		**(708,531)**	(650,860)
Purchase of intangible assets		**(31,956)**	(31,679)
Interest income on the loans to the ultimate holding company		**745,533**	753,686
Proceeds from disposal of property, plant and equipment		**25,946**	7,401
Proceeds from disposal of an associate		**–**	3,405
Dividends received from associates		**10,000**	5,600
Net increase in time deposits		**(696,068)**	(84,178)
Loans to the ultimate holding company		**(20,500,000)**	(20,500,000)
Loans repaid by the ultimate holding company		**20,500,000**	21,000,000
Payments for fair value through other comprehensive income investments		**(250,000)**	–
Net cash (used in)/generated from investing activities		**(905,076)**	503,375
Cash flows from financing activities	43		
Drawdown/(repayment) of borrowings from a fellow subsidiary		**61,892**	(95,642)
Interest paid		**(5,872)**	(4,208)
Dividends paid		**(1,464,532)**	(1,187,602)
Payments of lease liabilities		**(119,078)**	(101,985)
Net cash used in financing activities		**(1,527,590)**	(1,389,437)
Net increase in cash and cash equivalents		**4,376,382**	2,057,166
Cash and cash equivalents at beginning of year		**10,305,176**	8,440,757
Exchange gains/(losses) on cash and cash equivalents		**291,540**	(192,747)
Cash and cash equivalents at end of year	29	**14,973,098**	10,305,176

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

31 DECEMBER 2022

1. General Information

1.1 Principal activities

SINOPEC Engineering (Group) Co., Ltd. (中石化煉化工程(集團)股份有限公司, the "Company") and its subsidiaries (together, the "Group") is principally engaged locally and overseas in (1) engineering, consulting and licensing, (2) EPC Contracting, (3) construction and (4) equipment manufacturing in respect of oil refining, petrochemical engineering, storage and transportation etc.

1.2 Organisation and reorganisation

The Company was established as a company with limited liability under the name of Sinopec Engineering Co., Ltd (中國石化集團煉化工程有限公司) in the People's Republic of China (the "PRC") on 24 July 2007 under the Company Law of the PRC. The address of the Company's registered office is No. 8 Building, Shenggujiayuan, Shenggu Middle Road, Chaoyang District, Beijing, PRC.

The directors of the Company (the "Directors") regard China Petrochemical Corporation (中國石油化工集團有限公司, "Sinopec Group") as being the ultimate holding company of the Group, which is owned and controlled by the State-owned Assets Supervision and Administration Commission of the State Council of the PRC.

Pursuant to a reorganisation of engineering, consulting and licensing, EPC Contracting, construction and equipment manufacturing in respect of oil refining, petrochemical engineering, storage and transportation of Sinopec Group in preparation for the primary listing (the "Listing") of the Company's shares on the Main Board of The Stock Exchange of Hong Kong Limited (the "Hong Kong Stock Exchange") ("the Reorganisation"), Sinopec Group transferred the equity interests of its refining and engineering entities to the Company and the Company became the holding company of the subsidiaries now comprising the Group. Subsequent to the above reorganisation transactions which were completed in April 2012, the Company was transformed into a joint stock company with limited liability and renamed as SINOPEC Engineering (Group) Co., Ltd. (中石化煉化工程(集團)股份有限公司) on 28 August 2012.

The Company has completed its listing on the Main Board of the Hong Kong Stock Exchange on 23 May 2013.

These consolidated financial statements are presented in Renminbi ("RMB"), unless otherwise stated.

The consolidated financial statements have been approved for issue by the Board of Directors on 17 March 2023.

2. Basis of Preparation

The consolidated financial statements have been prepared in accordance with all International Financial Reporting Standards, International Accounting Standards ("IASs") and Interpretations (hereinafter collectively referred to as the "IFRSs") issued by the International Accounting Standards Board (the "IASB") and the disclosure requirements of the Hong Kong Companies Ordinance. The consolidated financial statements also comply with the applicable disclosure provisions of the Rules Governing the Listing of Securities on the Stock Exchange (the "Listing Rules").

The consolidated financial statements have been prepared under the historical cost basis except for certain financial instruments that are measured at fair values as explained in the accounting policies set out below.

The preparation of consolidated financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgment in the process of applying the accounting policies of the Group. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in Note 5.

3. Summary of Significant Accounting Policies

3.1 New standards, interpretations and amendments adopted from 1 January 2022

The following amendments are effective for the period beginning 1 January 2022:

- Onerous Contracts – Cost of Fulfilling a Contract (Amendments to IAS 37);
- Property, Plant and Equipment: Proceeds before Intended Use (Amendments to IAS 16);
- Annual Improvements to IFRS Standards 2018-2020 (Amendments to IFRS 1, IFRS 9, IFRS 16 and IAS 41); and
- References to Conceptual Framework (Amendments to IFRS 3).

Other than as noted below, the adoption of the new or amended IFRSs had no material impact on how the results and financial position for the current and prior periods have been prepared and presented. The Group has not early applied any new or amended IFRSs that is not yet effective for the current accounting period.

Onerous Contracts – Cost of Fulfilling a Contract (Amendments to IAS 37)

IAS 37 defines an onerous contract as a contract in which the unavoidable costs (costs that the Group has committed to pursuant to the contract) of meeting the obligations under the contract exceed the economic benefits expected to be received under it.

The amendments to IAS 37.68A clarify, that the costs relating directly to the contract consist of both:

- The incremental costs of fulfilling that contract- e.g. direct labour and material; and
- An allocation of other costs that relate directly to fulfilling contracts: e.g. Allocation of depreciation charge on property, plant and equipment used in fulfilling the contract.

The Group, prior to the application of the amendments, did not have any onerous contracts and there is no material impact on the year-end consolidated financial statements.

Property, Plant and Equipment: Proceeds before Intended Use (Amendments to IAS 16)

The amendment to IAS 16 prohibits an entity from deducting from the cost of an item of PP&E any proceeds received from selling items produced while the entity is preparing the asset for its intended use (for example, the proceeds from selling samples produced during the testing phase of a manufacturing facility after it is being constructed but before start of commercial production). The proceeds from selling such samples, together with the costs of producing them, are now recognised in profit or loss.

These amendments had no impact on the year-end consolidated financial statements of the Group as there were no sales of such items produced by property, plant and equipment made available for use on or after the beginning of the earliest period presented.

Annual Improvements to IFRS Standards 2018-2020 (Amendments to IFRS)

- IFRS 1: Subsidiary as a First-time Adopter (FTA)
- IFRS 9: Fees in the '10 per cent' Test for Derecognition of Financial liabilities
- IAS 41: Taxation in Fair Value Measurements

References to Conceptual Framework (Amendments to IFRS 3)

In May 2020, the IASB issued amendments to IFRS 3, which update a reference to the Conceptual Framework for Financial Reporting without changing the accounting requirements for business combinations.

3. Summary of Significant Accounting Policies (Continued)

3.2 New standards, interpretations and amendments not yet effective

There are a number of standards, amendments to standards, and interpretations which have been issued by the IASB that are effective in future accounting periods that the Group has decided not to adopt early.

The following amendments are effective for the period beginning 1 January 2023:

- *Disclosure of Accounting Policies (Amendments to IAS 1 and IFRS Practice Statement 2)*;
- *Definition of Accounting Estimates (Amendments to IAS 8);* and
- *Deferred Tax Related to Assets and Liabilities arising from a Single Transaction (Amendments to IAS 12)*.

The following amendments are effective for the period beginning 1 January 2024:

- IFRS 16 *Leases* (Amendment – Liability in a Sale and Leaseback)
- IAS 1 *Presentation of Financial Statements* (Amendment – Classification of Liabilities as Current or Non-current)
- IAS 1 *Presentation of Financial Statements* (Amendment – Non-current Liabilities with Covenants)

The directors of the Company anticipate that the application of other new or amended IFRSs will have no material impact on the results and the financial position of the Group.

3.3 Consolidation

Subsidiaries

Subsidiaries are entities (including structured entities) over which the Group has control. The Group controls an entity when the Group is exposed to, or has the rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. The existence and effect of potential voting rights that are currently exercisable or convertible are considered when assessing whether the Group controls another entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are de-consolidated from the date that the Group ceases control.

Merger accounting for common control combinations

The transfer/acquisition of equity interests in subsidiaries which are regarded as common control combinations are accounted for in a manner similar to a uniting of interests. Assets and liabilities are transferred at book value, adjusted only to harmonies accounting policies, and no goodwill arises. Any difference between the consideration given and the aggregate book value of the assets and liabilities acquired (as of the date of the transaction) is included in equity. The financial statements incorporate the acquired entity's results as if both entities (acquirer and acquiree) had always been combined. Consequently, the financial statements reflect both entities' full year's results, even though the business combinations may have occurred part of the way throughout the year. In addition, the corresponding amounts for the previous year also reflect the combined results of both entities, even though the transaction did not occur until the current year.

Acquisition method of accounting for non-common control combinations

The acquisition method of accounting is used to account for business combinations other than common control combinations by the Group. The consideration transferred for the acquisition of a subsidiary is the fair values of the assets transferred, the liabilities incurred 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. Acquisition-related costs are expensed as incurred. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. On an acquisition-by-acquisition basis, the Group recognises any non-controlling interests in the acquiree either at fair value or at the non-controlling interests' proportionate share of the acquiree's net assets.

In the statement of financial position of the Company, investments in subsidiaries are accounted for at cost less impairment. Cost is adjusted to reflect changes in consideration arising from contingent consideration amendments. Cost also includes direct attributable costs of investment.

The excess of the consideration transferred the amount of any non-controlling interests in the acquiree and the acquisition-date fair value of any previous equity interest in the acquiree over the fair value of the Group's share of the identifiable net assets acquired is recorded as goodwill. If this is less than the fair value of the net assets of the subsidiary acquired in the case of bargain purchase, the difference is recognised directly in the consolidated statement of profit or loss and other comprehensive income.

Inter-group transactions, balances and unrealised gains and losses on transactions between group companies are eliminated in preparing the consolidated financial statements. Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Group.

3. Summary of Significant Accounting Policies (Continued)

3.3 Consolidation (Continued)

Subsidiaries (Continued)

Transactions with non-controlling interests

The Group treats transactions with non-controlling interests as transactions with equity holders of the Group. For purchases from non-controlling interests, the difference between any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary is recorded in equity. Gains or losses on disposals to non-controlling interests are also recorded in equity.

When the Group ceases to have control or significant influence, any retained interest in the entity is remeasured to its fair value, with the change in carrying amount recognised in profit or loss. The fair value is the initial carrying value for the purposes of subsequent accounting for the retained interest as an associate, joint arrangement or financial asset as the fair value on initial recognition for subsequent accounting under IFRS 9 “Financial Instruments”. 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. This may mean that amounts previously recognised in other comprehensive income are reclassified to profit or loss or transferred directly to retained earnings.

Joint Arrangement

A joint arrangement is an arrangement which operates under a contractual arrangement between the Group and other parties, where the contractual arrangement establishes the Group and other parties have joint control of the arrangement.

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. Assets, liabilities, revenue and expenses of a joint operation are apportioned between the joint operators in accordance with the agreement.

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement. The Group recognises its interest in a joint venture using the equity method. The equity method is detailed in accounting policies of interests in associates as below. The unrealised gains and losses will be eliminated in accordance with the Group’s share of the interests in a joint venture if the Group enters into transactions with the joint venture.

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 and are initially recognised at cost. The Group’s investment in associates includes goodwill identified on acquisition, net of any accumulated impairment loss (Note 3.8).

The Group’s shares of its associates’ post-acquisition profits or losses is recognised in the profit or loss and its share of post acquisition movements in other comprehensive income is recognised in the consolidated statement of profit or loss and other comprehensive income. The cumulative post-acquisition movements are adjusted against the carrying amounts of the investments. When the Group’s share of losses in an associate equals or exceeds its interest in that associate (which includes any other unsecured receivables that, in substance, form part of the Group’s net investment in the associate), the Group does not recognise further losses, unless the Group has incurred legal or constructive obligations or made payments on behalf of the associate.

Unrealised gains on transactions between the Group and its associates are eliminated to the extent of the Group’s interests in the associates. Where unrealised losses on assets sales between the Group and its associate are reversed on equity accounting, the underlying asset is also tested for impairment from the Group’s prospective. Accounting policies of associates have been changed where necessary to ensure consistency with the policies adopted by the Group.

The Group discontinues the use of equity method from the date when it ceases to have significant influence over an associate. If the retained interest in that former associate is a financial asset, the retained interest is measured at fair value, which is regarded as its fair value on initial recognition as a financial asset in accordance with IFRS 9. The difference between (i) the fair value of any retained interest and any proceeds from disposing of a part interest in the associate; and (ii) the carrying amount of the investment at the date the equity method was discontinued, is recognised in the profit or loss. In addition, the Group accounts for all amounts previously recognised in other comprehensive income in relation to that associate on the same basis as would have been required if the associate had directly disposed of the related assets or liabilities. Therefore, if a gain or loss previously recognised in other comprehensive income by the investee would be reclassified to profit or loss on the disposal of the related assets or liabilities, the entity reclassifies the gain or loss from equity to profit or loss (as a reclassification adjustment) when the equity method is discontinued.

3. Summary of Significant Accounting Policies (Continued)

3.4 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 executive directors and certain senior management (including chief financial officer) (together referred to as the "Senior Management") that makes strategic decisions.

3.5 Foreign currency translation

Functional currency and presentation currency

Items included in the individual financial statements of each of the entities within the Group 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 Renminbi ("RMB"), which is the Group's functional currency.

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 remeasured. Foreign exchange gains and losses resulting from the settlement of such transactions and from the reporting date retranslation of monetary assets and liabilities denominated in foreign currencies are recognised in profit or loss.

Foreign exchange gains and losses that relate to borrowings and cash and cash equivalents and all other foreign exchange gains and losses are presented in the consolidated statement of profit or loss and other comprehensive income within "other gains – net" and "other operating expenses".

Non-monetary items carried at fair value that are denominated in foreign currencies are retranslated at the rates prevailing on the date when the fair value was determined. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated (i.e. only translated using the exchange rates at the transaction date).

Group companies

The results and financial position of all the group entities (none of which has the currency of a hyper-inflationary 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 and other comprehensive income are translated at average exchange rates (unless this average 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 rate on the dates of the transactions); and

(c) all resulting exchange differences are recognised in other comprehensive income and accumulated separately in the exchange translation reserve.

3.6 Property, plant and equipment

Property, plant and equipment, except for construction-in-progress ("CIP"), are stated at historical cost less accumulated depreciation and accumulated impairment loss. Historical cost includes expenditures that are directly attributable to the acquisition of the items, including the purchase price, import duties, non-refundable purchase taxes and any directly attributable costs of bringing the asset to its working condition and location for its intended use.

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

Buildings and other facilities	12 – 40 years
Machinery, transportation equipment and other equipment	4 – 30 years

CIP represents buildings and plant under construction and is stated at cost less accumulated impairment loss. Cost includes costs of construction of buildings, cost of plant and other direct costs. No 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 the relevant asset categories and depreciated in accordance with the policy as stated above.

3. Summary of Significant Accounting Policies (Continued)

3.6 Property, plant and equipment (Continued)

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

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 3.8).

Gains or losses on disposals are determined by comparing the proceeds on disposal with the carrying amount and are included within "other (losses)/gains – net" in the consolidated statement of profit or loss and other comprehensive income.

Subsequent costs are included in the asset's carrying amount or recognised as separate assets, 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 consolidated statement of profit or loss and other comprehensive income during the financial period in which they are incurred.

3.7 Intangible assets

Computer software

Acquired computer software are capitalised on the basis of the costs incurred to acquire and bring to use the specific software. After initial recognition, intangible assets with finite useful lives are carried at cost less accumulated amortisation and any accumulated impairment losses. These costs are amortised over their estimated useful lives of 5 years, and recorded in "depreciation and amortisation" within administrative expenses in the consolidated statement of profit or loss and other comprehensive income.

Patent and proprietary technologies

Patents and proprietary technologies are initially recorded at cost. After initial recognition, intangible assets with finite useful lives are carried at cost less accumulated amortisation and any accumulated impairment losses. These intangibles assets are amortised on a straight-line basis over their estimated useful lives of 8 to 10 years, and recorded in "depreciation and amortisation" within administrative expenses in the consolidated statement of profit or loss and other comprehensive income.

Amortisation methods and useful lives on computer software, patent and proprietary technologies are reviewed and adjusted if appropriates, at each reporting period.

3.8 Impairment of non-financial assets

Assets that have an indefinite useful life, for example goodwill, are not subject to amortisation and are tested annually for impairment. Property, plant and equipment, intangible assets and interest in associate and joint venture 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 flows (cash-generating units). Corporate assets are allocated to individual cash-generating units, when a reasonable and consistent basis of allocation can be identified, or otherwise they are allocated to the smallest group of cash-generating units for which a reasonable and consistent allocation basis can be identified. Non-financial assets other than goodwill that suffered an impairment are reviewed for possible reversal of the impairment if there has been a favourable change in the estimates used to determine the asset's recoverable amount and only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised at each reporting date.

3.9 Financial instruments

Financial assets and financial liabilities are recognised in the consolidated statements of financial position when the Group becomes a party to the contractual provision of the financial instrument. Financial assets and financial liabilities are initially measured at fair value.

A financial asset or financial liability (unless it is a trade receivable without a significant financing component) is initially measured at fair value plus, for an item not at fair value through profit or loss ("FVTPL"), transaction costs that are directly attributable to its acquisition or issue. Transaction costs of financial assets carried at FVTPL are expensed in the consolidated statement of profit or loss and other comprehensive income. A trade receivable without a significant financing component is initially measured at the transaction price.

