ENGINEERING
A BETTER WORLD

2019
ANNUAL REPORT

中石化炼化工程(集团)股份有限公司
SINOPEC ENGINEERING (GROUP) CO., LTD.

Stock Code: 2386

中国石化
SINOPEC

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. All Directors have attended and voted at the Tenth Meeting of the Third Session of the Board (the "Meeting"). Mr. YU Renming (Chairman of the Board), Mr. XIANG Wenwu (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 2019 (the "Reporting Period") of SINOPEC SEG and its subsidiaries (the "Group"), prepared in accordance with the International Financial Reporting Standards, were audited by Grant Thornton Hong Kong 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 20 March 2020 and, unless otherwise required by the relevant regulatory authorities, the Company undertakes no obligation or responsibility to update these statements.


好中国

CONTENTS

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, 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.

After more than 60 years of continuous development, the Group currently has an academician of the Chinese Academy of Sciences, three academicians of the Chinese Academy of Engineering and nearly 10,000 high-quality professionals. The Group has extensive project management and implementation experience, and owns and cooperatively 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, the Group will continue to focus on the development strategies of "energy and petrochemical-oriented, innovation-driven, globalisation-targeted and value-focused", enhance exploration and development in the fields of renewable energy and new materials, and create a new momentum in achieving the vision of "building a world-class 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

Mr. YU Renming

AUTHORISED REPRESENTATIVES

Mr. XIANG Wenwu

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: +8610-5673-0522

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.hkex.com.hk

The Company's website:

http://www.segroup.cn

PLACE WHERE THIS ANNUAL REPORT IS AVAILABLE FOR INSPECTION

Company Office (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:

Grant Thornton China (Special General Partnership)

4th, 5th and 10th Floor, Scitech Place,

22 Jianguomen Wai Avenue, Chaoyang District,

Beijing, the PRC

Overseas:

Grant Thornton Hong Kong Limited

Level 12, 28 Hennessy Road, Wan Chai, Hong Kong

NAME AND ADDRESS OF LEGAL ADVISORS

PRC:

Beijing King & Wood Mallesons

18th Floor, East Tower, World Financial Center,

1 Dongsanhuan Zhonglu, Chaoyang District, Beijing

Hong Kong:

Kirkland & Ellis

26th Floor, Gloucester Tower, The Landmark,

15 Queen's Road Central, Hong Kong

PRINCIPAL FINANCIAL DATA AND INDICATORS

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 2019	As at 31 December 2018	As at 31 December 2017	As at 31 December 2016	As at 31 December 2015	Changes from the end of 2018 (%)
Non-current assets	7,256,957	7,034,787	7,540,799	7,871,988	7,977,456	3.2
Current assets	60,616,791	63,837,953	51,864,822	51,016,799	50,490,979	(5.0)
Current liabilities	37,791,658	41,998,840	31,015,076	30,724,440	30,807,397	(10.0)
Non-current liabilities	2,811,549	2,890,751	2,799,540	2,899,238	2,967,341	(2.7)
Consolidated equity attributable to equity holders of the Company	27,265,976	25,978,646	25,586,839	25,261,201	24,689,960	5.0
Net assets per share of equity holders of the Company (RMB)	6.16	5.87	5.78	5.70	5.58	5.0

Unit: RMB'000

Items	Year ended 31 December					Changes over the same period of 2018 (%)
	2019	2018	2017	2016	2015	
Revenue	52,261,051	47,019,024	36,208,723	39,402,331	45,498,354	11.1
Gross profit	5,482,733	5,195,574	4,026,172	4,295,415	6,157,034	5.5
Operating profit	2,017,007	1,435,534	1,112,267	1,942,256	3,845,193	40.5
Profit before taxation	2,827,400	2,121,515	1,635,101	2,376,776	4,240,047	33.3
Profit attributable to equity holders of the Company	2,183,457	1,679,472	1,129,974	1,670,888	3,317,704	30.0
Basic earnings per share (RMB)	0.49	0.38	0.26	0.38	0.75	30.0
Net cash flow generated from operating activities	300,047	6,104,192	4,240,508	4,670,772	5,793,143	(95.1)
Net cash flow generated from operating activities per share (RMB)	0.07	1.38	0.96	1.05	1.31	(95.1)

Items	Year ended 31 December				
	2019	2018	2017	2016	2015
Gross profit margin (%)	10.5	11.0	11.1	10.9	13.5
Net profit margin (%)	4.2	3.6	3.1	4.2	7.3
Return on assets (%) [(1)]	3.1	2.6	1.9	2.8	6.0

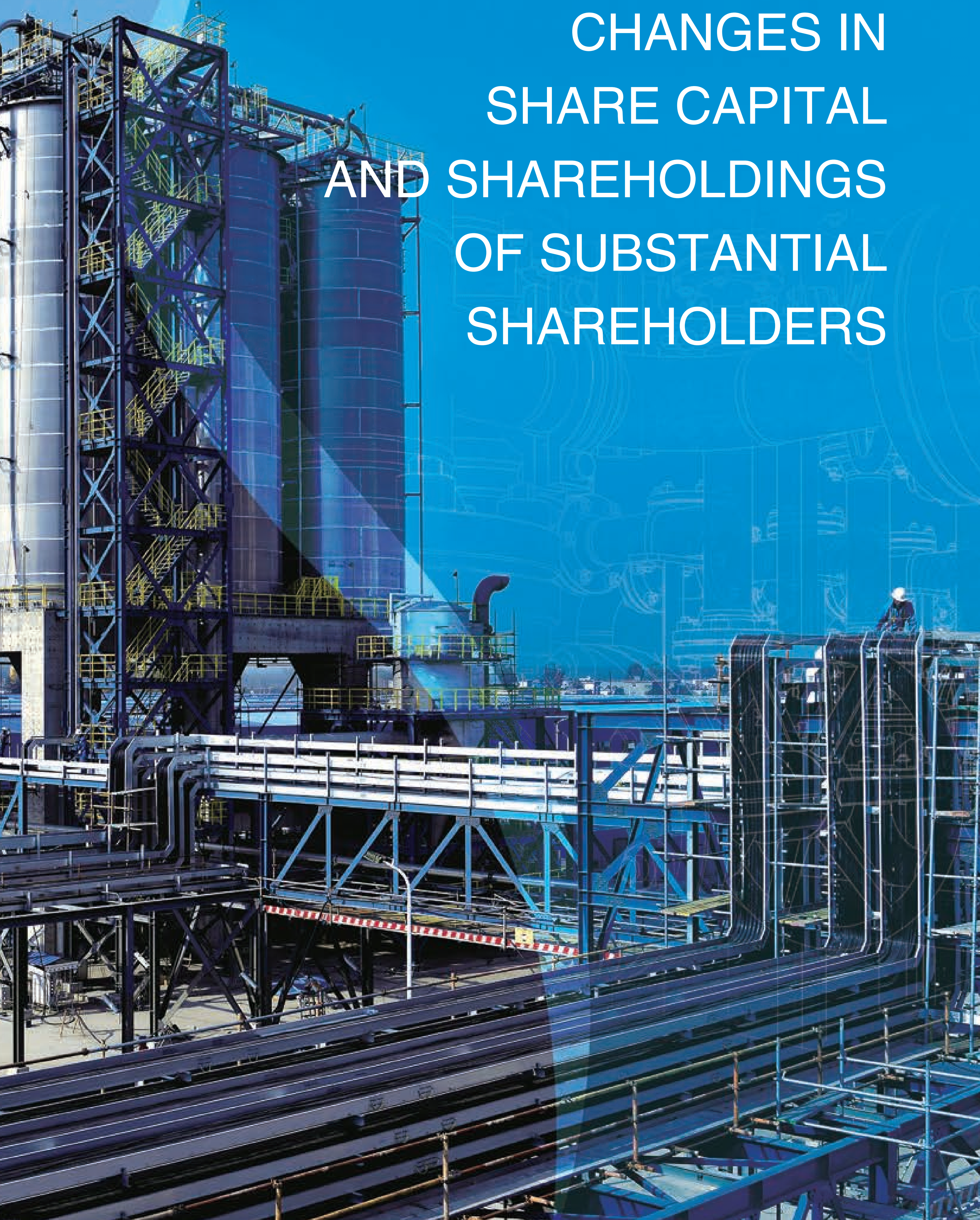
Items	As at 31 December 2019	As at 31 December 2018	As at 31 December 2017	As at 31 December 2016	As at 31 December 2015
Asset-liability ratio (%) [(2)]	59.8	63.3	56.9	57.1	57.8

Notes:

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

(2) $$\text{Asset-liability ratio} = \frac{\text{Total liabilities as at the end of the year}}{\text{Total assets as at the end of the year}}$$

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 2018		Increase/Decrease during the Reporting Period (+, -)			As at 31 December 2019	
	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 996 shareholders of the Company. As at 20 March 2020, 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	-1,964,061	–	1,456,439,839	32.94	99.70
ZHANG SAIYU	+2,000,000	–	2,000,000	0.05	0.14
WONG CHUI CHUNG	0	–	295,000	0.01	0.02
CHAN LAI KUEN SELINA	0	–	195,500	0.00	0.01
WONG CHUI CHUNG	0	–	195,500	0.00	0.01
CHOI LAI MING	0	–	130,000	0.00	0.01
PANG KWOK WAI	0	–	60,000	0.00	0.00
CHENG PAT TAN LINDA	0	–	59,000	0.00	0.00
DUN YUK SIM	0	–	23,000	0.00	0.00
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) (other than a Director, chief executive of the Company or supervisor of the Company (the "**Supervisor**")) had an interest or short position in the shares or underlying shares or debentures of the Company 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 (%)[7]	Percentage in the total share capital of the Company (%)[8]
China Petrochemical Corporation[1]	Domestic Share	Beneficial owner/Interests of controlled corporation	2,967,200,000 (L)	100.00 (L)	67.01 (L)
JPMorgan Chase & Co.[2]	H Share	Interests of controlled corporation/Investment manager/Persons having a security interest in shares/ Approved lending agent	144,358,865 (L)	9.88 (L)	3.26 (L)
			8,556,794 (S)	0.58 (S)	0.19 (S)
			96,611,849 (P)	6.61 (P)	2.18 (P)
Pandanus Associate Inc.[3]	H Share	Interests of controlled corporation	117,100,455 (L)	8.02 (L)	2.64 (L)
Pandanus Partners L.P.[3]	H Share	Interests of controlled corporation	117,100,455 (L)	8.02 (L)	2.64 (L)
FIL Limited[3]	H Share	Interests of controlled corporation	117,100,455 (L)	8.02 (L)	2.64 (L)
BlackRock, Inc.[4]	H Share	Interests of controlled corporation	106,099,380 (L)	7.26 (L)	2.39 (L)
Prudential plc[5]	H Share	Interests of controlled corporation	103,023,700 (L)	7.05 (L)	2.32 (L)
Citigroup Inc.[6]	H Share	Interests of controlled corporation/Persons having a security interest in shares/ Approved lending agent	81,779,470 (L)	5.59 (L)	1.84 (L)
			3,316,389 (S)	0.22 (S)	0.07 (S)
			74,539,913 (P)	5.10 (P)	1.68 (P)

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

Notes:

(1) China Petrochemical Corporation ("**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 15 October 2019 and filed by JPMorgan Chase & Co. with the Hong Kong Stock Exchange.

(3) The information is based on the Corporate Substantial Shareholders Notices dated 12 December 2019 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 40.07% interest in FIL Limited.

(4) The information is based on the Corporate Substantial Shareholders Notice dated 4 January 2020 and filed by BlackRock, Inc. with the Hong Kong Stock Exchange.

(5) The information is based on the Corporate Substantial Shareholders Notice dated 5 June 2019 and filed by Prudential plc with the Hong Kong Stock Exchange.

(6) The information is based on the Corporate Substantial Shareholders Notice dated 8 October 2019 and filed by Citigroup Inc. with the Hong Kong Stock Exchange.

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

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

CHAIRMAN'S STATEMENT

Mr. YU Renming

Chairman of the Board

Dear shareholders and friends,

On behalf of the Board, I would like to report to the shareholders of the Company (the "**Shareholders**") about the 2019 annual report of the Company and express our sincere gratitude to the friends supporting the development of the Company.

In 2019, the world's political and economic situation was complicated and changeable, and the risks and challenges were obviously increasing. The economic operation in China progressed with stability and better than the expectation. In 2019, confronted with heavy tasks and various challenges, the Group has made efforts to fulfill the market development targets, ensure the progress of key projects, tighten cost control and expenses reduction, deepen enterprise reform, and strengthen quality and safety management, focusing on improving development quality and efficiencies, and highlighting the main line of seizing opportunities, expanding markets, controlling costs, promoting development, and ensuring safety, and has achieved hard-won business performance. For the year 2019, the Group's revenue was RMB52.261 billion, representing an increase of 11.1% on a year-on-year basis; the net profit was RMB2.184 billion, representing an increase of 30.0% on a year-on-year basis; the total new contract value was RMB52.319 billion, representing an increase of 2.7% on a year-on-year basis; as at the end of 2019, the Group's backlog was RMB94.994 billion, remaining broadly stable as compared to that as at the end of 2018. After due consideration of the Group's earnings, return to the Shareholders and the needs for future sustainable development, the Board recommended a final dividend of RMB0.212 per Share for the year 2019. After taking into account the interim dividend of RMB0.108 per Share, the total dividend for the year will be RMB0.320 per Share, representing a substantial increase of 42.9% on a year-on-year basis.

In 2019, the Group has achieved steady development. In respect of the market development, the Group firmly grasped the golden opportunity of domestic refining and petrochemical investment, focused on the potential projects of "seven major national petrochemical industry bases" and the "world-class refining and petrochemical bases" of Sinopec Group, exerted our competitive advantages to strive to expand our market shares. In respect of the projects implementation, the Group fully leveraged its overall advantages by overall planning and optimising resources, worked hard to control the cost of subcontracting and procurement, and the safety, quality, progress and cost of the projects were under fully control. In respect of our international business, the Group was actively engaged in the "Belt and Road" initiatives, and entered into a series of new contracts in Saudi Arabia, Oman and other countries. The 4,000-ton crawler crane made its debut in Saudi Arabia, and the oil processing project of Kazakhstan won the China Construction Engineering Luban Prize. In respect of scientific and technological innovations, the Group worked hard to successfully organise the collaboration of major technologies and the implementation of technological innovation projects, made full use of the distinctive advantages of the R&D center in the development of engineering technology and continuously strengthened the collaboration with well-known licensors in the world.

In 2019, the Board of the Company insisted on standardised operation. All Directors earnestly complied with applicable PRC laws and regulations, the articles of association of the Company (the "**Articles**") and the responsibilities vested by the Shareholders general meetings, worked diligently and responsibly, made decisions in a reasonable way, and ensured the implementation of the resolutions passed at the general meetings, with the role of independent directors being well recognised. The Board strengthened the corporate governance, emphasised the Shareholders' returns, and achieved satisfactory results in all respects of its work. Due to work adjustment, Mr. YU Baocai and Mr. LU Dong resigned as the chairman and vice chairman of the Board, respectively. Mr. YU Baocai and Mr. LU Dong were diligent and responsible during their term of office. On behalf of the Board, I would like to express my gratitude to them for their hard work and outstanding contribution to the operation and development of the Company. Thanks to the kindness of the Directors, I was elected as the chairman of the Board. I would like to express my heartfelt thanks to the Shareholders and the Board for their trust and support.

In 2019, the Group earnestly practiced its social responsibility. The Company actively responded to the disclosure requirements of Hong Kong Stock Exchange in relation to environmental, social and governance matters, and released the 2019 Environmental, Social and Governance Report at the same time as this annual report. The Group conscientiously implemented the HSSE management system, adhered to safe production, actively implemented the green enterprise strategy, and formulated the Green Enterprise Action Implementation Plan. Setting the Fujian Gulei Refining and Petrochemical Integration Project as a pilot, the Group promoted the establishment of green construction sites. The Group actively developed, promoted and applied new technologies of refined oil quality upgrading, environmental protection and energy saving to promote the sustainable development of the energy and chemical industry.

The sudden outbreak of the novel coronavirus pneumonia epidemic (the "**COVID-19**") at the beginning of 2020 has adverse impact on the global economy. Facing the COVID-19, the Group, with a highly responsible attitude, has established and improved prevention and control measures, carried out detailed prevention and control work, strived to ensure the full resumption of the Company's projects in a safe and orderly manner, and made every effort to reduce the impact of the COVID-19 on operation. Currently, profound changes are brewing in the energy and chemical industry. The industrial structure, consumption structure and energy structure are constantly adjusted. The Group's operation and development are facing new challenges. Looking forward, the Group will earnestly carry out analysis on the circumstances and task, imperturbably face and tackle challenges, and build itself into a "service provider of the whole life cycle from project planning to project operation". The Group will strengthen the main business segments through the development of high-end business, and further optimise the corporate governance structure. The Group will continuously carry out benchmarking with international first-class engineering companies, and strengthen confidence, speed up pace and increase investment in the process of "going out".

Seizing every moment and living up to the prime of youth. I firmly believe that with the strong support of the Company's Shareholders and all sectors of society, and with the unremitting efforts of the Board, management members and all employees, the Group will be able to overcome difficulties and forge ahead courageously, striving to create a new momentum for the reform and development of the SINOPEC SEG, so as to deliver real benefits to shareholders, society and employees with more excellent performance.

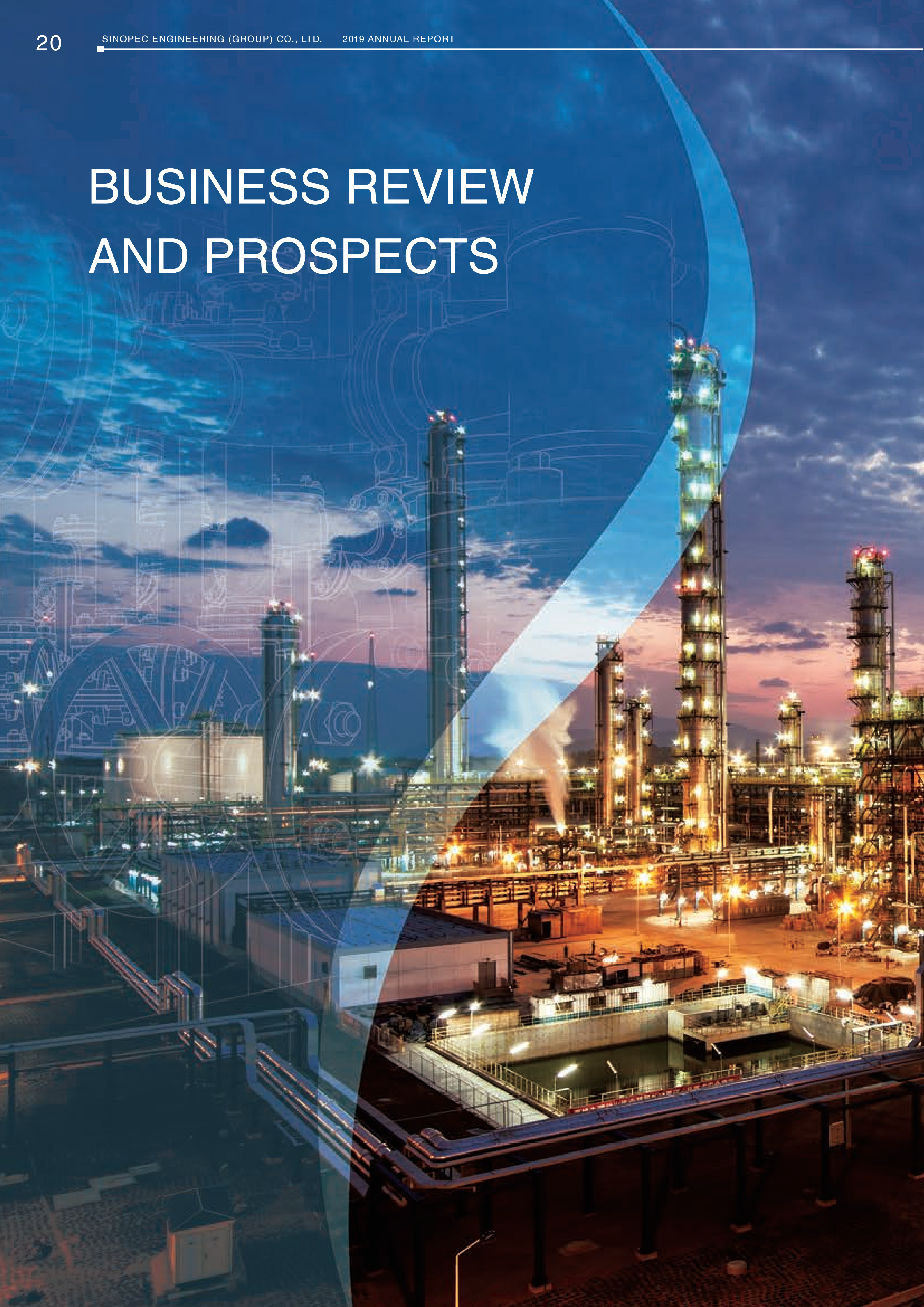
YU Renming

Chairman of the Board

Beijing, the PRC

20 March 2020

BUSINESS REVIEW AND PROSPECTS




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

1 Business Review

Mr. XIANG Wenwu

Executive Director and President

(1) Market Environment

In 2019, global trade disputes escalated, manufacturing activities continued to weaken and the world economy growth rate was 2.9%. Facing the complicated situations with internal and external contradictions entangled, Chinese government adhered to the keynote of seeking progress while maintaining stability, deepened structural reforms on the supply side, continued to fight the "three major tough battles", and made solid progress in the work of "Six Stables". In 2019, China's GDP growth rate reached 6.1%, being in the lead of the global economic growth rate, and its contribution to the world economic growth was approximately 30%, which remained as the main power source of the world economic growth. In 2019, due to the impact of global trade friction and geopolitical factors, the overall international oil price fluctuated downward, even dropping below US$50/barrel.

Year of 2019 is the first year of the restructuring of China's refining and chemical industry. Marked by the successive commissioning of large private refining and chemical projects, the pattern of China's domestic refining and chemical enterprises, the flow of resources and the profits distribution along the industrial chain have all experienced major changes. The overall quality and efficiency of the refining and chemical industry have been improved, and the international competitiveness of domestic products has continuously increased. With the successive release of new production capacity in the refining and chemical industry, a new round of industry integration will lay a solid foundation for the high-quality development of the industry in the future.

In 2019, the situation of overall excess supply over demand in the global energy and chemical industry remained. The competition of global refining and chemical engineering market was more intense. However, Chinese engineering companies benefited from the expanded international influence of the "Belt and Road" initiative, and continued to enjoy the desirable policies of countries along the "Belt and Road". In addition, the global demand for clean energy represented by natural gas has grown rapidly, and the natural gas processing and downstream chemical industries have shown great market potential.

(2) Operation Overview

During the Reporting Period, the Group's total revenue and profits attributable to equity holders of the Company were RMB52.261 billion and RMB2.183 billion, respectively. As at the end of the Reporting Period, the Group's backlog was RMB94.994 billion. The value of new contracts entered into by the Group during the Reporting Period was RMB52.319 billion.

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				
	2019		2018		
	Revenue	Percentage of total revenue	Revenue	Percentage of total revenue	Change
	(RMB'000)	(%)	(RMB'000)	(%)	(%)
Engineering, consulting and licensing	2,802,805	4.7	2,924,408	5.8	(4.2)
EPC Contracting	32,438,087	54.4	29,135,814	57.3	11.3
Construction	23,723,645	39.8	18,120,864	35.7	30.9
Equipment manufacturing	611,368	1.1	630,598	1.2	(3.0)
Subtotal	59,575,905	100.0	50,811,684	100.0	17.2
Total (after inter-segment elimination) (1)	52,261,051	N/A	47,019,024	N/A	11.1

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, construction and equipment manufacturing segments.

During the Reporting Period, the total revenue of the Group was RMB52.261 billion, representing an increase of 11.1% on a year-on-year basis, which was mainly due to the fact that several large projects such as Zhongke Refining and Chemical Integration Project, Sinochem Quanzhou Ethylene Project, Zhejiang Petrochemical Zhoushan Refining and Chemical Integration Project and Kuwait Oil Refining Project have entered into peak execution period during the Reporting Period.

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				
	2019		2018		
	Revenue	Percentage of total revenue	Revenue	Percentage of total revenue	Change
	(RMB'000)	(%)	(RMB'000)	(%)	(%)
Oil refining	**19,399,122**	**37.1**	17,749,091	37.7	9.3
Petrochemicals	**25,146,107**	**48.1**	17,133,941	36.4	46.8
New coal chemicals	**4,109,700**	**7.9**	8,841,627	18.8	(53.5)
Other industries	**3,606,122**	**6.9**	3,294,365	7.0	9.5
Total	**52,261,051**	**100.0**	47,019,024	100.0	11.1

The Group derived its revenue mainly from services provided to clients in oil refining, petrochemicals, new coal chemicals and other industries. During the Reporting Period, due to large projects such as Zhongke Refining and Chemical Integration Project, Sinochem Quanzhou Ethylene Project, Zhejiang Petrochemical Zhoushan Refining and Chemical Integration Project and Kuwait Oil Refining Project have entered into peak execution periods, revenue generated from petrochemicals industry and oil refining industry increased by different degrees. Revenue generated from petrochemicals industry was RMB25.146 billion, representing an increase of 46.8% on a year-on-year basis; revenue generated from oil refining industry was RMB19.399 billion, representing an increase of 9.3% on a year-on-year basis. Due to the growth of business volume such as natural gas pipeline engineering, revenue generated from other industries was RMB3.606 billion, representing an increase of 9.5% on a year-on-year basis. Revenue generated from new coal chemicals industry was RMB4.110 billion, representing a decrease of 53.5% on a year-on-year basis, which was affected by the settlement and completion of coal chemicals projects such as Zhong'An Joint Coalification Integration Project.

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

	Year ended 31 December				Change
	2019		2018		
	Revenue	Percentage of total revenue	Revenue	Percentage of total revenue	Change
	(RMB'000)	(%)	(RMB'000)	(%)	(%)
PRC	42,551,448	81.4	36,932,325	78.5	15.2
Overseas	9,709,603	18.6	10,086,699	21.5	(3.7)
Total	52,261,051	100.0	47,019,024	100.0	11.1

During the Reporting Period, revenue of the Group generated in the PRC was RMB42.551 billion, representing an increase of 15.2% on a year-on-year basis, mainly due to the fact that several large projects such as Zhongke Refining and Chemical Integration Project, Sinochem Quanzhou Ethylene Project, Zhejiang Petrochemical Zhoushan Refining and Chemical Integration Project have entered into peak execution periods. The Group continued to expand its overseas business steadily. Revenue generated from overseas was RMB9.710 billion, representing a decrease of 3.7% on a year-on-year basis.

As at the end of the Reporting Period, the backlog of the Group amounted to RMB94.994 billion, which remained broadly the same as compared to that as at the end of 2018, and was 1.8 times of the total revenue of RMB52.261 billion in 2019. During the Reporting Period, the value of new contracts amounted to RMB52.319 billion, representing an increase of 2.7% on a year-on-year basis.

During the Reporting Period, representative domestic projects that the Group entered into include Fujian Gulei Refining and Petrochemical Integration Project, Sinopec Tianjin Oil Product Upgrade Project, Tianjin Bohai Chemical DMTO Relocation and Transformation Project, Sinochem Quanzhou Oil Refining Reconstruction and Expansion Project. Representative overseas projects that were entered into by the Group include Saudi Aramco Overhaul and Renovation Project, BASF USA Pipeline Prefabrication Project, Saudi Aramco Marjan Oil and Gas Increase and Expansion Project.

During the Reporting Period, the Group's capital expenditure was approximately RMB810 million, which was mainly used for the contract energy management investment, production base construction, information system construction, construction machinery and engineering professional software purchase, as well as the right-of-use assets recognised in accordance with the new standards in relation to leases.

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 "Report of the Board – 28. Report on Corporate Environmental, Social and Governance" from pages 100 to 101 of this annual report.

(3) Business Highlights

Successful implementation of major projects

Zhongke Refining and Chemical Integration Project: please refer to the announcements dated 18 January 2018 and 17 April 2018 published by the Company for further details. As at the end of the Reporting Period, the project was in the final stage of construction with an overall progress exceeding 90%, and the progress was under control in general.

Fujian Gulei Refining and Petrochemical Integration Project: please refer to the announcement dated 15 April 2019 published by the Company for further details. As at the end of the Reporting Period, the project is in the stage of underground pipeline and civil construction, with an overall progress of about 30%.

Zhong'An Joint Coalification Integration Project: please refer to the announcement dated 24 November 2014 published by the Company for further details. As at the end of the Reporting Period, the main units achieved a comprehensive high standard of interim handover, and the whole plant successfully commissioned once and produced acceptable products.

SINOPEC SABIC Polycarbonate Project: please refer to the announcement dated 11 June 2018 published by the Company for further details. As at the end of the Reporting Period, the detailed design of the project was completed, and the field installation started, with an overall progress of about 40%.

Sinochem Quanzhou Ethylene Project: please refer to the announcement dated 6 June 2017 published by the Company for further details. As at the end of the Reporting Period, the project is in the final stage of construction, with an overall progress exceeding 90%.

