中鋁國際工程股份有限公司

CHALIECO

China Aluminum International Engineering Corporation Limited

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

Stock Code: 2068

ANNUAL REPORT 2018

CONTENTS

PRESIDENT'S STATEMENT

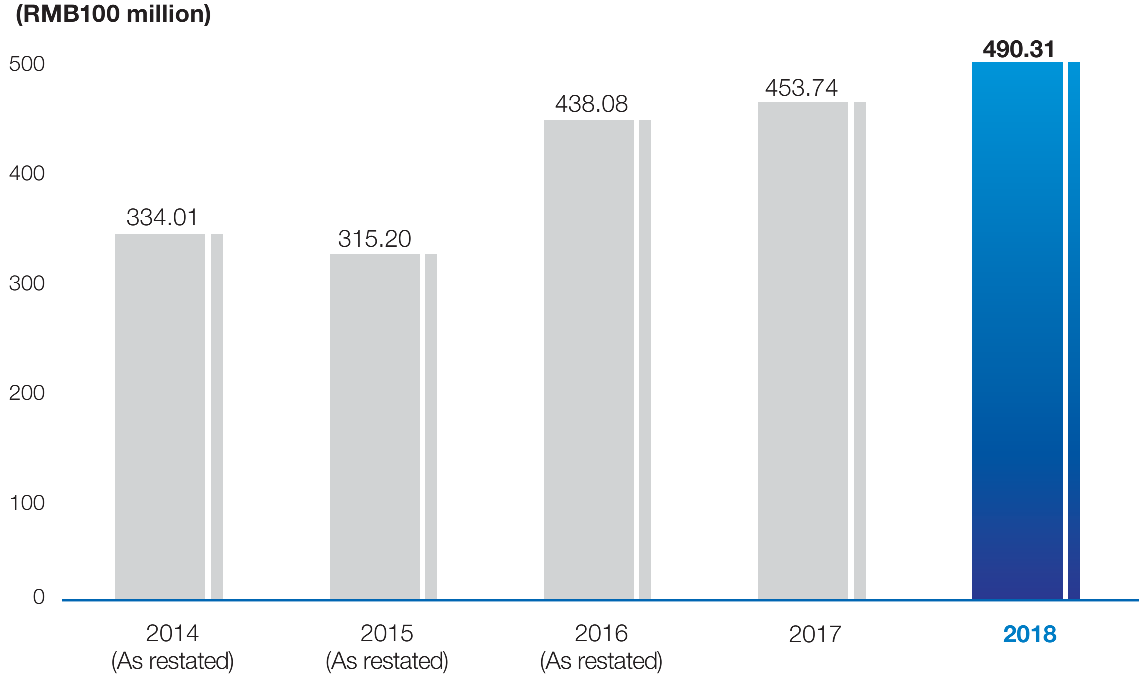
The year 2018 marked the 40th anniversary of China's reform and opening-up, as well as the 15th anniversary of the establishment of Chalieco. In light of the complex factors such as changing economic environment, the shrinking non-ferrous industry and the fierce competition in the external market, all of the staff of Chalieco endeavored to overcome the difficulties and made concerted efforts with hard persevering work which enabled us to ride through the challenges amidst the intense market competition. The Company has successfully completed the listing of A Shares, and the reform and development has made new progress. Our business value, industry position and capital strength are widely recognized by all sections of the society. In 2018, the Group's operating revenue amounted to RMB33.6 billion; the operating profit amounted to RMB1 billion; and net cash inflow from operating activities was RMB0.6 billion.

The year 2019 marks the 70th anniversary of the establishment of China, which will play a crucial role in the comprehensive development to a moderate and prosperous society. The year is also a reform and innovation year of Chalieco. We will adhere to make progress on a steady pace, insist on high quality development, enhance investment in R&D, strengthen marketing efforts, refine project management, focus on risk prevention, and further enhance the market competitiveness. We will strive forward to develop into a world leading engineering technical group.