3. Summary of Significant Accounting Policies (Continued)

3.9 Financial instruments (Continued)

(a) Classification and measurement of financial assets

On initial recognition, a financial asset is classified as measured at: amortised cost; fair value through other comprehensive income ("FVTOCI") – debt investment; FVTOCI – equity investment; or FVTPL.

Financial assets are not reclassified subsequent to their initial recognition, except if and in the period the Group changes its business model for managing financial assets.

A financial asset is measured at amortised cost if it meets both of the following conditions and is not designated as at FVTPL:

(i) the asset is held within a business model whose objective is to hold assets to collect contractual cash flows; and

(ii) the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

On initial recognition of an equity investment that is not held for trading, the Group may irrevocably elect to present subsequent changes in the investment's fair value in other comprehensive income. This election is made on an investment-by-investment basis.

All financial assets not classified as measured at amortised cost or FVTOCI as described above are measured at FVTPL. On initial recognition, the Group may irrevocably designate a financial asset that otherwise meets the requirements to be measured at amortised cost or at FVTOCI as at FVTPL if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise.

Financial assets: Business model assessment

The Group makes an assessment of the objective of the business model in which a financial asset is held at a portfolio level because this best reflects the way the business is managed and information is provided to management.

Transfers of financial assets to third parties in transactions that do not qualify for derecognition are not considered sales for this purpose, consistent with the Group's continuing recognition of the assets.

Financial assets that are held for trading or are managed and whose performance is evaluated on a fair value basis are measured at FVTPL.

Financial assets: Assessment whether contractual cash flows are solely payments of principal and interest

For the purposes of this assessment, "principal" is defined as the fair value of the financial asset on initial recognition. "Interest" is defined as consideration for the time value of money and for the credit risk associated with the principal amount outstanding during a particular period of time and for other basic lending risks and costs (e.g. liquidity risk and administrative costs), as well as a profit margin.

In assessing whether the contractual cash flows are solely payments of principal and interest, the Group considers the contractual terms of the instrument. This includes assessing whether the financial asset contains a contractual term that could change the timing or amount of contractual cash flows such that it would not meet this condition. In making this assessment, the Group considers:

(i) contingent events that would change the amount or timing of cash flows;

(ii) terms that may adjust the contractual coupon rate, including variable rate features;

(iii) prepayment and extension features; and

(iv) terms that limit the Group's claim to cash flows from specified assets (e.g. non-recourse features).

A prepayment feature is consistent with the solely payments of principal and interest criterion if the prepayment amount substantially represents unpaid amounts of principal and interest on the principal amount outstanding, which may include reasonable additional compensation for early termination of the contract. Additionally, for a financial asset acquired at a significant discount or premium to its contractual par amount, a feature that permits or requires prepayment at an amount that substantially represents the contractual par amount plus accrued (but unpaid) contractual interest (which may also include reasonable additional compensation for early termination) is treated as consistent with this criterion if the fair value of the prepayment feature is insignificant at initial recognition.

3. Summary of Significant Accounting Policies (Continued)

3.9 Financial instruments (Continued)

(a) Classification and measurement of financial assets (Continued)

Financial assets: Subsequent measurement and gains and losses

Financial assets at amortised cost

Notes and trade receivables, other receivables, loans due from the ultimate holding company, restricted cash, time deposits and cash and cash equivalents are subsequently measured at amortised cost using the effective interest method. The amortised cost is reduced by impairment losses. Interest income, foreign exchange gains and losses and impairment are recognised in the profit or loss. Any gain or loss on derecognition is recognised in the profit or loss.

Financial assets at FVTOCI

They are measured at fair value with gains and losses arising from changes in fair value recognised in OCI and accumulated in the fair value reserve (non-recycling); and are not subject to impairment assessment. The cumulative gain or loss will not be reclassified to profit or loss on disposal of the equity investments, and will continue to be held in the fair value reserve (non-recycling).

Dividends on these investments in equity instruments are recognised in profit or loss when the Group's right to receive the dividends is established in accordance with IFRS 9, unless the dividends clearly represent a recovery of part of the cost of the investment. Dividends are included in the "other income" line item in profit or loss.

(b) Derecognition of financial assets

The Group derecognises a financial asset when the contractual rights to the cash flows from the financial asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all of the risks and rewards of ownership of the financial asset are transferred or in which the Group neither transfers nor retains substantially all of the risks and rewards of ownership and it does not retain control of the financial asset.

The Group enters into transactions whereby it transfers assets recognised on its consolidated statement of financial position, but retains either all or substantially all of the risks and rewards of the transferred assets. In such cases, the transferred assets are not derecognised.

(c) Impairment of financial assets

The Group recognises loss allowances for ECL on financial assets measured at amortised cost.

The Group measures loss allowances at an amount equal to lifetime ECL. For trade receivables and contract assets, the Group applies the simplified approach to providing for ECL prescribed by IFRS 9, which requires the use of the lifetime expected losses provision for all trade receivables. The Group determines the ECL on these items by using a provision matrix, estimated based on historical credit losses experience based on the past due status of the debtors, adjusted as appropriate to reflect current conditions and estimates of future economic conditions.

When determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating ECL, the Group considers reasonable and supportable information that is relevant and available without undue cost or effort. This includes both quantitative and qualitative information and analysis, based on the Group's historical experience and informed credit assessment and including forward-looking information.

Lifetime ECL are the ECL that result from all possible default events over the expected life of a financial instrument.

12-month ECL are the portion of ECL that results from default events on a financial instrument that are possible within the 12 months after the reporting date (or a shorter period if the expected life of the instrument is less than 12 months).

In all cases, the maximum period considered when estimating ECL is the maximum contractual period over which the Group is exposed to credit risk.

3. Summary of Significant Accounting Policies (Continued)

3.9 Financial instruments (Continued)

(c) Impairment of financial assets (Continued)

Measurement of ECL

The Group assesses on a forward-looking basis the ECL associated with its debt instruments carried at amortised cost. ECL are a probability-weighted estimation of credit losses (i.e. the present value of all cash shortfalls) over the expected life of the financial assets.

The Group has the following types of assets that are subject to IFRS 9's new ECL model:

- notes and trade receivables
- contract assets
- cash and cash equivalents
- restricted cash
- time deposits
- loans due from the ultimate holding company
- other receivables

While cash and cash equivalents, restricted cash, time deposits, and loans due from the ultimate holding company are also subject to the impairment requirements of IFRS 9, the identified impairment loss was immaterial.

For trade receivables and contract assets with no significant financing component, the Group applies the simplified approach permitted by IFRS 9, which requires expected lifetime losses to be recognised from initial recognition of the assets. The provision matrix is determined based on historical observed default rates over the expected life of the trade receivables and contract assets with similar credit risk characteristics and is adjusted for forward-looking estimates. At every reporting date the historical observed default rates are updated and changes in the forward-looking estimates are analysed.

Impairment on other financial assets measured at amortised cost are measured as either 12-month ECL or lifetime ECL, depending on whether there has been a significant increase in credit risk since initial recognition. If a significant increase in credit risk of a receivable has occurred since initial recognition, then impairment is measured as lifetime ECL.

In assessing whether the credit risk has increased significantly since initial recognition, the Group compares the risk of a default occurring on the financial instrument as at the reporting date with the risk of a default occurring on the financial instrument as at the date of initial recognition. In making this assessment, the Group considers both quantitative and qualitative information that is reasonable and supportable, including historical experience and forward-looking information that is available without undue cost or effort.

The Group assesses on in particular, the following information is taken into account when assessing whether credit risk has increased significantly:

- an actual or expected significant deterioration in the financial instrument's external (if available) or internal credit rating;
- significant deterioration in external market indication of credit risk, e.g. a significant increase in the credit spread, the credit default swap prices for the debtor;
- existing or forecast adverse changes in business, financial or economic conditions that are expected to cause a significant decrease in the debtor's ability to meet its debt obligations;
- an actual or expected significant deterioration in the operating results of the debtor;
- an actual or expected significant adverse change in the regulatory, economic or technological environment of the debtor that results in a significant decrease in the debtor's ability to meet its debt obligations.

If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognised, the reversal of the previously recognised impairment loss is recognised in profit or loss.

3. Summary of Significant Accounting Policies (Continued)

3.9 Financial instruments (Continued)

(c) Impairment of financial assets (Continued)

Credit-impaired financial assets

At each reporting date, the Group assesses on a forward-looking basis whether financial assets carried at amortised cost are credit-impaired. A financial asset is "credit-impaired" when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred.

Evidence that a financial asset is credit-impaired includes the following observable data:

(i) significant financial difficulty of the borrower or issuer;

(ii) a breach of contract such as a default or past due event;

(iii) the restructuring of a loan or advance by the Group on terms that the Group would not consider otherwise;

(iv) it is becoming probable that the borrower will enter bankruptcy or other financial reorganisation; or

(v) the disappearance of an active market for a security because of financial difficulties.

The Group recognises an impairment loss in profit or loss for all financial instruments by adjusting their carrying amount, with the exception of trade and other receivables and contract assets where the corresponding adjustment is recognised through a loss allowance account.

Write-off

The gross carrying amount of a financial asset is written off (either partially or in full) to the extent that there is no realistic prospect of recovery. This is generally the case when the Group determines that the debtor does not have assets or sources of income that could generate sufficient cash flows to repay the amounts subject to the write-off. However, financial assets that are written off could still be subject to enforcement activities in order to comply with the Group's procedures for recovery of amounts due, taking into account legal advice where appropriate.

A write-off constitutes a derecognition event. Any subsequent recoveries are recognised in profit or loss.

(d) Classification and measurement of financial liabilities

The Group's financial liabilities include notes and trade payables, other payables, loan due to a fellow subsidiary and lease liabilities. Financial liabilities (other than lease liabilities) are classified as measured at amortised cost or FVTPL. A financial liability is classified as at FVTPL if it is classified as held-for-trading, it is a derivative or it is designated as such on initial recognition. Financial liabilities at FVTPL are measured at fair value and net gains and losses, including any interest expense, are recognised in the profit or loss. Other financial liabilities (other than lease liabilities) are subsequently measured at amortised cost using the effective interest method, in the case of loans and borrowings, net of directly attributable transaction costs. Interest expense and foreign exchange gains and losses are recognised in the profit or loss. Any gain or loss on derecognition is also recognised in the profit or loss. Accounting policies of lease liabilities are set out in note 3.27.

(e) Derecognition of financial liabilities

The Group derecognises a financial liability when its contractual obligations are discharged or cancelled, or expire.

The Group also derecognises a financial liability when its terms are modified and the cash flows of the modified liability are substantially different. In this case, a new financial liability based on the modified terms is recognised at fair value. The difference between the carrying amount of the financial liability extinguished and the new financial liability with modified terms is recognised in the profit or loss.

(f) Offsetting

Financial assets and financial liabilities are offset and the net amount presented in the consolidated statement of financial position when, and only when, the Group currently has a legally enforceable right to set off the amounts and it intends either to settle them on a net basis or to realise the asset and settle the liability simultaneously.

Income and expenses are presented on a net basis only when permitted under IFRS, or for gains and losses arising from a group of similar transactions.

3. Summary of Significant Accounting Policies (Continued)

3.10 Derivative financial instruments

Derivative financial instruments are recognised at fair value at the end of each reporting period with gain or loss on remeasurement to fair value is recognised immediately in profit or loss, except where the derivatives qualify for hedged accounting under IFRS 9.

3.11 Inventories

Inventories are stated at the lower of cost and net realisable value. Inventories are expensed to relevant operating expenses when used, sold or capitalised to property, plant and equipment when installed, as appropriate, using moving 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 selling expenses.

3.12 Cash and cash equivalents

Cash and cash equivalents includes cash in hand, deposits held at call with banks, other short-term highly liquid investments with original maturities of three months or less.

3.13 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.

3.14 Borrowings

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

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

3.15 Payables

Payables primarily include notes and trade payables and other payables, and are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method.

3. Summary of Significant Accounting Policies (Continued)

3.16 Employee benefits

Pension obligations

The full-time employees of the Group in the PRC are covered by various government-sponsored pension plans under which the employees are entitled to a monthly pension based on certain formulas. The relevant government agencies are responsible for the pension liability to these retired employees. The Group contributes on a monthly basis to these pension plans. Under these plans, the Group has no obligation for post-retirement benefits beyond the contributions made. Contributions to these plans are expensed as incurred.

The Group also provides supplementary pension subsidies to certain employees in the PRC. Such supplementary pension subsidies are considered to be defined benefit plans as the Group is obligated to provide post-employment benefits to these employees. The liability recognised in the consolidated statement of financial position in respect of these defined benefit plans is the present value of the defined benefit obligation at the end of the reporting period, together with adjustments for unrecognised actuarial gains or losses and past service costs. The defined benefit obligation is calculated annually by independent qualified actuaries using the projected unit credit method. Net interests are recognised to the profit or loss and are calculated by the discount rate, which is determined by reference to the market yields of the high-quality government bonds at the end of the reporting period, multiplied the net defined benefit liabilities or assets at each of the beginning of the reporting period. The differences between the actual return on plan assets and with the passage of time in the plan assets are recognised in other comprehensive income.

The Group has various defined contribution plans in accordance with the local conditions and practices in the municipalities and provinces in which they operate. Defined contribution plans are pension and/or other social benefit plans under which the Group pay fixed contributions into a separate entity (a fund) and will have no legal or constructive obligations to pay further contributions if the fund does not hold sufficient assets to pay all employees benefits relating to employee service in the current and prior periods. The contributions are recognised as labour costs when they are due.

Other post-employment obligations

Some of the companies comprising the Group provide post-retirement medical benefits to their retired employees. The expected costs of these benefits are accrued over the period of employment using the same accounting methodology as used for defined benefit pension plans. These obligations are valued annually by independent qualified actuaries.

Termination and early retirement benefits

Termination and early retirement benefits are payable when employment is terminated by the Group before the normal retirement date, or whenever an employee accepts voluntary redundancy in exchange for these benefits. The Group recognises termination and early retirement benefits when it is demonstrably committed to either: (i) terminating the employment of current employees according to a detailed formal plan without possibility of withdrawal; or (ii) providing termination benefits as a result of an offer made to encourage voluntary redundancy. The specific terms vary among the terminated and early retired employees depending on various factors including position, length of service and district of the employee concerned. Benefits falling due more than 12 months after the end of the reporting period are discounted to their present value.

Housing benefits

The Group contributes to the state-prescribed housing fund. Such costs are charged to the consolidated statement of profit or loss and other comprehensive income as incurred. Apart from those described above, the Group does not have other legal or constructive obligations over such benefits.

Bonus entitlements

The expected cost of bonus payments is recognised as a liability when the Group has a present contractual or constructive obligation as a result of services rendered by employees and a reliable estimate of the obligation can be made. Liabilities for bonus are expected to be settled within twelve months and are measured at the amounts expected to be paid when they are settled.

3. Summary of Significant Accounting Policies (Continued)

3.17 Borrowing costs

Borrowing costs incurred, net of any investment income earned on the temporary investment of the specific borrowings, for the acquisition, construction or production of any qualifying asset are capitalised during the period of time that is required to complete and prepare the asset for its intended use. A qualifying asset is an asset which necessarily takes a substantial period of time to get ready for its intended use or sale. Other borrowing costs are expensed when incurred.

Borrowing costs are capitalised as part of the cost of a qualifying asset when expenditure for the asset is being incurred, borrowing costs are being incurred and activities that are necessary to prepare the asset for its intended use or sale are being undertaken. Capitalisation of borrowing costs ceases when substantially all the activities necessary to prepare the qualifying asset for its intended use or sale are completed.

3.18 Taxation

Current and deferred income tax

The tax expense for the year comprises current and deferred income tax. Income 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 income tax is also recognised in other comprehensive income or directly in equity, respectively.

The current income tax charge is calculated on the basis of the tax rates and tax laws enacted or substantively enacted at the end of the reporting period in the countries where the Company and its subsidiaries 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.

Deferred income tax is recognised, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. However, deferred income tax liabilities are not recognised if they arise from the initial recognition of goodwill; deferred income tax is not accounted for if it arises from the 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 end of the reporting period and are expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled.

Changes in deferred tax assets or liabilities are recognised in profit or loss, or in other comprehensive income or directly in equity if they relate to items that are charged or credited to other comprehensive income or directly in equity.

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

Deferred income tax is provided on temporary differences arising on investments in subsidiaries, a joint arrangement and associates, 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.

Deferred income tax assets and deferred income tax liabilities are offset when meeting all the conditions below:

- The Group has the legally enforceable right to settle current income tax assets and current income tax liabilities; and
- The deferred income tax assets and liabilities relate to income tax 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.

Value-added taxation (“VAT”)

Sales of goods and provision of engineering, consulting and licensing services of the Group are subjected to VAT. VAT payable is determined by applying 13% or 6% on the taxable revenue arising from sales of goods and provision of engineering, consulting and licensing service in certain regions after offsetting deductible input VAT of the period.

Taxable revenue from construction services is subject to VAT at the rate of 9% after offsetting deductible input VAT. Certain revenue resulting from providing construction services was taxed by using applicable simple tax method, paying VAT at 3%.

3. Summary of Significant Accounting Policies (Continued)

3.19 Contingent liabilities and contingent assets

A contingent liability is a possible obligation that arises from past events and whose existence will only be confirmed by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Group. It can also be a present obligation arising from past events that is not recognised because it is not probable that an outflow of economic resources will be required or the amount of the obligation cannot be measured reliably.

A contingent liability is not recognised but is disclosed in the consolidated financial statements unless the probability of outflow of resources embodying economic benefits is remote. When a change in the probability of an outflow occurs so that the outflow is probable, it will then be recognised as a provision.

A contingent asset is not recognised in the consolidated financial statements unless virtually certain but disclosed when an inflow of economic benefits is probable.