Kuwait Oil Refining Project: please refer to the announcements dated 14 October 2015 and 23 February 2016 published by the Company for further details. As at the end of the Reporting Period, the project has been completed and handed over to the owner, which made us the first to complete the contract among the contractors in the project and was highly recognised by the owner.

Malaysia RAPID Oil Refining Project: please refer to the announcements dated 29 August 2014 and 15 October 2014 published by the Company for further details. As at the end of the Reporting Period, the project has already completed the start-up of the atmospheric distillation unit, and the start-up of other units was in progress as scheduled.

Saudi Arabia SABIC GAS Phase-9 Air Separation Project: please refer to the announcement dated 17 April 2018 published by the Company for further details. As at the end of the Reporting Period, design of the project has been largely completed, and the procurement progressed nearly 80%. Currently, the project is under construction with an overall progress exceeding 70%.

Continuous enhancement of project management capability

During the Reporting Period, the Group kept close communications with owners, strengthened the coordination of key projects construction, issued a list of key projects, established a coordination group for key projects, and strengthened organisation and coordination. Focusing on efficiency and progress, the Group implemented the "triple warning" for progress deviation, revenue deviation and budget deviation, rectified the deviation in a timely manner, strengthened closed-loop management, and ensured the smooth implementation of the projects. Through optimising the design workflow and professional division interface, the Group strengthened standardisation and modular designs, and improved design efficiency; carried out project management trainings and contract management trainings, creating International Project Management Manual brand trainings and implementing the advanced management concepts and management processes of international projects; strengthened project settlement management, continuously followed up the reduction of project inventory and accounts receivable, and constantly paid attention to the analysis of project basic data and rectification guidance.

During the Reporting Period, the Group further improved the subcontracting management system, strengthened the cultivation of strategic subcontractors, and evaluated the operational effectiveness of the QHSSE system of strategic subcontractors; developed subcontracting resources and information sharing platform, realised integrated management of subcontractor resource pool and subcontractor assessment, with continuous optimisation of allocation in subcontracting resources, which reduced subcontracting management costs. While ensuring the supply of materials for various construction projects, we have actively explored ways and means to improve procurement management, procurement efficiency, cost reduction and efficiency promotion. We improved standard procedures, document templates and management regulations, promoted framework agreement procurement, and strengthened procurement management for overseas projects, areas of which witnessed remarkable progress.

Significant results in market development

During the Reporting Period, the Group made full use of its overall advantages in its industry, business and technical chains, and expanded its presence in the market in a proactive manner. During the Reporting Period, the value of new contracts entered into by the Group was RMB52.319 billion, among which, the value of newly signed domestic contracts amounted to RMB45.585 billion, which remained broadly the same on a year-on-year basis, and the value of newly signed overseas contracts amounted to approximately RMB6.734 billion, representing an increase of 34.6% on a year-on-year basis.

During the Reporting Period, the Group continued to deepen its traditional markets while striving to open up new regional markets. The Group entered into new contracts for a number of large projects in the PRC, such as Fujian Gulei Refining and Petrochemical Integration Project with a total contract value of approximately RMB12.513 billion, Sinopec Tianjin Oil Product Upgrade Project with a total contract value of approximately RMB2.601 billion, Tianjin Bohai Chemical DMTO Relocation and Transformation Project with a total contract value of approximately RMB2.049 billion, Sinochem Quanzhou Oil Refining Reconstruction and Expansion Project with a total contract value of approximately RMB1.913 billion.

During the Reporting Period, the Group strengthened its cooperation with international engineering companies, continuously improved its competitiveness, improved the deployment in overseas markets, strengthened overseas outlets and expanded its business to new regions and new fields. The Group achieved breakthroughs in the Omani and Uzbek markets for the first time, signing the Oman DUQM Refinery P2 Construction Project with a total contract value of approximately RMB376 million, and the basic design contract of the new sulfuric acid and phosphate fertilizer project for Uzbekistan with a total contract value of approximately RMB29 million. During the Reporting Period, other major newly signed overseas projects of the Group include Saudi Aramco Marjan Oil and Gas Increase and Expansion Project with a total contract value of approximately RMB1.004 billion; BASF USA Pipeline Prefabrication Project with a total contract value of approximately RMB826 million; Kuwait's Al-Zour New Refinery Maintenance Project with a total contract value of approximately RMB395 million; Saudi Aramco Overhaul and Updating Project with a total contract value of approximately RMB376 million.

In addition to the above projects, the Group also followed up with several projects in oil refining, petrochemicals, new coal chemicals, environmental protection and energy saving fields, and is expected to sign the contracts with the relevant parties regarding such projects in the future.

Continuous promotion of innovation and technological advancement

Steady progress in research and development of engineering technologies and major progress in key scientific research projects

During the Reporting Period, the Group has newly set up 190 key scientific research projects. Relevant scientific research projects closely focused on the development trend and demand of engineering market technologies. Key research and development projects have been steadily moved forward. "Development and Industrial Application of Second-Generation High Efficiency Environmental-friendly Aromatics Packaged Technology" was successfully commissioned once in September 2019. The key research tasks represented by "SE Water Coal (Coke) Slurry Gasification Complete Technology" have achieved the key research objectives at a high standard. Other key research projects, such as "Alkylation of High-grade Polybutene -1 and 200,000 Tons Per Annum ZCA-1 Solid Acid", were all moved forward as scheduled and under overall control.

Increasing number of patent applications and numerous fruitful results in technological innovation

During the Reporting Period, the Group completed 600 new patent applications, among which, 370 or 61.7% applications were invention patents applications. The Group also had 338 newly licensed patents, 138 of which were invention patents.

During the Reporting Period, the Group received a total of 72 scientific advancement awards in scientific innovation and engineering construction fields at the provincial and above level. Among these awards, "High Efficiency Catalyst and Complete Set of Technology for Dilute Ethylene Value-added Conversion" received the national scientific and technological advancement award. Further, there was 1 provincial and ministerial scientific advancement award, 24 provincial and ministerial invention awards, 1 national excellent design award, 10 high quality projects awards, and 27 provincial and ministerial high quality projects awards.

Enterprise reform continued to deepen

According to the vision of "building a world-class engineering company" and the development model of "integrated management and cross-group control", the Group has comprehensively promoted the optimisation of resources, and the reform and reorganisation of enterprises. The Group continued to leverage the integration advantages and promote the optimisation and integration of internal resources.

During the Reporting Period, the Company has set up the Information Technology Branch of SINOPEC ENGINEERING (GROUP) CO., LTD. as the Group's information center, to further promote the Group's digital and intelligent enabling development, enhance the application level of the "two modernisations", and accelerate the digital transformation.

During the Reporting Period, by benchmarking with well-known engineering companies at home and abroad, in accordance with the principles of flattening, simplification and high efficiency, the Company improved the structural efficiency and management effectiveness of the Company, and completed the optimisation and adjustment of the organisation structure of the Company in a comprehensive way. The number of internal functional departments of the Company have been reduced from 16 to 11.

Environmental protection and energy saving businesses constantly expanded

During the Reporting Period, the Group's environmental protection and energy saving business has been constantly expanded. The contract value of energy saving and environmental protection business amounted to RMB2.1 billion, including Ji'nan 1.2 Million Tons Per Annum Coking Plant Environmental Protection Comprehensive Treatment Project, Qingdao Refining and Chemical Company Delayed Coking Plant Airtight Decoking Project, Fujian Gulei Refining and Petrochemical Integration Project Sewage Treatment Plant Project, Tianjin Branch Catalytic Cracking Unit Flue Gas Desulfurisation Project, and Gaoqiao SBR Tail Gas VOCs Treatment Project.

In the field of energy-saving, the Group actively promoted the progress of the existing contract energy management projects. The Group was actively organising communications on energy-saving technologies and enriching energy saving technological resources; actively exploring new market areas such as coal chemical waste heat recovery, LNG cold energy utilisation, gas waste heat recovery from power plant and smart energy stations; actively exploring cooperation with financial lease companies with greater efforts to develop external markets.

In the field of environmental protection, the Group has actively cooperated with international large-scale water companies to explore building-owning-operation (BOO) model of large-scale industrial wastewater treatment projects. In soil remediation, the Group successfully won the bid for the soil remediation project of former Anhui Bayi Chemical Plant, achieving a breakthrough in the external market. We cooperated with the enterprises in Sichuan, Shaanxi, Guangxi and other regions and explored the cooperation opportunities in site remediation.

ERP system successfully constructed and implemented

During the Reporting Period, the Group comprehensively promoted the application of integrated design and digital delivery, and established a construction platform for digital factory based on INTERGRAPH/AVEVA production line. The innovation of the Group in engineering design model supported the intelligent factory operation of domestic and foreign owners. The Group strengthened the cross-group control of large-scale engineering software licensing in full scope, full module, full process and full element costs, deepened application of intelligent process design, comprehensively promoted integrated engineering design, improved quality and efficiency of visual three-dimensional design, achieved breakthrough in pilot of digital delivery, centralised control of standardised engineering main data, and shared virtual engineering cloud resources. The overall engineering design capability and project execution effectiveness of the Group were improved, and new momentum was obtained for the networking, digitalisation and intelligence reform of the engineering construction model of the Group.

During the Reporting Period, the Group steadily pushed forward the construction of smart projects and completed a series of smart engineering projects such as the draft of Implementation Detailed Rules for Digital Delivery of Petrochemical Engineering, the pilot application of Zhenhai Refining and Chemical POX Unit Project, the promotion and application of key Sinopec projects with unified engineering material coding, the integration and application of Zhongke Refining and Chemical Integration Project in the 4D pipeline construction management system, and the research, development and independent innovation of three-dimensional design in equipment and structure. The standardised design, centralised procurement and modular construction have enabled the Group to transform and upgrade its digitalisation. The Group has effectively guaranteed the high level, high quality and high efficiency for completion of the owner's contracts with first-class platform, excellent design and high-quality service.

Continued to promote safe production

During the Reporting Period, the Group always adhered to the core value of QHSSE (quality, health, safety, security and environment) as People-oriented and Quality First, constantly improved QHSSE management system and effectively implemented corporate responsibility, strived to thoroughly identify security risks and major latent risks, strengthened risk control and cemented "Three Foundations" management. The Group advanced the establishment of quality safety standardisation and intrinsic safe construction capability, adhered to the combination of "raided front-line inspection without notice" and "cross-checking", and carried out diagnostic evaluation and continuous follow-up on key areas, key nodes, major hidden dangers and outstanding issues. The Group also constantly improved its QHSSE management by organising multi-level trainings, deepening the design of intrinsic safety management, and fully promoting quality elevation activities. In line with its management philosophy of "all staffs, all process, all dimension and all time", the Group kept improving its QHSSE management of overseas projects, so as to ensure successful implementation of domestic and overseas projects.

As at the end of the Reporting Period, the Group achieved no accidents in safety, quality, environment, occupational health or public security as a result of all employees' dedication and strict management. As a result, an aggregate of 346.62 million labour safe hours were realised during the Reporting Period.

2 Business Prospects

Looking forward to 2020, there are still many uncertain factors affecting the recovery of the world economy and the complicated situation where domestic and international contradictions exist simultaneously may continue. The year of 2020 is the last year of China's 13th Five-Year Plan and the decisive year for building a comprehensive well-off society. Chinese economy will overcome the impact of the COVID-19 and continue to maintain a development with stable growth rate, optimised structure, and kinetic energy conversion. In the future, the development of the energy industry will adjust the pace with improved quality and efficiency, and the patten of refining and chemical industry will constantly change. Certain projects of the national "seven major national petrochemical industry bases" and Sinopec Group's "four world-class refining and petrochemical bases" will continue to progress. Private investments will remain active, and international large energy companies such as Exxon Mobil, BASF and SABIC will actively be involved in the Chinese market. The business development of the Group will meet new opportunities and challenges.

In 2020, the Group will enthusiastically seize the market conditions at home and abroad, fully leverage its advantages such as collectivisation, integration and large scale, continuously enhance its core competitive edge, propel its sustainable and healthy development. In 2020, the Group's target of domestic new contract value is RMB46 billion, and the target of overseas new contract value is USD1.5 billion.

(1) Continuously promote in-depth enterprise reform and accelerate the optimisation of internal resources

In 2020, the Group will continue to promote the optimal allocation of internal resources, explore digital transformation, integrate information technology resources, and establish the information and digital industry platform of the Group. The Group will promote regional resource optimisation, achieve complementary advantages of engineering companies and construction enterprises, create a total force, reduce marginal costs, and improve overall efficiency and competitiveness.

(2) Actively explore transformation, develop and open up new market areas

In 2020, the Group will attach great importance to and vigorously develop high-end businesses such as engineering consulting and technology licensing to enhance the Company's overall competitiveness and influence; strive to develop factory operations, inspection and maintenance services, and strive to create new profit areas for the Company; greatly promote modular designs and modular manufacture; actively deploy intelligent manufacturing business, and promote intelligent and high-end development of the equipment manufacturing sector.

(3) Strengthen project process management, take various measures to enhance cost efficiency

In 2020, the Group will continue to strengthen project control and coordination, fully guarantee the smooth implementation of projects under construction. Focusing on revenue conversion and cost reduction, we will strengthen production management and operation plans, and enhance economic benefits from the projects. The Group will further strengthen the refined management of project costs, continue to advance design optimisation, promote groupisation and coordinated procurement, emphasise inventory and contract asset management, and further reduce costs and increase efficiency.

(4) Seize the strategic opportunity of the "Belt and Road" initiative to solidly advance global development

In 2020, the Group will strengthen the "Belt and Road" international cooperation strategy, actively leverage the integration advantages of the Group, and comprehensively enhance the Company's international capabilities. The Group will strengthen and optimise the global layout, on the basis of consolidating the traditional regional markets such as the Middle East, Central Asia and Russia and Southeast Asia, and foster new regional markets in Africa, South Asia and South America, establish and improve the overseas marketing network system, strengthen relationship with financial institutions, expand market development channels and models, actively cultivate "one-stop" overall solutions, and strive to provide customers with a full range of high-quality services to better serve the overseas market.

(5) Focus on technology advancement to maintain and enhance technology leading advantages

In 2020, the Group will be oriented by the market demand for refining engineering business, actively find cooperation partners, expand technology sources, and continuously organise the technology innovation tasks of the Company. While constantly improving the technology of traditional refining and chemical engineering, we will actively stimulate technology cooperation and engineering development in the fields of environmental protection and new energy technologies, so as to create new market growth for the sustainable development of the Company.

(6) Vigorously exploit environmental protection and energy saving sectors to create new profit pool

In 2020, the Group will actively explore the energy saving and environmental protection market. The Group will also actively carry out energy saving diagnosis for clients, and propose energy saving transformation plans. The Group will develop energy saving markets in the industries such as steel, electric power, and coal chemicals, in order to further expand contract energy management business and realise new profit growth. In the field of soil restoration, the Group will ensure projects execution after winning the bids, provide preparation services for petrochemical relocation site restoration projects, continue to focus on key projects tracking and bid preparation.

(7) Promote the innovation of human resource management system

In 2020, the Group will place more emphasise on the in-depth integration of corporate strategy, corporate culture and human resources management, improve the construction of human resources strategic management system, and steadily stimulate the motivation and atmosphere for active innovation and creation of organisations and employees. The Group will continue to improve the value creation and sharing mechanism of the entire industrial chain, attract more excellent talents to help create value for the Company, further give play to the governance advantages of listed companies, establish more flexible incentive and distribution measures, and effectively mobilise the polarity of the management members and all employees.

(8) Give full play to the application effect of ERP system

In 2020, the Group will continue to deepen information reform, eliminate information isolation, continue to promote further application of enterprise resource planning ("**ERP**"), promote overseas pilot application of ERP, and promote the application of the Build-Work big data analysis, and achieve the management and operation of the Group in a standardised, streamlined and integrated manner. The Group will focus on the data-based governance, promote the application of digitalised factory platform projects with integrated design as the initial stage, promote the integration of engineering master data platforms based on standardised design, and promote the centralised application of engineering cloud platforms with intensive engineering software licenses as the core.


中国石化
SINOPEC

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 statement of profit or loss and other comprehensive income of the Group for the indicated years.

	Year ended 31 December				
	2019		2018		
	Revenue	Percentage of total revenue	Revenue	Percentage of total revenue	Change
	(RMB'000)	(%)	(RMB'000)	(%)	(%)
Revenue	52,261,051	100.0	47,019,024	100.0	11.1
Cost of sales	(46,778,318)	(89.5)	(41,823,450)	(89.0)	11.8
Gross profit	5,482,733	10.5	5,195,574	11.0	5.5
Other income	254,958	0.5	559,214	1.2	(54.4)
Selling and marketing expenses	(131,243)	(0.3)	(123,546)	(0.3)	6.2
Administrative expenses	(1,281,950)	(2.5)	(1,298,652)	(2.8)	(1.3)
Research and development costs	(2,136,152)	(4.1)	(1,675,692)	(3.6)	27.5
Other operating expenses	(191,263)	(0.4)	(36,812)	(0.1)	419.6
Other gains/(losses) – net	19,924	0.0	(1,184,552)	(2.5)	–
Operating profit	2,017,007	3.9	1,435,534	3.1	40.5
Finance income	897,375	1.7	780,375	1.7	15.0
Finance expenses	(111,130)	(0.2)	(118,014)	(0.3)	(5.8)
Finance income – net	786,245	1.5	662,361	1.4	18.7
Share of profits/(losses) of joint arrangements	650	0.0	(46)	(0.0)	–
Share of profit of associates	23,498	0.0	23,666	0.1	(0.7)
Profit before taxation	2,827,400	5.4	2,121,515	4.5	33.3
Income tax expense	(643,881)	(1.2)	(441,706)	(0.9)	45.8
Profit for the year	2,183,519	4.2	1,679,809	3.6	30.0

(1) Revenue

The revenue of the Group increased by 11.1% from RMB47.019 billion for the year ended 31 December 2018 to RMB52.261 billion for the year ended 31 December 2019, which was mainly due to the fact that large projects such as Zhongke Refining and Chemical Integration Project, Sinochem Quanzhou Ethylene Project, Zhejiang Petrochemical Zhoushan Refining and Chemical Integration Project and Kuwait Oil Refining Project have entered into the peak period of construction, and led to an increase in revenue on a year-on-year basis.

(2) Cost of sales

The cost of sales of the Group increased by 11.8% from RMB41.823 billion for the year ended 31 December 2018 to RMB46.778 billion for the year ended 31 December 2019, which was mainly due to the increase in business volume and the corresponding increase in costs of equipment, materials and subcontracting.

(3) Gross profit

The gross profit of the Group increased by 5.5% from RMB5.196 billion for the year ended 31 December 2018 to RMB5.483 billion for the year ended 31 December 2019, which was mainly due to the increase in revenue. The gross profit margin decreased from 11.0% for the same period of last year to 10.5%, which was mainly due to the year-on-year increase in the price of equipment, materials and subcontracted labor.

(4) Other income

The other income of the Group decreased by 54.4% from RMB559 million for the year ended 31 December 2018 to RMB255 million for the year ended 31 December 2019, a year-on-year decrease of RMB304 million. The main reason is that an exchange loss of RMB41 million was recorded in the Reporting Period due to exchange rates fluctuation, while an exchange gain of RMB370 million was recorded last year.

(5) Selling and marketing expenses

The selling and marketing expenses of the Group were RMB131 million, which remained broadly stable on a year-on-year basis.

(6) Administrative expenses

The administrative expenses of the Group were RMB1.282 billion, which remained broadly stable on a year-on-year basis.

(7) Research and development costs

The research and development costs of the Group increased by 27.5% from RMB1.676 billion for the year ended 31 December 2018 to RMB2.136 billion for the year ended 31 December 2019, which was mainly due to the Group's continued technology development in traditional business areas in oil refining, petrochemicals, coal chemicals and energy saving and environmental protection, such as high efficiency environmental-friendly aromatics, gasification and hydrogen production technology, and zero discharge of high salinity, as well as increased investment in research and development in engineering design digitisation and construction automation.

(8) Other operating expenses

Other operating expenses of the Group increased from RMB37 million for the year ended 31 December 2018 to RMB191 million for the year ended 31 December 2019. The main reasons were that the impairment allowance in the Reporting Period increased by RMB85 million on a year-on-year basis, and that due to the impact of exchange rates fluctuation, an exchange loss of RMB41 million was recorded in the Reporting Period while an exchange gain was recorded last year.

(9) Other gains/(losses) – net

The net other gains/(losses) of the Group increased from a loss of RMB1.185 billion for the year ended 31 December 2018 to a gain of RMB20 million for the year ended 31 December 2019, which was mainly due to the impact of a relatively large amount of expenses from the separation and transfer of "Water/Electricity/Gas Supply and Property Management" incurred last year.

(10) Operating profit

Due to the above reasons, the operating profit of the Group increased by 40.5% from RMB1.436 billion for the year ended 31 December 2018 to RMB2.017 billion for the year ended 31 December 2019.

(11) Finance income – net

The net finance income of the Group increased by 18.7% from RMB662 million for the year ended 31 December 2018 to RMB786 million for the year ended 31 December 2019, which was mainly due to the year-on-year volume increase in time deposits and loans due from the ultimate holding company.

(12) Income tax expense

The Group's income tax expense increased by 45.8% from RMB442 million for the year ended 31 December 2018 to RMB644 million for the year ended 31 December 2019, which was mainly due to the year-on-year increase in the Group's pre-tax profit. The effective income tax rate increased from 20.8% to 22.8% 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 30.0% from RMB1.680 billion for the year ended 31 December 2018 to RMB2.184 billion for the year ended 31 December 2019.

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	
	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
	(RMB'000)		(RMB'000)		(%)		(RMB'000)		(%)	
Engineering, consulting and licensing	2,802,805	2,924,408	876,784	907,915	31.3	31.0	28,094	39,245	1.0	1.3
EPC Contracting	32,438,087	29,135,814	2,991,727	2,740,206	9.2	9.4	1,666,605	1,548,272	5.1	5.3
Construction	23,723,645	18,120,864	1,597,710	1,501,894	6.7	8.3	292,169	(249,979)	1.2	(1.4)
Equipment manufacturing	611,368	630,598	16,512	45,559	2.7	7.2	(6,882)	23,145	(1.1)	3.7
Unallocated	N/A	N/A	N/A	N/A	N/A	N/A	37,021	74,851	N/A	N/A
Subtotal	59,575,905	50,811,684	5,482,733	5,195,574	N/A	N/A	2,017,007	1,435,534	N/A	N/A
Total after inter-segment elimination [(3)]	52,261,051	47,019,024	5,482,733	5,195,574	10.5 [(1)]	11.0[(1)]	2,017,007	1,435,534	3.9[(2)]	3.1[(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, 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			
	2019		2018	
	Amount	Percentage of segment revenue	Amount	Percentage of segment revenue
	(RMB'000)	(%)	(RMB'000)	(%)
Revenue	2,802,805	100.0	2,924,408	100.0
Cost of sales	(1,926,021)	(68.7)	(2,016,493)	(69.0)
Gross profit	876,784	31.3	907,915	31.0
Selling and marketing expenses	(27,975)	(1.0)	(27,106)	(0.9)
Administrative expenses	(240,096)	(8.6)	(248,703)	(8.5)
Research and development costs	(649,574)	(23.2)	(628,482)	(21.5)
Other income and expenses	68,955	2.5	35,621	1.2
Operating profit	28,094	1.0	39,245	1.3

(1) Revenue

The revenue generated from the Group's engineering, consulting and licensing segment decreased by 4.2% from RMB2.924 billion for the year ended 31 December 2018 to RMB2.803 billion for the year ended 31 December 2019, 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 4.5% from RMB2.016 billion for the year ended 31 December 2018 to RMB1.926 billion for the year ended 31 December 2019, which was mainly due to the decrease in engineering business volume.

(3) Gross profit

The gross profit of the Group's engineering, consulting and licensing segment decreased by 3.4% from RMB908 million for the year ended 31 December 2018 to RMB877 million for the year ended 31 December 2019, which was mainly due to the decrease in revenue. The gross profit margin of the Group's engineering, consulting and licensing segment was 31.3%, 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 were RMB28 million, 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 were RMB240 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 engineering, consulting and licensing segment were RMB650 million, 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 by 28.4% from RMB39 million for the year ended 31 December 2018 to RMB28 million for the year ended 31 December 2019.

EPC Contracting

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

	Year ended 31 December			
	2019		2018	
	Amount	Percentage of segment revenue	Amount	Percentage of segment revenue
	(RMB'000)	(%)	(RMB'000)	(%)
Revenue	32,438,087	100.0	29,135,814	100.0
Cost of sales	(29,446,360)	(90.8)	(26,395,608)	(90.6)
Gross profit	2,991,727	9.2	2,740,206	9.4
Selling and marketing expenses	(51,581)	(0.2)	(47,789)	(0.2)
Administrative expenses	(412,921)	(1.3)	(414,005)	(1.4)
Research and development costs	(903,451)	(2.8)	(587,959)	(2.0)
Other income and expenses	42,831	0.1	(142,181)	(0.5)
Operating profit	1,666,605	5.1	1,548,272	5.3

(1) Revenue

The revenue generated from the Group's EPC contracting segment increased by 11.3% from RMB29.136 billion for the year ended 31 December 2018 to RMB32.438 billion for the year ended 31 December 2019, which was mainly due to the fact that large EPC contracting projects such as Zhongke Refining and Chemical Integration Project, Sinochem Quanzhou Ethylene Project and Kuwait Oil Refining Project have entered into construction peak period, and the completion of workload during the Reporting Period was relatively large.

(2) Cost of sales

The cost of sales of the Group's EPC contracting segment increased by 11.6% from RMB26.396 billion for the year ended 31 December 2018 to RMB29.446 billion for the year ended 31 December 2019, which was mainly due to the corresponding increase in costs of equipment, materials and subcontracting when the projects were implemented.

(3) Gross profit

The gross profit of the Group's EPC contracting segment increased by 9.2% from RMB2.740 billion for the year ended 31 December 2018 to RMB2.992 billion for the year ended 31 December 2019, which was mainly due to the increase in revenue. The gross profit margin was 9.2%, which remained broadly stable on a year-on-year basis.

(4) Selling and marketing expenses

The selling and marketing expenses of the Group's EPC contracting segment were RMB52 million, which remained broadly stable on a year-on-year basis.

(5) Administrative expenses

The administrative expenses of the Group's EPC contracting segment were RMB413 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 EPC contracting segment increased by 53.7% from RMB588 million for the year ended 31 December 2018 to RMB903 million for the year ended 31 December 2019, which was mainly due to the Group's continued technology development in traditional business areas in oil refining, petrochemicals, coal chemicals and energy saving and environmental protection.

(7) Operating profit

Due to the above reasons, the operating profit of the Group's EPC contracting segment increased by 7.6% from RMB1.548 billion for the year ended 31 December 2018 to RMB1.667 billion for the year ended 31 December 2019.

Construction

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

	Year ended 31 December			
	2019		2018	
	Amount	Percentage of segment revenue	Amount	Percentage of segment revenue
	(RMB'000)	(%)	(RMB'000)	(%)
Revenue	23,723,645	100.0	18,120,864	100.0
Cost of sales	(22,125,935)	(93.3)	(16,618,970)	(91.7)
Gross profit	1,597,710	6.7	1,501,894	8.3
Selling and marketing expenses	(47,842)	(0.2)	(44,377)	(0.2)
Administrative expenses	(610,989)	(2.6)	(617,962)	(3.4)
Research and development costs	(581,717)	(2.5)	(459,146)	(2.5)
Other income and expenses	(64,993)	(0.3)	(630,388)	(3.5)
Operating profit/(losses)	292,169	1.2	(249,979)	(1.4)

(1) Revenue

The revenue generated from the Group's construction segment increased by 30.9% from RMB18.121 billion for the year ended 31 December 2018 to RMB23.724 billion for the year ended 31 December 2019, which was mainly due to the increased business volume in construction.

(2) Cost of sales

The cost of sales of the Group's construction segment increased by 33.1% from RMB16.619 billion for the year ended 31 December 2018 to RMB22.126 billion for the year ended 31 December 2019, which was mainly due to the increased business volume in construction.

(3) Gross profit

The gross profit of the Group's construction segment increased by 6.4% from RMB1.502 billion for the year ended 31 December 2018 to RMB1.598 billion for the year ended 31 December 2019, and the gross profit margin decreased from 8.3% to 6.7% on a year-on-year basis, which were mainly due to the increase in settlement profit of certain completed construction projects in the same period last year and the increase in price of construction materials and subcontracting labor in the Reporting Period.

(4) Selling and marketing expenses

The selling and marketing expenses of the Group's construction segment were RMB48 million, which remained broadly stable on a year-on-year basis.

(5) Administrative expenses

The administrative expense of the Group's construction segment was RMB611 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 construction segment increased by 26.7% from RMB459 million for the year ended 31 December 2018 to RMB582 million for the year ended 31 December 2019, which was mainly due to the Group's increased investment in research and development in the technologies such as construction automation.

(7) Operating profits/(losses)

Due to the above reasons and the impact of the expenses from the separation and transfer of "Water/Electricity/Gas Supply and Property Management" incurred last year, the operating profits of the construction segment of the Group increased from a loss of RMB250 million for the year ended 31 December 2018 to a profit of RMB292 million for the year ended 31 December 2019.