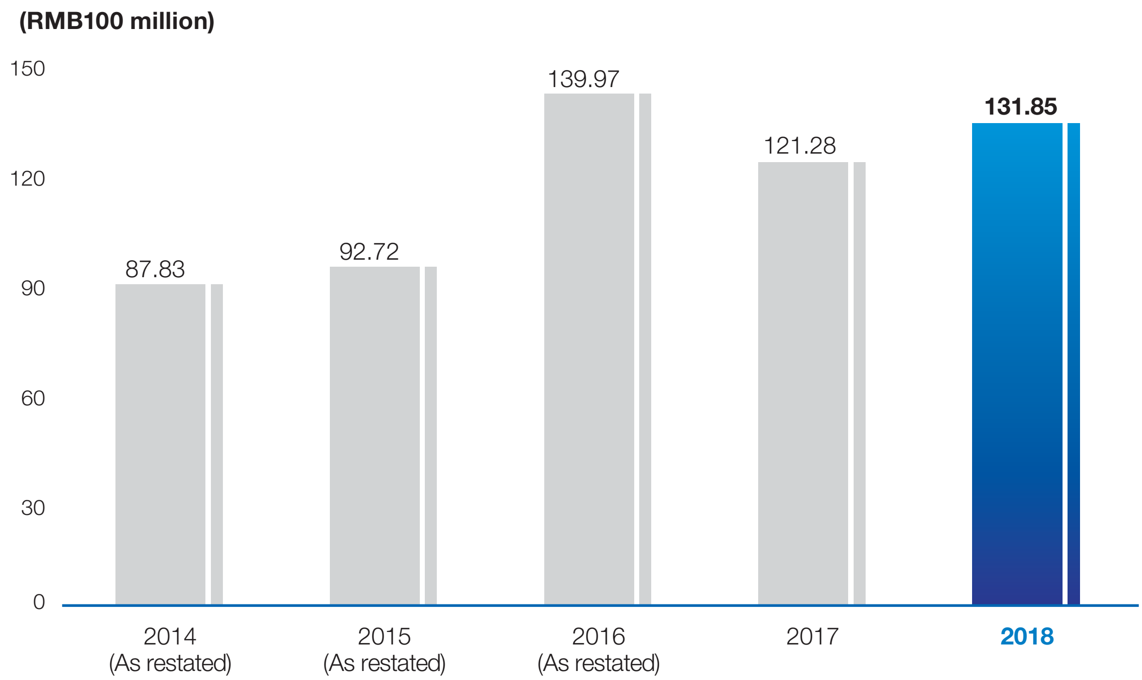
Zong Xiaoping
President

FINANCIAL INFORMATION SUMMARY

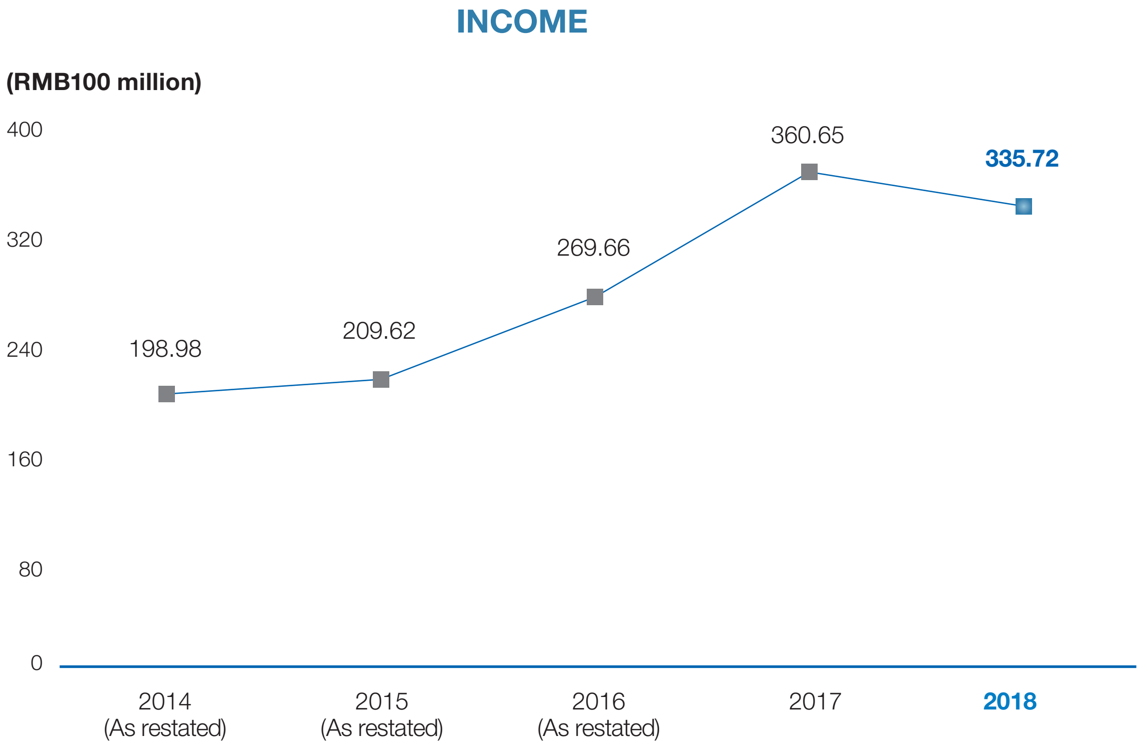
TOTAL ASSETS

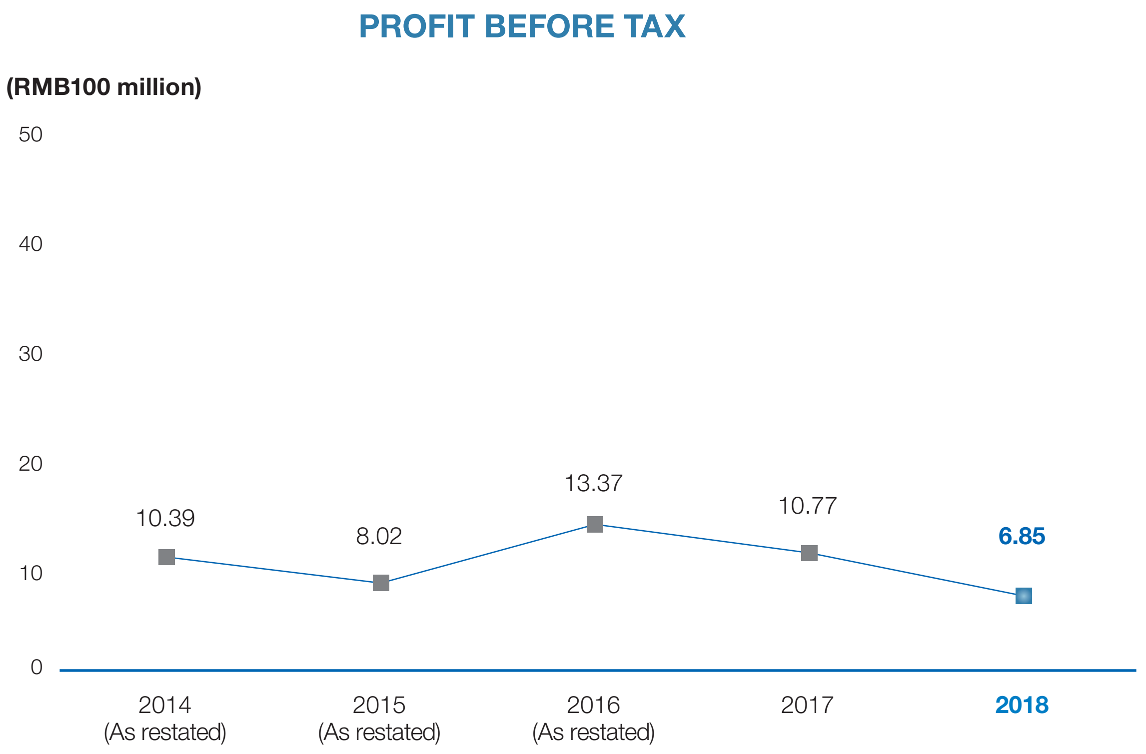


TOTAL EQUITY



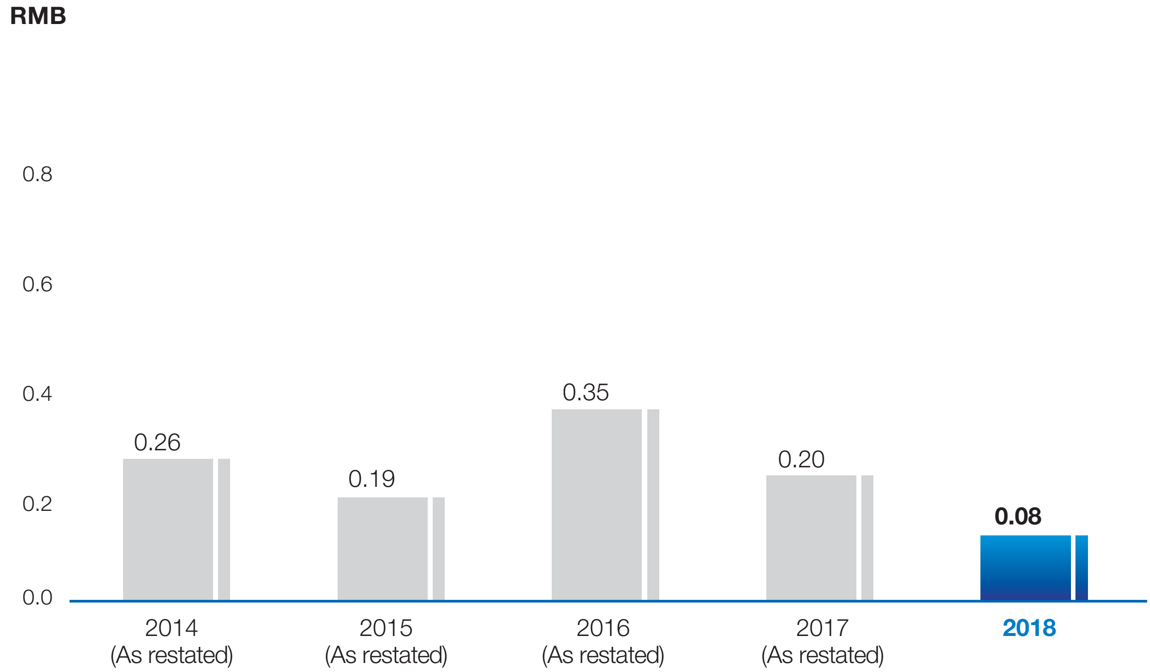
FINANCIAL INFORMATION SUMMARY



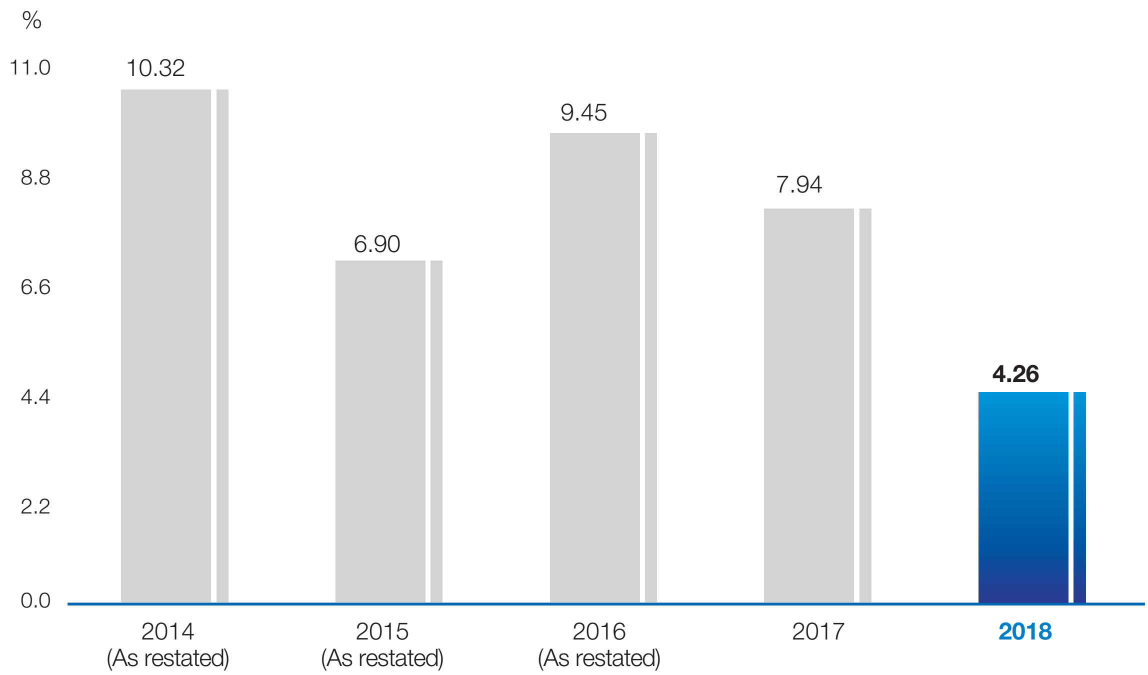


FINANCIAL INFORMATION SUMMARY

EARNINGS PER SHARE



YIELD OF NET ASSETS



CORPORATE PROFILE

THE ISSUANCE AND LISTING OF THE SHARES