3.20 Provisions

Provisions 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 has been reliably estimated.

All provisions are reviewed at each reporting date and adjusted to reflect the current best estimate.

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 passage of time is recognised as interest expense.

3.21 Government grants

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 purchase of assets are deferred and recognised in the consolidated statement of profit or loss and other comprehensive income over the period necessary to match them with the costs that they are intended to compensate.

Government grants relating to income is presented in gross under “other income” in the consolidated statement of profit or loss and other comprehensive income.

3.22 Contract assets and contract liabilities

The contract asset is the Group’s right to consideration in the exchange for services that the Group has transferred to customer. The contract assets transferred to trade receivables when receipt of the consideration is conditional only on the passage of time.

The Group expects that contract assets have the same risk characteristics as trade receivables. The ECL assessment of contract assets in accordance with the accounting policy set out in Note 3.9.

A contract liability is recognised when the customer pays consideration before the Group recognises the related revenue. A contract liability would also be recognised if the Group has an unconditional right to receive consideration before the Group recognises the related revenue. In such cases, a corresponding receivable would also be recognised.

For a single contract with the customer, either a net contract asset or a net contract liability is presented. For multiple contracts, contract assets and contract liabilities of unrelated contracts are not presented on a net basis.

3. Summary of Significant Accounting Policies (Continued)

3.23 Revenue recognition

Revenue comprises the fair value of the consideration received or receivable for the construction contracts and sale of goods and services in the ordinary course of the Group's activities. Revenue is shown net of value-added tax, returns, rebates and discounts and after eliminating sales within the Group.

To determine whether to recognise revenue, the Group follows a 5-step process:

(1) Identifying the contract with a customer;

(2) Identifying the performance obligations;

(3) Determining the transaction price;

(4) Allocating the transaction price to the performance obligations; and

(5) Recognising revenue when/as performance obligation(s) are satisfied.

In all cases, the total transaction price for a contract is allocated amongst the various performance obligations based on their relative stand-alone selling prices. The transaction price for a contract excludes any amounts collected on behalf of third parties.

Revenue is recognised either at a point in time or over time, when (or as) the Group satisfies performance obligations by transferring the promised goods or services to its customers.

Where the contract contains a financing component which provides a significant financing benefit to the customer for more than 12 months, revenue is measured at the present value of the amount receivable, discounted using the discount rate that would be reflected in a separate financing transaction with the customer, and interest income is accrued separately under the effective interest method. Where the contract contains a financing component which provides a significant financing benefit to the Group, revenue recognised under that contract includes the interest expense accreted on the contract liability under the effective interest method.

Further details of the Group's revenue and other income recognition policies are as follows:

Revenue from construction and service contracts

According to the nature of the contracts, the stage of contract completion is based on that the customer is able to control goods in progress during the Group's performance, revenue on construction contracts is recognised based on the Group's efforts or input to the satisfaction of the performance obligation over time. The input method recognises revenue based on the proportion of the actual costs incurred relative to the estimated total costs for satisfaction of the construction services. Variations in contract work are recognised as contract revenue to the extent that the modification has been approved by the parties to the contracts and it is highly probable that a significant reversal in the amount of cumulative revenue recognised will not occur.

When the outcome of the contract cannot be reasonably measured, revenue is recognised only to the extent of contract costs incurred that are expected to be recovered.

Services rendered

Revenue for services rendered mainly includes technological development, engineering, consultation and supervision is recognised over time when services are rendered.

Sales of products

Revenue from sales of products is recognised when i) control of the products has transferred, being when the products are delivered to the customers and there is no unfulfilled obligation that could affect the customer's acceptance of the products; and ii) collectability of the related receivables is reasonably assured. No contract liability and right to the returned goods are recognised as insignificant amount of returns are expected based on previous experience.

Dividend income

Dividend income is recognised when the right to receive payment is established.

3. Summary of Significant Accounting Policies (Continued)

3.23 Revenue recognition (Continued)

Interest income

Interest income is recognised on a time-proportion basis using the effective interest method. When a loan and receivable is impaired, the Group reduces the carrying amount to its recoverable amount, being the estimated future cash flow discounted at the original effective interest rate of the instrument, and continues unwinding the discount as interest income. Interest income on impaired loan and receivables is recognised using the original effective interest rate.

3.24 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:

(i) it is technically feasible to complete the intangible asset so that it will be available for use or sale;

(ii) management intends to complete the intangible asset and use or sell it;

(iii) the Group's an ability to use or sell the intangible asset is demonstrated;

(iv) it can be demonstrated how the intangible asset will generate probable future economic benefits;

(v) adequate technical, financial and other resources to complete the development and to use or sell the intangible asset are available; and

(vi) 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.

3.25 Dividend distribution

Dividend distribution to the Company's equity holders is recognised as a liability in the consolidated financial statements in the year in which the dividends are approved by the Company's equity holders or directors, where appropriate.

3.26 Financial guarantee contracts

Financial guarantee contracts are recognised as a financial liability at the time the guarantee is issued. The liability is initially measured at fair value and subsequently at the higher of:

- The amount determined in accordance with the ECL model under IFRS 9 "Financial Instruments"; and
- The amount initially recognised less, where appropriate, the cumulative amount of income recognised in accordance with the principles of IFRS 15 Revenue from Contracts with Customers.

The fair value of financial guarantees is determined based on the present value of the difference in cash flows between the contractual payments required under the debt instruments and the payments that would be required without the guarantee, or the estimated amount that would be payable to a third party for assuming the obligations.

Where consideration is received or receivable for the issuance of the guarantee, the consideration is recognised in accordance with the Group's policies applicable to that category of asset. Where no such consideration is received or receivable, an immediate expense is recognised in profit or loss on initial recognition of any deferred income.

3. Summary of Significant Accounting Policies (Continued)

3.27 Leases

(a) Definition of a lease and the Group as a lessee

For any new contracts entered into on or after 1 January 2019, the Group considers whether a contract is, or contains a lease. A lease is defined as 'a contract, or part of a contract, that conveys the right to use an identified asset (the underlying asset) for a period of time in exchange for consideration'. To apply this definition, the Group assesses whether the contract meets three key evaluations which are whether:

- the contracts contain an identified asset, which is either explicitly identified in the contract or implicitly specified by being identified at the time the asset is made available to the Group;
- the Group has the right to obtain substantially all of the economic benefits from use of the identified asset throughout the period of use, considering its rights within the defined scope of the contract; and
- the Group has the right to direct the use of the identified asset throughout the period of use. The Group assess whether it has the right to direct 'how and for what purpose' the asset is used throughout the period of use.

For contracts that contains a lease component and one or more additional lease or non-lease components, the Group allocates the consideration in the contract to each lease and non-lease component on the basis of their relative stand-alone prices. However, for leases of properties in which the Group is a lessee, the Group elected not to separate non-lease components and will instead account for the lease and non-lease components as a single lease component.

Measurement and recognition of leases as a lessee

At lease commencement date, the Group recognises a right-of-use asset and a lease liability on the condensed consolidated statement of financial position. The right-of-use asset is measured at cost, which is made up of the initial measurement of the lease liability, any initial direct costs incurred by the Group, an estimate of any costs to dismantle and remove the underlying asset at the end of the lease, and any lease payments made in advance of the lease commencement date (net of any lease incentives received).

The Group depreciates the right-of-use assets on a straight-line basis from the lease commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term unless the Group is reasonably certain to obtain ownership at the end of the lease term. The Group also assesses the right-of-use asset for impairment when such indicator exists.

At the commencement date, the Group measures the lease liability at the present value of the lease payments unpaid at that date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Group's incremental borrowing rate.

Lease payments included in the measurement of the lease liability are made up of fixed payments (including in-substance fixed payments) less any lease incentives receivable, variable payments based on an index or rate, and amounts expected to be payable under a residual value guarantee. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Group and payment of penalties for terminating a lease, if the lease term reflects the Group exercising the option to terminate.

Subsequent to initial measurement, the liability will be reduced for lease payments made and increased for interest cost on the lease liability. It is remeasured to reflect any reassessment or lease modification, or if there are changes in in-substance fixed payments. The variable lease payments that do not depend on an index or a rate are recognised as expense in the period on which the event or condition that triggers the payment occurs.

The Group remeasures lease liabilities whenever:

- there are changes in lease term, in which case the related lease liability is remeasured by discounting the revised lease payments using a revised discount rate at the date of reassessment.
- the lease payments changes due to changes in market rental rates following a market rent review in which cases the related lease liability is remeasured by discounting the revised lease payments using the initial discount rate.

For lease modification that is not accounted for as a separate lease, the Group remeasures the lease liability based on the lease term of the modified lease by discounting the revised lease payments using a revised discount rate at the effective date of modification.

When the lease is remeasured, the corresponding adjustment is reflected in the right-of-use asset, or profit and loss if the right-of-use asset is already reduced to zero.

3. Summary of Significant Accounting Policies (Continued)

3.27 Leases (Continued)

(a) Definition of a lease and the Group as a lessee (Continued)

Measurement and recognition of leases as a lessee (Continued)

The Group has elected to account for short-term leases using the practical expedients. Instead of recognising a right-of-use asset and lease liability, the payments in relation to these leases are recognised as an expense in profit or loss on a straight-line basis over the lease term. Short-term leases are leases with a lease term of 12 month or less.

Refundable rental deposits paid are accounted for under IFRS 9 and initially measured at fair value. Adjustments to fair value at initial recognition are considered as additional lease payments and included in the cost of right-of-use assets.

(b) The Group as a lessor

As a lessor, the Group classifies its leases as either operating or finance leases.

A lease is classified as a finance lease if it transfers substantially all the risks and rewards incidental to ownership of the underlying asset, and classified as an operating lease if it does not.

The Group also earns rental income from operating leases. Rental income is recognised on a straight-line basis over the term of the lease.

3.28 Related parties

For the purposes of these consolidated financial statements, a party is considered to be related to the Group if:

(a) the party is a person or a close member of that person's family and if that person:

(i) has control or joint control over the Group;

(ii) has significant influence over the Group, or

(iii) is a member of the key management personnel of the Group or of a parent of the Group.

(b) the party is an entity and if any of the following conditions applies:

(i) the entity and the Group are members of the same group;

(ii) one entity is an associate or joint venture of the other entity (or an associate or joint venture of a member of a group of which the other entity is a member);

(iii) the entity and the Group are joint ventures of the same third party;

(iv) one entity is a joint venture of a third entity and the other entity is an associate of the third entity;

(v) the entity is a post-employment benefit plan for the benefit of employees of either the Group or an entity related to the Group;

(vi) the entity is controlled or jointly controlled by a person identified in (a);

(vii) a person identified in (a) (i) has significant influence over the entity or is a member of the key management personnel of the entity (or of a parent of the entity); and

(viii) the entity, or any member of a group of which it is a part, provided key management personnel services to the Group or to the parent of the Group.

Close members of the family of a person are those family members who may be expected to influence, or be influenced by, that person in their dealings with the entity.

4. Financial and Capital Risks Management

The Group works out general principles for overall risk management, including management of financial risks, as well as management policies covering specific areas. In considering the importance of risks, the Group identifies and evaluates risks at head office and individual subsidiary level, and requires analysis and proper communication for the information collected periodically.

4.1 Financial risk management

The activities of the Group expose them to a variety of financial risks: market risk (including foreign exchange risk, interest rate risk and price risk), credit risk and liquidity risk. The overall risk management program of the Group focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on financial performance of the Group.

The carrying amounts presented in the consolidated statement of financial position relate to the following categories of financial assets and financial liabilities:

	2022	2021
	RMB'000	RMB'000
Financial assets		
Financial assets at amortised cost		
Notes, trade and other receivables	**9,737,226**	8,118,975
Restricted cash	**82,916**	109,685
Time deposits	**9,053,681**	8,357,613
Cash and cash equivalents	**14,973,098**	10,305,176
Loans due from the ultimate holding company	**20,500,000**	20,500,000
Financial assets at FVTOCI		
Fair value through other comprehensive income investments	**250,000**	–
Total financial assets	**54,596,921**	47,391,449
Financial liabilities		
Financial liabilities measured at amortised cost		
Notes, trade and other payables	**22,080,648**	22,658,233
Loan due to a fellow subsidiary	**141,972**	63,757
Lease liabilities	**129,070**	161,730
Total financial liabilities	**22,351,690**	22,883,720

4. Financial and Capital Risks Management (Continued)

4.1 Financial risk management (Continued)

(a) Market risk

Foreign exchange risk

The functional currency of the entities within the Group is RMB and most of the transactions are settled in RMB.

The Group carries out operations outside the PRC where transactions are usually denominated in the United States Dollars ("USD") which are translated into RMB at the prevailing exchange rates on the dates of the transactions.

The Group is exposed to currency risk primarily through provision of engineering contracting services which give rise to notes, trade and other receivables, notes, trade and other payables, restricted cash, time deposits and cash and cash equivalents that are denominated in a foreign currency. The currency that gives rise to this risk is primarily in USD as at 31 December 2022 and 31 December 2021.

On the other hand, RMB is not a freely convertible currency and the PRC government may at its discretion restrict access to foreign currencies for current account transactions in the future. Changes in the foreign exchange control system may prevent the Group from satisfying sufficient foreign currency demands.

The following table details the Group's exposure at the end of the reporting period to currency risk arising from recognised assets or liabilities denominated in a currency other than RMB to which they relate.

	USD	Others
At 31 December 2022	**RMB'000**	**RMB'000**
Restricted cash, time deposits and cash and cash equivalents	**2,766,345**	**2,448,911**
Notes, trade and other receivables	**34,610**	**645,188**
Notes, trade and other payables	**(296,841)**	**(1,614,035)**
Loans due to a fellow subsidiary	**(69,646)**	**(72,326)**
Lease liabilities	**(390)**	**(16,402)**
Net exposure in RMB	**2,434,078**	**1,391,336**

	USD	Others
At 31 December 2021	RMB'000	RMB'000
Restricted cash, time deposits and cash and cash equivalents	2,811,345	2,447,819
Notes, trade and other receivables	32,908	792,587
Notes, trade and other payables	(281,951)	(1,316,352)
Loan due to a fellow subsidiary	(63,757)	–
Lease liabilities	(1,199)	(25,840)
Net exposure in RMB	2,497,346	1,898,214

4. Financial and Capital Risks Management (Continued)

4.1 Financial risk management (Continued)

(a) Market risk (Continued)

A 5% strengthening of RMB against the USD as at 31 December 2022 and 31 December 2021 would have changed the equity and net profit by the amounts shown below:

	2022 RMB'000	2021 RMB'000
Decrease in equity and net profit		
– USD	**(91,278)**	(93,650)

A 5% weakening of RMB as at 31 December 2022 and 31 December 2021 would have had the equal but opposite effect on the above currency to the amounts shown above, on the basis that all other variables remain constant.

The stated changes represent management's assessment of reasonably possible changes in foreign exchange rates over the period until the end of the next annual reporting period. The analysis is performed on the same basis at the relevant period.

Interest rate risk

The Group's ordinary income and operating cash flows are substantially independent of changes in market interest rates. The interests arise from the loans between the Group and the ultimate holding company and time deposits are mainly based on fixed interest rate.

Price risk

The Group is not exposed to equity securities price risk because the Group's equity securities investments are classified as financial assets at FVTOCI which are stated at fair value.

(b) Credit risk

Credit risk refers to the risk that the counterparty to a financial instrument would fail to discharge its obligation under the terms of the financial instrument and cause a financial loss to the Group. The Group's exposure to credit risk mainly arises from restricted cash, time deposit, cash and cash equivalent, notes, trade and other receivables, contract assets and loans due from the ultimate holding company.

In order to minimise credit risk, the Group has developed and maintained the Group's credit risk grading to categorise exposures according to their degree of risk of default. The credit rating information is based on the Group's own trading records to rate its major customers and other debtors. The Group's exposure and the credit ratings of its counterparties are continuously monitored and the aggregate value of transactions concluded is spread amongst approved counterparties.

For financial assets measured at amortised cost and contract assets, the exposures to credit risk are monitored such that any outstanding debtors are reviewed and followed up on an ongoing basis. In the opinion of the Directors, the Group has no significant concentration of credit risk arising from its ordinary course of business due to its large customer base. The Group does not hold any collateral from its debtors.

4. Financial and Capital Risks Management (Continued)

4.1 Financial risk management (Continued)

(b) Credit risk (Continued)

Impairment assessment under ECL model

The Group's current credit risk grading framework comprises the following categories:

Category	Description	Basis for recognising ECL
Performing	The counterparty has a low risk of default and does not have any past-due amounts	12-month ECL
Doubtful	There has been a significant increase in credit risk since initial recognition	Lifetime ECL – not credit-impaired
In default	There is evidence indicating the asset is credit-impaired	Lifetime ECL – credit-impaired
Write-off	There is evidence indicating that the debtor is in severe financial difficulty and the Group has no realistic prospect of recovery	Amount is written off

Trade receivables and contract assets

As set out in Note 3.9, the Group assesses ECL under IFRS 9 on trade receivables and contract assets based on provision matrix, the expected loss rates are based on the payment profile for sales in the past 5 years as well as the corresponding historical credit losses during that period. The historical rates are adjusted to reflect current and forwarding looking macroeconomic factors affecting the customer's ability to settle the amount outstanding. At each reporting date, the historical default rates are updated and changes in the forward-looking estimates are analysed.

Based on the Group's assessment of historical credit loss experience of the existing debtors and all available forward looking information, for trade receivables and contract assets, the Group used estimated loss rates based on aging for classes with different credit risk characteristics and exposures.

Other receivables

The Group measures the loss allowance equal to 12-month ECL of other receivables. For those balances expected to have significant increase in credit risk since initial recognition, the Group apply lifetime ECL based on aging for classes with different credit risk characteristics and exposures.