Equipment Manufacturing

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

	Year ended 31 December			
	2019		2018	
	Amount	Percentage of segment revenue	Amount	Percentage of segment revenue
	(RMB'000)	(%)	(RMB'000)	(%)
Revenue	611,368	100.0	630,598	100.0
Cost of sales	(594,856)	(97.3)	(585,039)	(92.8)
Gross profit	16,512	2.7	45,559	7.2
Selling and marketing expenses	(3,845)	(0.6)	(4,274)	(0.7)
Administrative expenses	(17,944)	(2.9)	(17,982)	(2.9)
Research and development costs	(1,410)	(0.2)	(105)	(0.0)
Other income and expenses	(195)	(0.0)	(53)	(0.0)
Operating (losses)/profits	(6,882)	(1.1)	23,145	3.7

(1) Revenue

The revenue generated from the Group's equipment manufacturing segment decreased by 3.0% from RMB631 million for the year ended 31 December 2018 to RMB611 million for the year ended 31 December 2019, which was mainly due to the decreased business volume in equipment manufacturing.

(2) Cost of sales

The cost of sales of the Group's equipment manufacturing segment increased by 1.7% from RMB585 million for the year ended 31 December 2018 to RMB595 million for the year ended 31 December 2019, which was mainly due to the increase in prices of raw materials.

(3) Gross profit

The gross profit of the Group's equipment manufacturing segment decreased by 63.8% from RMB46 million for the year ended 31 December 2018 to RMB17 million for the year ended 31 December 2019, and gross profit margin decreased from 7.2% to 2.7% on a year-on-year basis, which was mainly due to the increase in prices of raw materials.

(4) Selling and marketing expenses

The selling and marketing expenses of the Group's equipment manufacturing segment were RMB4 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 RMB18 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 RMB1 million, the total expenditure remained broadly stable on a year-on-year basis.

(7) Operating (losses)/profits

Due to the above reasons, the operating profit of the Group's equipment manufacturing segment decreased from a profit of RMB23 million for the year ended 31 December 2018 to a loss of RMB7 million for the year ended 31 December 2019.

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				
	2019		2018		
	Revenue	Percentage of total revenue	Revenue	Percentage of total revenue	Change
	(RMB'000)	(%)	(RMB'000)	(%)	(%)
Oil refining	19,399,122	37.1	17,749,091	37.7	9.3
Petrochemicals	25,146,107	48.1	17,133,941	36.4	46.8
New coal chemicals	4,109,700	7.9	8,841,627	18.8	(53.5)
Other industries	3,606,122	6.9	3,294,365	7.0	9.5
Total	52,261,051	100.0	47,019,024	100.0	11.1

During the Reporting Period, due to large projects such as Zhongke Refining and Chemical Integration Project, Sinochem Quanzhou Ethylene Project, Zhejiang Petrochemical Zhoushan Refining and Chemical Integration Project and Kuwait Oil Refining Project have entered into peak execution periods, revenue generated from petrochemical industry and oil refining industry increased by different degrees. Revenue generated from petrochemicals industry was RMB25.146 billion, representing an increase of 46.8% on a year-on-year basis; revenue generated from oil refining industry was RMB19.399 billion, representing an increase of 9.3% on a year-on-year basis. Due to the growth of natural gas pipeline engineering business, revenue generated from other industries was RMB3.606 billion, representing an increase of 9.5% on a year-on-year basis. Revenue generated from new coal chemicals industry was RMB4.110 billion, representing a decrease of 53.5% on a year-on-year basis, which was affected by the settlement and completion of coal chemicals project such as Zhong'An Joint Coalification Integration Project.

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

	Year ended 31 December				
	2019		2018		
	Revenue	Percentage of total revenue	Revenue	Percentage of total revenue	Change
	(RMB'000)	(%)	(RMB'000)	(%)	(%)
PRC	42,551,448	81.4	36,932,325	78.5	15.2
Overseas	9,709,603	18.6	10,086,699	21.5	(3.7)
Total	52,261,051	100.0	47,019,024	100.0	11.1

During the Reporting Period, revenue of the Group generated in the PRC was RMB42.551 billion, representing an increase of 15.2% on a year-on-year basis, which was mainly due to the fact that large projects such as Zhongke Refining and Chemical Integration Project, Sinochem Quanzhou Ethylene Project, Zhejiang Petrochemical Zhoushan Refining and Chemical Integration Project have entered into peak execution periods; the Group continued to steadily expand its overseas business and revenue of the Group generated from overseas was RMB9.710 billion, representing a decrease of 3.7% on a year-on-year basis.

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				
	2019		2018		
	Revenue	Percentage of total revenue	Revenue	Percentage of total revenue	Change
	(RMB'000)	(%)	(RMB'000)	(%)	(%)
Sinopec Group and its associates	25,700,995	49.2	24,845,535	52.8	3.4
Non-Sinopec Group and its associates	26,560,056	50.8	22,173,489	47.2	19.8
Total	52,261,051	100.0	47,019,024	100.0	11.1

During the Reporting Period, the revenue generated from Sinopec Group and its associates and the revenue from non-Sinopec Group and its associates increased by different degrees on a year-on-year basis. The revenue generated from Sinopec Group and its associates was RMB25.701 billion, representing an increase of 3.4% on a year-on-year basis, and the revenue generated from non-Sinopec Group and its associates was RMB26.560 billion, representing an increase of 19.8% on a year-on-year basis.

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 was initially anticipated due to various factors beyond the Group's control.

In addition, the Group transferred certain backlog and new contracts value from equipment manufacturing segment to construction segment to reflect the actual production and operation situation of the Company in a more accurate and effective way, as well as to align with the revenue recognition of the Group. Due to such adjustment, the data disclosed below may not be exactly the same as those previously disclosed by the Company. However, such adjustment does not affect the total value of backlog and new contracts.

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 2019	As at 31 December 2018	Change
	(RMB'000)	(RMB'000)	(%)
Engineering, consulting and licensing	8,192,663	7,797,111	5.1
EPC Contracting	72,662,664	73,892,040	(1.7)
Construction	13,653,862	12,731,186	7.2
Equipment manufacturing	484,371	515,127	(6.0)
Total	94,993,560	94,935,464	0.1

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 2019	As at 31 December 2018	Change
	(RMB'000)	(RMB'000)	(%)
Oil refining	28,201,648	33,542,698	(15.9)
Petrochemicals	28,285,500	29,395,716	(3.8)
New coal chemicals	13,394,670	10,491,448	27.7
Other industries	25,111,742	21,505,602	16.8
Total	94,993,560	94,935,464	0.1

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

	As at 31 December 2019 (RMB'000)	As at 31 December 2018 (RMB'000)	Change (%)
PRC	74,754,485	71,720,786	4.2
Overseas	20,239,075	23,214,678	(12.8)
Total	94,993,560	94,935,464	0.1

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 2019 (RMB'000)	As at 31 December 2018 (RMB'000)	Change (%)
Sinopec Group and its associates	49,789,049	46,294,473	7.5
Non-Sinopec Group and its associates	45,204,511	48,640,991	(7.1)
Total	94,993,560	94,935,464	0.1

As at 31 December 2019, the Group's backlog was RMB94.994 billion, which was generally in line with that as at 31 December 2018, and 1.8 times of the total revenue of RMB52.261 billion in 2019.

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		Change
	2019	2018	
	(RMB'000)	(RMB'000)	(%)
Engineering, consulting and licensing	2,713,103	2,883,414	(5.9)
EPC Contracting	31,208,711	35,314,894	(11.6)
Construction	18,142,304	12,236,631	48.3
Equipment manufacturing	255,029	491,605	(48.1)
Total	52,319,147	50,926,544	2.7

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		Change
	2019	2018	
	(RMB'000)	(RMB'000)	(%)
Oil refining	14,058,072	18,750,233	(25.0)
Petrochemicals	24,035,891	22,304,787	7.8
New coal chemicals	7,012,922	3,946,775	77.7
Other industries	7,212,262	5,924,749	21.7
Total	52,319,147	50,926,544	2.7

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		Change
	2019	2018	
	(RMB'000)	(RMB'000)	(%)
PRC	45,585,147	45,924,486	(0.7)
Overseas	6,734,000	5,002,058	34.6
Total	52,319,147	50,926,544	2.7

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		Change
	2019	2018	
	(RMB'000)	(RMB'000)	(%)
Sinopec Group and its associates	29,195,571	33,472,018	(12.8)
Non-Sinopec Group and its associates	23,123,576	17,454,526	32.5
Total	52,319,147	50,926,544	2.7

During the Reporting Period, the value of the Group's new contracts was RMB52.319 billion, representing an increase of 2.7% 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

Units: RMB'000

	As at 31 December 2019	As at 31 December 2018	Changes
Total assets	67,873,748	70,872,740	(2,998,992)
Current assets	60,616,791	63,837,953	(3,221,162)
Non-current assets	7,256,957	7,034,787	222,170
Total liabilities	40,603,207	44,889,591	(4,286,384)
Current liabilities	37,791,658	41,998,840	(4,207,182)
Non-current liabilities	2,811,549	2,890,751	(79,202)
Non-controlling interests	4,565	4,503	62
Net assets	27,270,541	25,983,149	1,287,392
Equity attributable to equity holders of the Company	27,265,976	25,978,646	1,287,330
Share capital	4,428,000	4,428,000	0
Reserves	22,837,976	21,550,646	1,287,330

As at the end of the Reporting Period, the total assets of the Group were RMB67.874 billion, the total liabilities were RMB40.603 billion, the non-controlling interests were RMB5 million, and the equity attributable to the equity holders of the Company was RMB27.266 billion. The changes in the assets and liabilities as compared with those as at the end of 2018 and the main reasons are as follows:

As at the end of the Reporting Period, the total assets were RMB67.874 billion, decreased by RMB2.999 billion as compared with that as at the end of 2018. In particular, the current assets were RMB60.617 billion, decreased by RMB3.221 billion as compared with that as at the end of 2018, which was mainly due to a decrease of RMB7.062 billion in cash and cash equivalents, a decrease of RMB3.488 billion in contract assets, an increase of RMB4.944 billion in time deposits, an increase of RMB1.00 billion in loans due from the ultimate holding company, a decrease of RMB1.113 billion in notes and trade receivables, and an increase of RMB1.698 billion in prepayments and other receivables. Non-current assets amounted to RMB7.257 billion, an increase of RMB222 million over the end of 2018, which was mainly due to an increase of RMB180 million in the right-of-use assets (other than the land use rights).

As at the end of the Reporting Period, the total liabilities were RMB40.603 billion, decreased by RMB4.286 billion as compared with that as at the end of 2018. In particular, the current liabilities were RMB37.792 billion, decreased by RMB4.207 billion as compared with that as at the end of 2018, which was mainly due to a decrease of RMB6.572 billion in notes and trade payables, and a decrease of RMB384 million in loans due to a fellow subsidiary. The non-current liabilities were RMB2.812 billion, decreased by RMB79 million as compared with that as at the end of 2018, which was mainly due to a decrease of RMB148 million in retirement and other supplementary benefit obligations.

The equity attributable to equity holders of the Company was RMB27.266 billion, increased by RMB1.287 billion as compared with that as at the end of 2018, which was mainly due to the increase in retained earnings during the Reporting Period.

(2) Cash Flows

During the Reporting Period, the net decrease in cash and cash equivalents was RMB7.095 billion and net cash generated from operating activities was RMB300 million. 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 2019 and 2018, respectively.

Units: RMB'000

Major items of cash flow	Year ended 31 December	
	2019	2018
Net cash generated from operating activities	**300,047**	6,104,192
Net cash (used in)/generated from investing activities	**(5,889,979)**	23,954
Net cash used in financing activities	**(1,505,020)**	(1,179,216)
Net (decrease)/increase in cash and cash equivalents	**(7,094,952)**	4,948,930

During the Reporting Period, the profit before taxation was RMB2.827 billion, and the profit was RMB2.843 billion after adjusting the items (non-cash expense items) in expenses that did not affect the cash flow in operating activities. Major non-cash expense items included depreciation and amortisation of RMB683 million; gains on disposal of property, plant, land use rights and equipment of RMB59 million; exchange losses of RMB78 million, net interest income and expenditure of RMB786 million. Changes in working capital affected cash outflows of RMB2.412 billion, which were mainly shown in: the increase in trade and other receivables balance which caused the cash outflow from operating activities of RMB771 million; the decrease in contract assets which caused the cash inflow from operating activities of RMB3.460 billion; the increase in inventory balance which caused the cash outflow from operating activities of RMB793 million; the decrease in trade and other payables balance which caused the cash outflow from operating activities of RMB7.646 billion; the increase in contract liabilities which caused cash inflow from operating activities of RMB3.346 billion. After adjusting non-cash expense items, receivables and payables for the profit before taxation, deducting the income tax paid amounting to RMB574 million, and increasing inflow of received interest by RMB443 million, the net cash generated from operating activities was RMB300 million.

Net cash used in investing activities was RMB5.890 billion, which was mainly due to the increase in time deposits and loans to the ultimate holding company.

Net cash used in financing activities was RMB1.505 billion, which was mainly due to the dividend distribution, repayment of loans from a fellow subsidiary and rental expenses of the leased right-of-use assets.

Based on the cash flows during the Reporting Period, the Group has adequate working capital. The Group will continue to strengthen the settlement of trade debts and reduce 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	
	2019	2018
Net profit margin (%)	4.2	3.6
Return on assets (%) (1)	3.1	2.6
Return on equity (%) (2)	8.0	6.5
Return on invested capital (%) (3)	8.3	6.7

Main financial ratios	As at 31 December 2019	As at 31 December 2018
Gearing ratio (%) (4)	0.7	1.5
Net debt to equity ratio (%) (5)	Net cash	Net cash
Current ratio (6)	1.6	1.5
Quick ratio (7)	1.6	1.5

(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 = $\dfrac{\text{Profit for the year}}{\text{Total equity at the end of the year}}$

(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 increased to 3.1% from 2.6% for the same period in 2018, mainly due to the increase in the profit during the Reporting Period.

Return on equity

The Group's return on equity increased to 8.0% from 6.5% for the same period in 2018, mainly due to the increase in the profit during the Reporting Period.

Return on invested capital

The Group's return on invested capital increased to 8.3% from 6.7% for the same period in 2018 for the same reason as the increase in return on equity.

Gearing ratio

The Group's gearing ratio decreased to 0.7% from 1.5% at the end of 2018, mainly due to the decrease 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 2018 and as at 31 December 2019.

Current ratio

The Group's current ratio increased to 1.6 from 1.5 at the end of 2018. This increase was mainly due to the decrease of current liabilities during the Reporting Period was greater than the decrease of current assets.

Quick ratio

The Group's quick ratio increased to 1.6 from 1.5 at the end of 2018. As the inventory accounted for a small proportion of current assets of the Group, the reason for the change in quick ratio was the same as that for current ratio.

SIGNIFICANT EVENTS

1 H Share Appreciation Rights Scheme

For the details of H Shares appreciation rights scheme of the Company, please refer to the announcements of the Company entitled "The Proposed Initial Terms of H Share Appreciation Rights Scheme" dated 21 August 2017, the "Announcement in Relation to the Approval of the Proposed Initial Terms of H Share Appreciation Rights Scheme by the SASAC" dated 12 December 2017, the "Announcement of Resolutions Passed at the Second Extraordinary General Meeting for the Year 2017" dated 20 December 2017, the "Grant of H Share Appreciation Rights" dated 20 December 2017, the "Unfulfillment of the Conditions to the First Effective Phase of the Initial Grant Under the H Share Appreciation Rights Scheme" dated 30 July 2019, the contents in relation to the unfulfillment of the conditions to the second effective phase of the Initial Grant under the H Share Appreciation Rights Scheme in the announcement dated 23 March 2020, and the circular of the Company in relation to the second extraordinary general meeting for the year 2017 dated 3 November 2017.

On 20 December 2017, the Company granted 13,143,000 units of H share appreciation rights (the "**H Share Appreciation Rights**") (representing 0.30% of the total issued shares of the Company and 0.90% of the total issued H shares of the Company as at 20 December 2017) to 89 incentive recipients, accounting for approximately 0.5% of the total number of contracted employees of the Company as at 20 December 2017 (the "**Initial Grant**"), including the Directors (other than the independent non-executive Directors), the Company's senior management members (including presidents, vice presidents and chief financial officer) and the core management, technical and highly skilled personnel of the Company's subsidiaries. The exercise price of each H Share Appreciation Right granted under the Initial Grant is HK$6.35 per share.

As reviewed and approved at the 2017 annual general meeting convened on 8 May 2018, the final cash dividend of RMB0.144 per share (inclusive of applicable tax) was paid by the Company. As reviewed and approved in the thirteenth meeting of the Second Session of the Board convened on 21 August 2018, the Company distributed 2018 interim cash dividend of RMB0.100 per share (inclusive of applicable tax). As reviewed and approved at the 2018 annual general meeting convened on 8 May 2019, the final cash dividend of RMB0.124 per share (inclusive of applicable tax) was paid by the Company. As reviewed and approved in the fifth meeting of the Third Session of the Board convened on 16 August 2019, the Company distributed 2019 interim cash dividend of RMB0.108 per share (inclusive of applicable tax). As at the date of this annual report, the distribution of the final dividends of 2017, interim dividends of 2018, the final dividends of 2018 and interim dividends of 2019 has been completed. According to Article 28 of "The H Share Appreciation Rights Scheme and the Initial Grant" (the "**H Share Appreciation Rights Scheme**") in Appendix I to the circular of the second extraordinary general meeting for the year 2017 published on 3 November 2017, the Company may adjust the exercise price of the H Share Appreciation Rights in the event of distribution of dividends, and the exercise price after adjustment will be equal to the exercise price before adjustment minus the amount of dividends distributed per share. Thus, the exercise price of each H Share Appreciation Right under the Initial Grant will be adjusted to HKD5.804 per share.

Unfulfillment of the Conditions to the First Effective Phase of the Initial Grant under the H Share Appreciation Rights Scheme

For details of the unfulfillment of the conditions to the first effective phase of the Initial Grant under the H Share Appreciation Rights Scheme, please refer to the announcement of the Company dated 30 July 2019 and the 2019 interim report of the Company.

Unfulfillment of the Conditions to the Second Effective Phase of the Initial Grant under the H Share Appreciation Rights Scheme

According to Article 23 of Chapter 7 of the H Share Appreciation Rights Scheme, the conditions upon which the granted H Share Appreciation Rights become effective include conditions based on the Group's performance and conditions based on the performance of the relevant incentive recipients. The performance evaluation benchmarks on the Group for the second effective phase are as follows:

(1) the ROE of the financial year immediately before the effective date shall not be lower than 10.0% and shall not be lower than 75 percentile of such growth rate of revenue of benchmark companies

(2) the growth rate of revenue of the financial year immediately before the effective date as compared with that of the financial year immediately before the grant shall not be lower than 21.6% and shall not be lower than 75 percentile of such growth rate of revenue of benchmark companies

(3) the EVA of the financial year immediately before the effective date shall not be less than RMB2.233 billion

The Company will use the financials prepared in accordance with the China Accounting Standards for Business Enterprises and the net profit after deduction of non-recurring profit or loss for the purposes of computing the ROE, the growth rate of revenue and the EVA stated above. The benchmark companies shall be those with similar business, in similar markets, with similar scale as the Group and with relatively stable historical operating performance.

The H Share Appreciation Rights initially granted by the Company on 20 December 2017 will enter into the second effective phase on 21 December 2020. According to the H Share Appreciation Rights Scheme, the "year before the second effective phase coming into effect" as specified in the conditions of the Initial Grant means the year of 2019. According to the audit report prepared by Grant Thornton China (Special General Partnership), the domestic auditor of the Company, the ROE of the Company for the year of 2019 was 8.0%, the growth rate of revenue for the year of 2019 compared with that for the year of 2016 was 32.9%, and the EVA for the year of 2019 was RMB2.238 billion. Since the ROE for the year of 2019 is lower than 10.0%, the conditions to effect the H Share Appreciation Rights in the second effective phase of the Initial Grant were not fulfilled.

According to the authorisation granted to the Board at the extraordinary general meeting for the year 2017, the Board has considered and approved the relevant matters in relation to the unfulfillment of the conditions to the second effective phase of the Initial Grant under the H Share Appreciation Rights Scheme in the tenth meeting of the Third Session of the Board convened on 20 March 2020. The Board approved that a total of 4,337,190 units (representing 33% of the H Share Appreciation Rights under the Initial Grant) of H Share Appreciation Rights in the second effective phase of the Initial Grant shall be nullified.

The nullification of H Share Appreciation Rights in the first and second effective phases will not affect the remaining number of H Share Appreciation Rights of 4,468,620 units to be effective upon the third effective phase under the Initial Grant. During the Reporting Period, save for the above adjustment to the exercise price and the unfulfillment of the conditions to the first and second effective phases of the Initial Grant under the H Share Appreciation Rights Scheme, there are no other matters in relation to the number of units and the exercise price of the H Share Appreciation Rights. For details of the Company's H Share Appreciation Rights Scheme, please refer to Note 40 of the consolidated financial statements in this annual report.

2 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 Group's Connected Transactions

During the Reporting Period, the aggregate value of the connected transactions entered into by the Group was RMB29.520 billion. In particular, the expenses amounted to RMB3.038 billion and the revenue amounted to RMB26.482 billion (including RMB25.784 billion from the sale of products and services and RMB698 million from interest income).

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 RMB2.982 billion, which was within the annual cap. The engineering and construction services (preliminary consulting, technology licensing, engineering design, EPC contracting, construction and equipment manufacturing, etc.) provided by the Group to Sinopec Group amounted to RMB25.584 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 RMB2 million, which was within the annual cap. The maximum daily balance of deposits and interest income was RMB7.387 billion, which was within the annual cap. The maximum daily balance of entrustment loans was RMB19 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 RMB193 million, which was within the annual cap.

During the Reporting Period, the counter-guarantees provided by Sinopec Group to the Group amounted to USD52 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 right and property lease contracts provided by the Group to Sinopec Group amounted to RMB7 million, which was within the annual cap.

During the Reporting Period, the land use right and property lease contracts provided by Sinopec Group to the Group amounted to RMB5 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.

For more information on the major related parties transactions during the Reporting Period, please refer to Note 44 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.

The above-mentioned connected transactions during the Reporting Period were approved at the tenth meeting of the Third Session of the Board. The connected transactions carried out during the Reporting Period are in compliance with the Hong Kong Listing Rules.

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.

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 (including deposits and entrustment loans under the Financial Services Framework Agreement), 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 Company and the shareholders of the Company as a whole.

3 Material Litigation or Arbitration Events

During the Reporting Period, the Company 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 is still in the evidence exchange and cross-examination phase.

There were no other material litigation or arbitration events during the Reporting Period.

4 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.

5 Repurchase, Sale and Redemption of Shares

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

6 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.

7 Use of IPO Proceeds

During the Reporting Period, the Group used a total of RMB450 million net proceeds from the global offering, all of which was used for newly added long-term equity investment. As at the end of the Reporting Period, the total amount of net proceeds from the global offering used by the Group amounted to RMB4.367 billion, and the remaining balance of the net proceeds from the global offering was approximately RMB6.791 billion (approximately RMB600 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 RMB477 million of the unused net proceeds for information technology development projects; approximately RMB400 million of the unused net proceeds for purchasing large lifting and transport equipment and specialised construction equipment; approximately RMB1.155 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 items). 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.

8 Assets Transactions

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

9 Insolvency and Restructuring

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

10 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.

11 Material Acquisitions and Disposal

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

12 Financial Derivatives for Hedging Purposes

On 8 March 2019, the second meeting of the Third Session of the Board considered and approved the resolution in relation to the 2019 annual business plan for financial derivatives. For details, please refer to the announcement of the Company dated 11 March 2019. During the Reporting Period, the Group did not use any financial derivative for hedging purposes.

On 20 March 2020, the tenth meeting of the Third Session of the Board considered and approved the resolution in relation to the 2020 annual business plan for financial derivatives. For details, please refer to the announcement of the Company dated 23 March 2020.

13 Pledged Assets

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

14 Debt

The Group has no bank loans or other borrowings as at the end of the Reporting Period.

15 Contingent Liabilities

For details of the contingent liabilities of the Group, please refer to Note 43 to the financial statements contained in this annual report.

16 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 24 years of experience in auditing, internal control and consultancy.

17 Significant Events Affecting the Group After the Reporting Period

From 31 December 2019 and up to the date of this annual report, there is no significant event that affected the Group after the Reporting Period.

18 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

1 Enhancement of Corporate Governance in 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 Organisational structural reform of the Company

During the Reporting Period, in order to comprehensively improve the structural effectiveness and management efficiency of the Company, the Company carried out and fully completed the optimisation and adjustment of organisational structure as approved by the fifth meeting of the Third Session of the Board. The number of functional departments of the Company has been reduced from 16 to 11.

3 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.

4 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.

5 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 2019 to 31 December 2019, 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.

6 Construction and Implementation of Internal Control System of the Group

Internal Control Construction

During the Reporting Period, the Company revised, released and implemented the "Internal Control Manual of the Company (2019 Edition)" (the "**Internal Control Manual**"), which was concurrently released online on the internal control information system. 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 newly revised 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 three lines of defense for continuous supervision of internal control, namely, regular testing of departments (units) in charge of internal control, daily management of departments in charge of internal control, and comprehensive audit, inspection and evaluation, which as a whole form an internal control supervision and evaluation system.

Setup of Internal Control Examination and Supervision Department

The Department of Risk Management 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.

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.

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.

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.

Internal Control Deficiencies and Rectification

During the Reporting Period, no material internal control deficiency was identified. For the 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 2019, 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.

7 Assessment and Incentive Mechanism for the Senior Management Members

The implementation details of the H shares appreciation rights scheme of the Group are set out in the section headed "SIGNIFICANT EVENTS – 1 H Share Appreciation Rights Scheme" from page 62 to page 63 of this annual report.

8 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 2019, 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 2019, the Company held seven 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 report 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 Chairman of the Board and President

a. Mr. YU Renming serves as the Chairman of the Board, Mr. XIANG Wenwu serves as the President. The Chairman 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 Chairman 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 Chairman of the Board highly values the communication with the independent non-executive Directors and will hold meetings with them at least once each year without the presence of other Directors.

c. The Chairman 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 eight 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 eight (8) members, there are 4 executive Directors (including 2 employee representative Directors), 1 non-executive Director and 3 independent non-executive Directors. The independent non-executive Directors represent at least one-third of the Board. All the executive Directors and non-executive Directors 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 Chairman of the Board and the President) except for the working relationship.

c. The Company received the confirmation letter for the year 2019 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**"). Mr. YU Renming, the Chairman of the Board and an executive Director, is the chairman of the Nomination Committee. Mr. HUI Chiu Chung, Stephen, an independent non-executive Director, is the vice chairman of the Nomination Committee. 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 Chairman 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 2019 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 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 member 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. As assessed by the Remuneration Committee, it considered that for the year 2019, 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 2019 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, risks reaction, 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 Company office (office of the Board) 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 Company office (office of the Board) 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 aim 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. The executive Director, Mr. YU Renming, serves as the chairman of the committee. Mr. JIN Yong, an independent non-executive Director, serves as the vice chairman of the committee. Mr. XIANG Wenwu (the President and an executive Director), Mr. WU Wenxin (a non-executive Director), Ms. SUN Lili (an executive Director) and Mr. ZHOU Yingguan (an executive Director), serve as members of the 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. 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.

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 Investor Relations

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 Chairman 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 and answered questions raised by the shareholders of the Company.

d. During the Reporting Period, the Company has not amended the Articles of Association.

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 Chairman 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 an 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

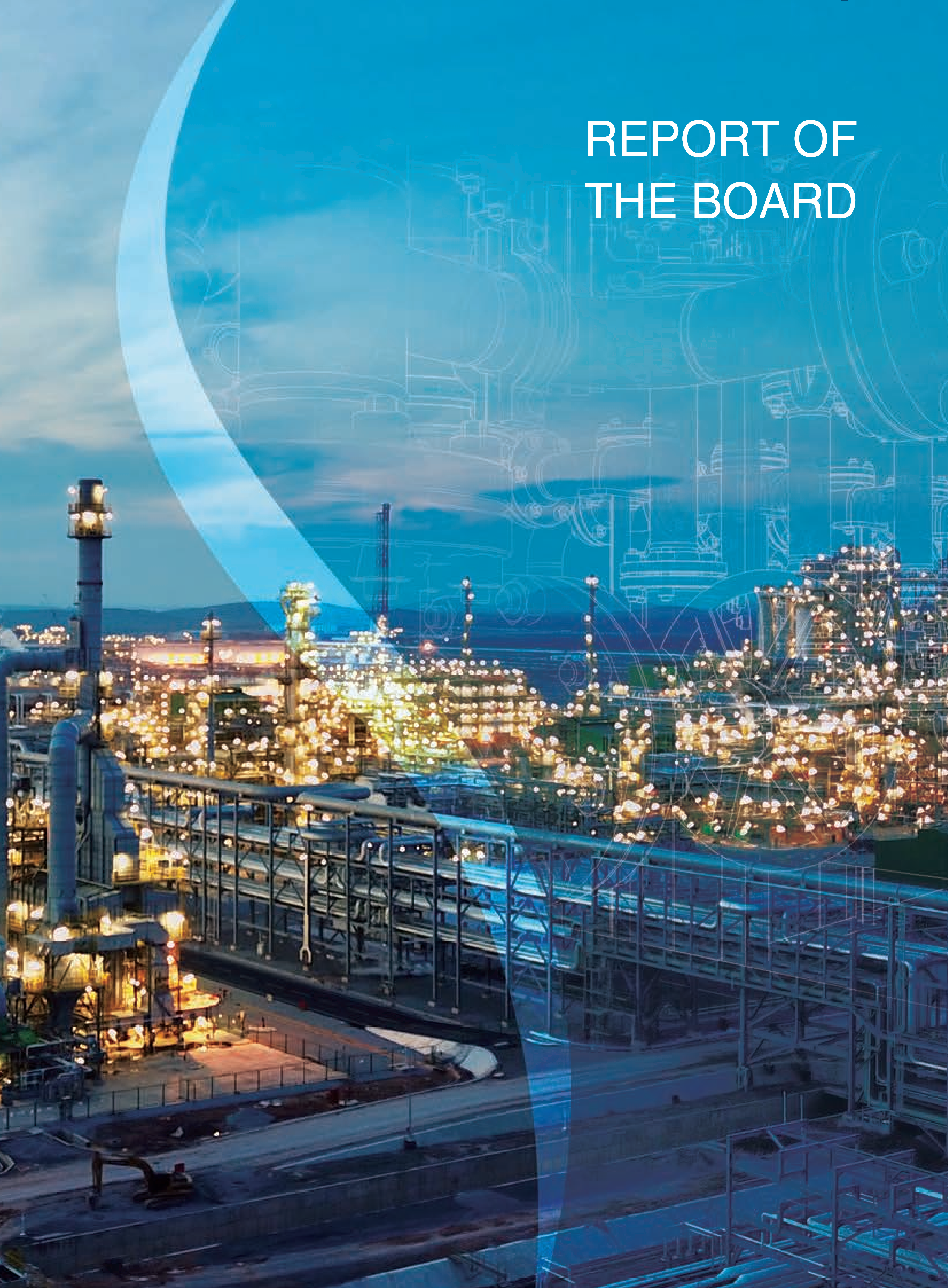
At the 2018 annual general meeting of the Company held on 8 May 2019, the Company approved the re-appointment of Grant Thornton China (Special General Partnership) and Grant Thornton Hong Kong Limited as the domestic and international auditors of the Company for the year 2019 and authorised the Board to determine their remuneration for the year 2019. As approved at the second meeting of the Third Session of the Board, the audit fee for 2019 is RMB4.7 million. The financial statement of 2019 was audited by Grant Thornton Hong Kong Limited.

During the Reporting Period, Grant Thornton China (Special General Partnership) and Grant Thornton Hong Kong 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 86; for information regarding changes in share capital and shareholdings of substantial shareholders, please refer to page 14 to page 15; for information regarding meetings of the Board, please refer to page 87 to page 88; for the attendance of each Director in Board meetings and Shareholders meetings, please refer to page 88; for information regarding the equity interests of Directors, Supervisors and other Senior Management members, please refer to page 72; for information regarding the resume and annual remuneration of Directors, Supervisors and other Senior Management members, please refer to page 108 to page 118.

REPORT OF THE BOARD



The Board is pleased to present the report for the year ended 31 December 2019 for Shareholders' review.

1 Board Composition

As at the date of this annual report, the composition of the Third Session of the Board consists Mr. YU Renming (Chairman of the Board, appointed on 18 February 2020), Mr. XIANG Wenwu (President), Ms. SUN Lili (employee representative Director) and Mr. ZHOU Yingguan (employee representative Director), as the executive Directors; Mr. WU Wenxin as the non-executive Director; and Mr. HUI Chiu Chung, Stephen, Mr. JIN Yong and Mr. YE Zheng, as the independent non-executive Directors. The resigned Directors were Mr. YU Baocai (Chairman, resigned on 18 February 2020) and Mr. LU Dong (Vice Chairman, resigned on 18 February 2020).

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 2019, 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 46 to the financial statements contained in this annual report.

3 Meetings of the Board

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

The second meeting of the Third Session of the Board was held in Beijing, the PRC, on 8 March 2019, whereby the following resolutions were considered and approved: the report of the Board for the year 2018, the report on the fulfillment of the targets for the year 2018 and the key work arrangements for the year 2019, the report on the operating results, financial performance and other relevant matters for the year 2018, independent auditor's audit opinion on the Company's 2018 annual financial report, review opinions of Auditing Committee regarding 2018 annual financial report and relevant matters, proposal on the audited financial statements for the year of 2018, proposal on the 2018 annual report and results announcement, proposal on the environmental, social and governance report for the year 2018, proposal on the business operation plan, investment plan and financial budget for the year 2019, 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 2019, proposal on the final dividend distribution plan for the year 2018 and the authorisation to the Board to determine the interim profit distribution plan for the year 2019 to be put forward for approval at the Company's annual general meeting, proposal on the re-appointment of domestic auditor and international auditor and the authorisation to the Board to fix their remuneration for the year 2019, proposal on internal control manual of SINOPEC SEG (2019 version), proposal on establishment of Information Center of SINOPEC SEG, proposal on 2019 annual business plan of financial derivatives, 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 and the class meetings, 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 approval to convene the annual general meeting for the year 2018 and the class meetings for shareholders, and the explanation in relation to the first effective phase of initial grant under the H share appreciation rights scheme.

The third meeting of the Third Session of the Board was held in Beijing, the PRC, on 8 April 2019, whereby the proposal on appointment of vice president of the Company was considered and approved.

The fourth meeting of the Third Session of the Board was held in Beijing, the PRC, on 30 July 2019, whereby the following resolutions were considered and approved: the proposal on appointment of company secretary of the Company, the proposal on appointment of vice president of the Company, the proposal on appointment of authorised representatives of the Company for the Hong Kong Stock Exchange, the proposal on increasing the annual cap for the continuing connected transactions under the land use right and property lease framework agreement for the years 2019 to 2021, and the proposal in relation to the unfulfillment of the conditions to the first effective phase of the initial grant under the H share appreciation rights scheme.

The fifth meeting of the Third Session of the Board was held in Beijing, the PRC, on 16 August 2019, whereby the following resolutions were considered and approved: the report on the fulfillment of the key targets for the first half of 2019 and the report on the work arrangements for the second half of 2019, report on the operating results, financial performance and other relevant matters for the first half of 2019, audit opinion of the independent auditor on the Company's 2019 interim financial report, review opinion of the Audit Committee regarding 2019 interim financial report and relevant matters, proposal on audited 2019 interim financial report, proposal on 2019 interim report and results announcement, proposal on 2019 interim dividend distribution plan, proposal on optimisation of structural establishment and functional adjustment of the headquarter, proposal to increase the business scope of the Company and revise the Articles of Association, proposal on revision of Rules and Procedures for Shareholders Meetings and Rules and Procedures for the Board Meetings, proposal on approval to convene the first extraordinary general meeting of shareholders for the year 2019 and explanation on selection and appointment of domestic and international auditors for the year 2020.

The sixth meeting of the Third Session of the Board was held in Beijing, the PRC, on 8 October 2019, whereby the proposal on assignment of principal authorised person of the Company for e-Submission System (ESS) and the proposal to cancel the first extraordinary general meeting for the year 2019 were considered and approved.

The seventh meeting of the Third Session of the Board was held in Beijing, the PRC, on 29 November 2019, whereby the proposal on appointment of vice president of the Company, proposal on resignation and succession of Chairman of Trade Union of the Company and proposal on change of registered address and actual business operation address of Kazakhstan Branch were considered and approved.

The eighth meeting of the Third Session of the Board was held in Beijing, the PRC, on 30 December 2019, whereby the proposal on resignation of directors and recommendation for appointment of a director of the Third Session of the Board and the proposal to convene the first extraordinary general meeting for the year 2020 were 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 Third 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 2019 and the 2019 extraordinary shareholders meeting	Trainings
	Attend in person	Attend by proxy		
YU Baocai (1)	7	0	1	3
YU Renming (2)	0	0	0	0
LU Dong (1)	7	0	1	3
XIANG Wenwu	7	0	1	3
WU Wenxin	7	0	1	3
SUN Lili	6	1	1	3
ZHOU Yingguan	6	1	1	3
HUI Chiu Chung, Stephen	7	0	1	3
JIN Yong	7	0	1	3
YE Zheng	7	0	1	3

Notes:

(1) Due to work adjustment, Mr. YU Baocai and Mr. LU Dong ceased to serve as directors of the Company from 18 February 2020.

(2) On 18 February 2020, Mr. YU Renming was appointed as a director of the Third Session of the Board of the Company upon the approval of the first extraordinary general meeting of the Company for the year 2020. In addition, with the approval of the ninth meeting of the Third Session of the Board of the Company, Mr. YU Renming was elected as the chairman of the Third Session of the Board of the Company.

6 Meetings held by the Special Committees of the Board

The Board has established four special committees, namely, the Audit Committee, the Remuneration Committee, the Nomination Committee and the Strategy and Development 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 Audit Committee held two meetings, the Remuneration Committee and the Nomination Committee each held one meeting. As there is no particular issues that need to be discussed and considered, the Strategy and Development Committee did not convene any meeting during the Reporting Period. 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
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			
YU Baocai (1)	1	1	0
LU Dong (1)	1	1	0
YU Renming (2)	0	0	0
HUI Chiu Chung, Stephen	1	1	0
JIN Yong	1	1	0
YE Zheng	1	1	0

Notes:

(1) Due to work adjustment, Mr. YU Baocai and Mr. LU Dong ceased to serve as the members of the Nomination Committee of the Company from 18 February 2020.

(2) On 18 February 2020, with the approval of the ninth meeting of the Third Session of the Board of the Company, Mr. YU Renming was appointed as the chairman of the Nomination Committee of the Company.

Specific situations of meetings of each committee are as follows:

The first meeting of the Audit Committee of the Third Session of the Board was held in Beijing, the PRC, on 7 March 2019, whereby it reviewed and provided opinion on the following: the audited opinion of independent auditor on financial statements of 2018, explanation of appointment of independent auditor and authorisation to the Board to determine audit remuneration for the year 2019, execution of the continuing connected transactions in 2018, description of 2018 annual report of the Company, description of non-competition situation for the year 2018, work report of internal control audit for the year 2018, description of work report of risk management and internal control for the year 2018, description of environmental, social and governance report for the year 2018, other matters for consideration by members of the Audit Committee.

The second meeting of the Audit Committee of the Third Session of the Board was held in Beijing, the PRC, on 15 August 2019, whereby it reviewed and provided opinions on the following: audit opinion of the independent auditor on the Company's 2019 interim financial report, description on the 2019 interim report of the Company, work report of comprehensive risk management and internal control in the interim of 2019, execution of the continuing connected transactions in the first half of 2019, and description on selection and appointment of domestic and international auditors in 2020.

The first meeting of the Nomination Committee of the Third Session of the Board was held in Beijing, the PRC, on 30 December 2019, whereby it reviewed and provided opinions on the proposal on resignation of directors and recommendation for appointment of a director of the Third Session of the Board.

The second meeting of the Remuneration Committee of the Third Session of the Board was held in Beijing, the PRC, on 30 July 2019, whereby it reviewed and provided opinions on the proposal in relation to the unfulfillment of the conditions to the first effective phase of the initial grant under the H share appreciation rights scheme.

7 Performance

The financial results of the Group for the year ended 31 December 2019 were prepared in accordance with the IFRS and its financial position as at that date and the corresponding analysis are set out from page 36 to page 59 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 2018 convened on 8 May 2019, an ordinary resolution was passed to approve the authorisation to the Board to determine the interim profit distribution plan for the year 2019. The dividend distribution plan of RMB0.108 per share (inclusive of applicable tax) for the six months ended 30 June 2019 was approved at the fifth meeting of the Third Session of the Board convened on 16 August 2019. The dividend distribution plan was implemented.

The final dividend distribution plan for the year ended 31 December 2019 was approved at the tenth meeting of the Third Session of the Board. The final dividend distribution shall be calculated based on the total number of Shares of 4,428,000,000 shares as at Wednesday, 20 May 2020 and the final dividend distribution shall be based on RMB0.212 per Share (inclusive of applicable tax). That distribution plan will be implemented after being reviewed and approved at the annual general meeting to be held by the Company on 8 May 2020. The final dividend for the year 2019 will be paid on or before Monday, 20 July 2020 to all Shareholders whose names appear on the register of members of the Company at the close of business on Wednesday, 20 May 2020. 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 Thursday, 14 May 2020 for registration. For the purpose of ascertaining Shareholders who qualify for the dividend, the register of members for H Shares will be closed from Friday, 15 May 2020 to Wednesday, 20 May 2020 (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 mean 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 8 May 2020.

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 or 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 Wednesday, 20 May 2020.

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 and 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 19.3% of the total purchases of the Group, of which the purchases from the largest supplier accounted for 12.8% of the total purchases of the Group.

During the Reporting Period, the total sales to the top five clients of the Group accounted for 63.7% of the total sales of the Group, of which sales to the largest client accounted for 38.6% 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

As at the end of the Reporting Period, the Group has no bank loans or other borrowings.

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 RMB1.2368 million.

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

The resignation of Directors and Supervisors of the Company during the Reporting Period is set out in the section headed "Directors, Supervisors, Other Members of Senior Management and Employees – 2 Appointment and Resignation of Directors, Supervisors and Other Members of the Senior Management during and after the Reporting Period" in this annual report.

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 2019).

20 Accounting Standard

The difference between the main accounting policies adopted by the Company for compilation of 2019 audited consolidated financial statement and the main accounting policies for compilation of 2018 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 34 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 -7 Employees" in this annual report.

22 Compliance with Laws and Regulations

In 2019, the Group was strictly in compliance with laws and regulations such as the Company Law of the People's Republic of China, the Contract 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. 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 under the existing system.

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 listing and as at the end of the Reporting Period.

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 current domestic and international auditors of the Company will retire, respectively, with effect from the conclusion of the forthcoming annual general meeting for the year 2019. With recommendation of the Audit Committee of the Company, the Board has proposed an ordinary resolution in the annual general meeting for the year 2019 to appoint BDO China Shu Lun Pan Certified Public Accountants LLP and BDO Limited as the domestic auditor and the international auditor of the Company, respectively. For details of the resolution, please refer to the announcement and circular of the Company dated 23 March 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.

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 China and international engineering markets.

27 Risk Factors

The global macro-economy situation trend is unclear

The business performance of the Group is closely related to the economic situation of the PRC as well as the global economic situation. China's economic development has entered into a new normal, economic growth slowed down. In the beginning of 2020, although the COVID-19 was effectively under control in the PRC, its influence on the China's economy is yet to be evaluated. Although all countries in the world have adopted various macro-economic policies to eliminate the negative influence caused by factors such as the slowdown of world economic growth, the economic globalisation has regressed at present. With the spread of COVID-19 abroad, the prospect of global economic recovery remained uncertain. The Company's operation may also be adversely affected by various other factors, such as the negative influence upon overseas refinery/chemical projects brought by discontinuity and unpredictability of international geopolitics as well as uncertainty of international oil price fluctuation, and the negative influence upon oil product and chemical product demand brought by slowdown of economic growth rate.

Risks brought by changes in market environment

In 2020, the insufficient endogenous force, the substantial decline risk of global economy, the global spread of COVID-19 and negative factors at macro-level will continue to restrict the expansion of industrial activities and growth of petroleum consumption. Recently, as the major oil export countries were not able to reach effective yield reduction agreement, with the expectation that the global economy will slow down, the international oil price dropped dramatically and the trend of oil price become greatly uncertain. The investment in construction and expansion of oil refining and petrochemical engineering projects will be more conservative globally. Additionally, the economy of China is still in a grade-climbing and setback-overcoming phase featuring transformation and upgrade, and is subject to huge pressure of economic decline in the process of conversion from old kinetic energy to new kinetic energy. After concentrated construction and start-up of production of existing large-size refining and petrochemical integration projects, new domestic energy chemical project investment will slow down. Subject to the influence of factors such as technical problem, environmental protection pressure, fluctuation of oil price and insufficient fund, slowdown of progress, stoppage and reconstruction of new coal chemicals industry projects under construction may occur, and projects which have been granted with "permit" and have been on schedule may be suspended. In fields such as new energy, new material, energy saving and environmental protection, influence will be imposed on smooth execution of project due to immature technology and insufficiency of demonstration guidance.

Risks relating to changes in policies

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

Turbulent and unstable political situation in the countries where the Group has overseas projects, policy discontinuity due to partisan policy, and government intervention in overseas investments may elevate political risks. In some regions of Africa, 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 in affected countries are relatively high and this may hinder market expansion of the Group.

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

If the host country's public policies, in particular, security policies, are flawed, for instance, if the regulations on rallies, demonstrations and strikes are imperfect, in the event that certain events occur, project implementation will be directly affected, and even legal proceedings could be initiated. These conditions will indirectly affect any new market exploration in the country hereof.

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

Changes in value-added tax, income tax, customs tax and other aspects of host countries' financial and tax systems will directly affect the economic results of the projects and may reduce the profitability of the project. The Group pays taxes in overseas countries and regions where it operates. If the income from overseas business grows, related tax expenses will also increase. It is difficult for the Company to predict changes in tax policies of the overseas host countries or regions, and such policy changes may have a material adverse effect on our profitability and financial performance.

Meanwhile, if changes are made in the legal system of the host regions of projects in the Middle East or Middle Asia, such as changes in environmental protection law, investment law, labour law and other relevant law, and if regulations may become restrictive, the execution of our projects will become more difficult and potentially affect the development of new projects in relevant countries. If laws and regulations on environmental protection, safety and health are revised or updated, or standards are raised, the costs of compliance and business operations 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) may affect the efficiency and accuracy of preparing quotations and budget, which will in turn affect the decision-making of projects and subsequent project implementation. For large projects with higher complexity, particularly the EPC contracting projects, 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 steel, cement and other raw materials used in our domestic and overseas projects fluctuates frequently. Any increase in the price of raw materials will lead to a direct increase in procurement costs for our refining projects. This is especially relevant in the international market where competition is intense, and sub-contractors compete by providing low bids in order to win contracts. This, to some degree, directly 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 of areas 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 increases 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. Insufficient financing service support may lead to delays in construction because we may not solve problems in a timely manner. For projects where design standards are substantially different from standards 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, 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.

Any non-standard, non-regulated, imperfect situation or insufficient execution in the Group's QHSE management principles, models and system may result in QHSE incidents. On the other hand, if our overseas public safety management cannot fulfill our overseas expansion demand, it can also 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. We also raised funds which are settled in foreign currencies by offering H Shares. During the Reporting Period, our foreign currencies mainly consist of U.S. dollars, Kuwaiti dinar, euros and Saudi Riyals. 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 petrochemical and new coal chemicals industries services, as well as refining services. 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 or income fluctuations or 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, both domestic and overseas engineering companies have placed emphasis on 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 explore the overseas markets and potential new businesses. It may also increase research investment in substitute resources and substitute chemical raw materials. The future of these investments and trades will be mainly under the influence of government policies, which is out of our control. We cannot guarantee maintaining our powerful growth momentum. If the investments are not successful, this may result in a significant negative impact on the business and financial status of the Group.

Risks relating to new business segments

The Group is vigorously exploring new businesses such as new coal chemicals engineering, energy saving and environmental protection, LNG and shale gas. Faced with the intricate market environment, if the Group does not have comprehensive technological reserves of the new fields, has defects in project engineering and constructional experience, and does not obtain enough information regarding the credit status of its 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, contract energy management and BT/BOT. 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. In view of the input in contract energy management and contract environmental management projects, the Group may also face transforming risks as an asset-light company.

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

In addition, new sanctions requirements may be imposed, or original sanctions requirements may be reimposed, in relevant jurisdictions, including Iran, which could increase scrutiny on the Group's business or result in one of or more of the Group's business activities being 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. or other sanctions, or that the Group will conform its business to the expectations and requirements of U.S. authorities or the authorities of any other government 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 and gas 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.

Risks of Novel Coronavirus Pneumonia Epidemic to the Group's Operation

The outbreak and spread of the Novel Coronavirus Pneumonia Epidemic in China and many countries around the world pose challenges to the Group's market development and project implementation. The Group's current overseas key markets and project implementation are mainly concentrated in such regions as the Middle East, Central Asia, Russia and Southeast Asia. If the epidemic situation continues to spread in the above regions, the development of the Group's new projects may face great difficulties. In terms of project implementation, it may also be adversely affected by projects suspension, delays in construction period, increased difficulty in project management, delays in project payment, and increased operating costs, etc.

28 Report on Corporate Environmental, Social and Governance

For details of the Group's environmental, social and governance practices, please refer to the 2019 environmental, social and governance report issued by the Company on 23 March 2020.

Implementation of green enterprise action plan and promotion of sustainable development

Actively implementing green enterprise strategy, the Group formulated "Green Enterprise Action Implementation Program" in 2019, so as to comprehensively execute green development philosophy, strengthen guidance of green technology, comprehensively implement green construction, continuously research, develop and apply new technology and new technique, realise energy-saving and emission reduction from source of design, enhance quality from construction process, strengthen final stage governing from energy-saving and environmental protection, propel energy resources saving and recycling, build green construction site featuring beautiful environment, green low carbon, civilisation and environmental protection, enhance green competition edge and promote high quality development of the Company. Meanwhile, the Group has actively explored energy saving, environmental protection and soil recovery governing service, and propelled development of high concentration chlorine-containing organic exhaust prevention and control technology, research of environmental protection technologies such as coal-to-synthetic gas high temperature desulfurisation technology and sodium hydroxide fuel gas desulfurisation wastewater resource-based utilisation process, so as to make contribution for building beautiful China and propelling clean and efficient development of the industry.

Insistence on human-oriented and assistance for employee growth

Considering talent as an important propulsion force for sustainable development of the Group, we implement multi-element recruitment strategy, respect and equally treat employees of different nationalities, citizenships and religions, and attach importance to occupational health, physical health and mental health of employees. Meanwhile, we have established optimal training hierarchy and occupational development channel, so as to assist employee to realise their own value and fuse and grow together with the enterprise.

Insistence on production safety and construction of high quality project

The Group has established optimal safety quality management hierarchy, propelled target management and risk prevention and control, strengthened fulfillment of obligations, tightened investigation of responsibilities and implemented intrinsic safety management. In 2019, the Group further revised and optimised HSSE management hierarchy, orderly propelled major risk management and potential hazard governing, consolidated project onsite operation specifications, and executed safety supervision inspection work, so that the production safety showed a general good trend. In 2019, safety and high quality were taken as basis of project, one project undertaken by the Group was granted with China Construction Engineering Luban Prize, 2 projects were granted with Gold Award of National High Quality Projects and 5 projects were granted with Silver Award of National High Quality Projects.

Enthusiasm for community beneficence and joint construction of harmonious society

The Group attaches great importance to the development of the community where domestic and overseas operation is implemented. Over the years, the Group has promoted returns such as local employment, industrial development, skill training, science and technology demonstration, industries such as culture and education as well as social assistance to local community through multiple modes such as assignment of cadre for supporting the poor and establishment of voluntary service team. In December 2019, because of the Group's active involvement in social responsibilities activities in overseas market, the Company was granted for the first time with enterprise best practice award for sustainable development target issued by UN Global Compact Network China.

By Order of the Board

YU Renming

Chairman of the Board

Beijing, the PRC

20 March 2020

REPORT OF THE SUPERVISORY COMMITTEE

Mr. 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 assigned by relevant laws and regulations, Articles of Association of the Company, and the shareholders general meetings. The Supervisory Committee's responsibilities mainly include inspecting the financial status of the Company timely, 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, adhering to work in a honest, diligent and pious manner, combining normalised supervision with good service, and supporting the chairman of the Board, President and other senior management members of the Company to sufficiently exercise their legitimate 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 2018 annual report, the 2019 interim report, financial reports, the report of the Supervisory Committee, production and operation plans, investment plans and financial budgets as well as dividend distribution plan were reviewed and considered.

The second meeting of the Third Session of the Supervisory Committee of the Company was held on 8 March 2019. The 2018 annual report, the financial statements of 2018, the dividend distribution plan for the year 2018, the report of the Supervisory Committee for the year 2018, the business operation plan, investment plan and financial budget for the year 2019 and proposal on establishment of Information Center of SINOPEC SEG were considered and approved at the meeting. The third meeting of the Third Session of the Supervisory Committee of the Company was held on 16 August 2019. The 2019 interim report, the 2019 interim financial statements and the 2019 interim dividend distribution plan 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 also organised self-evaluation of performance of duties of directors, supervisors and senior management members of the Company in 2018.

Through the supervision of production, business operation and financial of the Company, the Supervisory Committee and all supervisors believe that in 2019, the Board 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 and maintained its effective implementation, and 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 between the Company and Sinopec Group complied with the stipulations of relevant laws, regulations and Articles of Association, and there was no infringement of the interests of the Company and independent Shareholders.

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

20 March 2020


中石化四

DIRECTORS, SUPERVISORS, OTHER MEMBERS OF SENIOR MANAGEMENT AND EMPLOYEES

1 Directors, Supervisors and Other Members of Senior Management

(1) Directors

Mr. YU Renming (俞仁明) – Chairman of the Board and Executive Director

Mr. YU Renming (俞仁明), aged 56, is the Chairman of the Company. Mr. YU is a senior engineer at professor level with a university diploma. From June 2000 to September 2006, Mr. YU was a deputy general manager of SINOPEC Zhenhai Refining & Chemical Company Limited(中國石化鎮海煉油化工股份有限公司). From June 2003 to September 2006, he served as a director of SINOPEC Zhenhai Refining & Chemical Company Limited(中國石化鎮海煉油化工股份有限公司). From September 2006 to September 2007, he served as a deputy manager of Zhenhai Refining & Chemical Branch of China Petroleum & Chemical Corporation(中國石油化工股份有限公司鎮海煉化分公司). From September 2007 to March 2008, he served as a manager of Zhenhai Refining & Chemical Branch of China Petroleum & Chemical Corporation(中國石油化工股份有限公司鎮海煉化分公司). He served as the director of production and operation management department of China Petroleum & Chemical Corporation(中國石油化工股份有限公司)("**Sinopec Corp**"), from January 2008 to December 2017. He has been an employee representative supervisor of Sinopec Corp since December 2010, and served as the director of refining department of Sinopec Corp from December 2017 to December 2019. From December 2017 to December 2019, he served as the vice chairman of the board of directors and chairman of the audit committee of Yanbu Aramco Sinopec Refining Company Ltd. Mr. YU has served as the chairman of SINOPEC SEG since February 2020.

Mr. XIANG Wenwu (向文武) – Executive Director and President

Mr. XIANG Wenwu (向文武), aged 53, is an executive Director and the President of the Company. Mr. XIANG is a senior economist at professor level 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 SSC**") 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 since January 2017 and has been a Director of SINOPEC SEG since February 2017.

Mr. WU Wenxin (吳文信) – Non-executive Director

Mr. WU Wenxin (吳文信), aged 56, is a non-executive Director of the Company 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), and the general manager of the engineering department of Sinopec Corp. (中國石油化工股份有限公司工程部). Mr. WU is a senior engineer at professor level with a Master degree. From May 2007 to September 2010, he served as the deputy general manager of Fujian Petrochemical Company Limited (福建煉油化工有限公司). From December 2007 to September 2010, he was the director of the refining and ethylene integration project of Fujian Refining & Petrochemical Co., Ltd. (福建聯合石油化工有限公司). From November 2009 to September 2010 he served as a director of Fujian Petrochemical Co., Ltd. (福建煉油化工有限公司). 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. (中國石油化工股份有限公司工程部). 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. (中國石油化工股份有限公司工程部) since December 2019.

Ms. SUN Lili (孫麗麗) – Executive Director

Ms. SUN Lili (孫麗麗), aged 58, is an employee representative Director of the Company, and an executive director of Sinopec Engineering Incorporation (中國石化工程建設公司). Ms. SUN is a senior engineer at professor level with a university diploma, and was elected as a member of Chinese Academy of Engineering in 2019. 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 has served as the chairman 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 has 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 November 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 has been a Director of SINOPEC SEG since January 2015.

Mr. ZHOU Yingguan (周赢冠) – Executive Director

Mr. ZHOU Yingguan (周赢冠), aged 51, is an employee representative Director of the Company, as well as an executive director and general manager of Sinopec Fourth Construction Co., Ltd. (中石化第四建設有限公司). Mr. ZHOU is a senior engineer with a university diploma. From March 2004 to July 2010, Mr. ZHOU served as the deputy manager 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 has been an executive director and president of Sinopec Fourth Construction Co., Ltd. since April 2017. He has been a Director of SINOPEC SEG since October 2018.

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

Mr. HUI Chiu Chung (許照中), J.P., aged 72, is an independent non-executive Director of the Company. 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 has been 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 non-executive Director of SINOPEC SEG since April 2013.

Mr. JIN Yong (金涌) – Independent non-executive Director

Mr. JIN Yong (金涌), aged 84, is an independent non-executive Director of the Company. 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 non-executive Director of SINOPEC SEG since April 2013.