Restricted cash, time deposits and cash and cash equivalents

Restricted cash, time deposits and cash and cash equivalents are placed at financial institutions that have sound credit ratings assigned by international credit-rating agencies and the Group considers the credit risk to be insignificant.

Loans due from the ultimate holding company

The 12-month ECL calculated by the Group is not significant and there has been no significant increase in credit risk since initial recognition.

4. Financial and Capital Risks Management (Continued)

4.1 Financial risk management (Continued)

(c) Liquidity risk

Prudent liquidity risk management implies maintaining sufficient cash and the availability of funding from an adequate amount of committed credit facilities. Due to the dynamic nature of the underlying business, the Group aims to maintain flexibility in funding by keeping committed credit lines available.

Management monitors the cash flow forecasts of the Group in meeting its liabilities.

The table below analyses the Group's non-derivative financial liabilities that will be settled on a net basis into relevant maturity groupings based on the remaining period from the end of the reporting period to the contractual maturity dates. 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.

	Weighted average effective interest rate	Within 1 year	1-2 years	2-5 years	Over 5 years	Total undiscounted cash flows	Carrying amount
		RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
At 31 December 2022							
Notes, trade and other payables	N/A	22,080,648	–	–	–	22,080,648	22,080,648
Loan due to a fellow subsidiary	2.58%	141,972	–	–	–	141,972	141,972
Lease liabilities	4.78%	64,933	27,319	30,078	18,538	140,868	129,070
Total other liabilities		22,287,553	27,319	30,078	18,538	22,363,488	22,351,690

	Weighted average effective interest rate	Within 1 year	1-2 years	2-5 years	Over 5 years	Total undiscounted cash flows	Carrying amount
		RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
At 31 December 2021							
Notes, trade and other payables	N/A	22,658,233	–	–	–	22,658,233	22,658,233
Loan due to a fellow subsidiary	2.16%	63,757	–	–	–	63,757	63,757
Lease liabilities	4.76%	78,264	39,404	33,874	28,337	179,879	161,730
Total other liabilities		22,800,254	39,404	33,874	28,337	22,901,869	22,883,720

4. Financial and Capital Risks Management (Continued)

4.2 Capital risk management

The objectives of the Group when managing capital are to safeguard the ability of the Group in continuing as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

In order to maintain or adjust the capital structure, the Group may adjust the amount of dividends paid to shareholders, issue new shares or sell assets to reduce debts.

The Group monitors their capital structure on the basis of gearing ratio. This ratio is calculated as net debt divided by total capital. Net debts are calculated as other liabilities (including notes and trade payables, other payables, loan due to a fellow subsidiary and lease liabilities, as shown in the consolidated statement of financial position) less restricted cash, time deposits and cash and cash equivalents. Total capital is calculated as equity, as shown in the consolidated statement of financial position, plus net debts less non-controlling interests.

	2022	2021
	RMB'000	RMB'000
Total other liabilities	**22,351,690**	22,883,720
Less: Restricted cash, time deposits and cash and cash equivalents	**(24,109,695)**	(18,772,474)
Net debt	**(1,758,005)**	4,111,246
Total equity (excluding non-controlling interests)	**30,034,208**	29,118,084
Total capital	**28,276,203**	33,229,330
Gearing ratio	**N/A**	12%

4.3 Fair value measurement of financial instruments

Fair value measurements

Apart from the below mentioned, the carrying amounts of the Group's financial assets and financial liabilities as re-elected in the consolidated statement of financial position approximate their respective fair values.

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. The Group discloses fair value measurements of financial instruments by level of the following fair value measurement hierarchy:

- Quoted prices (unadjusted) in active markets for identical assets or liabilities (level 1).
- Inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly or indirectly (level 2).
- Inputs for the asset or liability that are not based on observable market data (i.e. unobservable inputs) (level 3).

5. Critical Accounting Estimates and Judgments

Estimates and judgments 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 accounting estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal to 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 discussed below.

(a) Construction contracts

Revenue from individual contracts is recognised according to progress of the project. The determination of the progress of the construction service involves judgments. According to the nature of contract, the Group recognises revenue by reference to the stage of completion of the contract activity at the end of the reporting period as measured by the proportion that the actual costs incurred relative to the estimated total costs for satisfaction of the construction services. In addition, when determining the transaction price, the Group consider factors such as whether there is any financing component. The Group considers whether the payment schedule is commensurate with the Group's performance and whether the delayed payment is for finance purpose. The Group does not consider the arrangement with customers have significant financing component. The Group has, therefore, recognised revenue on progress confirmation over the period during which the services are rendered and transferred to customers. As at 31 December 2022 the contract assets (Note 23(a)) and contract liabilities (Note 23(b)) are RMB9,745,992,000 (31 December 2021: RMB10,273,333,000) and RMB22,929,193,000 (31 December 2021: RMB17,485,967,000) respectively.

(b) Useful lives of property, plant and equipment

The Group determines the estimated useful lives and related depreciation charges for the Group's property, plant and equipment (Note 17). This estimate is based on projected wear and tear incurred during the useful life of property, plant and equipment. This could change significantly as a result of technical renovations and competitor actions in response to severe industry cycles. Management will increase the depreciation charge where useful lives or residual values vary with previously estimated, or it will write-off or write-down technically obsolete or non-strategic assets that have been abandoned or sold. As at 31 December 2022, the net carrying amount of property, plant and equipment is RMB4,663,369,000 (31 December 2021: RMB4,398,287,000).

(c) Provision for ECL of trade receivables and contract assets

The Group determines the provision for ECL on trade receivables (Note 21) and contract assets (Note 23(a)). This estimate is based on the credit history of the customers and the current market condition and forward-looking information. Management reassesses the adequacy of provision on a regular basis by reviewing the individual account based on past credit history and any prior knowledge of debtor insolvency or other credit risk which might not be easily accessible public information and market volatility might bear a significant impact which might not be easily ascertained. As at 31 December 2022, the provision for impairment on trade receivables and contract assets are RMB2,286,527,000 (31 December 2021: RMB2,303,492,000) and RMB528,294,000 (31 December 2021: RMB465,962,000) respectively.

(d) Deferred taxes

The estimates of deferred income tax assets (Note 37) require estimates over future taxable profit and corresponding applicable income tax rates of respective years. The change in future income tax rates and timing would affect income tax expense or benefit, as well as deferred income tax balance. The realisation of deferred income tax assets also depends on the realisation of sufficient profitability (taxable profit) of the Group. Deviation of future profitability from the estimate could result in material adjustments to the carrying amount of deferred income tax assets. Deferred tax assets relating to certain temporary differences and tax losses are recognised as management considers it is probable that future taxable profit will be available against which the temporary differences or tax losses can be utilised. Where the expectation is different from the original estimate, such differences will impact the recognition of deferred tax assets and taxation in the years in which such estimates are changed. As at 31 December 2022, deferred tax assets recognised in the +consolidated statement of financial position is RMB769,229,000 (31 December 2021: RMB843,162,000).

5. Critical Accounting Estimates and Judgments (Continued)

(e) Pension obligations

The present value of the pension obligations depends on a number of factors that are determined on an actuarial basis using a number of assumptions. The assumptions used in determining the net cost (income) for provisions include the discount rate. Any changes in these assumptions will impact the carrying amount of pension obligations. The Group determines the appropriate discount rate at the end of each year. This is the interest rate that should be used to determine the present value of estimated future cash outflows expected to be required to settle the pension obligations. In determining the appropriate discount rate, the Group considers the interest rates of corporate securities which have maturity approximating to the terms of the related pension liability. Other key assumptions for pension obligations are based on current market conditions. As at 31 December 2022, the net liabilities of retirement benefit plan obligations (Note 33(b)) is RMB1,913,763,000 (31 December 2021: RMB2,154,036,000).

(f) Provision for litigation claims

The Group are from time to time involved in legal proceedings arising in the ordinary course of our business. If the management believes that the legal proceedings may result claims for compensation to third parties against the Group, the best estimate of provision for litigation claims will be recognised. If the management believes that the legal proceedings may be more likely not to result claims for compensation to third parties against the Group, no provision will be recognised under any potential litigation claims. Except to the extent that the situations and uncertainties involved, that will be disclosed as contingent liabilities. To access the outcome of legal proceedings and any potential amount of litigation claims, significant judgment is required. As at 31 December 2022, provision for litigation claims (Note 34) is RMB184,271,000 (31 December 2021: RMB181,292,000).

6. Revenue

The Group's revenue is set out below:

	2022	2021
	RMB'000	RMB'000
Engineering, consulting and licensing*	**3,224,572**	3,779,770
EPC Contracting*	**29,586,178**	35,670,573
Construction*	**19,788,145**	17,522,236
Equipment manufacturing*	**429,244**	787,011
	53,028,139	57,759,590

* Above revenue is after elimination.

7. Segment Information

Management has determined the operating segments based on the reports reviewed by the Senior Management that are used to make strategic decisions.

The Senior Management considers the business from a product and service perspective, which mainly includes four reportable operating segments:

(i) Engineering, consulting and licensing – providing design, consulting, research and development, feasibility studies, compliance certification services to oil refining and chemical etc industries;

(ii) EPC Contracting – providing integrated engineering, procurement, construction, maintenance and project management services to oil refining and chemical etc industries;

(iii) Construction – providing infrastructure for oil refining and chemical etc industries, oil and gas storage, pipelines transportation, construction, renovation, expansion, repair and maintenance services and large equipment lifting and transportation services in construction projects; and

(iv) Equipment manufacturing – providing design, development, manufacture and sales of equipment and spare parts for facilities including oil refining and chemical facilities.

7. Segment Information (Continued)

Inter-segment sales were conducted at prices no less than cost and with terms mutually agreed among those business segments. Operating expenses of a functional unit are allocated to the relevant segment which is the predominant user of the services provided by the unit. Operating expenses of other shared services which cannot be allocated to a specific segment and corporate expenses are included as unallocated costs.

Segment assets consist primarily of property, plant and equipment, rights of use assets, construction in progress, intangible assets, investment in a joint arrangement and investment in associates, other non-current assets, inventories, notes and trade receivables, prepayments and other receivables, restricted cash and cash and cash equivalents. Unallocated assets comprise items such as some of the time deposits, cash and cash equivalents, loans due from the ultimate holding company, deferred income tax assets and other unallocated assets.

Segment liabilities comprise operating liabilities.

Capital expenditure comprises additions to property, plant and equipment (Note 17), right-of-use assets (Note 18), intangible assets (Note 19) and other non-current assets.

The segment information provided to the Senior Management for the reportable segments is as follow:

(i) As at and for the year ended 31 December 2022:

The segment results for the year ended 31 December 2022 are as follows:

	Engineering, consulting and licensing	EPC contracting	Construction	Equipment manufacturing	Unallocated	Elimination	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Segment revenue and results							
Revenue from external customers	3,224,572	29,586,178	19,788,145	429,244	–	–	53,028,139
Inter-segment revenue	145,564	–	5,812,350	400,507	–	(6,358,421)	–
Segment revenue	3,370,136	29,586,178	25,600,495	829,751	–	(6,358,421)	53,028,139
Segment results	104,380	955,023	609,936	7,570	133,904	–	1,810,813
Finance income							1,008,528
Finance expenses							(73,491)
Share of profit of a joint arrangement	(76)	–	–	–	–	–	(76)
Share of profit of associates	6,826	9,676	–	–	–	–	16,502
Profit before taxation							2,762,276
Income tax expense							(480,425)
Profit for the year							2,281,851
Other segment items							
Depreciation	346,495	156,600	349,429	20,476	–	–	873,000
Amortisation	27,742	12,960	2,309	–	–	–	43,011
Capital expenditures							
– Property, plant and equipment	398,169	108,607	485,103	8,214	–	–	1,000,093
– Right-of-use assets	18,779	28,961	19,702	–	–	–	67,442
– Intangible assets	7,609	21,834	2,513	–	–	–	31,956
Provision for impairment on inventories	–	27,849	–	–	–	–	27,849
Provision/(Reversal of provision) for ECL on trade and other receivables and contract assets, net	13,786	(16,538)	36,642	14,779	–	–	48,669

7. Segment Information (Continued)

(i) As at and for the year ended 31 December 2022: (Continued)

The segment assets and liabilities as at 31 December 2022 are as follows:

	Engineering, Consulting and licensing	EPC Contracting	Construction	Equipment manufacturing	Elimination	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Assets						
Segment assets	30,910,037	22,123,629	21,227,989	1,072,592	(27,154,459)	48,179,788
Investment in a joint arrangement	3,847	–	–	–	–	3,847
Investment in associates	55,627	118,796	–	–	–	174,423
Unallocated assets						30,323,681
Total assets						78,681,739
Liabilities						
Segment liabilities	32,947,171	23,932,728	18,353,474	729,688	(27,320,832)	48,642,229
Total liabilities						48,642,229

(ii) As at and for the year ended 31 December 2021:

The segment results for the year ended 31 December 2021 are as follows:

	Engineering, consulting and licensing	EPC contracting	Construction	Equipment manufacturing	Unallocated	Elimination	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Segment revenue and results							
Revenue from external customers	3,779,770	35,670,573	17,522,236	787,011	–	–	57,759,590
Inter-segment revenue	83,709	33,870	8,017,313	249,849	–	(8,384,741)	–
Segment revenue	3,863,479	35,704,443	25,539,549	1,036,860	–	(8,384,741)	57,759,590
Segment results	106,695	814,711	645,392	14,386	120,714	–	1,701,898
Finance income							954,622
Finance expenses							(82,796)
Share of profit of a joint arrangement	1,448	–	–	–	–	–	1,448
Share of profit of associates	12,626	4,609	–	–	–	–	17,235
Profit before taxation							2,592,407
Income tax expense							(462,432)
Profit for the year							2,129,975
Other segment items							
Depreciation	248,326	102,923	469,732	22,042	–	(32,725)	810,298
Amortisation	29,556	32,397	1,870	–	–	–	63,823
Capital expenditures							
– Property, plant and equipment	269,132	113,671	782,256	1,912	11,020	–	1,177,991
– Right-of-use assets	21,006	40,521	47,290	6,415	–	–	115,232
– Intangible assets	38,687	5,968	3,288	–	–	–	47,943
Provision/(Reversal of provision) for ECL on trade and other receivables and contract assets, net	81,738	860,445	23,786	28,895	(1,442)	–	993,422

7. Segment Information (Continued)

(ii) As at and for the year ended 31 December 2021: (Continued)

The segment assets and liabilities as at 31 December 2021 are as follows:

	Engineering, Consulting and licensing	EPC Contracting	Construction	Equipment manufacturing	Elimination	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Assets						
Segment assets	28,441,216	32,302,344	22,727,109	1,097,452	(41,551,062)	43,017,059
Investment in a joint arrangement	3,923	–	–	–	–	3,923
Investment in associates	127,682	31,233	–	–	–	158,915
Unallocated assets						29,737,346
Total assets						72,917,243
Liabilities						
Segment liabilities	30,249,398	28,950,927	19,742,143	758,840	(35,907,401)	43,793,907
Total liabilities						43,793,907

Analysis of information by geographical regions:

The following table lists out the information about geographical regions. The geographical regions of the sales to external customers are based on the locations where the services are rendered or the places where the goods are delivered. The specific non-current assets include property, plant and equipment, right-of-use assets, intangible assets, investment in a joint arrangement and investment in associates, which the geographical regions are based on the places where the assets are located for property, plant and equipment and land use rights, the places where they are allocated to for intangible assets and the places where the business are conducted for a joint arrangement and associates.

Revenue

	2022	2021
	RMB'000	RMB'000
The PRC	**48,837,100**	53,120,489
Saudi Arabia	**2,037,734**	1,622,794
Kuwait	**434,231**	989,022
Other countries	**1,719,074**	2,027,285
	53,028,139	57,759,590

Information about major customers

The customers accounted for more than 10% of the total revenue of the Group and revenue from them for the year ended 31 December 2022 and 2021, the details are as follows:

	2022	2021
	RMB'000	RMB'000
Fellow subsidiary and its subsidiaries		
– Customer group A	**26,236,433**	28,365,516

The revenue from the customers are derived from the segment of engineering, consulting and licensing, EPC contracting, construction and equipment manufacturing.

7. Segment Information (Continued)

Specified non-current assets

	2022 RMB'000	2021 RMB'000
The PRC	**6,968,179**	6,893,411
Other countries	**325,162**	242,994
	7,293,341	7,136,405

Disaggregation of revenue from contracts with customer

The Group derives revenue from the transfer of goods and service at a point in time and over time in the following customers' segment for engineering, consulting and licensing, EPC contracting, construction and equipment manufacturing:

	Engineering, consulting and licensing RMB'000	EPC contracting RMB'000	Construction RMB'000	Equipment manufacturing RMB'000	Total RMB'000
Timing of revenue recognition					
For the year ended 31 December 2022					
– At a point in time	**–**	**–**	**–**	**429,244**	**429,244**
– Over time	**3,224,572**	**29,586,178**	**19,788,145**	**–**	**52,598,895**
Total revenue	**3,224,572**	**29,586,178**	**19,788,145**	**429,244**	**53,028,139**
For the year ended 31 December 2021					
– At a point in time	–	–	–	787,011	787,011
– Over time	3,779,770	35,670,573	17,522,236	–	56,972,579
Total revenue	3,779,770	35,670,573	17,522,236	787,011	57,759,590
For the year ended 31 December 2022					
– Oil refining	**1,202,823**	**3,625,856**	**2,590,206**	**2,442**	**7,421,327**
– Petrochemicals	**1,887,513**	**16,297,227**	**12,995,739**	**426,289**	**31,606,768**
– New coal chemicals	**134,236**	**394,751**	**383,427**	**513**	**912,927**
– Storage and transportation and others	**–**	**9,268,344**	**3,818,773**	**–**	**13,087,117**
Total revenue	**3,224,572**	**29,586,178**	**19,788,145**	**429,244**	**53,028,139**
For the year ended 31 December 2021					
– Oil refining	1,167,846	8,440,987	3,476,343	57,058	13,142,234
– Petrochemicals	1,718,192	17,646,105	9,928,241	729,717	30,022,255
– New coal chemicals	234,618	771,843	347,195	–	1,353,656
– Storage and transportation and others	659,114	8,811,638	3,770,457	236	13,241,445
Total revenue	3,779,770	35,670,573	17,522,236	787,011	57,759,590

8. Other Income

	2022	2021
	RMB'000	RMB'000
Operating lease rental income on property, plant and equipment	**55,873**	56,265
Income from write back long outstanding payables	**10,086**	6,749
Government grants (note)	**48,533**	43,918
Others	**199,683**	4,681
	314,175	111,613

Note: Government grants mainly represent financial subsidies from Talent Development Fund and job stabilisation subsidies etc.