Mr. YE Zheng (葉政) – Independent non-executive Director

Mr. YE Zheng (葉政), aged 55, is an independent non-executive Director of the Company. Mr. YE is a practicing director of Mazars CPA Limited. He worked in Shanghai Municipal Finance Bureau (上海市財政局) from October 1982 to January 1989. Mr. YE has over 24 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 and a director in Ernst &Young from August 2005 to October 2006. 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 practicing director of Mazars CPA Limited since November 2006 and an independent non-executive Director of SINOPEC SEG since April 2013. 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 Third Session of the Board as at the date of this annual report

Name	Gender	Age (1)	Position in the Company	Term of Office as Director
YU Renming	Male	56	Chairman of the Board and executive Director	February 2020 – October 2021
XIANG Wenwu	Male	53	Executive Director and President	October 2018 – October 2021
WU Wenxin	Male	56	Non-executive Director	October 2018 – October 2021
SUN Lili	Female	58	Executive Director	October 2018 – October 2021
ZHOU Yingguan	Male	51	Executive Director	October 2018 – October 2021
HUI Chiu Chung, Stephen	Male	72	Independent non-executive Director	October 2018 – October 2021
JIN Yong	Male	84	Independent non-executive Director	October 2018 – October 2021
YE Zheng	Male	55	Independent non-executive Director	October 2018 – October 2021

Note:
(1) The age of each of the Directors of the Third Session of the Board was that as at the end of the Reporting Period.

List of relevant information of the resigned Directors as at the date of this annual report

Name	Gender	Age (1)	Position in the Company	Term of office
YU Baocai	Male	54	Chairman of the Board and Non-executive Director	October 2018 – February 2020
LU Dong	Male	56	Vice Chairman of the Board and Executive Director	October 2018 – February 2020

Note:
(1) The age of retired Directors was that as at the end of the Reporting Period.

(2) Supervisors

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

Mr. ZHU Fei (朱斐), aged 55, is the Chairman of the Supervisory Committee and the Chairman of the Trade Union of the Company. 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. WANG Guoliang (王國良) – Supervisor

Mr. WANG Guoliang (王國良), aged 59, is a Supervisor of the Company and a vice president of each of Luoyang Petrochemical Engineering Corporation (LPEC)/SINOPEC (中石化洛陽工程有限公司) and Guangzhou Petrochemical Engineering Corporation (GPEC)/SINOPEC (中石化廣州工程有限公司). Mr. WANG is a senior engineer at professor level with a doctorate degree. From September 1997 to November 2001, he worked as the deputy manager of Sinopec Group Luoyang Petrochemical Engineering Corporation (中國石化集團洛陽石油化工工程公司). From November 2001 to May 2003, he was the secretary of the CPC Committee of Sinopec Group Luoyang Petrochemical Engineering Corporation. From May 2003 to December 2008, he was the deputy manager of Sinopec Group Luoyang Petrochemical Engineering Corporation. From December 2008 to April 2012, he was the vice president of Sinopec Group Luoyang Petrochemical Engineering Corporation. From April 2012 to September 2012, he was the vice president of Luoyang Petrochemical Engineering Corporation (LPEC)/SINOPEC and Guangzhou Petrochemical Engineering Corporation (GPEC)/SINOPEC. From September 2012 to November 2014, he was a director and president of each of Luoyang Petrochemical Engineering Corporation (LPEC)/SINOPEC and Guangzhou Petrochemical Engineering Corporation (GPEC)/SINOPEC. From December 2012 to November 2014, he was the Vice President of SINOPEC SEG. Since November 2014, he has been the vice president of each of Luoyang Petrochemical Engineering Corporation (LPEC)/SINOPEC and Guangzhou Petrochemical Engineering Corporation (GPEC)/SINOPEC. He has been a Supervisor of SINOPEC SEG since January 2015.

Mr. YE Wenbang (葉文邦) – Supervisor

Mr. YE Wenbang (葉文邦), aged 57, is a Supervisor of the Company and also serves as a director and vice president of Sinopec Shanghai Engineering Co., Ltd. (中石化上海工程有限公司). Mr. YE is a senior engineer with a master's degree. From September 2001 to January 2003, Mr. YE worked as the deputy dean of Shanghai Pharmaceutical Industry Design Institute (上海醫藥工業設計院). From January 2003 to April 2012, he served as the deputy general manager and a director of Sinopec Group Shanghai Engineering Co., Ltd. From April 2012 to May 2012, he served as the deputy general manager and the supervisory committee convener of Sinopec Group Shanghai Engineering Co., Ltd. (中石化上海工程有限公司). From May 2012 to August 2016, he has been the supervisory committee convener of Sinopec Group Shanghai Engineering Co., Ltd.. He has been a director and deputy general manager of Sinopec Group Shanghai Engineering Co., Ltd. since August 2016. He has been a Supervisor of SINOPEC SEG since October 2018.

Mr. WU Jibo (吳吉波) – Supervisor

Mr. WU Jibo (吳吉波), aged 51, is a Supervisor of the Company and also serves as a deputy general manager of Sinopec Nanjing Engineering Co., Ltd. (中石化南京工程有限公司). Mr. WU is a senior engineer at professor level with a master's degree. From August 2008 to December 2008, Mr. WU worked as the vice manager of Sinopec Second Construction Company (中國石化第二建設公司). From December 2008 to July 2010, he was the vice president of Sinopec Second Construction Company. Since July 2010, he has been the deputy general manager of Sinopec Nanjing Engineering Co., Ltd.. He has been a Supervisor of SINOPEC SEG since October 2018.

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

Mr. XU Yijun (許一君), aged 56, is an employee representative Supervisor of the Company, 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 senior economist at professor level 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. JIANG Dejun (蔣德軍) – Employee Representative Supervisor

Mr. JIANG Dejun (蔣德軍), aged 54, is an employee representative Supervisor of the Company, who is also a general manager of Sinopec Engineering Incorporation (中國石化工程建設有限公司). Mr. JIANG is a senior engineer at professor level 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. From September 2012 to October 2019, he has been the vice president of Sinopec Fifth Construction Co., Ltd. (中石化第五建設有限公司). He has been an employee representative Supervisor of SINOPEC SEG since January 2015, and has been the general manager of Sinopec Engineering Incorporation since October 2019.

Mr. WU Zhongxian (吳忠憲) – Employee Representative Supervisor

Mr. WU Zhongxian (吳忠憲), aged 57, is an employee representative Supervisor of the Company and also serves as a vice president of Sinopec Tenth Construction Company Limited (中石化第十建設有限公司). Mr. WU is a senior engineer at professor level with a university diploma. From March 1996 to April 2012, Mr. WU was the chief engineer of Sinopec Tenth Construction Company Limited. From October 2006 to December 2008, he was the deputy manager of Sinopec Tenth Construction Company Limited. From December 2008 to April 2012, he was the vice president of Sinopec Tenth Construction Company Limited. From April 2012 to December 2015, he was the vice president and the chief engineer of Sinopec Tenth Construction Company Limited. Since December 2015, he has been the vice president of Sinopec Tenth Construction Company Limited. He has been an employee representative Supervisor of SINOPEC SEG since October 2018.

Profile of the Supervisors of the Third Session of the Supervisory Committee during the Reporting Period

Name	Gender	Age (1)	Position in the Company	Term of Office as Supervisor
ZHU Fei	Male	55	Chairman of the Supervisory Committee and Chairman of the Trade Union	October 2018 – October 2021
WANG Guoliang	Male	59	Supervisor	October 2018 – October 2021
YE Wenbang	Male	57	Supervisor	October 2018 – October 2021
WU Jibo	Male	51	Supervisor	October 2018 – October 2021
XU Yijun	Male	56	Employee Representative Supervisor	October 2018 – October 2021
JIANG Dejun	Male	54	Employee Representative Supervisor	October 2018 – October 2021
WU Zhongxian	Male	57	Employee Representative Supervisor	October 2018 – October 2021

Note:
(1) The age of each of the Supervisors of the Third Session of the Supervisory Committee was that as at the end of the Reporting Period.

(3) Other Senior Management

Please refer to the subsection headed “Directors” in this section for biographical details of Mr. XIANG Wenwu.

Please refer to the subsection headed “Supervisors” in this section for biographical details of Mr. ZHU Fei.

Mr. QI Guosheng (戚國勝) – Vice President

Mr. QI Guosheng (戚國勝), aged 59, is a Vice President of SINOPEC SEG. Mr. QI is a senior engineer at professor level with a university diploma. From August 1983 to February 2002, Mr. QI has held positions in Anti Chemical Command and Engineering Institute of the Chinese People's Liberation Army (解放軍防化兵指揮學院), Beijing Petrochemical Engineering Company (北京石化工程公司), Engineering & Construction Department of China Petrochemical Corporation (中國石油化工總公司工程建設部), engineering & construction management department of Sinopec Group (中國石化集團工程建設管理部) and Sinopec Engineering Incorporation (中國石化工程建設公司). Mr. QI served as vice president of Sinopec Engineering Incorporation from December 2002 to April 2012 and vice president of Sinopec Engineering Incorporation from April 2012 to November 2014. He has been a Vice President of SINOPEC SEG since November 2014.

Mr. WANG Guohua (王國華) – Vice President

Mr. WANG Guohua (王國華), aged 50, is the Vice President of SINOPEC SEG and the president of Sinopec Heavy Lifting and Transportation Co., Ltd. (中石化重型起重運輸工程有限公司). Mr. WANG is a senior economist at professor level 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 and 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, Company Secretary

Mr. JIA Yiqun (賈益群), aged 52, is the Chief Financial Officer and Company Secretary of SINOPEC SEG. 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 (中國石化石油化工科學研究院), 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. Mr. JIA obtained the qualifications of Chartered Financial Analyst issued by CFA Institute in September 2006.

Mr. WANG Yi (王毅) – Vice President

Mr. WANG Yi (王毅), aged 49, is a Vice President of SINOPEC SEG. Mr. WANG is a senior engineer at professor level with a bachelor degree. From July 1992 to November 2014, Mr. WANG held positions in Dalian Petrochemical Company (大連石化公司), China Petrochemical Corporation (中國石化總公司), SINOPEC Engineering Incorporation (中國石化工程建設公司) and SINOPEC SEG. He served as a president assistant and director of the International Business Division of the Company from March 2013 to November 2014, served as the vice president of SINOPEC Tenth Construction Co., Ltd. (中石化第十建設有限公司) from November 2014 to July 2019, and has served as the vice president of the SINOPEC SEG since July 2019.

Mr. ZHENG Lijun (鄭立軍) – Vice President

Mr. ZHENG Lijun (鄭立軍), aged 51, is the vice president of SINOPEC SEG. Mr. ZHENG is a senior engineer at professor level with a university diploma. From August 1990 to March 2017, Mr. Zheng held positions in SINOPEC Beijing Design Institute (中國石化北京設計院) and SINOPEC Engineering Incorporation (中國石化工程建設有限公司). He served as a vice president of SINOPEC Engineering Incorporation (中國石化工程建設有限公司) from March 2017 to November 2019, and has served as a vice president of SINOPEC SEG since November 2019.

Profile of other members of the Senior Management during the Reporting Period

Name	Gender	Age (1)	Position in the Company	Date of Taking Office
XIANG Wenwu	Male	53	President	January 2017
QI Guosheng	Male	59	Vice President	November 2014
ZHU Fei	Male	55	Chairman of the Trade Union	November 2019
WANG Guohua	Male	50	Vice President	April 2019
JIA Yiqun	Male	52	Chief Financial Officer Company Secretary	August 2012 July 2019
WANG Yi	Male	49	Vice President	July 2019
ZHENG Lijun	Male	51	Vice President	November 2019

Note:
(1) The age of each of senior management members was that as at the end of the Reporting Period.

Profile of other members of Senior Management resigned during the Reporting Period

Name	Gender	Age (1)	Position in the Company	Resigned time
XIAO Gang	Male	61	Vice President	February 2019
SUN Xiaobo	Male	59	Vice President	April 2019
SANG Jinghua	Male	52	Vice President Secretary to the Board Company Secretary	May 2019 May 2019 May 2019
GUAN Qingjie	Male	60	Chairman of Trade Union	November 2019

Note:
(1) The age of each of the resigned senior management members was that as at the end of the Reporting Period.

2 Appointment and Resignation of Directors, Supervisors and Other Members of the Senior Management during and after the Reporting Period

Due to work adjustment, Mr. YU Baocai and Mr. LU Dong ceased to be the Directors from 18 February 2020. On 18 February 2020, Mr. YU Renming was appointed as a director of the Third Session of the Board upon the approval of the first extraordinary general meeting of the Company for the year 2020. On 18 February 2020, Mr. YU Renming was elected as the Chairman of the Third Session of the Board by the ninth meeting of the Third Session of the Board.

In consideration of their respective age, Mr. XIAO Gang ceased to be the Vice President of the Company since 11 February 2019, Mr. SUN Xiaobo ceased to be the Vice President of the Company since 8 April 2019, and Mr. GUAN Qingjie ceased to be the Chairman of Trade Union since 29 November 2019. Due to work adjustment, Mr. SANG Jinghua ceased to be the Vice President, the Secretary to the Board and Company Secretary since 16 May 2019. On 8 April 2019, it was approved at the third meeting of the Third Session of the Board that Mr. WANG Guohua was appointed as the Vice President of the Company. On 30 July 2019, it was approved at the fourth meeting of the Third Session of the Board that Mr. JIA Yiqun was appointed as the Company Secretary and Mr. WANG Yi was appointed as the Vice President of the Company. On 29 November 2019, it was approved at the seventh meeting of the Third Session of the Board that Mr. ZHENG Lijun was appointed as the Vice President of the Company and Mr. ZHU Fei has taken the post of the Chairman of Trade Union of the Company.

3 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.

4 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. YU Baocai (who resigned as a Director on 18 February 2020) served as the Vice President of Sinopec Group and a director of Sinopec Corp.; (ii) Mr. YU Renming (who was appointed as a Director on 18 February 2020) served as an employee representative supervisor of Sinopec Corp; and (iii) Mr. WU Wenxin served as the general manager of the engineering department of Sinopec Group, and the general manager of the engineering department of Sinopec Corp. 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.

5 Contract Benefits of Directors and Supervisors

As at 31 December 2019 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 executive Directors and non-executive 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 Third 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 Third 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).

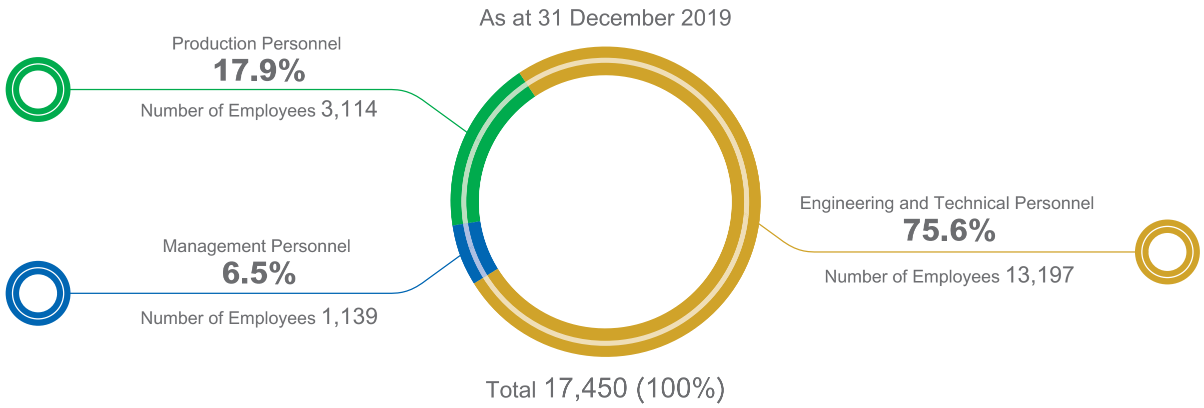
6 Remuneration of Directors, Supervisors and other Senior Management Members

During the Reporting Period, the total number of Directors, Supervisors and other Senior Management members paid by the Company was 24, and the annual total remuneration paid was RMB25.28 million. For details of the remuneration of Directors, Supervisors and the five highest paid individuals for the year ended 31 December 2019, please see notes 15 and 44(b) to the financial statements in this annual report.

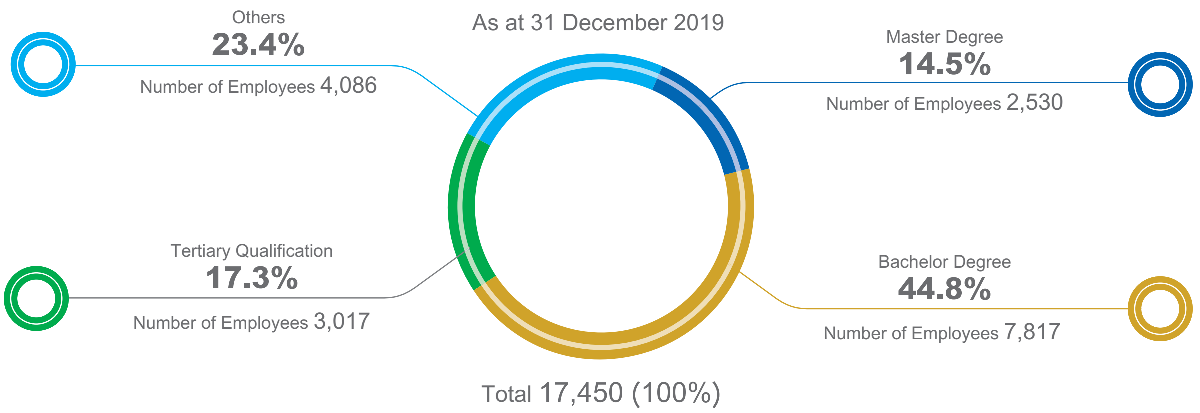
7 Employees

As at 31 December 2019, there were a total of 17,450 employees in the Group.

The following table lists the information of employees classified by business as at 31 December 2019.



The following table lists the information of employees classified based on education background as at 31 December 2019.



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 2018 and 31 December 2019, the employment costs of the Group were approximately RMB5.911 billion and RMB6.066 billion, respectively. The details of H shares appreciation rights scheme adopted by the Group are set out in the section headed "SIGNIFICANT EVENTS – 1 H Share Appreciation Rights Scheme" of this annual report.

9 Employee Training Programmes

During the Reporting Period, over 20 key special trainings have been organised by the Group. Throughout the year, a total of 31.8 thousand attendees attended the trainings inside and outside the Group, of which there were 3.1 thousand attendees who were operation management staff, 23.3 thousand attendees who were engineering and technical staff, and 4.2 thousand attendees who were operational staff.

FINANCIAL STATEMENTS

Grant Thornton 致同

Independent Auditor's Report

To the Shareholders of SINOPEC Engineering (Group) Co., Ltd.

(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 125 to 211, which comprise the consolidated statement of financial position as at 31 December 2019, 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 2019, and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards ("IFRSs") issued by the International Accounting Standards Board 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 the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (the "IESBA Code"), and we have fulfilled our other ethical responsibilities in accordance with the IESBA 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.

Key audit matters identified in our audit are summarised as follow:

Key Audit Matter	How our audit addressed the Key Audit Matter
Revenue recognition of construction contracts *Refer to notes 5(a) and 6 to the consolidated financial statements and note 3.24 to the consolidated financial statements for the related accounting policies.* The Group recognised revenue of RMB52,261,051,000 for the year ended 31 December 2019. The Group recognised contract revenue and costs by measuring progress towards completion of the performance obligations at the end of the reporting period, that involves the use of significant judgment and estimates, including estimates of stage of completion of the contracts, the scope of deliveries and services required, total contract cost, remaining cost to completion, total contract revenue and contract risk. 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. 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 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; – 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)

Key Audit Matter	How our audit addressed the Key Audit Matter
Provision for expected credit losses ("ECL") of trade receivables and contract assets	
Refer to notes 5(c), 23 and 25(a) to the consolidated financial statements and note 3.9(c) to the consolidated financial statements for related accounting policy. 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 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 historical 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 significant trade receivables over 180 days after the reporting period, 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 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.

RESPONSIBILITIES OF DIRECTORS 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 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 assisted by the Audit Committee in discharging their responsibilities for overseeing the Group's financial reporting process.

AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue the auditor's report that includes our opinion. We report our opinion solely to you, as a body, and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report.

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

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.

From the matters communicated with the Audit Committee, 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.

Grant Thornton Hong Kong Limited
Certified Public Accountants
Level 12
28 Hennessy Road
Wanchai
Hong Kong

20 March 2020

Chan Tze Kit
Practising Certificate No.: P05707

CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

	Note	2019 RMB'000	2018 RMB'000
Revenue	6	**52,261,051**	47,019,024
Cost of sales		**(46,778,318)**	(41,823,450)
Gross profit		**5,482,733**	5,195,574
Other income	8	**254,958**	559,214
Selling and marketing expenses		**(131,243)**	(123,546)
Administrative expenses		**(1,281,950)**	(1,298,652)
Research and development costs		**(2,136,152)**	(1,675,692)
Other operating expense		**(191,263)**	(36,812)
Other gains/(losses) – net	9	**19,924**	(1,184,552)
Operating profit		**2,017,007**	1,435,534
Finance income	10	**897,375**	780,375
Finance expenses	10	**(111,130)**	(118,014)
Finance income – net		**786,245**	662,361
Share of profit/(loss) of joint arrangements	21(a)	**650**	(46)
Share of profit of associates	21(b)	**23,498**	23,666
Profit before taxation	11	**2,827,400**	2,121,515
Income tax expense	12	**(643,881)**	(441,706)
Profit for the year		**2,183,519**	1,679,809

CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME (CONTINUED)

	Note	2019 RMB'000	2018 RMB'000
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		**95,848**	(49,746)
Item that will not be reclassified subsequently to profit or loss:			
Gains/(losses) on revaluation of retirement benefit plans obligations, net of income tax effect		**35,650**	(157,487)
Other comprehensive income/(expense) for the year, net of tax		**131,498**	(207,233)
Total comprehensive income for the year		**2,315,017**	1,472,576
Profit attributable to:			
Equity holders of the Company		**2,183,457**	1,679,472
Non-controlling interests		**62**	337
Profit for the year		**2,183,519**	1,679,809
Total comprehensive income attributable to:			
Equity holders of the Company		**2,314,955**	1,472,239
Non-controlling interests		**62**	337
Total comprehensive income for the year		**2,315,017**	1,472,576

		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	**0.49**	0.38

Note:
The Group has initially applied IFRS 16 at 1 January 2019, using the modified retrospective approach. Under this approach, comparative information is not restated. See note 3.1.

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

	Note	2019 RMB'000	2018 RMB'000
ASSETS			
Non-current assets			
Property, plant and equipment	17	**3,597,352**	3,496,474
Land use rights	18	**–**	2,442,793
Right-of-use assets	19	**2,523,770**	–
Intangible assets	20	**233,315**	164,081
Investment in joint arrangements	21(a)	**2,516**	1,866
Investment in associates	21(b)	**161,952**	147,454
Financial assets at fair value through other comprehensive income	22	**–**	680
Deferred income tax assets	38	**738,052**	781,439
Total non-current assets		**7,256,957**	7,034,787
Current assets			
Inventories	26	**1,193,480**	400,921
Notes and trade receivables	23	**8,613,198**	9,726,429
Prepayments and other receivables	24	**6,664,671**	4,967,162
Contract assets	25(a)	**8,085,951**	11,573,904
Loans due from the ultimate holding company	27	**19,000,000**	18,000,000
Restricted cash	28	**38,087**	29,468
Time deposits	29	**7,086,066**	2,142,406
Cash and cash equivalents	30	**9,935,338**	16,997,663
Total current assets		**60,616,791**	63,837,953
Total assets		**67,873,748**	70,872,740

CONSOLIDATED STATEMENT OF FINANCIAL POSITION (CONTINUED)

		2019	2018
	Note	RMB'000	RMB'000
EQUITY			
Share capital	31	**4,428,000**	4,428,000
Reserves		**22,837,976**	21,550,646
Equity attributable to equity holders of the Company		**27,265,976**	25,978,646
Non-controlling interests		**4,565**	4,503
Total equity		**27,270,541**	25,983,149
LIABILITIES			
Non-current liabilities			
Lease liabilities	33	**125,678**	–
Retirement and other supplemental benefit obligations	34	**2,488,926**	2,636,815
Provision for litigation claims	35	**196,945**	253,936
Total non-current liabilities		**2,811,549**	2,890,751
Current liabilities			
Notes and trade payables	36	**22,114,039**	28,686,243
Other payables	37	**2,008,917**	2,758,139
Contract liabilities	25(b)	**13,314,941**	9,968,594
Lease liabilities	33	**55,275**	–
Loans due to a fellow subsidiary	39	**–**	384,339
Current income tax liabilities		**298,486**	201,525
Total current liabilities		**37,791,658**	41,998,840
Total liabilities		**40,603,207**	44,889,591
Total equity and liabilities		**67,873,748**	70,872,740
Net current assets		**22,825,133**	21,839,113
Total assets less current liabilities		**30,082,090**	28,873,900

Chairman of the Board: **YU Renming** Director, President: **XIANG Wenwu** Chief Financial Officer: **JIA Yiqun**

Note:
The Group has initially applied IFRS 16 at 1 January 2019, using the modified retrospective approach. Under this approach, comparative information is not restated. See note 3.1.

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

	Attributable to equity holders 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 31)	RMB'000 (Note 32(v))	RMB'000 (Note 32(iv))	RMB'000 (Note 32(vi))	RMB'000 (Note 32(vii))	RMB'000	RMB'000	RMB'000	RMB'000
Balance at 1 January 2019	4,428,000	10,092,369	999,155	182,340	(95,834)	10,372,616	25,978,646	4,503	25,983,149
Profit for the year	–	–	–	–	–	2,183,457	2,183,457	62	2,183,519
Other comprehensive income:									
Defined benefits obligation revaluation of actuarial gain and loss – gross	–	–	–	–	–	47,319	47,319	–	47,319
Defined benefits obligation revaluation of actuarial gain and loss – tax	–	–	–	–	–	(11,669)	(11,669)	–	(11,669)
Exchange differences arising on translation of foreign operations	–	–	–	–	95,848	–	95,848	–	95,848
Total comprehensive income	–	–	–	–	95,848	2,219,107	2,314,955	62	2,315,017
Transactions with owners:									
Final dividends for 2018 (Note 14)	–	–	–	–	–	(549,072)	(549,072)	–	(549,072)
Interim dividends for 2019 (Note 14)	–	–	–	–	–	(478,224)	(478,224)	–	(478,224)
Appropriation of specific reserve	–	–	–	149,401	–	(149,401)	–	–	–
Utilisation of specific reserve	–	–	–	(139,852)	–	139,852	–	–	–
Transfer to Statutory surplus reserve	–	–	358,428	–	–	(358,428)	–	–	–
Proceed from financial assets at fair value through other comprehensive income	–	–	–	–	–	(329)	(329)	–	(329)
Total transactions with owners	–	–	358,428	9,549	–	(1,395,602)	(1,027,625)	–	(1,027,625)
Balance at 31 December 2019	4,428,000	10,092,369	1,357,583	191,889	14	11,196,121	27,265,976	4,565	27,270,541

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY (CONTINUED)

	Attributable to equity holders 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 31)	RMB'000 (Note 32(v))	RMB'000 (Note 32(iv))	RMB'000 (Note 32(vi))	RMB'000 (Note 32(vii))	RMB'000	RMB'000	RMB'000	RMB'000
Balance at 1 January 2018	4,428,000	10,092,369	872,994	164,393	(46,088)	10,075,171	25,586,839	4,166	25,591,005
Profit for the year	–	–	–	–	–	1,679,472	1,679,472	337	1,679,809
Other comprehensive income:									
Defined benefits obligation revaluation of actuarial gain and loss – gross	–	–	–	–	–	(190,589)	(190,589)	–	(190,589)
Defined benefits obligation revaluation of actuarial gain and loss – tax	–	–	–	–	–	33,102	33,102	–	33,102
Exchange differences arising on translation of foreign operations	–	–	–	–	(49,746)	–	(49,746)	–	(49,746)
Total comprehensive income	–	–	–	–	(49,746)	1,521,985	1,472,239	337	1,472,576
Transactions with owners:									
Final dividends for 2017	–	–	–	–	–	(637,632)	(637,632)	–	(637,632)
Interim dividends for 2018 (Note 14)	–	–	–	–	–	(442,800)	(442,800)	–	(442,800)
Appropriation of specific reserve	–	–	–	107,995	–	(107,995)	–	–	–
Utilisation of specific reserve	–	–	–	(90,048)	–	90,048	–	–	–
Transfer to statutory surplus reserve	–	–	126,161	–	–	(126,161)	–	–	–
Total transactions with owners	–	–	126,161	17,947	–	(1,224,540)	(1,080,432)	–	(1,080,432)
Balance at 31 December 2018	4,428,000	10,092,369	999,155	182,340	(95,834)	10,372,616	25,978,646	4,503	25,983,149

Note:
The Group has initially applied IFRS 16 at 1 January 2019, using the modified retrospective approach. Under this approach, comparative information is not restated. See note 3.1.