9. Other Gains – Net

	2022	2021
	RMB'000	RMB'000
Gains on disposal/write-off of property, plant and equipment	**3,193**	51,342
Gains/(losses) on disposal/write-off of land use rights	**140**	(163)
(Losses)/gains on separation and transfer of "Water/electricity/gas supply and property management"	**(700)**	5,949
	2,633	57,128

10. Finance Income and Finance Expenses

	2022	2021
	RMB'000	RMB'000
Finance income		
Interest income from the ultimate holding company	**693,529**	711,024
Interest income from the fellow subsidiaries	**87,850**	55,500
Bank interest income	**227,149**	188,098
	1,008,528	954,622
Finance expenses		
Interest expenses to a fellow subsidiary on balances wholly repayable within 5 years	**(5,658)**	(4,323)
Interest expenses on retirement and other supplementary benefit obligation	**(60,905)**	(69,440)
Finance charges on lease liabilities	**(6,926)**	(8,578)
Other interest expense	**(2)**	(455)
	(73,491)	(82,796)
	935,037	871,826

11. Profit Before Taxation

Profit before taxation is arrived at after charging/(crediting):

	2022 RMB'000	2021 RMB'000
Staff costs, including directors and supervisors emoluments (Note 16)	**6,796,902**	6,590,754
Retirement benefit plan contribution (including in the above mentioned staff costs)	**871,843**	857,824
Cost of goods sold	**18,277,547**	20,445,779
Subcontracting costs	**18,883,927**	20,567,047
Depreciation and amortisation		
– Property, plant and equipment	**700,138**	640,524
– Right of use assets	**172,862**	169,774
– Intangible assets	**43,011**	63,823
Operating lease rentals		
Short term leases expenses	**350,686**	339,952
Provision for ECL on trade and other receivables and contract assets, net	**48,669**	993,422
Provision for impairment on inventories	**27,849**	–
Rental income from property, plant and equipment after relevant expenses	**(55,873)**	(56,265)
Research and development costs	**2,577,892**	2,379,149
Gains on disposal/write-off of property, plant and equipment	**(3,193)**	(51,342)
(Gains)/losses on disposal/write-off of land use rights	**(140)**	163
Auditor's remuneration		
– Audit service	**4,570**	4,570
Exchange (gains)/losses, net	**(229,800)**	82,990

12. Income Tax Expense

	2022 RMB'000	2021 RMB'000
Current tax		
PRC enterprise income tax	**427,456**	576,402
Overseas enterprise income tax	**28,446**	23,514
Over provision for income tax in prior years	**(30,541)**	(6,943)
	425,361	592,973
Deferred tax		
Origination and reversal of temporary differences (note 37)	**55,064**	(130,541)
Income tax expense	**480,425**	462,432

According to the Corporate Income Tax Law of the PRC, the applicable income tax of the years ended 31 December 2022 and 2021 is 25%.

According to the normal statutory PRC corporate income tax and relevant rules, for the years ended 31 December 2022 and 2021, certain subsidiaries of the Company have been qualified as new high-tech enterprises which can enjoy 15% preferential tax rate in the related period, other members of the Group are subject to 25% income tax rate.

The tax of other countries is based on the nation's tax laws, where the relevant subsidiary of the Group operates in.

12. Income Tax Expense (Continued)

The difference between the actual income tax charge in the consolidated statement of profit or loss and other comprehensive income and the amounts which would result from applying the enacted tax rate to profit before income tax can be reconciled as follows:

	2022	2021
	RMB'000	RMB'000
Profit before tax	**2,762,276**	2,592,407
Taxation calculated at the statutory tax rate	**690,569**	648,101
Income tax effects of:		
Preferential income tax treatments of certain companies	**(449,835)**	(365,212)
Difference in overseas profits tax rates	**14,099**	(1,824)
Non-deductible expenses	**216,658**	249,576
Income not subject to tax	**(12,800)**	(57,882)
Unrecognised tax losses	**61,769**	16,076
Utilisation of previously unrecognised tax losses	**(9,494)**	(19,721)
Over provision for income tax in prior years	**(30,541)**	(6,682)
Income tax expense	**480,425**	462,432
Effective income tax rate	**17.4 %**	17.8%

13. Earnings Per Share

Basic earnings per share for each of the years ended 31 December 2022 and 2021 is calculated based on the profit attributable to the equity holders of the Company and the weighted average number of ordinary shares in issue.

	2022	2021
Profit attributable to equity holders of the Company (RMB'000)	**2,281,800**	2,129,589
Weighted average number of ordinary shares in issue	**4,428,000,000**	4,428,000,000
Basic earnings per share (RMB)	**0.52**	0.48

Diluted earnings per share is equal to basic earnings per share as there was no potential diluted shares outstanding for the reporting period.

14. Dividends

Dividends represented dividends declared by the Company during each of the years ended 31 December 2022 and 2021.

	2022	2021
	RMB'000	RMB'000
Interim dividends of RMB0.118 per ordinary share (2021: RMB0.091)(1)	**522,504**	402,948
Proposed final dividends of RMB0.210 per ordinary share (2021: RMB0.222)(2)	**929,880**	983,016

(1) Pursuant to a resolution passed at the board of Directors' meeting on 19 August 2022, the Directors authorised to declare the interim dividends for the year ended 31 December 2022 of RMB0.118 (2021: RMB0.091) per share totalling RMB522,504,000 (2021: RMB402,948,000).

(2) Pursuant to the board of Directors' meeting on 17 March 2023, the Directors recommended to declare the final dividends for the year ended 31 December 2022 of RMB0.210 (2021: RMB0.222) per share totalling RMB929,880,000 (2021: RMB983,016,000). Such recommendation is to be approved by the shareholders at the Annual General Meeting. Dividends declared after the year end of the reporting period are not recognised as a liability at the end of the reporting period.

15. Directors' and Supervisors' Emoluments and Five Highest Individuals' Emoluments

(a) Directors' and supervisors' emoluments

Details of directors and supervisors of the Company are as follows:

(i) For the year ended 31 December 2022

	Fee	Basic salaries, other allowances and benefits-in-kind	Discretionary bonus	Contributions to pension plans	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Executive directors					
SUN Lili[(5)]	–	540	1,083	120	1,743
XIANG Wenwu[(5)]	–	432	1,171	120	1,723
JIANG Dejun[(2)(5)]	–	376	989	120	1,485
	–	1,348	3,243	360	4,951
Non-executive directors					
WANG Zizong[(6)]	–	–	–	–	–
LI Chengfeng[(6)]	–	–	–	–	–
WU Wenxin[(5)]	–	–	–	–	–
	–	–	–	–	–
Independent non-executive directors					
HUI Chiu Chung, Stephen	200	–	–	–	200
JIN Yong	200	–	–	–	200
YE Zheng	200	–	–	–	200
	600	–	–	–	600
Supervisors					
ZHU Fei[(5)]	–	346	843	120	1,309
XU Yijun[(1)(6)]	–	309	755	95	1,159
WU Zhongxian[(1)(5)]	–	286	997	91	1,374
ZHOU Yingguan[(1)(5)]	–	305	1,113	102	1,520
ZHANG Xinming[(1)(4)]	–	481	650	112	1,243
ZHOU Chengping[(1)(6)]	–	326	935	95	1,356
YI Hao[(1)(6)]	–	289	967	94	1,350
	–	2,342	6,260	709	9,311
	600	3,690	9,503	1,069	14,862

15. Directors' and Supervisors' Emoluments and Five Highest Individuals' Emoluments (Continued)

(a) Directors' and supervisors' emoluments (Continued)

Details of directors and supervisors of the Company are as follows: (Continued)

(ii) For the year ended 31 December 2021

	Fee	Basic salaries, other allowances and benefits-in-kind	Discretionary bonus	Contributions to pension plans	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Executive directors					
SUN Lili(5)	–	583	718	109	1,410
XIANG Wenwu(5)	–	437	642	109	1,188
JIANG Dejun(2)(5)	–	382	711	109	1,202
	–	1,402	2,071	327	3,800
Non-executive directors					
WANG Zizong(6)	–	–	–	–	–
LI Chengfeng(6)	–	–	–	–	–
WU Wenxin(5)	–	–	–	–	–
	–	–	–	–	–
Independent non-executive directors					
HUI Chiu Chung, Stephen	200	–	–	–	200
JIN Yong	200	–	–	–	200
YE Zheng	200	–	–	–	200
	600	–	–	–	600
Supervisors					
ZHU Fei(5)	–	352	577	109	1,038
WANG Guoliang(1)(3)	–	–	–	–	–
XU Yijun(1)(6)	–	307	521	89	917
YE Wenbang(1)(3)	–	–	–	–	–
WU Jibo(1)(3)	–	–	–	–	–
WU Zhongxian(1)(5)	–	283	457	89	829
ZHOU Yingguan(1)(5)	–	258	568	95	921
ZHANG Xinming(1)(4)	–	262	648	102	1,012
ZHOU Chengping(1)(6)	–	333	609	86	1,028
YI Hao(1)(6)	–	293	438	88	819
	–	2,088	3,818	658	6,564
	600	3,490	5,889	985	10,964

15. Directors' and Supervisors' Emoluments and Five Highest Individuals' Emoluments (Continued)

(a) Directors' and supervisors' emoluments (Continued)

Details of directors and supervisors of the Company are as follows: (Continued)

Notes:

(1) These supervisors receive no emoluments for their services provided to the Company but they however receive emoluments from the Group for their services as directors and/or supervisors of a number of subsidiaries.

(2) Appointed on 22 February 2021

(3) Resigned on 22 March 2021

(4) Appointed on 10 May 2021

(5) Retired and re-appointed on 26 October 2021

(6) Appointed on 26 October 2021

(b) Five highest paid individuals

The number of director or supervisor and non-director or supervisor included in the five highest paid individuals for the years ended 31 December 2022 and 2021 are set forth below:

	2022	2021
	Number of individuals	Number of individuals
Director or supervisor	4	3
Non-director or supervisor	1	2
	5	5

The aggregate of the emoluments in respect of the remaining highest paid non-director or supervisor are as follows:

	2022	2021
	RMB'000	RMB'000
Basic salaries, other allowances and benefits-in-kind	263	571
Discretionary bonuses	1,042	1,644
Contributions to pensions plans	105	177
	1,410	2,412

The emoluments one (2021: two) highest paid individuals who are non-director or supervisor are within the following bands:

	2022	2021
	Number of individuals	Number of individuals
HK$1,500,001 to HK$2,000,000	1	–
HK$1,000,001 to HK$1,500,000	–	2
Nil to HK$1,000,000	–	–
	1	2

No emoluments were paid by the Group to any director or the five highest paid individuals as an inducement to join or upon joining the Group or as compensation for loss of office during the year (2021: nil).

16. Employment Benefits

	2022	2021
	RMB'000	RMB'000
Salaries, wages and bonuses	**4,648,084**	4,433,334
Retirement benefits(1)	**799,657**	754,366
Early retirement and supplemental pension benefit (Note 33 (b))		
– service cost	**3,532**	22,099
– interest cost	**60,905**	69,440
Immediate recognition of actuarial losses	**7,749**	11,919
Housing fund(2)	**400,912**	383,692
Welfare, medical and other expenses	**876,063**	915,904
	6,796,902	6,590,754

Notes:

(1) Retirement benefits

The Group is required to make specific contributions to the state-managed retirement plan at a rate of 14% to 19% (2021: 14% to 19%) of the specified salaries of the PRC employees for the year ended 31 December 2022. The PRC government is responsible for the pension liability to the retired employees. The PRC employees of the Group are entitled to a monthly pension upon their retirements.

(2) Housing fund

In accordance with the PRC housing reform regulations, the Group is required to make contributions to the state-managed housing fund at rates of 12% of the specified salaries of the PRC employees. At the same time, the employees are required to make a contribution based on certain percentages. The employees are entitled to claim the entire sum of the fund under certain specified withdrawal circumstances. The Group has no further obligations for housing benefits beyond the contributions made above.

17. Property, Plant and Equipment

	Buildings and other facilities	Machinery, transportation equipment and other equipment	Construction-in-progress	Total
	RMB'000	RMB'000	RMB'000	RMB'000
At 1 January 2021				
Cost	3,454,045	4,896,970	692,596	9,043,611
Accumulated depreciation and impairment	(1,632,561)	(3,529,584)	–	(5,162,145)
Net book amount	1,821,484	1,367,386	692,596	3,881,466
Year ended 31 December 2021				
Opening net book amount	1,821,484	1,367,386	692,596	3,881,466
Transfers	325,128	974,479	(1,299,607)	–
Additions	2,437	–	1,175,554	1,177,991
Depreciation	(120,136)	(520,388)	–	(640,524)
Disposals/write-off	(15,236)	(5,410)	–	(20,646)
Closing net book amount	2,013,677	1,816,067	568,543	4,398,287
At 31 December 2021 and 1 January 2022				
Cost	3,745,323	5,375,963	568,543	9,689,829
Accumulated depreciation and impairment	(1,731,646)	(3,559,896)	–	(5,291,542)
Net book amount	2,013,677	1,816,067	568,543	4,398,287
Year ended 31 December 2022				
Opening net book amount	**2,013,677**	**1,816,067**	**568,543**	**4,398,287**
Transfers	**64,201**	**849,141**	**(913,342)**	**–**
Additions	**–**	**44,037**	**956,056**	**1,000,093**
Depreciation	**(123,986)**	**(576,152)**	**–**	**(700,138)**
Disposals/write-off	**(773)**	**(34,100)**	**–**	**(34,873)**
Closing net book amount	**1,953,119**	**2,098,993**	**611,257**	**4,663,369**
At 31 December 2022				
Cost	**3,807,432**	**5,834,235**	**611,257**	**10,252,924**
Accumulated depreciation and impairment	**(1,854,313)**	**(3,735,242)**	**–**	**(5,589,555)**
Net book amount	**1,953,119**	**2,098,993**	**611,257**	**4,663,369**

Depreciation expense recognised is analysed as follows:

	2022	2021
	RMB'000	RMB'000
Cost of sales	**593,767**	561,635
Selling and marking expenses	**287**	25
Administrative expenses	**40,722**	24,124
Research and development costs	**65,362**	54,740
	700,138	640,524

18. Right-of-Use Assets

The Group leases assets including buildings and other facilities, Machinery, transportation equipment and other equipment and lands. Information about leases for which the Group is a lessee is presented below:

	Buildings and other facilities	Machinery, transportation equipment and other equipment	Land use right	Total
	RMB'000	RMB'000	RMB'000	RMB'000
Balance at 1 January 2021	168,526	46,383	2,233,392	2,448,301
Additions	83,490	31,742	–	115,232
Depreciation for the year	(84,462)	(28,033)	(57,279)	(169,774)
Disposal/written off	(18,805)	(455)	(2,298)	(21,558)
Balance at 31 December 2021 and 1 January 2022	**148,749**	**49,637**	**2,173,815**	**2,372,201**
Additions	**64,813**	**2,629**	**–**	**67,442**
Depreciation	**(86,117)**	**(29,530)**	**(57,215)**	**(172,862)**
Disposal/written off	**–**	**–**	**(771)**	**(771)**
Modification	**(5,398)**	**(934)**	**–**	**(6,332)**
Balance at 31 December 2022	**122,047**	**21,802**	**2,115,829**	**2,259,678**

Depreciation recognised is analysed as follows:

	2022	2021
	RMB'000	RMB'000
Cost of sales	**113,922**	109,418
Administrative expenses	**54,419**	60,356
Research and development expenses	**4,521**	–
	172,862	169,774

19. Intangible Assets

	Patent	Computer software	Total
	RMB'000	RMB'000	RMB'000
At 1 January 2021			
Cost	479,882	552,631	1,032,513
Accumulated amortisation	(455,762)	(357,792)	(813,554)
Net book amount	24,120	194,839	218,959
Year ended 31 December 2021			
Opening net book amount	24,120	194,839	218,959
Additions	–	47,943	47,943
Amortisation	(24,120)	(39,703)	(63,823)
Closing net book amount	–	203,079	203,079
At 31 December 2021 and 1 January 2022			
Cost	479,882	600,574	1,080,456
Accumulated amortisation	(479,882)	(397,495)	(877,377)
Net book amount	–	203,079	203,079
Year ended 31 December 2022			
Opening net book amount	**–**	**203,079**	**203,079**
Additions	**10,100**	**21,856**	**31,956**
Amortisation	**(84)**	**(42,927)**	**(43,011)**
Disposal			
– Cost	**–**	**(2,571)**	**(2,571)**
– Accumulated amortisation	**–**	**2,571**	**2,571**
Closing net book amount	**10,016**	**182,008**	**192,024**
At 31 December 2022			
Cost	**489,982**	**619,859**	**1,109,841**
Accumulated amortisation	**(479,966)**	**(437,851)**	**(917,817)**
Net book amount	**10,016**	**182,008**	**192,024**

Amortisation recognised is analysed as follows:

	2022	2021
	RMB'000	RMB'000
Cost of sales	**4,403**	12,121
Administrative expenses	**21,212**	51,702
Research and development expenses	**17,396**	–
	43,011	63,823

20. Investment in a Joint Arrangement and Associates

(a) Investment in a joint arrangement

	2022 RMB'000	2021 RMB'000
Joint venture		
Beginning of the year	**3,923**	2,475
Share of total comprehensive (expense)/income	**(76)**	1,448
End of the year	**3,847**	3,923

The Group's joint venture, is unlisted and established in a form of limited company, is as follows:

Name	Establishment/Place of incorporation	Registered and fully paid capital RMB'000	Indirect effective interest held	Principal activities and place of operations
Hainan Great Wall Machinery Engineering Co., Ltd. (海南長城機械工程有限公司)	The PRC	3,000 (2021: 3,000)	50%	Technical development, sales of equipment/The PRC

The above joint venture is accounted for by using the equity method.