CONSOLIDATED STATEMENT OF CASH FLOWS

	Note	2019 RMB'000	2018 RMB'000
Cash flows from operating activities			
Cash generated from operations	42	**430,588**	6,428,833
Income tax paid		**(573,908)**	(587,985)
Interest received		**443,367**	263,344
Net cash generated from operating activities		**300,047**	6,104,192
Cash flows from investing activities			
Purchase of property, plant and equipment		**(226,992)**	(229,282)
Purchase of intangible assets		**(143,984)**	(17,582)
Settlement of acquisition of a subsidiary		**–**	(44,100)
Interest income on the loans to the ultimate holding company		**588,656**	517,031
Proceeds from disposal of property, plant and equipment		**8,709**	1,870
Settlement of derivative financial liabilities		**(231,168)**	(46,160)
Proceeds from disposal of financial assets at fair value through other comprehensive income		**351**	1,946
Proceeds from disposal of land use rights		**56,109**	–
Dividends received from joint arrangements		**2,000**	–
Net (increase)/decrease in time deposits		**(4,943,660)**	2,340,231
Loans to the ultimate holding company		**(21,000,000)**	(22,000,000)
Loans repaid by the ultimate holding company		**20,000,000**	19,500,000
Net cash (used in)/generated from investing activities		**(5,889,979)**	23,954
Cash flows from financing activities			
Borrowings from a fellow subsidiaries		**–**	513,123
Repayments of borrowings from a fellow subsidiary		**(384,339)**	(590,510)
Interest paid		**(19,624)**	(21,397)
Dividends paid		**(1,027,296)**	(1,080,432)
Payments of lease liabilities		**(73,761)**	–
Net cash used in financing activities		**(1,505,020)**	(1,179,216)
Net (decrease)/increase in cash and cash equivalents		**(7,094,952)**	4,948,930
Cash and cash equivalents at beginning of year		**16,997,663**	11,660,660
Exchange gains on cash and cash equivalents		**32,627**	388,073
Cash and cash equivalents at end of year	30	**9,935,338**	16,997,663

Note:
The Group has initially applied IFRS 16 at 1 January 2019, using the modified retrospective approach. Under this approach, comparative information is not restated. See note 3.1.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2019

1. PRINCIPAL ACTIVITIES, ORGANISATION AND REORGANISATION

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.

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, the 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 20 March 2020.

2. BASIS OF PREPARATION

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") issued by the International Accounting Standards Board (the "IASB"). The consolidated financial statements also comply with the applicable disclosure requirements of Hong Kong Companies Ordinance and 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 convention, as modified by the revaluation of financial assets at fair value through other comprehensive income, which are carried at fair value.

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

The principal accounting policies applied in the preparation of the consolidated financial statements are set out below.

3.1 New and amended IFRS

The IASB has issued a number of new and amended IFRS. The Group has applied for the first time of the following new and amended IFRS issued by IASB, which are relevant to the Group's operations and effective for the Group's consolidated financial statements for the accounting period beginning on or after 1 January 2019:

IFRS 16	Leases
Amendments to IFRS 9	Prepayment Features with Negative Compensation
Amendments to IAS 19	Plan Amendment, Curtailment or Settlement
Amendments to IAS 28	Long-term Interests in Associates and Joint Ventures
IFRIC – Int 23	Uncertainty over Income Tax Treatments
Amendments to IFRSs	Annual Improvements to IFRSs 2015-2017 Cycle

Other than the impact of the adoption of IFRS 16 as noted below, the adoption of the new and amended IFRSs had no material impact on how the results and financial position for the current and prior periods have been prepared and presented.

IFRS 16 "Leases"

As a Lessee

IFRS 16 "Leases" replaces IAS 17 "Leases" along with three Interpretations IFRIC-Int 4 "Determining whether an Arrangement contains a Lease", SIC -15 "Operating Leases-Incentives" and SIC Int-27 "Evaluating the Substance of Transactions Involving the Legal Form of a Lease"). IFRS 16 has been applied using the modified retrospective approach, has therefore recognised the cumulative effect of initial application as an adjustment to the opening balance of equity at 1 January 2019. Prior periods have not been restated.

For contracts in place at the date of initial application, the Group has elected to apply the definition of a lease from IAS 17 and IFRIC-Int 4 and has not applied IFRS 16 to arrangements that were previously not identified as lease under IAS 17 and IFRIC-Int 4. The Group has already recognised the land use rights for leasehold land where the Group is a lessee. The application of IFRS 16 does not have impact on these assets except for the whole balance is now presented as "land use rights" under non-current assets.

The Group has elected not to include initial direct costs in the measurement of the right-of-use asset for operating leases in existence at the date of initial application of IFRS 16, being 1 January 2019. At this date, the Group has also elected to measure the right-of-use assets at an amount equal to the lease liability adjusted for any prepaid or accrued lease payments that existed at the date of transition. The discounting effects of refundable rental deposits paid included in "prepayment and other receivables" at transition were considered as additional lease payments and adjusted to the cost of corresponding right-of-use assets.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

3.1 New and amended IFRS (Continued)

IFRS 16 "Leases" (Continued)

As a Lessee (Continued)

Instead of performing an impairment review on the right-of-use assets at the date of initial application, the Group has relied on its historic assessment as to whether leases were onerous immediately before the date of initial application of IFRS 16.

On transition, for leases previously accounted for as operating leases with a remaining lease term of less than 12 months, the Group has applied the practical expedient not to recognise right-of-use assets but to account for the lease expense on a straight-line basis over the remaining lease term.

When measuring lease liabilities for leases that were classified as operating leases, the Group discounted lease payments using its incremental borrowing rate. The weighted average rate applied is 4.81%.

The following is a reconciliation of total operating lease commitments (Note 41) as at 31 December 2018 to the lease liabilities recognised as at 1 January 2019:

	At 1 January 2019
	RMB'000
Total operating lease commitments disclosed as at 31 December 2018	279,298
Less: Commitments relating to leases exempt from capitalisation	
Leases with remaining lease term of less than 12 months	(66,451)
Less: Total future interest expenses (as at 1 January 2019)	(27,454)
Total lease liabilities recognised under IFRS 16 as at 1 January 2019	185,393
Classified as:	
Current lease liabilities	51,299
Non-current lease liabilities	134,094
	185,393

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

3.1 New and amended IFRS (Continued)

IFRS 16 "Leases" (Continued)

As a Lessor

Upon initial application of IFRS 16, the Group is not required to make any adjustment on transition for leases in which the Group is a lessor but account for these leases in accordance with IFRS 16. Comparative information is not restated.

The following table summarises the impact of transition to IFRS 16 on the Group's consolidated statement of financial position as at 1 January 2019:

	Carrying amount as at 31 December 2018	Remeasurement	Reclassification	IFRS 16 carrying amount as at 1 January 2019
	RMB'000	RMB'000	RMB'000	RMB'000
Line items in the consolidated statement of financial position impacted by the adoption of IFRS 16:				
Right-of-use assets	–	187,437	2,442,793	2,630,230
Land use rights	2,442,793	–	(2,442,793)	–
Non-current assets	7,034,787	187,437	–	7,222,224
Prepayment and other receivables	4,967,162	(2,044)	–	4,965,118
Current asset	63,837,953	(2,044)	–	63,835,909
Lease liabilities (current portion)	–	51,299	–	51,299
Current liabilities	41,998,840	51,299	–	42,050,139
Lease liabilities (non-current portion)	–	134,094	–	134,094
Non-current liabilities	2,890,751	134,094	–	3,024,845
Total equity	25,983,149	–	–	25,983,149

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

3.1 New and amended IFRS (Continued)

IFRS 16 "Leases" (Continued)

The new and amended accounting standards issued but not yet effective for the accounting year ended 31 December 2019 which are relevant to the Group but the Group has not early adopted are set out below:

Amendments to IAS 1 and IAS 8	Definition of Material[1]
Amendments to IFRS 9, IAS 39 and IFRS 7	Interest Rate Benchmark Reform[1]
Amendments to IAS 1	Classification of liabilities As Current or Non-current[2]
IFRS 17	Insurance Contracts[3]
Amendments to IFRS 10 and IAS 28	Sale or Contribution of Assets between an Investor and its Associate or Joint Venture[4]
Amendments to IFRS 3	Definition of a Business[5]

[1] Accounting periods beginning on or after 1 January 2020
[2] Accounting periods beginning on or after 1 January 2022
[3] Accounting periods beginning on or after 1 January 2023
[4] Effective date not yet been determined
[5] Effective for business combinations and asset acquisition for which the acquisition date is on or after the beginning of the first annual period beginning on or after 1 January 2020

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

3.2 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.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

3.2 Consolidation (Continued)

Subsidiaries (Continued)

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.

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 Arrangements

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.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

3.2 Consolidation (Continued)

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.

3.3 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.

3.4 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/(losses) – 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).

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

3.4 Foreign currency translation (Continued)

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.

3.5 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
Plant and 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.

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 gains/(losses) – 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. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

3.6 Land use rights

Policy applicable before 1 January 2019

Land use rights represent upfront prepayments made for the land use rights which are stated at cost less accumulated amortisation and any accumulated impairment losses. Amortisation are recognised in the consolidated statement of profit or loss and other comprehensive income on a straight-line basis over the terms of the leases. Whenever there is impairment, the impairment is recognised in the consolidated statement of profit or loss and other comprehensive income.

The Group has already reallocated land use rights to right-of-use assets at the date of initial application of IFRS 16, being 1 January 2019. See note 3.28.

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, land use rights, intangible assets and interest in associate, subsidiary 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. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

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.

(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.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

3.9 Financial instruments (Continued)

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

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.

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.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

3.9 Financial instruments (Continued)

(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.

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, loans due from the ultimate holding company and other receivables are also subject to the impairment requirements of IFRS 9, the identified impairment loss was immaterial.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

3.9 Financial instruments (Continued)

(c) Impairment of financial assets (Continued)

Measurement of ECL (Continued)

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.

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.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

3.9 Financial instruments (Continued)

(c) Impairment of financial assets (Continued)

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, dividend payables, lease liabilities and loans due to a fellow subsidiary. 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 3.28.

(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.

3.10 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. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

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 Share-based payment transactions

Cash-settled share-based payment transactions

The Group operates a cash-settled H share appreciation rights plan. The related cost of services received from the employees and the liability to pay for such services are measured at fair value of the liability. Fair value is established at the grant date and re-measured at each reporting date until the liability settled. The fair value of the liability at each reporting date is expensed on a straight-line basis over the vesting period, based on the Group's estimate of the cash-settled share appreciation rights that will eventually vest. At the end of each reporting period, the Group revises its estimation of the number of the cash-settled share appreciation rights expected to vest. The impact of the revision and remeasurement, if any, is recognised in profit or loss such that the cumulative expense reflects the revised estimation. After the vesting date, changes in fair value of the liability is recognised in profit or loss until the liability is settled.

3.15 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.

3.16 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.

3.17 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.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

3.17 Employee benefits (Continued)

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.

3.18 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. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

3.19 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, joint arrangements 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.

Before 1 April 2019, taxable revenue from construction services is subject to VAT at the rate of 10% after offsetting deductible input VAT. Certain revenue resulting from providing construction services was taxed by using applicable simple tax method, paying VAT at 3%. Taxable revenue from construction services is subject to VAT at the rate of 9% after offsetting deductible input VAT of the period from 1 April 2019. 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)

3.20 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.

3.21 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.

3.22 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.

3.23 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)

3.24 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 (a) 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; or (b) when the outcome of the contract can be reasonably measured, revenue from the contracts is recognised progressively over time using output method, based on direct measurement of the value of contract work performed, provided that the value of contract work performed can be measured reliably. The stage of contract completion is established by reference to the direct measurement of the work survey conducted. 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 at a point in 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.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

3.24 Revenue recognition (Continued)

Dividend income

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

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.

3.25 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.

3.26 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.

3.27 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)

3.28 Leases

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

Policy applicable from 1 January 2019

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:

(i) 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;

(ii) 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

(iii) 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)

3.28 Leases (Continued)

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

Policy applicable from 1 January 2019 (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 HKFRS 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.。

Policy applicable before 1 January 2019

An arrangement, comprising a transaction or a series of transactions, is or contains a lease if the Group determines that the arrangement conveys a right to use a specific asset or assets for an agreed period of time in return for a payment or a series of payments. Such a determination is made based on an evaluation of the substance of the arrangement and is regardless of whether the arrangement takes the legal form of a lease.

Assets that are held by the Group under leases which transfer to the Group substantially all the risks and rewards of ownership are classified as being held under finance leases. Leases which do not transfer substantially all the risks and rewards of ownership to the Group are classified as operating leases, with the following exceptions:

- property held under operating leases that would otherwise meet the definition of an investment property is classified as an investment property on a property-by-property basis and, if classified as investment property, is accounted for as if held under a finance lease; and
- land held for own use under an operating lease, the fair value of which cannot be measured separately from the fair value of a building situated thereon, at the inception of the lease, is accounted for as being held under a finance lease, unless the building is also clearly held under an operating lease. For these purposes, the inception of the lease is the time that the lease was first entered into by the Group, or taken over from the previous lessee.

Operating leases

Where the Group has the right to use of assets held under operating leases, payments made under the leases are charged to profit or loss on a straight line basis over the lease terms except where an alternative basis is more representative of the time pattern of benefits to be derived from the leased assets. Lease incentives received are recognised in profit or loss as an integral part of the aggregate net lease payments made. Contingent rentals are charged to profit or loss in the accounting period in which they are incurred.

(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. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

3.29 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:

	2019	2018
	RMB'000	RMB'000
Financial assets		
Financial assets at amortised cost		
Notes, trade and other receivables	**9,675,307**	10,941,504
Restricted cash	**38,087**	29,468
Time deposits	**7,086,066**	2,142,406
Cash and cash equivalents	**9,935,338**	16,997,663
Loans due from the ultimate holding company	**19,000,000**	18,000,000
	45,734,798	48,111,041
Financial assets at FVTOCI (non-recycling)		
Unlisted equity investments	**–**	680
Total financial assets	**45,734,798**	48,111,721
Financial liabilities		
Financial liabilities measured at amortised cost		
Notes, trade and other payables	**23,655,333**	30,765,919
Loans due to a fellow subsidiary	**–**	384,339
Lease liabilities	**180,953**	–
Total financial liabilities	**23,836,286**	31,150,258

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, cash and cash equivalents and lease liabilities that are denominated in a foreign currency, i.e. a currency other than the functional currency of the operations to which the transactions relate. The currency that gives rise to this risk is primarily in USD as at 31 December 2019 and 2018.

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 2019	RMB'000	RMB'000
Restricted cash, time deposits and cash and cash equivalents	**3,853,855**	**1,955,368**
Notes, trade and other receivables	**514,025**	**761,457**
Notes, trade and other payables	**(409,313)**	**(1,830,626)**
Lease liabilities	**(1,251)**	**(9,391)**
Net exposure in RMB	**3,957,316**	**876,808**

	USD	Others
At 31 December 2018	RMB'000	RMB'000
Restricted cash, time deposits and cash and cash equivalents	8,085,203	2,021,003
Notes, trade and other receivables	499,818	830,599
Notes, trade and other payables	(1,024,200)	(2,854,787)
Loans due to a fellow subsidiary	(384,339)	–
Net exposure in RMB	7,176,482	(3,185)

A 5% strengthening of RMB against the USD as at 31 December 2019 and 2018 would have changed the equity and net profit by the amounts shown below:

	2019	2018
	RMB'000	RMB'000
Decrease in equity and net profit		
– USD	**(148,400)**	(269,118)

A 5% weakening of RMB as at 31 December 2019 and 2018 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.

4. FINANCIAL AND CAPITAL RISKS MANAGEMENT (Continued)

4.1 Financial risk management (Continued)

(a) Market risk (Continued)

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 a fellow subsidiary and 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.

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.

4. FINANCIAL AND CAPITAL RISKS MANAGEMENT (Continued)

4.1 Financial risk management (Continued)

(b) Credit risk (Continued)

Impairment assessment under ECL model (Continued)

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 2019							
Notes, trade and other payables	N/A	23,655,333	–	–	–	23,655,333	23,655,333
Lease liabilities	4.81%	63,275	105,705	38,432	–	207,412	180,953
Borrowings and other liabilities		23,718,608	105,705	38,432	–	23,862,745	23,836,286

	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 2018							
Notes, trade and other liabilities	N/A	30,765,919	–	–	–	30,765,919	30,765,919
Loans due to a fellow subsidiary	4.20%	387,705	–	–	–	387,705	384,339
Borrowings and other liabilities		31,153,624	–	–	–	31,153,624	31,150,258

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 the total borrowings and other liabilities (including notes and trade payables, other payables, dividend payables, lease liabilities and loans due to a fellow subsidiary, 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.

	2019	2018
	RMB'000	RMB'000
Total borrowings and other liabilities	**23,836,286**	31,150,258
Less: Restricted cash, time deposits and cash and cash equivalents	**(17,059,491)**	(19,169,537)
Net debt	**6,776,795**	11,980,721
Total equity (excluding non-controlling interests)	**27,265,976**	25,978,646
Total capital	**34,042,771**	37,959,367
Gearing ratio	**20%**	32%

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 reflected 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 and not using significant unobservable input (level 2).
- Inputs for the asset or liability that are not based on signficant observable market data (i.e. unobservable inputs) (level 3).

Fair value disclosures

The carrying amounts of the Group's financial assets and liabilities including restricted cash, time deposits, cash and cash equivalents, trade and other receivables and trade and other payables approximate their fair values due to their short maturities. Financial assets at FVTOCI are measured at fair value as at 31 December 2019.

The reconciliation of the carrying amounts of the Group's financial instruments classified within Level 3 of the fair value hierarchy is as follows:

	Financial assets at FVTOCI	Financial assets at FVTOCI
	2019	2018
	RMB'000	RMB'000
At 1 January	**680**	680
Disposal	**(680)**	–
At 31 December	**–**	680

The fair value of the unlisted equity securities is measured using valuation techniques with reference to the net asset value. The Directors believe that the change in fair value (which is included in other comprehensive income) derived from the valuation technique is reasonable and is the most appropriate value at the end of the reporting period.

There have been no transfers into or out of Level 3 during the year ended 31 December 2019 (31 December 2018: Nil).

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 (a) the stage of completion of the contract activity at the end of the reporting period as measured by the proportion that the value or work performed to date to the estimated total contract value; or (b) direct measurements of the value of units delivered or surveys of work performed. Based on historical experience with similar projects, the difference is immaterial. 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 2019 the contract assets (Note 25(a)) and contract liabilities (Note 25(b)) are RMB8,085,951,000 (31 December 2018: RMB11,573,904,000) and RMB13,314,941,000 (31 December 2018: RMB9,968,594,000) 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 2019, the net carrying amount of property, plant and equipment is RMB3,597,352,000 (31 December 2018: RMB3,496,474,000).

(c) Provision for ECL of trade receivables and contract assets

The Group determines the provision for ECL on trade receivables (Note 23) and contract assets (Note 25(a)). This estimate is based on the credit history of the customers and the current market condition. 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 2019, the provision for impairment on trade receivables and contract assets are RMB1,346,804,000 (31 December 2018: RMB1,313,283,000) and RMB193,086,000 (31 December 2018: RMB164,750,000) respectively.

(d) Current taxation and deferred taxation

The Group pays income tax in various regions. There are various uncertainties on the ultimate income tax treatments for many transactions and events arising from normal operating activities and overall assets transfers. The Group has to make critical accounting judgments when calculating income tax expense in different regions. In the event that the finalised amounts recognised for such tax events are different from those originally recorded, this could result in material adjustments to income tax expense and deferred income tax.

The estimates of deferred income tax assets (Note 38) 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 2019, deferred tax assets recognised in the consolidated statement of financial position is RMB738,052,000 (31 December 2018: RMB781,439,000).

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 2019, the net liabilities of retirement benefit plan obligations (Note 34(b)) is RMB2,488,926,000 (31 December 2018: RMB2,636,815,000).

(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 2019, provision for litigation claims (Note 35) is RMB196,945,000 (31 December 2018: RMB253,936,000).

6. REVENUE

The Group's revenue is set out below:

	2019	2018
	RMB'000	RMB'000
Engineering, consulting and licensing	2,317,552	2,924,408
EPC Contracting	32,438,087	29,135,814
Construction	17,219,628	14,401,934
Equipment manufacturing	285,784	556,868
	52,261,051	47,019,024

Remaining performance obligations

As at 31 December 2019, amount of remaining performance obligations is RMB94,993,560,000 (2018: RMB94,935,464,000), which is expected to be completed in the coming 60 months (2018: 60 months).

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 oil refining equipment and spare parts for facilities including oil refining and chemical facilities.

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, land use rights, rights of use assets, construction in progress, intangible assets, investment in joint arrangements 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, loans due from the ultimate holding company, deferred income tax assets and other unallocated assets.

Segment liabilities comprise operating liabilities and borrowings. Unallocated liabilities comprise items such as current income tax liabilities and deferred income tax liabilities.

Capital expenditure comprises additions to property, plant and equipment (Note 17), land use rights (Note 18), right-of-use assets (Note 19), intangible assets (Note 20) and other non-current assets, including additions resulting from acquisitions through business combinations.

7. SEGMENT INFORMATION (Continued)

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 2019：

The segment results for the year ended 31 December 2019 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	2,317,552	32,438,087	17,219,628	285,784	–	–	52,261,051
Inter-segment revenue	485,253	–	6,504,017	325,584	–	(7,314,854)	–
Segment revenue	2,802,805	32,438,087	23,723,645	611,368	–	(7,314,854)	52,261,051
Segment result	28,094	1,666,605	292,169	(6,882)	37,021	–	2,017,007
Finance income							897,375
Finance expenses							(111,130)
Share of profit of joint arrangements	650	–	–	–	–	–	650
Share of profit of associates	5,463	14,294	3,741	–	–	–	23,498
Profit before taxation							2,827,400
Income tax expense							(643,881)
Profit for the year							2,183,519
Other segment items							
Depreciation	64,578	188,414	343,313	12,421	–	–	608,726
Amortisation	2,376	69,741	2,633	–	–	–	74,750
Capital expenditures							
– Property, plant and equipment	55,725	270,881	264,467	1,040	–	–	592,113
– Right-of-use assets	2,095	23,545	41,123	6,782	–	–	73,545
– Intangible assets	–	139,766	4,218	–	–	–	143,984
Provision/(Reversal of provision) for ECL on trade and other receivables and contract assets, net	23,443	(5,217)	(108,044)	832	–	–	(88,986)

The segment assets and liabilities as at 31 December 2019 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	4,334,365	26,984,887	15,466,872	877,664	(5,291,173)	42,372,615
Investment in joint arrangements	2,516	–	–	–	–	2,516
Investment in associates	139,531	–	22,421	–	–	161,952
Other unallocated assets						25,336,665
Total assets						67,873,748
Liabilities						
Segment liabilities	1,910,225	28,558,826	14,861,104	564,225	(5,291,173)	40,603,207
Other unallocated liabilities						–
Total liabilities						40,603,207

7. SEGMENT INFORMATION (Continued)

(ii) As at and for the year ended 31 December 2018:

The segment results for the year ended 31 December 2018 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	2,924,408	29,135,814	14,401,934	556,868	–	–	47,019,024
Inter-segment revenue	–	–	3,718,930	73,730	–	(3,792,660)	–
Segment revenue	2,924,408	29,135,814	18,120,864	630,598	–	(3,792,660)	47,019,024
Segment result	39,245	1,548,272	(249,979)	23,145	74,851	–	1,435,534
Finance income							780,375
Finance expenses							(118,014)
Share of loss of joint arrangements	(46)	–	–	–	–	–	(46)
Share of profit of associates	8,874	11,410	3,382	–	–	–	23,666
Profit before taxation							2,121,515
Income tax expense							(441,706)
Profit for the year							1,679,809
Other segment items							
Depreciation	37,170	139,706	387,004	12,423	–	–	576,303
Amortisation	3,123	108,794	23,790	1,065	–	–	136,772
Capital expenditures							
– Property, plant and equipment	70,743	130,625	178,566	4,065	–	–	383,999
– Intangible assets	–	15,074	2,508	–	–	–	17,582
Provision/(Reversal of provision) for ECL on trade and other receivables, net	28,091	60,440	(92,872)	380	–	–	(3,961)

The segment assets and liabilities as at 31 December 2018 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	7,211,251	28,861,168	19,594,180	1,041,922	(5,674,852)	51,033,669
Investment in joint arrangements	1,866	–	–	–	–	1,866
Investment in associates	67,135	61,639	18,680	–	–	147,454
Other unallocated assets						19,689,751
Total assets						70,872,740
Liabilities						
Segment liabilities	4,062,965	28,900,887	16,865,098	735,495	(5,674,854)	44,889,591
Other unallocated liabilities						–
Total liabilities						44,889,591

7. SEGMENT INFORMATION (Continued)

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, land use rights, right-of-use assets, intangible assets, investment in joint arrangements 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 joint arrangements and associates.

Revenue

	2019	2018
	RMB'000	RMB'000
The PRC	42,551,448	36,932,325
Malaysia	340,316	612,458
Kuwait	4,664,958	4,742,814
Saudi Arabia	2,446,953	2,331,551
Other countries	2,257,376	2,399,876
	52,261,051	47,019,024

The customers accounted for more than 10% of the total revenue of the Group and revenue from them for the year ended 31 December 2019 and 2018, the details are as follows:

	2019	2018
	RMB'000	RMB'000
Fellow subsidiary and its subsidiaries		
– Customer group A	20,162,602	17,011,814

The revenue from the customers are derived from the segment of engineering, consulting and licensing, EPC contracting, construction and equipment manufacturing.

Specified non-current assets

	2019	2018
	RMB'000	RMB'000
The PRC	6,230,199	5,916,635
Other countries	288,706	336,033
	6,518,905	6,252,668

7. SEGMENT INFORMATION (Continued)

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 segments:

	Engineering, consulting and licensing	EPC contracting	Construction	Equipment manufacturing	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Timing of revenue recognition					
For the year ended 31 December 2019					
At a point in time	–	–	–	**285,784**	**285,784**
Over time	**2,317,552**	**32,438,087**	**17,219,628**	–	**51,975,267**
Total revenue	**2,317,552**	**32,438,087**	**17,219,628**	**285,784**	**52,261,051**
For the year ended 31 December 2018					
At a point in time	–	–	–	556,868	556,868
Over time	2,924,408	29,135,814	14,401,934	–	46,462,156
Total revenue	2,924,408	29,135,814	14,401,934	556,868	47,019,024
Sales by products					
For the year ended 31 December 2019					
Oil refining	**610,463**	**13,934,085**	**4,745,901**	**108,673**	**19,399,122**
Petrochemicals	**1,378,038**	**14,388,215**	**9,207,390**	**172,464**	**25,146,107**
New coal chemicals	**97,213**	**3,204,899**	**807,033**	**555**	**4,109,700**
Other industries	**231,838**	**910,888**	**2,459,304**	**4,092**	**3,606,122**
Total revenue	**2,317,552**	**32,438,087**	**17,219,628**	**285,784**	**52,261,051**
For the year ended 31 December 2018					
Oil refining	1,063,394	11,661,811	4,720,783	303,103	17,749,091
Petrochemicals	1,262,411	8,277,279	7,404,386	189,865	17,133,941
New coal chemicals	239,328	7,632,677	905,766	63,856	8,841,627
Other industries	359,275	1,564,047	1,370,999	44	3,294,365
Total revenue	2,924,408	29,135,814	14,401,934	556,868	47,019,024

8. OTHER INCOME

	2019	2018
	RMB'000	RMB'000
Operating lease rental income on property, plant and equipment	**67,892**	51,434
Income from write-back long outstanding payables	**23,587**	3,385
Government grants (Note)	**64,946**	69,481
Net foreign exchange gain	–	370,230
Others	**98,533**	64,684
	254,958	559,214

Note:
Government grants mainly represent industry-specific subsidies and employee settlement subsidies.

9. OTHER GAINS/(LOSSES) – NET

	2019	2018
	RMB'000	RMB'000
Profits/(losses) on disposal/write-off of property, plant and equipment	4,232	(28,071)
Profits on disposal/write-off of land use rights	54,637	–
Loss on disposal of derivative financial liabilities	–	(279,769)
Loss on separation and transfer of "Water/electricity/gas supply and property management" (Note)	(38,945)	(876,712)
	19,924	(1,184,552)

Note:
Loss on separation and transfer of "Water/electricity/gas supply and property management" includes transfer of certain fixed assets (namely water/electricity/gas supply and property management system) with carrying amounts of RMB38,945,000 (2018: RMB188,823,000) (Notes 17, Note 18 and Note 19) in employee living areas to local government and their designated entities at nil consideration pursuant to the notices from State Council and Ministry of Finance as set out in the Company's announcement dated 10 January 2019.

10. FINANCE INCOME AND FINANCE EXPENSES

	2019	2018
	RMB'000	RMB'000
Finance income		
Interest income from the ultimate holding company	588,656	517,031
Interest income from the fellow subsidiaries	109,112	80,275
Bank interest income	199,607	183,069
	897,375	780,375
Finance expenses		
Interest expenses to a fellow subsidiary on balances wholly repayable within 5 years	(19,624)	(21,397)
Interest expenses on retirement and other supplementary benefit obligation	(81,758)	(96,617)
Finance charges on lease liabilities	(9,748)	–
	(111,130)	(118,014)
	786,245	662,361

11. PROFIT BEFORE TAXATION

Profit before taxation has been arrived at after charging/(crediting):

	2019 RMB'000	2018 RMB'000
Staff costs, including directors and supervisors emoluments (Note 16)	**6,066,225**	5,911,091
Retirement benefit plan contribution (including in the above mentioned staff costs)	**808,505**	758,036
Cost of goods sold	**17,415,941**	18,163,201
Subcontracting costs	**19,521,556**	16,473,821
Depreciation and amortisation		
– Property, plant and equipment	**485,154**	576,303
– Right-of-use assets (note)	**123,572**	–
– Land use rights (note)	**–**	59,831
– Intangible assets	**74,750**	76,941
Operating lease rentals		
– Property, plant and equipment (note)	**–**	478,473
– Short term leases and leases with leases term shorter than 12 months as at initial application of IFRS 16 (note)	**332,066**	–
Reversal of provision for ECL on trade and other receivables and contract assets, net	**88,986**	3,961
Rental income from property, plant and equipment after relevant expenses	**(62,387)**	(18,497)
Research and development costs	**2,136,152**	1,675,692
(Profit)/Loss on disposal/write-off of property, plant and equipment	**(4,232)**	28,071
Profit on disposal/write-off of land use rights	**(54,637)**	–
Auditor's remuneration		
– Audit service	**4,700**	4,700
Exchange losses/(gains), net	**40,719**	(370,230)
Cash-settled share-base (reversal)/payment	**(5,100)**	10,691
Loss on disposal of financial assets at FVTOCI	**–**	279,769

Note:
IFRS 16 has been applied using the modified retrospective approach, has therefore recognised the cumulative effect of initial application as an adjustment to the opening balance of equity at 1 January 2019. At this date, the Group has also elected to measure the right-of-use assets at an amount equal to the lease liability adjusted for any prepaid or accrued lease payments that existed at the date of transition. Prior periods have not been restated. See note 3.1

12. INCOME TAX EXPENSE

	2019 RMB'000	2018 RMB'000
Current tax		
PRC enterprise income tax	392,908	376,647
Overseas enterprise income tax	170,023	87,834
Under/(Over)-provision for income tax in prior years	49,232	(25,405)
	612,163	439,076
Deferred tax		
Origination and reversal of temporary differences (Note 38)	31,718	2,630
Income tax expense	643,881	441,706

According to the Corporate Income Tax Law of the PRC, the applicable income tax of the years ended 31 December 2019 and 2018 is 25%.

According to the normal statutory PRC corporate income tax and relevant rules, for the years ended 31 December 2019 and 2018, the majority of 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.

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:

	2019 RMB'000	2018 RMB'000
Profit before taxation	2,827,400	2,121,515
Taxation calculated at the statutory tax rate	706,850	530,379
Income tax effects of:		
Preferential income tax treatments of certain companies	(195,910)	(255,865)
Difference in overseas profits tax rates	(63,675)	(56,085)
Non-deductible expenses	167,333	291,137
Income not subject to tax	(46,836)	(52,736)
Unrecognised tax losses	31,789	10,281
Utilisation of previously unrecognised tax losses	(4,902)	–
Under/(Over)-provision for income tax in prior years	49,232	(25,405)
Income tax expense	643,881	441,706
Effective income tax rate	22.8%	20.8%

13. EARNINGS PER SHARE

(a) Basic

The basic earnings per share for each of the years ended 31 December 2019 and 2018 is calculated based on the profit attributable to the equity holders of the Company and the weighted average number of ordinary shares in issue.

	2019	2018
Profit attributable to equity holders of the Company (RMB'000)	2,183,457	1,679,472
Weighted average number of ordinary shares in issue	4,428,000,000	4,428,000,000
Basic earnings per share (RMB)	0.49	0.38

(b) Diluted

As the Company had no dilutive shares for the each of the years ended 31 December 2019 and 2018, dilutive earnings per share for the years ended 31 December 2019 and 2018 are the same as basic earnings per share.

14. DIVIDENDS

Dividends represented dividends declared by the Company during each of years ended 31 December 2019 and 2018.

	2019	2018
	RMB'000	RMB'000
Interim dividends of RMB0.108 (2018: RMB0.1) per ordinary share(1)	478,224	442,800
Proposed final dividends of RMB0.212 (2018: RMB0.124) per ordinary share(2)	938,736	549,072

Notes:

(1) Pursuant to a resolution passed at the board of Directors' meeting on 16 August 2019, the Directors authorised to declare the interim dividends for the year ended 31 December 2019 of RMB0.108 (2018: RMB0.1) per share totaling RMB478,224,000 (2018: RMB442,800,000), and have been paid in October 2019.

(2) Pursuant to the board of Directors' meeting on 20 March 2020, the Directors recommended to declare the final dividends for the year ended 31 December 2019 of RMB0.212 (2018: RMB0.124) per share totaling RMB938,736,000 (2018: RMB549,072,000). Such recommendation is to be approved by the shareholders at the Annual General Meeting. Dividends declared after the 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 2019

	Fee	Basic salaries, other allowances and benefits-in-kind	Discretionary bonus	Contributions to pension plans	Cash-settled share-based payment	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Executive directors						
LU Dong[5]	–	386	780	99	89	1,354
XIANG Wenwu	–	415	770	99	89	1,373
SUN Lili[1]	–	339	865	99	85	1,388
ZHOU Yingguan[4]	–	346	570	84	–	1,000
YU Renming[6]	–	–	–	–	–	–
	–	1,486	2,985	381	263	5,115
Non-executive directors						
YU Baocai[3] [5]	–	–	–	–	–	–
WU Wenxin[3]	–	–	–	–	–	–
	–	–	–	–	–	–
Independent non-executive directors						
HUI Chiu Chung, Stephen	200	–	–	–	–	200
JIN Yong	200	–	–	–	–	200
YE Zheng	200	–	–	–	–	200
	600	–	–	–	–	600
Supervisors						
WANG Guoliang[1]	–	318	707	76	–	1,101
ZHU Fei[1]	–	341	665	86	–	1,092
JIANG Dejun[1]	–	282	555	66	–	903
XU Yijun[1]	–	298	644	67	–	1,009
YE Wenbang[1]	–	301	668	89	68	1,126
WU Jibo[1]	–	285	547	76	64	972
WU Zhongxian[1]	–	277	577	75	–	929
	–	2,102	4,363	535	132	7,132
	600	3,588	7,348	916	395	12,847

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 2018

	Fee	Basic salaries, other allowances and benefits-in-kind	Discretionary bonus	Contributions to pension plans	Cash-settled share-based payment	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Executive directors						
LU Dong[5]	–	310	541	79	171	1,101
XIANG Wenwu	–	336	514	79	171	1,100
SUN Lili[1]	–	306	569	82	163	1,120
WU Derong[1] [2]	–	241	455	69	146	911
ZHOU Yingguan[4]	–	39	61	11	–	111
	–	1,232	2,140	320	651	4,343
Non-executive directors						
LING Yiqun[2]	–	–	–	–	–	–
LI Guoqing[2]	–	–	–	–	–	–
YU Baocai[3] [5]	–	–	–	–	–	–
WU Wenxin[3]	–	–	–	–	–	–
	–	–	–	–	–	–
Independent non-executive directors						
HUI Chiu Chung, Stephen	183	–	–	–	–	183
JIN Yong	183	–	–	–	–	183
YE Zheng	183	–	–	–	–	183
	549	–	–	–	–	549
Supervisors						
ZHOU Yingguan[1] [4]	–	196	304	55	–	555
WANG Guoliang[1]	–	313	529	54	–	896
ZHU Fei[1]	–	280	442	79	–	801
JIANG Dejun[1]	–	285	300	74	–	659
XU Yijun[1]	–	269	449	50	–	768
WANG Cunting[1] [2]	–	225	385	63	–	673
YE Wenbang[1]	–	241	455	69	130	895
WU Jibo[1]	–	184	421	64	122	791
WU Zhongxian[1]	–	223	406	63	–	692
	–	2,216	3,691	571	252	6,730
	549	3,448	5,831	891	903	11,622

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) Resigned on 26 October 2018.
(3) Appointed on 26 October 2018.
(4) Resigned as supervisor and appointed as executive director on 26 October 2018.
(5) Resigned on 18 February 2020.
(6) Appointed on 18 February 2020.

For the years ended 31 December 2019 and 2018, Mr. XIANG Wenwu was also the president of the Company and his emoluments disclosed above including his service as the president.

(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 2019 and 2018 are set forth below:

	2019	2018
	Number of individuals	Number of individuals
Director or supervisor	**2**	3
Non-director or supervisor	**3**	2
	5	5

The aggregate of the emoluments in respect of the remaining highest paid non-director or supervisor are as follows:

	2019	2018
	RMB'000	RMB'000
Basic salaries, other allowances and benefits-in-kind	**1,154**	347
Discretionary bonuses	**3,209**	1,601
Contributions to pensions plans	**277**	138
Cash-settled share-based payment	**–**	122
	4,640	2,208

The emoluments of the three (2018: two) highest paid individuals who are non-director or supervisor are within the following bands:

	2019	2018
	Number of individuals	Number of individuals
HK$1,500,001 to HK$2,000,000	**3**	–
HK$1,000,001 to HK$1,500,000	**–**	2
Nil to HK$1,000,000	**–**	–
	3	2

No emoluments were paid by the Group to any directors 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 (2018: nil).

16. EMPLOYMENT BENEFITS

	2019	2018
	RMB'000	RMB'000
Salaries, wages and bonuses	**4,005,135**	4,019,607
Retirement benefits[1]	**683,392**	617,947
Early retirement and supplemental pension benefit (Note 34(b))		
– service cost	**43,355**	43,472
– interest cost	**81,758**	96,617
Immediate recognition of actuarial losses	**7,106**	7,255
Housing fund[2]	**338,489**	306,154
Welfare, medical and other expenses	**912,090**	809,348
Cash-settled shared-based (reversal)/payment (Note 40)	**(5,100)**	10,691
	6,066,225	5,911,091

Notes:

(1) Retirement benefits

The Group is required to make specific contributions to the state-managed retirement plan at a rate of 19% to 21% (2018: 19% to 25%) of the specified salaries of the PRC employees for the year ended 31 December 2019. 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	Plant and machinery, transportation equipment and other equipment	Construction-in-progress	Total
	RMB'000	RMB'000	RMB'000	RMB'000
At 1 January 2018				
Cost	3,570,953	4,494,076	190,046	8,255,075
Accumulated depreciation and impairment	(1,365,069)	(3,034,154)	–	(4,399,223)
Net book amount	2,205,884	1,459,922	190,046	3,855,852
Year ended 31 December 2018				
Opening net book amount	2,205,884	1,459,922	190,046	3,855,852
Transfers	14,926	206,963	(221,889)	–
Additions	18,394	32,228	333,377	383,999
Depreciation	(128,933)	(447,370)	–	(576,303)
Disposals/write-off (Note)	(100,242)	(66,832)	–	(167,074)
Closing net book amount	2,010,029	1,184,911	301,534	3,496,474
At 31 December 2018 and 1 January 2019				
Cost	3,441,090	4,389,607	301,534	8,132,231
Accumulated depreciation and impairment	(1,431,061)	(3,204,696)	–	(4,635,757)
Net book amount	2,010,029	1,184,911	301,534	3,496,474
Year ended 31 December 2019				
Opening net book amount	**2,010,029**	**1,184,911**	**301,534**	**3,496,474**
Transfers	**9,069**	**103,514**	**(112,583)**	**–**
Additions	**–**	**262,075**	**330,038**	**592,113**
Depreciation	**(119,172)**	**(365,982)**	**–**	**(485,154)**
Disposals/write-off (Note)	**(3)**	**(6,078)**	**–**	**(6,081)**
Closing net book amount	**1,899,923**	**1,178,440**	**518,989**	**3,597,352**
At 31 December 2019				
Cost	**3,450,076**	**4,630,885**	**518,989**	**8,599,950**
Accumulated depreciation and impairment	**(1,550,153)**	**(3,452,445)**	**–**	**(5,002,598)**
Net book amount	**1,899,923**	**1,178,440**	**518,989**	**3,597,352**

Note: For the year ended 31 December 2018, buildings and other facilities amounted to approximately RMB110,666,000 have been transferred under separation and transfer "Water/electricity/gas supply and property management".

17. PROPERTY, PLANT AND EQUIPMENT (Continued)

Depreciation expense recognised is analysed as follows:

	2019	2018
	RMB'000	RMB'000
Cost of sales	465,015	550,354
Selling and marketing expenses	1,438	1,915
Administrative expenses	18,701	24,034
	485,154	576,303

18. LAND USE RIGHTS

	2019	2018
	RMB'000	RMB'000
Beginning of the year	2,442,793	2,580,781
Amortisation	–	(59,831)
Disposal (Note)	–	(78,157)
Reallocation (Note 19)	(2,442,793)	–
End of the year	–	2,442,793

Note: As at 31 December 2018, buildings and other facilities amounted to approximately RMB78,157,000 have been transferred under separation and transfer "Water/electricity/gas supply and property management".

Land use rights represent prepayments made by the Group for the land use rights located in the PRC which are held on leases between 20 years to 50 years.

IFRS 16 has been applied using the modified retrospective approach, has therefore recognised the cumulative effect of initial application as an adjustment to the opening balance at 1 January 2019. On that date, the Group has already reallocated land use rights to right-of-use assets. See note 19.

Amortisation recognised is analysed as follows:

	Year ended 31 December 2018
	RMB'000
Cost of sales	38,994
Administrative expenses	20,837
	59,831

19. RIGHT-OF-USE ASSETS

The Group leases assets including buildings and other facilities, plants and 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	Plant and machinery, transportation equipment and other equipment	Land use rights	Total
	RMB'000	RMB'000	RMB'000	RMB'000
Balance at 1 January 2019, impact on initial application of IFRS 16 (note 1)	179,730	7,707	2,442,793	2,630,230
Additions	68,189	5,356	–	73,545
Depreciation for the year	(59,420)	(5,585)	(58,567)	(123,572)
Disposal/written off (note 2)	–	–	(38,945)	(38,945)
Modification	(15,736)	(280)	(1,472)	(17,488)
Balance at 31 December 2019	172,763	7,198	2,343,809	2,523,770

Notes:

(1) IFRS 16 has been applied using the modified retrospective approach, has therefore recognised the cumulative effect of initial application as an adjustment to the opening balance at 1 January 2019.

(2) As at 31 December 2019, land use rights amounted to approximately RMB38,945,000 have been transferred under separation and transfer "Water/electricity/gas supply and property management".

Amortisation recognised is analysed as follows:

	Year ended 31 December 2019
	RMB'000
Cost of sales	**71,367**
Selling expenses	**166**
Administrative expenses	**52,039**
	123,572

20. INTANGIBLE ASSETS

	Patent	Computer software	Total
	RMB'000	RMB'000	RMB'000
At 1 January 2018			
Cost	479,882	351,790	831,672
Accumulated amortisation	(325,681)	(282,551)	(608,232)
Net book amount	154,201	69,239	223,440
Year ended 31 December 2018			
Opening net book amount	154,201	69,239	223,440
Additions	–	17,582	17,582
Amortisation	(52,981)	(23,960)	(76,941)
Closing net book amount	101,220	62,861	164,081
At 31 December 2018 and 1 January 2019			
Cost	479,882	369,372	849,254
Accumulated amortisation	(378,662)	(306,511)	(685,173)
Net book amount	101,220	62,861	164,081
Year ended 31 December 2019			
Opening net book amount	**101,220**	**62,861**	**164,081**
Additions	**–**	**143,984**	**143,984**
Amortisation	**(52,980)**	**(21,770)**	**(74,750)**
Closing net book amount	**48,240**	**185,075**	**233,315**
At 31 December 2019			
Cost	**479,882**	**513,356**	**993,238**
Accumulated amortisation	**(431,642)**	**(328,281)**	**(759,923)**
Net book amount	**48,240**	**185,075**	**233,315**

Amortisation recognised is analysed as follows:

	2019	2018
	RMB'000	RMB'000
Cost of sales	**69,874**	71,805
Selling and marketing expenses	**3**	3
Administrative expenses	**4,873**	5,133
	74,750	76,941

21. INVESTMENT IN JOINT ARRANGEMENTS, ASSOCIATES AND SUBSIDIARIES

(a) Investment in joint arrangements

	2019	2018
	RMB'000	RMB'000
Joint ventures		
Beginning of the year	1,866	3,221
Disposal (Note)	–	(1,309)
Share of total comprehensive income/(expense)	650	(46)
End of the year	2,516	1,866

Note: Lanzhou Great Wall Touping Machinery Technology Development Co., Ltd. (蘭州長城透平機械技術開發成套公司) deregistered on 16 March 2018.

The Group's joint ventures, 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		
Hainan Great Wall Machinery Engineering Co., Ltd. (海南長城機械工程有限公司)	The PRC	3,000 (2018: 3,000)	50%	Technical development, sales of equipment/The PRC

The above joint ventures are accounted for by using the equity method.

The Group's share of the results of its joint ventures (in aggregate for all individually insignificant joint venture), its aggregated assets and liabilities, are as follows:

	2019	2018
	RMB'000	RMB'000
Current assets	19,409	27,779
Non-current assets	1,352	1,497
Total assets	20,761	29,276
Current liabilities	(15,728)	(25,544)
Total liabilities	(15,728)	(25,544)
Equity	5,033	3,732
Share of equity by the Group (50%) (2018: 50%)	2,516	1,866

	2019	2018
	RMB'000	RMB'000
Revenue	8,088	419
Profit/(loss) and total comprehensive income/(expense) for the year	1,300	(92)
Share of total comprehensive income/(expense) (50%) (2018:50%)	650	(46)

There are no material contingent liabilities and commitments relating to the Group's interests in the joint ventures and no material contingent liabilities and commitments of the joint ventures themselves.

21. INVESTMENT IN JOINT ARRANGEMENTS, ASSOCIATES AND SUBSIDIARIES (Continued)

(b) Investment in associates

	2019	2018
	RMB'000	RMB'000
Beginning of the year	147,454	123,788
Share of total comprehensive income	23,498	23,666
Dividend distribution	(9,000)	–
End of the year	161,952	147,454

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 (2018: 50,000)	35.00%	Technical development, technical service/The PRC
Huizhou Tianxin Petrochemical Engineering Co., Ltd. (惠州天鑫石化工程有限公司) (2)	The PRC	15,000 (2018: 15,000)	40.00%	Construction contracting/The PRC
Shanghai KSD Bulk Solids Engineering Co., Ltd. (上海金申德粉體工程有限公司) (3)	The PRC	5,500 (2018: 5,500)	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:

	2019	2018
	RMB'000	RMB'000
Current assets	897,634	674,852
Non-current assets	39,694	38,892
Total assets	937,328	713,744
Current liabilities	(600,419)	(397,093)
Non-current liabilities	(21)	(17)
Total liabilities	(600,440)	(397,110)
Equity attributable to equity holders	305,451	290,574
Non-controlling interests	31,437	26,060
	336,888	316,634
Share of equity by the Group (35%) (2018: 35%)	106,908	101,701

	2019	2018
	RMB'000	RMB'000
Revenue	459,068	376,367
Profit and total comprehensive income for the year attributable to equity holders	34,878	34,149
Profit and total comprehensive income for the year attributable to non-controlling interest holders	7,876	9,005
Share of total comprehensive income (35%) (2018: 35%)	12,207	11,952

For the year ended 31 December 2019, China Petrochemical Technology Co., Ltd. declares dividends RMB7,000,000 (2018: Nil).

21. INVESTMENT IN JOINT ARRANGEMENTS, ASSOCIATES AND SUBSIDIARIES (Continued)

(b) Investment in associates (Continued)

(2) The Group's share of the results of Huizhou Tianxin Petrochemical Engineering Co., Ltd., its aggregated assets and liabilities, are as follows:

	2019	2018
	RMB'000	RMB'000
Current assets	97,678	86,158
Non-current assets	55,226	47,212
Total assets	152,904	133,370
Current liabilities	(78,165)	(71,105)
Total liabilities	(78,165)	(71,105)
Equity	74,739	62,265
Share of equity by the Group (40%) (2018: 40%)	29,895	24,906

	2019	2018
	RMB'000	RMB'000
Revenue	156,391	143,037
Profit and total comprehensive income for the year	12,474	11,275
Share of total comprehensive income (40%) (2018: 40%)	4,989	4,510

For the year ended 31 December 2019, Huizhou Tianxin Petrochemical Engineering Co., Ltd did not declare dividends (2018: Nil).

(3) The Group's share of the results of Shanghai KSD Bulk Solids Engineering Co., Ltd., its aggregated assets and liabilities, are as follows:

	2019	2018
	RMB'000	RMB'000
Current assets	136,485	132,972
Non-current assets	1,552	1,648
Total assets	138,037	134,620
Current liabilities	(68,866)	(77,281)
Non-current liabilities	(4)	(4)
Total liabilities	(68,870)	(77,285)
Equity	69,167	57,335
Share of equity by the Group (36.36%) (2018: 36.36%)	25,149	20,847

	2019	2018
	RMB'000	RMB'000
Revenue	77,868	60,298
Profit and total comprehensive income for the year	17,332	19,813
Share of total comprehensive income (36.36%) (2018: 36.36%)	6,302	7,204

For the year ended 31 December 2019, Shanghai KSD Bulk Solids Engineering Co., Ltd declares dividends RMB2,000,000 (2018: Nil).

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.

22. FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME

	2019	2018
	RMB'000	RMB'000
Beginning of the year	680	680
Disposal	(680)	–
At the end of the year	–	680

Financial assets at FVTOCI include the following:

	2019	2018
	RMB'000	RMB'000
Unlisted securities		
Equity securities – PRC	–	680

The Group designated its investment in unlisted investment as FVTOCI (non-recycling), as the investment is held for strategic purpose.

Unlisted equity securities are valued at fair value based on their asset values. Please refer to Note 4.3 for further explanation.

All financial assets at FVTOCI are denominated in RMB.

23. NOTES AND TRADE RECEIVABLES

	2019	2018
	RMB'000	RMB'000
Trade receivables		
Fellow subsidiaries	2,527,233	2,293,202
Joint ventures of fellow subsidiaries	721,605	662,743
Associates of fellow subsidiaries	134,362	215,846
Joint ventures	1,309	2,589
Associates	27,978	871
Third parties	5,287,290	5,638,274
	8,699,777	8,813,525
Less: ECL allowance for impairment	(1,346,804)	(1,313,283)
Trade receivables – net	7,352,973	7,500,242
Notes receivables	1,260,225	2,226,187
Notes and trade receivables – net	8,613,198	9,726,429

The carrying amounts of the Group's notes and trade receivables as at 31 December 2019 and 2018 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 provide 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.

23. NOTES AND TRADE RECEIVABLES (Continued)

Ageing analysis of notes and trade receivables, net of ECL allowance, by invoice date is as follows:

	2019	2018
	RMB'000	RMB'000
Within 1 year	7,219,493	8,621,584
Between 1 and 2 years	1,113,044	703,028
Between 2 and 3 years	157,823	264,769
Between 3 and 4 years	51,333	52,663
Between 4 and 5 years	20,946	46,326
Over 5 years	50,559	38,059
	8,613,198	9,726,429

The movements of ECL allowance on trade receivables are as follows:

	2019	2018
	RMB'000	RMB'000
At the beginning of the year	1,313,283	1,171,218
ECL allowance	385,752	426,209
Receivables written off as uncollectible	(15,244)	(1,257)
Reversal	(336,987)	(282,887)
At the end of the year	1,346,804	1,313,283

The carrying amounts of the Group's notes and trade receivables are denominated in the following currencies:

	2019	2018
	RMB'000	RMB'000
RMB	7,429,090	8,437,325
USD	508,013	490,435
SAR	267,525	540,037
Others	408,570	258,632
	8,613,198	9,726,429

24. PREPAYMENTS AND OTHER RECEIVABLES

	2019	2018
	RMB'000	RMB'000
Prepayments		
Prepayments for construction and materials:		
– Fellow subsidiaries	1,178,566	1,012,061
– Associates	–	8,685
– Associates of fellow subsidiaries	–	1,902
– Joint ventures of fellow subsidiaries	543	385
Prepayments for construction	832,966	466,260
Prepayments for materials and equipment	2,680,834	1,680,837
Prepayments for labour costs	487,548	220,594
Prepayments for rent	1,946	2,044
Others	73,503	57,734
	5,255,906	3,450,502
Other receivables		
Amounts due from fellow subsidiaries (1)	54,160	223,156
Amounts due from joint ventures of fellow subsidiaries (1)	189,451	191,606
Amounts due from associates of fellow subsidiaries (1)	250,152	473,386
Dividends receivable	24,200	17,200
Interests receivable	169,091	34,443
Petty cash funds	10,362	15,651
Other guarantee deposits and deposits	120,184	122,337
Payment in advance	199,993	85,879
Maintenance funds	55,203	77,093
Value-added tax credit	253,011	234,136
Prepaid value-added tax	18,013	–
Prepaid income tax	59,424	61,295
Value-added tax to be certified	16,208	6,154
Land disposal	36,515	36,515
Others	81,908	55,788
	1,537,875	1,634,639
Less: ECL allowance for impairment	(129,110)	(117,979)
Prepayments and other receivables – net	6,664,671	4,967,162

(1) The amounts due from related parties are unsecured, interest free and repayable on demand.

24. PREPAYMENTS AND OTHER RECEIVABLES (Continued)

The carrying amounts of the Group's prepayments and other receivables as at 31 December 2019 and 2018 approximate their fair values.

The movements of ECL allowance on other receivables are as follows:

	2019	2018
	RMB'000	RMB'000
At the beginning of the year	117,979	310,751
ECL allowance	39,639	29,620
Write-off of irrecoverable receivable	(1,066)	–
Reversal	(27,442)	(222,392)
At the end of the year	129,110	117,979

25. CONTRACT ASSETS AND CONTRACT LIABILITIES

(a) Contract assets

	2019	2018
	RMB'000	RMB'000
Contract assets arising from construction contracts	8,085,951	11,573,904

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 year 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 RMB585,816,000 (2018: RMB605,747,000), all of which relates to retentions.

The movements of ECL allowance on contract assets are as follows:

	2019	2018
	RMB'000	RMB'000
At the beginning of the year	164,750	110,571
ECL allowance	148,495	159,633
Reversal	(120,159)	(105,454)
At the end of the year	193,086	164,750

25. CONTRACT ASSETS AND CONTRACT LIABILITIES (Continued)

(b) Contract liabilities

	2019 RMB'000	2018 RMB'000
Contract liabilities arising from construction contracts	**13,314,941**	9,968,594

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 2019 is RMB9,968,594,000 (2018: RMB15,145,599,000), in which RMB7,892,011,000 (2018: RMB13,056,878,000) 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 2019, 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 RMB94,993,560,000 (2018: RMB94,935,464,000), 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.

26. INVENTORIES

	2019 RMB'000	2018 RMB'000
Raw materials	**923,519**	182,882
Turnover materials	**231,855**	188,759
Goods in transit	**38,106**	29,280
	1,193,480	400,921

As at 31 December 2019 and 2018, no provision for impairment on inventories of the Group has been made.

For the years ended 31 December 2019 and 2018, the cost of inventories recognised as expense and included in cost of sales amounted to RMB17,415,941,000 and RMB18,163,201,000 respectively.

27. 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:

	2019	2018
Loans due from the ultimate holding company	**3.60%**	3.00% – 3.60%

28. RESTRICTED CASH

	2019 RMB'000	2018 RMB'000
Restricted cash		
– RMB	38,087	29,375
– AED	–	93
	38,087	29,468

Restricted cash mainly represented bank deposits for guarantees and deposit for farmers' salaries.

As at 31 December 2019 and 2018, 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.

29. TIME DEPOSITS

	2019 RMB'000	2018 RMB'000
Time deposits with initial term over three months:		
Time deposits in banks	5,576,785	575,225
Time deposits in fellow subsidiaries	1,509,281	1,567,181
	7,086,066	2,142,406

	2019 RMB'000	2018 RMB'000
Denominated in:		
RMB	5,670,352	771,050
USD	1,398,728	1,173,607
MYR	16,986	197,749
	7,086,066	2,142,406

The fellow subsidiaries are Sinopec Century Bright Capital Investment Limited and Sinopec Finance Co., Ltd..

The effective interest rates per annum on time deposits, with maturities of half year to three years (2018: half year to three years), are approximately 1.83% to 4.30% as at 31 December 2019 (2018: 1.30% to 4.30%).

The maximum exposure to credit risk approximates to carrying amounts of the Group's time deposits at the end of the respective reporting periods.

30. CASH AND CASH EQUIVALENTS

	2019	2018
	RMB'000	RMB'000
Cash at bank and in hand		
less than three months time deposits	1,495,716	5,925,938
cash deposits	2,133,032	3,360,173
	3,628,748	9,286,111
Deposits in fellow subsidiaries		
less than three months time deposits	952,549	571,942
cash deposits	5,354,041	7,139,610
	6,306,590	7,711,552
	9,935,338	16,997,663

	2019	2018
	RMB'000	RMB'000
Denominated in:		
RMB	5,541,829	8,262,906
USD	2,455,127	6,911,596
SAR	442,209	263,643
EUR	573,511	464,491
KZT	2,100	2,267
KWD	705,060	779,203
THB	50,860	48,716
MYR	115,390	208,736
Others	49,252	56,105
	9,935,338	16,997,663

The fellow subsidiaries are Sinopec Century Bright Capital Investment Limited and Sinopec Finance Co., Ltd..