	2022 RMB'000	2021 RMB'000
Current assets	**8,160**	10,238
Non-current assets	**944**	1,087
Total assets	**9,104**	11,325
Current liabilities	**1,409**	3,479
Total liabilities	**1,409**	3,479
Equity	**7,695**	7,846
Share of equity by the Group (50%) (2021: 50%)	**3,847**	3,923

	2022 RMB'000	2021 RMB'000
Revenue	**–**	12,212
(Loss)/profit and total comprehensive (expense)/income for the year	**(151)**	2,896
Share of total comprehensive (expense)/income (50%) (2021:50%)	**(76)**	1,448

There are no material contingent liabilities and commitments relating to the Group's interests in the joint venture and no material contingent liabilities and commitments of the joint venture itself.

20. Investment in a Joint Arrangement and Associates (Continued)

(b) Investments in associates

	2022	2021
	RMB'000	RMB'000
Beginning of the year	**158,915**	149,680
Share of total comprehensive income	**16,508**	17,235
Dividend distribution	**(1,000)**	(8,000)
End of the year	**174,423**	158,915

The Group's associates, all of which are unlisted and established in a form of limited company, are as follows:

Name	Establishment/Place of incorporation	Registered and fully paid capital	Indirect effective interest held	Principal activities and place of operations
		RMB'000		
China Petrochemical Technology Co., Ltd. (中國石油化工科技開發有限公司)[1]	The PRC	50,000 (2021: 50,000)	35.00% (2021: 35.00%)	Technical development, Technical service/The PRC
Shanghai KSD Bulk Solids Engineering Co., Ltd. (上海金申德粉體工程有限公司)[2]	The PRC	5,500 (2021: 5,500)	36.36% (2021: 36.36%)	Powder engineering services/ The PRC

The above associates are accounted for by using the equity method.

(1) The Group's share of the results of China Petrochemical Technology Co., Ltd., its aggregated assets and liabilities, are as follows:

	2022	2021
	RMB'000	RMB'000
Current assets	**1,748,945**	1,475,754
Non-current assets	**64,332**	60,292
Total assets	**1,813,277**	1,536,046
Current liabilities	**1,367,169**	1,132,155
Non-current liabilities	**4,566**	34
Total liabilities	**1,371,735**	1,132,189
Equity attributable to equity holders	**397,332**	364,805
Non-controlling interests	**44,209**	39,052
	441,541	403,857
Share of equity by the Group (35%) (2021: 35%)	**139,066**	127,682

20. Investment in a Joint Arrangement and Associates (Continued)

(b) Investments in associates (Continued)

(1) The Group's share of the results of China Petrochemical Technology Co., Ltd., its aggregated assets and liabilities, are as follows: (Continued)

	2022 RMB'000	2021 RMB'000
Revenue	**724,012**	626,337
Profit and total comprehensive income for the year attributable to equity holders	**32,527**	36,075
Profit and total comprehensive income for the year attributable to non-controlling interest holders	**6,407**	5,771
Share of total comprehensive income (35%) (2021: 35%)	**11,384**	12,626

For the years ended 31 December 2022, China Petrochemical Technology Co., Ltd. declares dividends of RMB Nil (2021: RMB20,000,000).

(2) The Group's share of the results of Shanghai KSD Bulk Solids Engineering Co., Ltd., its aggregated assets and liabilities, are as follows:

	2022 RMB'000	2021 RMB'000
Current assets	**233,652**	207,814
Non-current assets	**3,364**	1,516
Total assets	**237,016**	209,330
Current liabilities	**137,202**	123,402
Non-current liabilities	**2,543**	5
Total liabilities	**139,745**	123,407
Equity	**97,271**	85,923
Share of equity by the Group (36.36%) (2021: 36.36%)	**35,368**	31,242

	2022 RMB'000	2021 RMB'000
Revenue	**128,250**	128,867
Profit and total comprehensive income for the year	**14,097**	12,698
Share of total comprehensive income (36.36%) (2021: 36.36%)	**5,124**	4,609

For the year ended 31 December 2022, Shanghai KSD Bulk Solids Engineering Co., Ltd. declares dividends of RMB2,750,000 (2021: RMB2,750,000).

There are no material contingent liabilities and commitments relating to the Group's interests in the associates and no material contingent liabilities and commitments of the associates themselves.

21. Notes and Trade Receivables

	2022 RMB'000	2021 RMB'000
Trade receivables		
Fellow subsidiaries	**3,635,396**	1,810,551
Joint ventures of fellow subsidiaries	**490,604**	445,412
Associates of fellow subsidiaries	**198,741**	323,414
Associates	**77,020**	2,473
Third parties	**5,261,796**	5,522,787
	9,663,557	8,104,637
Less: ECL allowance for impairment	**(2,286,527)**	(2,303,492)
Trade receivables – net	**7,377,030**	5,801,145
Notes receivables	**1,218,283**	1,052,371
Notes and trade receivables – net	**8,595,313**	6,853,516

The carrying amounts of the Group's notes and trade receivables as at 31 December 2022 and 31 December 2021 approximate their fair values.

All notes receivables of the Group are bank's acceptance bills and commercial's acceptance bills and usually collected within six months from the date of issue.

The Group usually provides customers with a credit term between 15 and 180 days. For the settlement of trade receivables from provision of services, the Group usually reaches an agreement on the term of each payment with the customer by taking into account of factors such as, among other things, the credit history of the customer, its liquidity position and the Group's working capital needs, which varies on a case-by-case basis that requires the judgment and experience of the management. The Group does not hold any collateral as security.

Ageing analysis of notes and trade receivables, net of ECL allowance, by invoice date is as follows:

	2022 RMB'000	2021 RMB'000
Within 1 year	**7,871,827**	6,169,387
Between 1 and 2 years	**540,571**	457,188
Between 2 and 3 years	**121,889**	160,573
Between 3 and 4 years	**20,802**	25,288
Between 4 and 5 years	**8,112**	9,987
Over 5 years	**32,112**	31,093
	8,595,313	6,853,516

21. Notes and Trade Receivables (Continued)

The movements of ECL allowance on trade receivables are as follows:

	2022 RMB'000	2021 RMB'000
At the beginning of the year	**2,303,492**	1,541,497
ECL allowance	**204,982**	996,625
Receivables written off as uncollectible	**(4,395)**	(2,598)
Reversal	**(217,552)**	(232,032)
At the end of the year	**2,286,527**	2,303,492

During the year ended 31 December 2022, the Group has performed an individual assessment on those trade debtors with significant outstanding balances, some trade receivables has provided full ECL allowance in light of the severe financial difficulty and long default payment record, this led to a significant change in the ECL allowance on trade receivables.

The carrying amounts of the Group's notes and trade receivables are denominated in the following currencies:

	2022 RMB'000	2021 RMB'000
RMB	**8,190,451**	6,162,544
USD	**26,055**	18,253
SAR	**180,066**	314,181
KWD	**193,281**	285,725
MYR	**–**	47,955
RUB	**5,460**	18,038
Others	**–**	6,820
	8,595,313	6,853,516

22. Prepayments and Other Receivables

	2022 RMB'000	2021 RMB'000
Prepayments		
Prepayments for fellow subsidiaries	**472,133**	1,476,856
Prepayments for joint ventures of fellow subsidiaries	**335**	385
Prepayments for associates of fellow subsidiaries	**209**	3
Prepayments for construction	**1,825,752**	1,190,350
Prepayments for materials and equipment	**2,732,945**	3,566,695
Prepayments for labour costs	**109,016**	10,315
Prepayments for rent	**3,383**	12,449
Others	**76,211**	86,378
	5,219,984	6,343,431
Other receivables		
Amounts due from fellow subsidiaries(1)	**44,860**	16,891
Amounts due from joint ventures of fellow subsidiaries(1)	**220,208**	245,495
Amounts due from associates of fellow subsidiaries(1)	**164,369**	190,787
Dividends receivable	**1,000**	10,000
Interests receivable	**198,502**	402,177
Petty cash funds	**4,736**	5,321
Other guarantee deposits and deposits	**160,863**	121,458
Payment in advance	**296,412**	237,969
Maintenance funds	**64,591**	64,393
Value-added tax credit	**138,749**	249,100
Prepaid value-added tax	**56,484**	105,075
Prepaid income tax	**88,091**	85,786
Value-added tax to be certified	**15,453**	9,571
Land disposal	**–**	827
Others	**98,135**	78,234
	1,552,453	1,823,084
Less: ECL allowance for impairment	**(111,763)**	(108,093)
Prepayments and other receivables – net	**6,660,674**	8,058,422

(1) The amounts due from related parties are unsecured, interest free and repayable on demand.

22. Prepayments and Other Receivables (Continued)

The carrying amounts of the Group's prepayments and other receivables as at 31 December 2022 and 31 December 2021 approximate their fair values.

The movements of ECL allowance on other receivables are as follows:

	2022	2021
	RMB'000	RMB'000
At the beginning of the year	**108,093**	132,725
ECL allowance	**54,406**	24,464
Write-off of irrecoverable receivable	**(953)**	(1,958)
Reversal	**(49,783)**	(47,138)
At the end of the year	**111,763**	108,093

23. Contract Assets and Contract Liabilities

(a) Contract assets

	2022	2021
	RMB'000	RMB'000
Contract assets arising from construction contracts	**9,745,992**	10,273,333

Typical payment terms which impact on the amount of contract assets recognised are as follows:

The Group's construction contracts include payment schedules which require progress payments over the construction period once certain specified milestones are reached. The Group requires customers to pay deposits, normally 10% of total contract sum, as part of its credit risk management policies. The Group also agrees to have 1 to 2 years retention period for, normally 5% of the contract value. This amount is included in contract assets until the end of retention period as the Group's entitlement to this final payment is conditional on the Group's satisfactory work.

The amount of contract assets that is expected to be recovered after more than one year is RMB336,617,000 (2021: RMB648,903,000), all of which relates to retentions.

The movements of ECL allowance on contract assets are as follows:

	2022	2021
	RMB'000	RMB'000
At the beginning of the year	**465,962**	214,459
ECL allowance	**97,855**	267,663
Reversal	**(35,523)**	(16,160)
At the end of the year	**528,294**	465,962

23. Contract Assets and Contract Liabilities (Continued)

(b) Contract liabilities

	2022	2021
	RMB'000	RMB'000
Contract liabilities arising from construction contracts	**22,929,193**	17,485,967

Notes:
When the Group receives a deposit before the production activity commences, this will give rise to contract liabilities at the start of a contract until the revenue recognised on the project exceeds the amount of the deposit.

The balance of contract liabilities as at 1 January 2022 is RMB17,485,967,000 (2021: RMB15,511,149,000), in which RMB13,370,398,000 (2021: RMB12,884,276,000) was recognised as revenue during the year.

Unsatisfied performance obligation:

The Group has signed construction contracts with a number of clients to provide construction services for a certain period of time in the future. These contracts normally constitute a single performance obligation as a whole. As at 31 December 2022, part of the construction projects of the Group was still in the process, and the total transaction price apportioned to the unsatisfied performance obligation was RMB122,337,044,000 (2021: RMB111,045,177,000), the amount of which was related to the progress of the performance of each construction contract, and will be recognised as revenue in accordance with the percentage of work performed in the future.

24. Inventories

	2022	2021
	RMB'000	RMB'000
Raw materials	**524,201**	259,480
Turnover materials	**252,707**	215,393
Goods in transit	**8,436**	5,058
	785,344	479,931
Provision for impairment on inventories	**(27,849)**	–
Inventory, net	**757,495**	479,931

For the year ended 31 December 2022 and 2021, the cost of inventories recognised as expense and included in cost of sales amounted to RMB18,277,547,000 and RMB20,445,779,000 respectively.

25. Fair Value Through Other Comprehensive Income Investments

	2022	2021
	RMB'000	RMB'000
Beginning of financial year	–	–
Additions	**250,000**	–
End of financial year	**250,000**	–

Financial assets, at FVOCI is analysed as follows:

	2022	2021
	RMB'000	RMB'000
Unlisted equity shares	**250,000**	–
Total	**250,000**	–

Unlisted equity shares related to investment in Sinopec Carbon Industry Technology Co., Ltd., the company incorporated in the PRC. The Company mainly provides carbon verification; carbon asset management; research and development of carbon emission reduction, carbon conversion, carbon capture and carbon storage technologies; China certified voluntary emission reduction services; natural science research and experimental development; engineering and technological research and experimental development; technical services, technology development, technology consulting, technology exchange, technology transfer, technology promotion; technology import and export; engineering technology services; production, storage and sales of chemical products and hazardous chemicals; contract energy management; project investment; equity investment; financial asset management services; computer data processing and storage services; big data collection and application; intelligent design consulting; enterprise management consulting and information technology consulting services.

The financial asset, at FVOCI is classified as Level 3 of the fair value hierarchy, based on the unobservable inputs of the net asset value. The lower the net asset value, the lower the fair value.

26. Loans Due from the Ultimate Holding Company

Loans due from the ultimate holding company are unsecured, repayable within one year and interest bearings as follows:

	2022	2021
Loans due from the ultimate holding company	**3.00% to 3.60%**	3.60%

27. Restricted Cash

	2022 RMB'000	2021 RMB'000
Restricted cash		
– RMB	**82,916**	109,685

Restricted cash mainly represented restricted funds frozen by the order of Justice, bank deposits for guarantees and deposit for farmers' salaries.

As at 31 December 2022 and 31 December 2021, the weighted average effective interest rates per annum on restricted cash with maturities ranging from one to twelve months was determined in accordance with the interest rate per annum of bank current account.

The maximum exposure to credit risk approximates to carrying amounts of the Group's restricted cash at the end of the respective reporting periods.

28. Time Deposits

	2022 RMB'000	2021 RMB'000
Time deposits with initial term over three months:		
Time deposits in banks	**7,060,597**	6,701,030
Time deposits in fellow subsidiaries	**1,993,084**	1,656,583
	9,053,681	8,357,613

	2022 RMB'000	2021 RMB'000
Denominated in:		
– RMB	**6,567,098**	6,239,654
– USD	**2,013,327**	1,694,342
– MYR	**285,151**	276,323
– KWD	**159,264**	147,294
– EUR	**28,841**	–
	9,053,681	8,357,613

The fellow subsidiaries are Sinopec Finance Co., Ltd. and Sinopec Century Bright Capital Investment Limited.

The effective interest rates per annum on time deposits, with maturities of three months to three years (2021: three months to three years), are approximately 0.50% to 5.20% as at 31 December 2021 (2021:0.16% to 4.13%).

The maximum exposure to credit risk approximates to carrying amounts of the Group's time deposits at the end of the respective reporting periods.

29. Cash and Cash Equivalents

	2022 RMB'000	2021 RMB'000
Cash at bank and in hand		
– less than three months time deposits	**2,448,480**	1,220,933
– cash deposits	**6,911,272**	3,171,962
	9,359,752	4,392,895
Deposits in fellow subsidiaries		
– less than three months time deposits	**173,998**	324,264
– cash deposits	**5,439,348**	5,588,017
	5,613,346	5,912,281
	14,973,098	10,305,176

	2022 RMB'000	2021 RMB'000
Denominated in:		
– RMB	**12,244,426**	7,163,971
– USD	**753,018**	1,117,003
– SAR	**654,062**	219,777
– EUR	**540,027**	677,638
– KWD	**191,516**	330,093
– THB	**15,076**	23,640
– MYR	**46,646**	58,837
– RUB	**103,237**	561,753
– IRR	**415,732**	149,798
– Others	**9,358**	2,666
	14,973,098	10,305,176

The fellow subsidiaries are Sinopec Finance Co., Ltd. and Sinopec Century Bright Capital Investment Limited.

As at 31 December 2022 and 31 December 2021, the weighted average effective interest rates per annum on cash at bank are determined in accordance with the interest rate per annum of bank current account.

The effective interest rates per annum on deposits less than three months, with maturities of seven days to three months (2021: seven days to three months), are approximately 0.00% to 4.50% as at 31 December 2022 (2021: 0.00% to 6.90%).

The maximum exposure to credit risk approximates the carrying amounts of cash and cash equivalents at the end of the respective reporting periods.

30. Share Capital

	As at 31 December 2022		As at 31 December 2021	
	Number of shares	Share capital	Number of shares	Share capital
		RMB'000		RMB'000
Registered, issued and fully paid				
– Domestic shares of RMB1.00 each[1]	**2,967,200,000**	**2,967,200**	2,967,200,000	2,967,200
– H Shares of RMB1.00 each	**1,460,800,000**	**1,460,800**	1,460,800,000	1,460,800
	4,428,000,000	**4,428,000**	4,428,000,000	4,428,000

(1) The 2,967,200,000 domestic shares comprise as follows:
   (a) 2,907,856,000 shares are held by Sinopec Group; and
   (b) 59,344,000 shares are held by SAMC (a fellow subsidiary).