As at 31 December 2019 and 2018, 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 one to three months (2018: one to three months), are approximately 1.96% to 2.70% as at 31 December 2019 (2018: 1.50% to 2.79%).

The maximum exposure to credit risk approximates the carrying amounts of cash and cash equivalents at the end of the respective reporting periods.

31. SHARE CAPITAL

	As at 31 December 2019		As at 31 December 2018	
	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).

32. 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

	2019	2018
	RMB'000	RMB'000
ASSETS		
Non-current assets		
Property, plant and equipment	161,155	280,426
Land use rights	–	55,755
Right-of-use assets	131,596	–
Intangible assets	127,384	11,634
Investment in subsidiaries	7,788,786	7,363,731
Deferred income tax assets	2,847	13,775
Total non-current assets	8,211,768	7,725,321
Current assets		
Inventories	45	51,107
Trade receivables	489,523	114,392
Prepayments and other receivables	909,528	968,593
Contract assets	44,547	785,275
Loans due from the ultimate holding company	19,000,000	18,000,000
Restricted cash	–	94
Time deposits	6,067,503	908,314
Cash and cash equivalents	5,884,076	13,333,801
Total current assets	32,395,222	34,161,576
Total assets	40,606,990	41,886,897

32. 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)

	2019 RMB'000	2018 RMB'000
EQUITY		
Share capital	4,428,000	4,428,000
Reserves	14,311,852	13,505,047
Total equity	18,739,852	17,933,047
LIABILITIES		
Non-current liabilities		
Lease liabilities	51,741	–
Retirement and other supplemental benefit obligations	586	595
Total non-current liabilities	52,327	595
Current liabilities		
Trade payables	729,331	1,223,968
Other payables	20,727,925	21,802,921
Contract liabilities	78,347	449,609
Lease liabilities	28,524	–
Loans due to a fellow subsidiary	–	384,339
Current income tax liabilities	250,684	92,418
Total current liabilities	21,814,811	23,953,255
Total liabilities	21,867,138	23,953,850
Total equity and liabilities	40,606,990	41,886,897
Net current assets	10,580,411	10,208,321
Total assets less current liabilities	18,792,179	17,933,642

Approved and authorised for issue by the board of directors on 20 March 2020.

Chairman of the Board: **YU Renming** Director, President: **XIANG Wenwu** Chief Financial Officer: **JIA Yiqun**

Note: The Group first applied IFRS 16 on 1 January 2019. Comparative information has not been restated according to the revised retrospective method (see note 3.1 for details)

32. 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 2018	4,428,000	11,207,894	871,887	2,050,137	18,557,918
Profit for the year	–	–	–	440,413	440,413
Other comprehensive income:					
Defined benefits obligation revaluation of actuarial gain and loss – gross	–	–	–	20,198	20,198
Defined benefits obligation revaluation of actuarial gain and loss – tax	–	–	–	(5,050)	(5,050)
Total comprehensive income	–	–	–	455,561	455,561
Transactions with owners:					
2017 final dividend	–	–	–	(637,632)	(637,632)
2018 interim dividend (Note 14)	–	–	–	(442,800)	(442,800)
Transfer to statutory surplus reserve	–	–	126,161	(126,161)	–
Total transactions with owners	–	–	126,161	(1,206,593)	(1,080,432)
At 31 December 2018 and 1 January 2019	**4,428,000**	**11,207,894**	**998,048**	**1,299,105**	**17,933,047**
Profit for the year	**–**	**–**	**–**	**1,824,796**	**1,824,796**
Other comprehensive income:					
Defined benefits obligation revaluation of actuarial gain and loss – gross	**–**	**–**	**–**	**12,407**	**12,407**
Defined benefits obligation revaluation of actuarial gain and loss – tax	**–**	**–**	**–**	**(3,102)**	**(3,102)**
Total comprehensive income	**–**	**–**	**–**	**1,834,101**	**1,834,101**
Transactions with owners:					
2018 final dividend (Note 14)	**–**	**–**	**–**	**(549,072)**	**(549,072)**
2019 interim dividend (Note 14)	**–**	**–**	**–**	**(478,224)**	**(478,224)**
Transfer to statutory surplus reserve	**–**	**–**	**186,374**	**(186,374)**	**–**
Total transactions with owners	**–**	**–**	**186,374**	**(1,213,670)**	**(1,027,296)**
At 31 December 2019	**4,428,000**	**11,207,894**	**1,184,422**	**1,919,536**	**18,739,852**

Note: The Group first applied IFRS 16 on 1 January 2019. Comparative information has not been restated according to the revised retrospective method (see note 3.1 for details)

32. 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:

	2019	2018
	RMB'000	RMB'000
Distributable profits	**1,919,536**	1,299,105

(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.

(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 3.4.

33. LEASE LIABILITIES

	2019
	RMB'000
Total minimum lease payments:	
Due within one year	63,275
Due in the second to fifth years	105,705
Due after the fifth year	38,432
	207,412
Future finance charges on leases liabilities	(26,459)
Present value of leases liabilities	180,953
Present value of minimum lease payments:	
Due within one year	55,275
Due in the second to fifth years	92,823
Due after the fifth year	32,855
	180,953
Less:	
Portion due within one year included under current liabilities	(55,275)
Portion due after one year included under non-current liabilities	125,678

Note:
The Group has initially applied IFRS 16 using the modified retrospective approach and adjusted the opening balances at 1 January 2019 to recognise lease liabilities relating to lease which were previously classified as operating leases under IAS 17. Details for transitions to IFRS 16 are set out in note 3.1.

During the year ended 31 December 2019, the Group entered into a number of lease agreements for usage of buildings, plant and machinery, transportation equipment and other equipment for 1 to 20 years (2018: 1 to 20 years). On lease commencement, the Group recognised right-of-use assets included in property, plant equipment and lease liabilities amounting to RMB73,545,000.

During the year ended 31 December 2019, the total cash outflows for the leases are RMB405,827,000.

Details of the lease activities

As at 31 December 2019, 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"	54	1 to 13 years
Land use rights in PRC	Prepaid land use rights payments	131	23 to 63 years

The Group considered that no extension option or termination option would be exercised at the lease commencement date.

34. RETIREMENT AND OTHER SUPPLEMENTAL BENEFIT OBLIGATIONS

(a) State-managed retirement plan

For the year ended 31 December 2019, 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 19% to 21%, (2018: 19% to 25%) 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 2019 and 2018 are as follows:

	2019	2018
	RMB'000	RMB'000
Contributions to state-managed retirement plan	683,392	617,947

(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 2019 was performed by an independent qualified actuarial firm: Towers Watson. 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):

	2019	2018
Retirement with honors benefit plan	3.00%	3.00%
Retirement benefit plan	3.25%	3.25%
Early retirement benefit plan	2.75%	3.00%

(ii) Benefit growth rates (per annum):

	2019	2018
Retirement with honors benefit plan	2.50%	2.60%
Retirement benefit plan	2.70%	2.60%
Early retirement benefit plan	1.80%	1.80%

(iii) Duration:

	2019	2018
Retirement with honors benefit plan	8.0 years	8.0 years
Retirement benefit plan	15.0 years	15.0 years
Early retirement benefit plan	4.0 years	4.0 years

34. RETIREMENT AND OTHER SUPPLEMENTAL BENEFIT OBLIGATIONS (Continued)

(b) Group employee retirement benefit plans (Continued)

(iii) Duration (Continued):

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 2019 Increase/(decrease) in retirement benefit plan obligation		As at 31 December 2018 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	(55,590)	57,939	(60,314)	63,165
Benefit growth rates	58,115	(56,020)	62,910	(60,838)

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.

34. 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 2018				
Service cost:				
Past service cost	–	–	43,472	43,472
Net interest expenses	2,661	88,290	5,666	96,617
Immediate recognition of actuarial losses	–	–	7,255	7,255
Benefit cost recognised in profit or loss	2,661	88,290	56,393	147,344
Revaluation of net benefit obligation liabilities				
Actuarial revaluation of economic assumptions change	2,518	209,676	–	212,194
Actuarial revaluation of other assumptions change	5,308	(26,913)	–	(21,605)
Benefit cost recognised in other comprehensive income	7,826	182,763	–	190,589
Total benefit cost recognised in the consolidated statement of comprehensive income	**10,487**	**271,053**	**56,393**	**337,933**
For the year ended 31 December 2019				
Service cost:				
Past service cost	–	–	43,355	43,355
Net interest expenses	2,039	75,127	4,592	81,758
Immediate recognition of actuarial losses	–	–	7,106	7,106
Benefit cost recognised in profit or loss	2,039	75,127	55,053	132,219
Revaluation of net benefit obligation liabilities				
Actuarial revaluation of economic assumptions change	(350)	21,837	–	21,487
Actuarial revaluation of other assumptions change	12,728	(81,534)	–	(68,806)
Benefit cost recognised in other comprehensive income	12,378	(59,697)	–	(47,319)
Total benefit cost recognised in the consolidated statement of comprehensive income	14,417	15,430	55,053	84,900

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.

34. 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:

	2019	2018
	RMB'000	RMB'000
Net liabilities of retirement benefit plan obligation	2,488,926	2,636,815

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 2018	76,441	2,286,502	173,672	2,536,615
Past service cost	–	–	43,472	43,472
Net interest expenses	2,661	88,290	5,666	96,617
Immediate recognition of actuarial losses	–	–	7,255	7,255
Revaluation gain/(loss):				
Actuarial revaluation of economic assumptions change	2,518	209,676	–	212,194
Actuarial revaluation of other assumptions change	5,308	(26,913)	–	(21,605)
Direct benefit paid by the Group	(13,936)	(168,386)	(55,411)	(237,733)
At 31 December 2018 and 1 January 2019	72,992	2,389,169	174,654	2,636,815
Past service cost	–	–	43,355	43,355
Net interest expenses	2,039	75,127	4,592	81,758
Immediate recognition of actuarial losses	–	–	7,106	7,106
Revaluation gain/(loss):				
Actuarial revaluation of economic assumptions change	(350)	21,837	–	21,487
Actuarial revaluation of other assumptions change	12,728	(81,534)	–	(68,806)
Direct benefit paid by the Group	(14,822)	(164,035)	(53,932)	(232,789)
At 31 December 2019	72,587	2,240,564	175,775	2,488,926

The Group has no reserve of plan assets, no capital injection of plan assets is established and no future contribution is arranged.

35. PROVISION FOR LITIGATION CLAIMS

	2019	2018
	RMB'000	RMB'000
Beginning of the year	253,936	262,925
Reversal	(70,718)	–
Exchange difference	14,673	(8,272)
Payment	(946)	(717)
End of the year	196,945	253,936

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 31 December 2019 and 2018, no additional provision for litigation claims is provided.

36. NOTES AND TRADE PAYABLES

	2019	2018
	RMB'000	RMB'000
Trade payables		
– Fellow subsidiaries	219,344	792,785
– Associates of fellow subsidiaries	2,256	–
– Joint ventures of fellow subsidiaries	1,196	1,270
– Associates	40	44,550
– Third parties	20,174,375	26,436,579
	20,397,211	27,275,184
Notes payables	1,716,828	1,411,059
Notes and trade payables	22,114,039	28,686,243

The carrying amounts of the Group's notes and trade payables as at 31 December 2019 and 2018 approximate their fair values.

Ageing analysis of notes and trade payables based on invoice date is as follows:

	2019	2018
	RMB'000	RMB'000
Within 1 year	18,773,812	22,388,561
Between 1 and 2 years	1,844,766	3,223,581
Between 2 and 3 years	572,916	1,501,701
Over 3 years	922,545	1,572,400
	22,114,039	28,686,243

36. NOTES AND TRADE PAYABLES (Continued)

The carrying amounts of notes and trade payables are denominated in the following currencies:

	2019	2018
	RMB'000	RMB'000
RMB	20,226,099	25,537,361
USD	173,299	646,640
EUR	5,066	3,033
KZT	11,168	22,495
SAR	976,439	1,300,283
Others	721,968	1,176,431
	22,114,039	28,686,243

37. OTHER PAYABLES

	2019	2018
	RMB'000	RMB'000
Salaries payables	214,210	268,235
Other taxation payables	457,206	665,698
Output value-added tax to be recognised	10,417	12,765
Payable of separation and transfer of "Water/electricity/gas supply and property management"(2)	127,495	285,385
Deposits and guarantee deposits payables	82,550	164,757
Advanced payables	499,986	523,156
Rent, property management and maintenance payables	120,332	126,355
Contracts payables	195,373	90,227
Amounts due to ultimate holding company(1)	–	100
Amounts due to fellow subsidiaries(1)	86,788	329,641
Amounts due to joint ventures(1)	71	71
Amounts due to joint ventures of fellow subsidiaries(1)	5,627	8,305
Amounts due to associates of fellow subsidiaries(1)	888	–
Others	207,974	283,444
Total other payables	2,008,917	2,758,139

Notes:

(1) Amounts due to related parties are unsecured, interest free and repayable on demand.

(2) Separation and transfer of "Water/electricity/gas supply and property management" includes transfer of certain fixed assets (namely water/electricity/gas supply and property management system) in employee living areas to local government and their designated entities at nil consideration pursuant to the notices from State Council and Ministry of Finance as set out in the Company's announcement dated 10 January 2019. The Group also incurred certain related maintenance and renovation expense amounting to RMB632,376,000.

The carrying amounts of the Group's other payables as at 31 December 2019 and 2018 approximate their fair values.

38. CURRENT AND DEFERRED TAXATION

Deferred income tax assets recognised:

	2019	2018
	RMB'000	RMB'000
Deferred income tax assets	**738,052**	781,439

The gross movement on the deferred income tax account is as follows：

	2019	2018
	RMB'000	RMB'000
At the beginning of the year	**781,439**	750,967
Credited to equity for defined benefit obligations revaluation of actuarial gain or loss	**(11,669)**	33,102
Tax credited to profit for the year (Note 12)	**(31,718)**	(2,630)
At the end of the year	**738,052**	781,439

The movement in deferred income tax assets during the years ended 31 December 2019 and 2018, without taking into consideration the offsetting of balances within the same tax jurisdiction, is as follows:

Deferred income tax liabilities

	Tax losses	Provision for retirement and other supplemental benefit obligation	Provision for impairment on assets	Others	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
At 1 January 2018	36,497	426,836	255,799	31,835	750,967
Credited/(Charged) to:					
Profit for the year	(24,370)	(1,050)	15,012	7,778	(2,630)
Equity	–	33,102	–	–	33,102
At 31 December 2018 and 1 January 2019	**12,127**	**458,888**	**270,811**	**39,613**	**781,439**
Credited/(Charged) to:					
Profit for the year	**(12,127)**	**(24,689)**	**11,444**	**(6,346)**	**(31,718)**
Equity	**–**	**(11,669)**	**–**	**–**	**(11,669)**
At 31 December 2019	**–**	**422,530**	**282,255**	**33,267**	**738,052**

38.CURRENT AND DEFERRED TAXATION (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 follow:

	2019	2018
	RMB'000	RMB'000
Tax losses for which no deferred income tax asset was recognised	1,299,180	597,104

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.

39. LOANS DUE TO A FELLOW SUBSIDIARY

Loans due to a fellow subsidiary are unsecured, repayable within one year and interest bearings as follows:

	2019	2018
Loans due to a fellow subsidiary	3.53% – 4.62%	3.29% – 4.62%

The fellow subsidiary is Sinopec Century Bright Capital Investment Limited.

40. CASH-SETTLED SHARE-BASED PAYMENT

Pursuant to the announcement in relation to the approval of the proposed initial terms of H share appreciation rights scheme by the State-owned Assets Supervision and Administration Commission of the State Council of the PRC (the "SASAC") on 12 December 2017 and the resolution passed at the second extraordinary general meeting for the year 2017 dated 20 December 2017, the proposed adoption of the H share appreciation rights scheme and the proposed initial grant have been approved at the second extraordinary general meeting.

According to the Company's H Share appreciation rights scheme, the Company granted 13,143,000 units of cash settled H share appreciation rights to a total of 89 incentive recipients on 20 December 2017. The H Share appreciation rights are valid for 10 years from the date of grant. Subject to a lock-up period of two years following the date of grant, H share appreciation rights should be exercised from the second anniversary of the date of grant in 3 years on equal proportion, subject to the following conditions:

Conditions based on the Group's performance:

Effective Phases	Performance Evaluation Targets
First Effective Phase	• the ROE of the financial year immediately before the year of the effective date shall not be lower than 10.0% and shall not be lower than 75 percentile of such growth rate of revenue of benchmark companies; • the growth rate of revenue of the financial year immediately before the effective date as compared with that of the financial year immediately before the grant shall not be lower than 14.2% and shall not be lower than 75 percentile of such growth rate of revenue of benchmark companies; • the EVA of the financial year immediately before the year of the effective date shall not be less than RMB2.099 billion.
Second Effective Phase	• the ROE of the financial year immediately before the year of the effective date shall not be lower than 10.0% and shall not be lower than 75 percentile of such growth rate of revenue of benchmark companies; • the growth rate of revenue of the financial year immediately before the effective date as compared with that of the financial year immediately before the grant shall not be lower than 21.6% and shall not be lower than 75 percentile of such growth rate of revenue of benchmark companies; • the EVA of the financial year immediately before the effective date shall not be less than RMB2.233 billion.
Third Effective Phase	• the ROE of the financial year immediately before the year of the effective date shall not be lower than 10.0% and shall not be lower than 75 percentile of such growth rate of revenue of benchmark companies; • the growth rate of revenue of the financial year immediately before the effective date as compared with that of the financial year immediately before the grant shall not be lower than 29.3% and shall not be lower than 75 percentile of such growth rate of revenue of benchmark companies; • the EVA of the financial year immediately before the effective date shall not be less than RMB2.373 billion.

40. CASH-SETTLED SHARE-BASED PAYMENT (Continued)

If the aforementioned conditions based on the Group's performance are satisfied, the H share appreciation rights granted to the incentive recipients shall become effective as determined based on the following:

- If the incentive recipient's performance evaluation rating for the previous year is "A", then 100% of the share appreciation rights in the relevant phase shall become effective;
- If the incentive recipient's performance evaluation rating for the previous year is "B", then 90% of the share appreciation rights in the relevant phase shall become effective;
- If the incentive recipient's performance evaluation rating for the previous year is "C", then 30% of the share appreciation rights in the relevant phase shall become effective;
- If the incentive recipient's performance evaluation rating for the previous year is "D", irrespective of whether the Company has satisfied the performance conditions or not, all the share appreciation rights in the relevant phase shall lapse; or
- If the incentive recipient does not satisfy the condition precedent set out above, then the share appreciation rights granted to such incentive recipient for the corresponding effective phase shall lapse.

As at 31 December 2019, the details of the H share appreciation rights were as follows:

Date of grant	Exercise price	Vesting period	Exercisable period	Number of underlying H share appreciation rights		
				Outstanding At 1 January 2019	Lapse during the year	Outstanding At 31 December 2019
	HKD					
Directors						
20 December 2017	6.35	20 December 2017 to 19 December 2027	20 December 2020 to 20 December 2023	80,000	(52,800)	27,200
Employees						
20 December 2017	6.35	20 December 2017 to 19 December 2027	20 December 2020 to 20 December 2023	13,063,000	(8,621,580)	4,441,420
				13,143,000	(8,674,380)(1)	4,468,620

(1) The conditions to effect the H share appreciation rights in the First Effective Phase and the Second Effective Phase of 8,674,380 units in total (representing 66% of the H share appreciation rights) were not fulfilled. Therefore, those H share appreciation rights have be lapsed.

The total fair value of share options as at 31 December 2019 has been valued using Black-Scholes valuation model.

The significant inputs into the model were as follows:

	2019	2018
Exercise price (i)	**HKD5.80**	HKD6.06
Expected volatility	**33.93%**	33.93%
Maturity (years)	**4.5 years**	5.5 years
Risk-free interest rate	**1.740%**	1.886%
Expected dividend yield	**0%**	0%

(i) If the Company distributes dividend, the exercise price of the H share appreciation rights will be adjusted accordingly. The adjusted exercise price equals to the exercise price before adjustment minus dividend per share. Therefore, the exercise price of each H share appreciation right granted by the Company is adjusted to HK$5.80 per share.

At 31 December 2019, the Group has recorded liabilities of RMB6,334,000, which RMB5,100,000 was included in accrued charges.

41. COMMITMENTS

(a) Capital commitments

Capital commitments for the purchase of property, plant and equipment outstanding as at 31 December 2019 and 2018 not provided for in the consolidated financial statements are as follows:

	2019	2018
	RMB'000	RMB'000
Contracted but not provided for		
– Property, plant and equipment	3,628	21,243

(b) Operating leasing commitments

At the reporting date, the lease commitments for short-term leases (2018: total future minimum lease payments payable by the Group under non-cancellable operating leases) are as follows:

	2019	2018
	RMB'000	RMB'000
Less than 1 year	62,236	117,396
1 year to 5 years	–	129,906
Over 5 years	–	31,996
Total	62,236	279,298

As at 31 December 2019, 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.

As at 31 December 2018, the Group leases a number of residential properties, office and equipment under operating leases. The leases run for an initial period of one to eight years, with an option to renew the lease and renegotiate the terms at the expiry date or at dates as mutually agreed between the Group and respective landlords/lessors. None of the leases include contingent rentals.

42. CASH GENERATED FROM OPERATIONS

	2019	2018
	RMB'000	RMB'000
Profit before taxation	2,827,400	2,121,515
Adjustments for:		
Reversal for ECL on trade and other receivables and contract assets, net	88,986	3,961
Depreciation of property, plant and equipment	485,154	576,303
Depreciation of right-of-use assets	123,572	–
Amortisation of land use rights	–	59,831
Amortisation of intangible assets	74,750	76,941
Net (profits)/losses on disposal/write-off of property, plant and equipment	(4,232)	28,071
Net profits on disposal/write-off of land use rights	(54,637)	–
Losses on separation and transfer of property, plant and equipment and land use rights	38,945	188,823
Interest income	(897,375)	(780,375)
Interest expense	111,130	118,014
Net foreign exchange losses/(gains)	78,206	(492,559)
Loss on disposal of derivative financial liabilities	–	279,769
Share of (profit)/loss of joint arrangements	(650)	46
Share of profit of associates	(23,498)	(23,666)
Cash-settled share-base (reversal)/payment	(5,100)	10,691
Cash flows from operating activities before changes in working capital	2,842,651	2,167,365
Changes in working capital:		
– Inventories	(792,559)	181,336
– Contract assets	3,459,617	(3,862,126)
– Contract liabilities	3,346,347	(5,177,005)
– Notes, trade and other receivables	(771,284)	(2,707,779)
– Notes, trade and other payables	(7,645,565)	15,840,423
– Restricted cash	(8,619)	(13,381)
Cash generated from operations	430,588	6,428,833

43. 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 35).

44. SIGNIFICANT RELATED PARTY TRANSACTIONS AND BALANCES

Related parties are those parties that have the ability to control the other party or exercise significant influence in making financial and operation decisions. Parties are also considered to be related if they are subject to common control. The Group is subject to the control of the PRC government which also controls a significant portion of the productive assets and entities in the PRC (collectively known as the "state-owned enterprises").

In accordance with IAS 24 "Related party disclosures", other state-owned enterprises and their subsidiaries, directly or indirectly controlled by the PRC government are regarded as related parties of the Group ("other state-owned enterprises"). For the purpose of related party disclosures, the Group has in place procedures to identify the immediate ownership structure of its customers and suppliers to determine whether they are state-owned enterprises. Many state-owned enterprises have multi-layered corporate structure and the ownership structures change over time as a result of transfers and privatisation programs. Nevertheless, management believes that meaningful information relating to related party transaction has been adequately disclosed.

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, including other state-owned enterprises, during the years ended 31 December 2019 and 2018 and balances as at 31 December 2019 and 2018.

The transactions with related parties are carried out on pricing and settlement terms agreed with counter parties in the ordinary course of business.

44. 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:

	2019	2018
	RMB'000	RMB'000
Construction and services provided to		
– Ultimate holding company	753	4,128
– Joint ventures of fellow subsidiaries	4,470,664	6,092,757
– Associates of fellow subsidiaries	262,890	344,224
– Fellow subsidiaries	20,785,457	18,211,641
– Associates	64,627	74,890
	25,584,391	24,727,640
Construction and services received from		
– Ultimate holding company	28,142	28,508
– Joint ventures of fellow subsidiaries	92,926	3,418
– Associates of fellow subsidiaries	2,881	2,591
– Fellow subsidiaries	2,833,153	2,280,174
– Associates	25,397	756
	2,982,499	2,315,447
Technology research and development provided to		
– Ultimate holding company	9,802	4,208
– Fellow subsidiaries	182,738	177,644
	192,540	181,852
General services received from		
– Fellow subsidiaries	48,452	–
Interest income on loans		
– Ultimate holding company	588,656	517,031
Interest expense on borrowings		
– Fellow subsidiaries	19,624	21,397
Expenses in relation to settlement and other financial services		
– Fellow subsidiaries	1,732	3,394
Deposit interest income from fellow subsidiaries	109,112	80,275

44. 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)

	As at 31 December 2019	As at 31 December 2018
	RMB'000	RMB'000
Deposits and time deposits placed in fellow subsidiaries	7,815,871	9,278,733

	As at 31 December 2019	As at 31 December 2018
	USD'000	USD'000
Guarantee received		
– Ultimate holding company	52,000	52,000

Besides, in respect of the Project RAPID (total contract value of approximately USD1.329 billion) between the Group and PETRONAS company, Sinopec Group provided guarantee to PETRONAS company. The Group provided counter guarantee to Sinopec Group.

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.

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 mainly in state-owned financial institutions. The deposits 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 27 and loans due to a fellow subsidiary in Note 39, trade receivables, prepayments and other receivables are unsecured, interest free and repayable on demand.

44. SIGNIFICANT RELATED PARTY TRANSACTIONS AND BALANCES (Continued)

(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:

	2019	2018
	RMB'000	RMB'000
Fee	600	549
Basic salaries, other allowances and benefits-in-kind	5,306	5,049
Discretionary bonus(i)	10,399	8,505
Contributions to pension plans	1,382	1,365
Cash-settled share-based payment	549	1,781
	18,236	17,249

(i) The Group determines and pays discretionary bonus based on the actual financial results and performance of employee.

Key management, excluding directors and supervisors, whose remuneration fell within the following bands is as follows:

	2019	2018
	Number of individuals	Number of individuals
HK$1,000,001 to HK$1,500,000	5	6
Nil to HK$1,000,000	–	–
	5	6

45. RECONCILIATIONS OF LIABILITIES ARISING FROM FINANCING ACTIVITIES

The changes in the Group's liabilities arising from financing activities can be classified as follows:

	2019	2018
	RMB'000	RMB'000
Loans due to a fellow subsidiary		
At 1 January	384,339	431,257
Cash-flow:		
– Repayment	(384,339)	(590,510)
– Proceeds	–	513,123
Non-cash:		
– Exchange adjustments	–	30,469
At 31 December	–	384,339
Lease liabilities		
At 1 January	–	–
Impact on initial application of HKFRS 16 (note 3.1)	185,393	–
Cash-flow:		
– Capital element of lease rentals paid	(64,013)	–
– Interest element of lease rentals paid	(9,748)	–
Non-cash:		
– Entered into new lease	73,545	–
– Interest paid on lease arrangement	9,748	–
– Modification	(17,488)	–
– Exchange loss	3,516	–
At 31 December	180,953	–

46. PARTICULARS OF PRINCIPAL SUBSIDIARIES

As at 31 December 2019, 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	200,000	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	300,000	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	50,000	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	3,356 (SAR18,000,000)	100%	–	Engineering contracting/ Saudi Arabia
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	8,046	–	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	6,228 (THB 3,300,000)	–	100%	Engineering contracting/ Thailand

The above table lists the subsidiaries of the Company which, in the opinion of the directors, principally affected the results for the year 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.

DOCUMENTS FOR INSPECTION

The following documents will be available for inspection during normal business hours after 23 March 2020 (Monday) at the registered address of the Company upon request by the relevant regulatory authorities and shareholders in accordance with the laws and regulations of the PRC and the Articles of Association:

a) The original annual report signed by the Chairman of the Board and the President;

b) The original audited financial report and consolidated financial report for the twelve months ended 31 December 2019 prepared in accordance with IFRS and signed by the Chairman of the Board, the President, the Chief Financial Officer and the Head of the Finance Department; and

c) The original auditor's report in respect of the above financial report signed by Grant Thornton Hong Kong Limited.

By Order of the Board

YU Renming

Chairman of the Board

Beijing, the PRC

20 March 2020

This annual report is printed in both Chinese and English languages. Should there be any discrepancy between the English language and the Chinese language, the Chinese language shall prevail.

中石化炼化工程(集团)股份有限公司
SINOPEC ENGINEERING (GROUP) CO., LTD.

中国石化
SINOPEC

Address: Building 8, Shenggujiayuan, Shenggu Middle Road, Chaoyang District, Beijing, PRC
Postcode: 100029
Web: www.segroup.cn
Email: seg.ir@sinopec.com

Printed on environmentally friendly paper