31. The Statement of Financial Position, the Statement of Changes in Equity and Reserves of the Company

(i) The statement of financial position of the Company

	2022	2021
	RMB'000	RMB'000
ASSETS		
Non-current assets		
Property, plant and equipment	**140,134**	135,181
Right-of-use assets	**55,212**	76,925
Intangible assets	**121,844**	139,092
Investment in subsidiaries	**7,999,976**	7,920,086
Deferred income tax assets	**3,693**	4,748
Total non-current assets	**8,320,859**	8,276,032
Current assets		
Inventories	**66**	116
Notes and trade receivables	**39,471**	25,262
Prepayments and other receivables	**1,042,914**	1,334,454
Contract assets	**56,957**	26,030
Loans due from the ultimate holding company	**20,500,000**	20,500,000
Time deposits	**6,955,217**	6,782,069
Cash and cash equivalents	**10,124,234**	6,201,983
Total current assets	**38,718,859**	34,869,914
Total assets	**47,039,718**	43,145,946

31. The Statement of Financial Position, the Statement of Changes in Equity and Reserves of the Company (Continued)

(i) The statement of financial position of the Company (Continued)

	2022	2021
	RMB'000	RMB'000
Equity		
Share capital	**4,428,000**	4,428,000
Reserves	**14,605,039**	14,770,615
Total equity	**19,033,039**	19,198,615
LIABILITIES		
Non-current liabilities		
Lease liabilities	**–**	6,156
Retirement and other supplemental benefit obligations	**1,018**	1,494
Total non-current liabilities	**1,018**	7,650
Current liabilities		
Trade payables	**506,578**	559,421
Other payables	**27,327,197**	23,168,563
Contract liabilities	**20,652**	46,931
Lease liabilities	**5,891**	22,575
Current income tax liabilities	**145,343**	142,191
Total current liabilities	**28,005,661**	23,939,681
Total liabilities	**28,006,679**	23,947,331
Total equity and liabilities	**47,039,718**	43,145,946
Net current assets	**10,713,198**	10,930,233
Total assets less current liabilities	**19,034,057**	19,206,265

Approved and authorised for issue by the board of directors on 17 March 2023.

SUN Lili	JIANG Dejun	JIA Yiqun
Chairwoman of the Board	*Director, President*	*Chief Financial Officer*

31. The Statement of Financial Position, the Statement of Changes in Equity and Reserves of the Company (Continued)

(ii) The statement of changes in equity of the Company

	Share capital	Capital reserve	Statutory surplus reserve	Retained earnings	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
At 1 January 2021	4,428,000	11,207,894	1,470,998	1,752,068	18,858,960
Profit for the year	–	–	–	1,589,370	1,589,370
Other comprehensive income:					
Defined benefits obligation revaluation of actuarial gain and loss – gross	–	–	–	4	4
Defined benefits obligation revaluation of actuarial gain and loss – tax	–	–	–	(1)	(1)
Exchange differences arising on foreign operations	–	–	–	(18,734)	(18,734)
Total comprehensive income	–	–	–	1,570,639	1,570,639
Transactions with owners:					
Final dividends for 2020	–	–	–	(828,036)	(828,036)
Interim dividends for 2021	–	–	–	(402,948)	(402,948)
Transfer to Statutory surplus reserve	–	–	35,181	(35,181)	–
Total transactions with owners	–	–	35,181	(1,266,165)	(1,230,984)
At 31 December 2021 and 1 January 2022	**4,428,000**	**11,207,894**	**1,506,179**	**2,056,542**	**19,198,615**
Profit for the year	**–**	**–**	**–**	**1,265,394**	**1,265,394**
Other comprehensive income:					
Defined benefits obligation revaluation of actuarial gain and loss – gross	**–**	**–**	**–**	**330**	**330**
Defined benefits obligation revaluation of actuarial gain and loss – tax	**–**	**–**	**–**	**(82)**	**(82)**
Exchange differences arising on foreign operations	**–**	**–**	**–**	**74,302**	**74,302**
Total comprehensive income	**–**	**–**	**–**	**1,339,944**	**1,339,944**
Transactions with owners:					
Final dividends for 2021	**–**	**–**	**–**	**(983,016)**	**(983,016)**
Interim dividends for 2022	**–**	**–**	**–**	**(522,504)**	**(522,504)**
Transfer to Statutory surplus reserve	**–**	**–**	**126,609**	**(126,609)**	**–**
Total transactions with owners	**–**	**–**	**126,609**	**(1,632,129)**	**(1,505,520)**
At 31 December 2022	**4,428,000**	**11,207,894**	**1,632,788**	**1,764,357**	**19,033,039**

31. The Statement of Financial Position, the Statement of Changes in Equity and Reserves of the Company (Continued)

(iii) Distributable profits

The distributable profits of the Company are as follows:

	2022	2021
	RMB'000	RMB'000
Distributable profits	**1,764,357**	2,056,542

(iv) Statutory surplus reserve

In accordance with the relevant laws and regulations of the PRC and the articles of association of the Company, it is required to appropriate 10% of its net profit determined in accordance with China Accounting Standards for Enterprises issued by the Ministry of Finance of PRC, after offsetting any prior years' losses, to the statutory surplus reserve. When the balance of such a reserve reaches 50% of the respective companies registered capital, any further appropriation is optional. The reserve must be made before distribution of dividends to shareholders.

The statutory surplus reserve can be used to offset prior years' losses, if any, and may be converted into share capital by issuing new shares to shareholders in proportion to their existing shareholding or by increasing the par value of the shares currently held by them, provided that the remaining balance of the reserve after such an issue is not less than 25% of registered capital. The statutory surplus reserve is non-distributable.

(v) Capital reserve

Capital reserve arising from event-driven revaluation represented reserve recognised due to the revaluation arising from the Reorganisation, being the excess of fair value over carrying value net of the deferred tax liabilities. Apart from the above mentioned event-driven revaluation, capital reserve included transactions with holding company such as assets transferred from/ to Sinopec Group and also the share premium account and the fair value change arising from the financial assets designated as a fair value through other comprehensive income of associate.

(vi) Specific reserve

Pursuant to certain regulations issued by the State Administration of Work Safety of the PRC, the Group is required to set aside an amount to a safety fund for its engineering and construction contracting business. The fund can be used for improvements of safety at the worksite, and is not available for distribution to shareholders. Upon incurring qualifying safety expenditures, an equivalent amount is transferred from safety fund to retained earnings.

(vii) Exchange translation reserve

Exchange translation reserve represents exchange differences arising on the translation of financial statements of foreign operations and is treated according to accounting policies Note 3.5.

32. Lease Liabilities

	2022 RMB'000	2021 RMB'000
Total minimum lease payments:		
Due within one year	**64,933**	78,264
Due in the second to fifth years	**57,397**	73,278
Due after the fifth year	**18,538**	28,337
	140,868	179,879
Future finance charges on leases liabilities	**(11,798)**	(18,149)
Present value of leases liabilities	**129,070**	161,730
Present value of minimum lease payments:		
Due within one year	**62,254**	73,489
Due in the second to fifth years	**51,048**	65,334
Due after the fifth year	**15,768**	22,907
	129,070	161,730
Less:		
Portion due within one year included under current liabilities	**(62,254)**	(73,489)
Portion due after one year included under non-current liabilities	**66,816**	88,241

During the year ended 31 December 2022, the Group entered into a number of lease agreements for usage of residential properties, office and equipment for 1 to 20 years (2021: 1 to 20 years). The Group makes fixed payments and additional variable payments depends on the usage of the buildings, plant and machinery, transportation equipment and other equipment during the contract period. On lease commencement, the Group recognised right-of-use assets included in property, plant equipment and lease liabilities amounting to RMB67,442,000 (2021: RMB115,232,000).

During the year ended 31 December 2022, the total cash outflows for the leases are RMB353,804,000 (2021: RMB402,619,000).

Details of the lease activities

As at 31 December 2022, the Group has entered into leases for office and staff quarter.

Types of right-of-use assets	Financial statements items of right-of-use assets included in	Number of leases	Range of remaining lease term
Office and staff quarter	Building and other facilities carried at cost in "property, plant and equipment"	98 (2021: 89)	1 to 10 years (2021: 1 to 10 years)
Land use rights in PRC	Prepaid land use rights payments	131 (2021: 133)	21 to 60 years (2021: 22 to 61 years)

The Group considered that no extension option or termination option would be exercised at the lease commencement date.

33. Retirement and Other Supplemental Benefit Obligations

(a) State-managed retirement plan

For the year ended 31 December 2022, the Chinese employees of the Group participate in employee social security plans organised and administrated by the PRC government authority. The PRC companies are required to contribute from 14% to 19%, (2021: 14% to 19%) depending on the applicable legal regulations, of salaries, wages and bonuses to the state-managed retirement plans. The obligation of these PRC companies with respect to the state-managed retirement plans is to make the specified contributions (Note 16(1)).

The total costs charged to the consolidated statement of comprehensive income during the years ended 31 December 2022 and 2021 are as follows:

	2022	2021
	RMB'000	RMB'000
Contributions to state-managed retirement plan	**799,657**	754,366

(b) Group employee retirement benefit plans

The Group has implemented a retirement benefit plan to employees in the PRC who were retired on or before 30 June 2012. Such supplementary pension subsidies are considered to be defined benefit plans as the Group is obligated to provide post-employment benefits to these employees.

According to the plans, such employees after retirement can enjoy retirement pension, welfare allowance, part of medical expenses claim, living expenses and insurance and housing fund and other benefits. The employees' lifetime is guaranteed by the plans.

The exposure to actuarial risks of the Group's retirement benefit plans include: discount rate risk, benefit growth rate risk.

The Group is not obligated to provide post-employment benefits to incumbent employees.

The most recent actuarial valuation as at 31 December 2022 was performed by an independent qualified actuarial firm: Towers Watson Management Consulting (Shenzhen) Co., Ltd. Beijing Branch. The present value, related current service cost and past service cost of the Group's retirement benefit plan obligation are prepared by qualified actuary using the projected unit credit actuarial cost method.

(i) Discount rates adopted (per annum):

	2022	2021
Retirement with honors benefit plan	**2.50%**	2.50%
Retirement benefit plan	**3.00%**	3.00%
Early retirement benefit plan	**2.50%**	2.50%

(ii) Benefit growth rates (per annum):

	2022	2021
Retirement with honors benefit plan	**2.00%**	1.70%
Retirement benefit plan	**2.20%**	2.60%
Early retirement benefit plan	**2.10%**	1.70%

33. Retirement and Other Supplemental Benefit Obligations (Continued)

(b) Group employee retirement benefit plans (Continued)

(iii) Duration:

	2022	2021
Retirement with honors benefit plan	**5.0 years**	5.0 years
Retirement benefit plan	**14.0 years**	14.0 years
Early retirement benefit plan	**3.0 years**	3.0 years

The below sensitivity analysis details how the Group's retirement benefit plan obligation as at the reporting date would have increased/(decreased) as a result of 0.25% reasonably possible increase or decrease assessed by management in each of the significant actuarial assumptions:

	As at 31 December 2022 Increase/(decrease) in retirement benefit plan obligation		As at 31 December 2021 Increase/(decrease) in retirement benefit plan obligation	
	Increase in assumption	Decrease in assumption	Increase in assumption	Decrease in assumption
	RMB'000	RMB'000	RMB'000	RMB'000
Discount rates	**(39,613)**	**41,179**	(46,544)	48,454
Benefit growth rates	**39,508**	**(38,189)**	46,397	(44,790)

The above sensitivity analysis is based on a change in an actuarial assumption while holding all other actuarial assumptions constant. Also, it is based on the assumption that changes in actuarial assumptions are not correlated.

(iv) Mortality: Average life expectancy of residents in the PRC.

(v) Benefit costs paid to the retirees are assumed to continue until the death of the retirees.

33. Retirement and Other Supplemental Benefit Obligations (Continued)

(b) Group employee retirement benefit plans (Continued)

The total costs of retirement benefit plans in the consolidated statement of comprehensive income are as follows:

	Retirement with honors benefit plan	Retirement benefit plan	Early retirement benefit plan	Total
	RMB'000	RMB'000	RMB'000	RMB'000
For the year ended 31 December 2021				
Service costs:				
Past service cost	–	–	22,099	22,099
Net interest expenses	1,232	64,097	4,111	69,440
Immediate recognition of actuarial losses	–	–	11,919	11,919
Benefit cost recognised in profit or loss	1,232	64,097	38,129	103,458
Revaluation of net benefit obligation liabilities				
Actuarial revaluation of economic assumptions change	576	62,382	–	62,958
Actuarial revaluation of other assumptions change	(4,091)	(37,036)	–	(41,127)
Benefit cost recognised in other comprehensive income	(3,515)	25,346	–	21,831
Total benefit cost recognised consolidated statement of comprehensive income	(2,283)	89,443	38,129	125,289
For the year ended 31 December 2022				
Service costs:				
Past service cost	**–**	**–**	**3,532**	**3,532**
Net interest expenses	**717**	**57,101**	**3,087**	**60,905**
Immediate recognition of actuarial losses	**–**	**–**	**7,749**	**7,749**
Benefit cost recognised in profit or loss	**717**	**57,101**	**14,368**	**72,186**
Revaluation of net benefit obligation liabilities				
Actuarial revaluation of economic assumptions change	**286**	**(62,610)**	**–**	**(62,324)**
Actuarial revaluation of other assumptions change	**6,747**	**(45,512)**	**–**	**(38,765)**
Benefit cost recognised in other comprehensive income	**7,033**	**(108,122)**	**–**	**(101,089)**
Total benefit cost recognised in the consolidated statement of comprehensive income	**7,750**	**(51,021)**	**14,368**	**(28,903)**

The Group's benefit plans do not include incumbent employees. No current service cost of each benefit plan incurred during each financial period. Meanwhile, the Group's benefit plans do not provide reserve of plan assets, therefore, there is no reserve of earnings from plan assets during each financial year.

Service cost and net interest expenses are recognised in employment benefits, part of the administrative expenses and finance expenses of the consolidated statement of comprehensive income. Revaluation of net liabilities of benefit obligation is recognised as other comprehensive income in the consolidated statement of profit or loss and other comprehensive income.

33. Retirement and Other Supplemental Benefit Obligations (Continued)

(b) Group employee retirement benefit plans (Continued)

As at the end of each reporting period, no assets reserve is under the Group's benefit plans. The net liabilities of retirement benefit plan obligations are recognised in the consolidated statement of financial position as follows:

	2022	2021
	RMB'000	RMB'000
Net liabilities of retirement benefit plan obligation	**1,913,763**	2,154,036

The movement of retirement benefit plan obligation as follows:

	Retirement with honors benefit plan	Retirement benefit plan	Early retirement benefit plan	Total
	RMB'000	RMB'000	RMB'000	RMB'000
At 1 January 2021	45,366	2,049,536	157,887	2,252,789
Past service cost	–	–	22,099	22,099
Net interest expenses	1,232	64,097	4,111	69,440
Immediate recognition of actuarial gains	–	–	11,919	11,919
Revaluation gain/(loss):				
Actuarial revaluation of economic assumptions change	576	62,382	–	62,958
Actuarial revaluation of other assumptions change	(4,091)	(37,036)	–	(41,127)
Direct benefit paid by the Group	(11,251)	(160,863)	(51,928)	(224,042)
At 31 December 2021 and 1 January 2022	**31,832**	**1,978,116**	**144,088**	**2,154,036**
Past service cost	**–**	**–**	**3,532**	**3,532**
Net interest expenses	**717**	**57,101**	**3,087**	**60,905**
Immediate recognition of actuarial losses	**–**	**–**	**7,749**	**7,749**
Revaluation gain/(loss):				
Actuarial revaluation of economic assumptions change	**286**	**(62,610)**	**–**	**(62,324)**
Actuarial revaluation of other assumptions change	**6,747**	**(45,512)**	**–**	**(38,765)**
Direct benefit paid by the Group	**(9,119)**	**(152,404)**	**(49,847)**	**(211,370)**
At 31 December 2022	**30,463**	**1,774,691**	**108,609**	**1,913,763**

The Group has no reserve of plan assets, no capital injection of plan assets is established and no future contribution is arranged.

34. Provision for Litigation Claims

	2022	2021
	RMB'000	RMB'000
Beginning of the year	**181,292**	186,593
Exchange difference	**4,876**	(4,014)
Payment	**(1,897)**	(1,287)
End of the year	**184,271**	181,292

The amounts represented the provision provided by a subsidiary of the Group for litigation.

The subsidiary of the Group has been sued during Year 2007 to Year 2009 due to a construction contract disputes and the case is ongoing process. The management of the Group has calculated all provision for the expected compensation incurred in accordance with the progress and solutions of the case.

For the years ended December 2022 and 2021, no additional provision for litigation claims is provided.

35. Notes and Trade Payables

	2022	2021
	RMB'000	RMB'000
Trade payables		
– Fellow subsidiaries	**306,790**	1,064,598
– Associates of fellow subsidiaries	**232**	240
– Joint ventures of fellow subsidiaries	**635**	1,769
– Associates	**48**	1,477
– Third parties	**17,442,700**	17,298,198
	17,750,405	18,366,282
Notes payables	**2,041,792**	2,023,775
Notes and trade payables	**19,792,197**	20,390,057

The carrying amounts of the Group's notes and trade payables as at 31 December 2022 and 31 December 2021 approximate their fair values.

35. Notes and Trade Payables (Continued)

Ageing analysis of notes and trade payables based on invoice date is as follows:

	2022	2021
	RMB'000	RMB'000
Within 1 year	**16,452,797**	16,232,436
Between 1 and 2 years	**1,521,141**	2,100,996
Between 2 and 3 years	**883,714**	1,116,808
Over 3 years	**934,545**	939,817
	19,792,197	20,390,057

The carrying amounts of notes and trade payables are denominated in the following currencies:

	2022	2021
	RMB'000	RMB'000
RMB	**18,615,829**	19,530,933
USD	**48,337**	55,447
SAR	**614,264**	392,183
RUB	**100,877**	206,706
KWD	**347,111**	63,654
MYR	**36,173**	94,149
AED	**12,757**	30,195
THB	**2,745**	11,318
Others	**14,104**	5,472
	19,792,197	20,390,057

36. Other Payables

	2022	2021
	RMB'000	RMB'000
Salaries payables	**457,724**	422,844
Other taxation payables	**802,300**	612,686
Output value-added tax to be recognised	**2,682**	5,964
Payable of separation and transfer of "Water/electricity/gas supply and property management"	**8,360**	21,834
Deposits and guarantee deposits payables	**72,117**	71,677
Advanced payables	**1,049,747**	968,843
Rent, property management and maintenance payables	**116,537**	93,507
Contracts payables	**419,668**	351,170
Amounts due to ultimate holding company(1)	**209**	192
Amounts due to fellow subsidiaries(1)	**68,598**	264,958
Amounts due to a joint venture(1)	**71**	71
Amounts due to joint ventures of fellow subsidiaries(1)	**241**	–
Amounts due to associates of fellow subsidiaries(1)	**888**	888
Interest payables	**–**	214
Others	**94,291**	71,978
Total other payables	**3,093,433**	2,886,826

Note:
(1) Amounts due to related parties are unsecured, interest free and repayable on demand.

The carrying amounts of the Group's other payables as at 31 December 2022 and 31 December 2021 approximate their fair values.

37. Deferred Income Tax

Deferred income tax assets recognised:

	2022	2021
	RMB'000	RMB'000
Deferred income tax assets	**769,229**	843,162

Deferred income tax liabilities recognised:

	2022	2021
	RMB'000	RMB'000
Deferred income tax liabilities	**2,091**	–

The gross movement on the deferred income tax account is as follows:

	2022	2021
	RMB'000	RMB'000
At the beginning of the year	**843,162**	709,030
Credited/(charged) to equity for defined benefit obligations revaluation of actuarial gain or loss	**(20,960)**	3,591
Tax credited/(charged) to profit for the year (Note 12)	**(55,064)**	130,541
At the end of the year	**767,138**	843,162

The movement in deferred income tax assets and liabilities during the years ended 31 December 2022 and 2021, without taking into consideration the offsetting of balances within the same tax jurisdiction, is as follows:

Deferred income tax assets/liabilities

	Provision for retirement and other supplemental benefit obligation	Provision for impairment on assets	Others	Total
	RMB'000	RMB'000	RMB'000	RMB'000
At 1 January 2021	368,211	311,825	28,994	709,030
Credited/(Charged) to:				
Loss/(Profit) for the year	(15,899)	147,506	(1,066)	130,541
Equity	3,591	–	–	3,591
At 31 December 2021 and 1 January 2022	**355,903**	**459,331**	**27,928**	**843,162**
Credited/(Charged) to:				
Loss/(Profit) for the year	**(45,381)**	**(9,286)**	**(397)**	**(55,064)**
Equity	**(20,960)**	**–**	**–**	**(20,960)**
At 31 December 2022	**289,562**	**450,045**	**27,531**	**767,138**

37. Deferred Income Tax (Continued)

Deferred income tax assets not recognised

Deferred income tax assets are recognised for tax losses carried-forward to the extent that the realisation of the related income tax benefits through the future taxable profits is probable. In accordance with the PRC tax law applicable to those companies in their respective jurisdictions, tax losses may be carried forward against future taxable income. Deferred income tax assets not recognised in the Group is as follows:

	2022	2021
	RMB'000	RMB'000
Tax losses for which no deferred income tax asset was recognised	**896,098**	959,394

The Group did not recognise deferred income tax assets as the management believes it is not likely that such tax losses would be realised before they expire. The tax loss for which no deferred income tax assets recognised mentioned would be expired in five years.

38. Loan Due to a Fellow Subsidiary

Loan due to a fellow subsidiary is unsecured, repayable within one year and interest bearing at 2.16% to 2.99% (2021: 1% to 2.16%) per annum. The fellow subsidiary is Sinopec Century Bright Capital Investment Limited.

39. Commitments

(a) Capital commitments

Capital commitments for the purchase of property, plant and equipment outstanding as at 31 December 2022 and 31 December 2021 not provided for in the consolidated financial statements are as follows:

	2022	2021
	RMB'000	RMB'000
Contracted but not provided for		
– Property, plant and equipment	**22,424**	6,922

(b) Operating leasing commitments

At the reporting date, the lease commitments for short-term leases are as follows:

	2022	2021
	RMB'000	RMB'000
Less than 1 year	**43,140**	58,100

As at 31 December 2022 and 31 December 2021, the Group leases a number of residential properties, offices and equipment with a lease period of 6 to 12 months, which are qualified to be accounted for under short-term lease exemption under IFRS 16.

40. Cash Generated from Operations

	2022 RMB'000	2021 RMB'000
Profit before taxation	**2,762,276**	2,592,407
Adjustments for:		
Provision for ECL on trade and other receivables and contract assets, net	**48,669**	993,422
Provision for impairment on inventories	**27,849**	–
Depreciation of property, plant and equipment	**700,138**	640,524
Depreciation of right-of-use assets	**172,862**	169,774
Amortisation of intangible assets	**43,011**	63,823
Net gains on disposal/write-off of property, plant and equipment	**(3,193)**	(51,342)
Net (gains)/losses on disposal/write-off land use rights	**(140)**	163
Losses/(gains) on separation and transfer of property, plant and equipment and land use rights	**700**	(5,949)
Interest income	**(1,008,528)**	(954,622)
Interest expense	**73,491**	82,796
Exchange (gains)/losses, net	**(229,800)**	82,990
Share of loss/(profit) of a joint arrangement	**76**	(1,448)
Share of profit of associates	**(16,502)**	(9,235)
Cash flows from operating activities before changes in working capital	**2,570,909**	3,603,303
Changes in working capital:		
– Inventories	**(305,413)**	868,191
– Contract assets	**470,584**	(1,698,568)
– Contract liabilities	**5,443,226**	1,974,818
– Notes, trade and other receivables	**(584,321)**	242,293
– Notes, trade and other payables	**(896,655)**	(1,725,123)
– Restricted cash	**26,769**	(73,024)
Cash generated from operations	**6,725,099**	3,191,890

41.Contingencies

The Group has been named in a number of lawsuits and other legal proceedings arising in the ordinary course of business. Provisions have been made for the probable losses to the Group on those claims when management can reasonably estimate the outcome of the lawsuits based on management's judgments and the legal advice. No provision has been made for pending lawsuits when the outcome of the lawsuits cannot be reasonably estimated or management believes the outflow of resources is not probable.

It is not anticipated that any material liabilities will arise from the contingent liabilities other than those provided for (Note 34).

42. Significant Related Party Transactions and Balances

Parties are considered to be related to the Group if the Group has the ability, directly or indirectly, to control or jointly control the party or exercise significant influence over the party in making financial and operating decisions, or vice versa, or where the Group and the party are subject to control or common control. Related parties may be individuals (being members of key management personnel, significant shareholders and/or their close family members) or other entities and include entities which are under the significant influence of related parties of the Group where those parties are individuals, and post-employment benefit plans which are for the benefit of employees of the Group or of any entity that is a related party of the Group.

In addition to the related party information shown elsewhere in this report, the following is a summary of significant related party transactions entered into in the ordinary course of business between the Group and its related parties during the year ended 31 December 2022 and 2021 and balances as at 31 December 2022 and 31 December 2021.

The transactions with related parties are carried out on pricing and settlement terms agreed with counter parties in the ordinary course of business.

(a) Significant related party transactions and year end balances arising with the Sinopec Group, fellow subsidiaries, associates, joint ventures of fellow subsidiaries and associates of fellow subsidiaries:

	2022	2021
	RMB'000	RMB'000
Construction and services provided to		
– Ultimate holding company	**75**	2,528
– Joint ventures of fellow subsidiaries	**1,165,901**	4,271,409
– Associates of fellow subsidiaries	**2,678,109**	1,825,310
– Fellow subsidiaries	**27,384,967**	31,687,423
– Associates	**16,613**	31,909
– Joint ventures	**–**	236
	31,245,665	37,818,815
Construction and services received from		
– Ultimate holding company	**9,837**	19,236
– Joint ventures of fellow subsidiaries	**2,225**	3,378
– Associates of fellow subsidiaries	**1,042**	1,487
– Fellow subsidiaries	**5,300,459**	3,574,878
– Associates	**15,182**	13,962
	5,328,745	3,612,941
Technology research and development provided to		
– Ultimate holding company	**10,283**	23,098
– Fellow subsidiaries	**5,523**	40,486
– Associates	**198,356**	87,848
	214,162	151,432

42. Significant Related Party Transactions and Balances (Continued)

(a) Significant related party transactions and year end balances arising with the Sinopec Group, fellow subsidiaries, associates, joint ventures of fellow subsidiaries and associates of fellow subsidiaries: (Continued)

	2022	2021
	RMB'000	RMB'000
General services provided to		
– Joint ventures of fellow subsidiaries	**294**	1,656
– Associates of fellow subsidiaries	**41**	–
– Fellow subsidiaries	**6,982**	4,804
	7,317	6,460
General services received from		
– Fellow subsidiaries	**48,391**	61,742
Interest income on loans		
– Ultimate holding company	**693,529**	711,024
Interest expense on borrowings		
– Fellow subsidiaries	**5,658**	4,323
Expenses in relation to settlement and other financial services		
– Fellow subsidiaries	**3,281**	1,835
Deposit interest income from fellow subsidiaries	**87,850**	55,500

	2022	2021
	RMB'000	RMB'000
Deposits and time deposits placed in fellow subsidiaries	**7,606,431**	7,568,864

The majority of these significant related party transactions with Sinopec Group and fellow subsidiaries also constitute continuing connected transactions as defined under Chapter 14A of the Rules Governing the Listing of Securities on the Hong Kong Stock Exchange.

42. Significant Related Party Transactions and Balances (Continued)

(a) Significant related party transactions and year end balances arising with the Sinopec Group, fellow subsidiaries, associates, joint ventures of fellow subsidiaries and associates of fellow subsidiaries: (Continued)

Apart from transactions with Sinopec Group, fellow subsidiaries, associates, joint ventures of fellow subsidiaries and associates of fellow subsidiaries, the Group has transactions with other state-owned enterprises including but not limited to the following:

– Sales and purchases of goods and services;

– Purchases of assets;

– Lease of assets; and

– Bank deposits and borrowings.

In the ordinary course of business, the Group sells goods and services to, and purchase goods and services from other state-owned enterprises based on terms as set out in the underlying agreements, market price or actual cost incurred, or as mutually agreed.

In the ordinary course of business, the Group places deposits and borrowings mainly in state-owned financial institutions. The deposits and borrowings are in accordance with terms as set out in the respective agreement, and the interest rates are set at prevailing market rates.

Apart from the disclosure of loans due from the ultimate holding company in Note 26, trade receivables, prepayments and other receivables are unsecured, interest free and repayable on demand.

(b) Key management personnel remuneration

Key management includes directors, supervisors, and other key management personnel to the Board of Directors. The compensation paid or payable to key management for employee services is shown below:

	Year ended 31 December	
	2022	2021
	RMB'000	RMB'000
Fee	**600**	600
Basic salaries, other allowances and benefits-in-kind	**3,634**	4,476
Discretionary bonus (i)	**12,055**	7,623
Contributions to pension plans	**2,458**	1,310
	18,747	14,009

(i) The Group determines and pays discretionary bonus based on the actual financial results and performance of employee.

43. Reconciliations of Liabilities Arising from Financing Activities

The changes in the Group's liabilities arising from financing activities can be classified as follows:

	Loans due to a fellow subsidiary	Lease liabilities
	RMB'000	RMB'000
At 1 January 2021	163,123	163,943
Cash-flow:		
– Drawdown	173,841	–
– Capital element of lease rentals paid	–	(93,407)
– Interest element of lease rentals paid	–	(8,578)
– Repayment	(269,483)	–
Non-cash:		
– Entered into new lease	–	91,721
– Interest expenses	–	8,578
– Modification	–	(514)
– Exchange difference	(3,724)	(13)
At 31 December 2021 and 1 January 2022	**63,757**	**161,730**
Cash-flow:		
– Drawdown	**61,892**	**–**
– Capital element of lease rentals paid	**–**	**(112,462)**
– Interest element of lease rentals paid	**–**	**(6,616)**
Non-cash:		
– Entered into new lease	**–**	**88,343**
– Interest expenses	**–**	**6,616**
– Modification	**–**	**(10,028)**
– Exchange difference	**16,323**	**1,487**
At 31 December 2022	**141,972**	**129,070**

44. Particulars of Principal Subsidiaries

As at 31 December 2022, the Company has direct and indirect interests in the following principal subsidiaries:

Name	Establishment/Place of incorporation and type of legal entity	Registered and fully paid capital	Effective interest held		Principal activities and place of operation
			Direct held	Indirect held	
		RMB'000			
SEI (中國石化工程建設有限公司)	The PRC/Limited liability company	500,000	100%	–	Engineering contracting, engineering and consulting/The PRC
LPEC (中石化洛陽工程有限公司)	The PRC/Limited liability company	500,000	100%	–	Engineering contracting, engineering and consulting/The PRC
SSEC (中石化上海工程有限公司)	The PRC/Limited liability company	500,000	100%	–	Engineering contracting, engineering and consulting/The PRC
SNEC (中石化寧波工程有限公司)	The PRC/Limited liability company	500,000	100%	–	Engineering contracting, design, equipment manufacturing/The PRC
SNEI (中石化南京工程有限公司)	The PRC/Limited liability company	556,005	100%	–	Engineering contracting, design/ The PRC
FCC (中石化第四建設有限公司)	The PRC/Limited liability company	350,000	100%	–	Engineering contracting/The PRC
SFCC (中石化第五建設有限公司)	The PRC/Limited liability company	350,000	100%	–	Engineering contracting/The PRC
TCC (中石化第十建設有限公司)	The PRC/Limited liability company	350,000	100%	–	Engineering contracting/The PRC
Sinopec Guangzhou Engineering Co., Ltd. (中石化廣州工程有限公司)	The PRC/Limited liability company	300,000	100%	–	Engineering contracting/The PRC
Ningbo Institute (中石化寧波技術研究院有限公司)	The PRC/Limited liability company	10,000	100%	–	Technical services/The PRC
Sinopec Heavy Lifting and Transportation Co., Ltd. (中石化重型起重運輸工程有限責任公司)	The PRC/Limited liability company	500,000	100%	–	Engineering contracting technical service, equipment selling and leasing/The PRC
Sinopec Engineering Group Saudi Arabia Co., Ltd. (中石化煉化工程(集團)股份有限公司沙特公司)	Saudi Arabia/Limited liability company	33,558 (SAR18,000,000)	100%	–	Engineering contracting/ Saudi Arabia
Sinopec Engineering Group America, L.L.C (中石化煉化工程(集團)股份有限公司美國公司)	United States/Limited liability company	3,075 (USD500,000)	100%	–	Engineering contracting, engineering and consulting/United States
Sinopec Energy-Saving Technology Service Co., Ltd (中石化節能技術服務有限公司)	The PRC/Limited liability company	500,000	100%	–	Technical service, contractual energy management and engineering research/The PRC
Sinopec Engineering Group Russia L.L.C. (中石化煉化工程集團俄羅斯子公司)	Russia/Limited liability company	9,804 (USD1,500,000)	100%	–	Engineering contracting, engineering and consulting/Russia
SINOPEC Engineering Group Malaysia SDN BHD (中石化煉化工程(集團)股份有限公司馬來西亞公司)	Malaysia/Limited liability company	5,158 (MYR3,607,000)	100%	–	Engineering contracting/Malaysia
Sinopec Shanghai Pharmaceutical Industry Designing Institute Co., Ltd. (中石化上海醫藥工業設計研究院有限公司)	The PRC/Limited liability company	8,000	–	100%	Medicine, pesticide, chemical research/The PRC
Shanghai Petrochemical Machine Manufacturing Co., Ltd. (上海石化機械製造有限公司)	The PRC/Limited liability company	133,640	–	100%	Petrochemical equipment manufacturing/The PRC
Ningbo Tianyi Equipment Technology Co., Ltd. (寧波天翼裝備技術有限公司)	The PRC/Limited liability company	60,000	–	100%	Petrochemical equipment design, manufacturing and installation/The PRC
Ningbo Tianyi Petrochemical Heavy Equipment Manufacturing Co., Ltd. (寧波天翼石化重型設備製造有限公司)	The PRC/Limited liability company	60,000	–	97%	Petrochemical equipment manufacturing and installation/The PRC
SINOPEC Engineering Group (Thailand) Co., Ltd. (中石化煉化工程(集團)股份有限公司泰國公司)	Thailand/Limited liability company	356 (THB2,000,000)	–	100%	Engineering contracting/Thailand

44. Particulars of Principal Subsidiaries (Continued)

The above table lists the subsidiaries of the Company which, in the opinion of the directors, principally affected the results for the period or formed a substantial portion of the net assets of the Group. To give details of other subsidiaries would, in the opinion of the directors, results in particulars of excessive length.

45. Comparative Figures

Certain comparative figures have been reclassified to conform the current year's presentation of the consolidated financial statements.