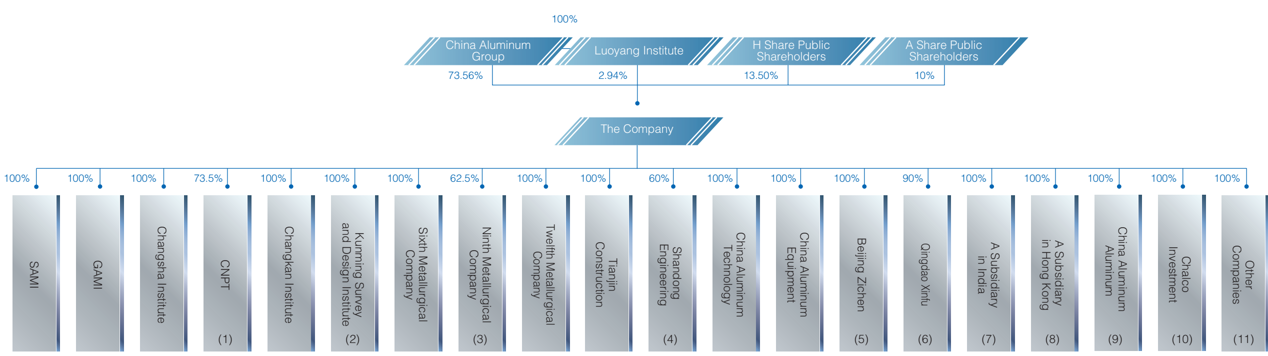
The Company is a subsidiary of China Aluminum Group and listed on the Main Board of the Stock Exchange (Stock Code: 2068) on 6 July 2012 with an offering price of HK$3.93 per H Share. On 31 August 2018, the total number of 295,906,667 A Shares were issued at an issue price of RMB3.45 per A Share in the SSE (Stock Code: 601068). As of 31 December 2018, the total number of Shares in issuance of the Group is 2,959,066,667 Shares, which is comprised of 399,476,000 H Shares, representing 13.5% of the issued share capital, and 2,559,590,667 A Shares, representing 86.5% of the issued share capital.

BUSINESS OVERVIEW

The Group is a leading technology, engineering service and equipment provider in the nonferrous metals industry in China, capable of providing full business-chain integrated engineering solutions for various stages in nonferrous metals industry chain. The Group's businesses mainly include engineering design and consultancy, engineering and construction contracting, equipment manufacturing and equipment trading.

CORPORATE STRUCTURE

Upon the listing of A Shares, the shareholding ratio of Shareholders of the Company is changed as follows:



CORPORATE PROFILE

Notes

(1) represents China Nonferrous Metals Processing Technology Co., Ltd., the remaining 26.5% of the equity interest is held by Suzhou Changguang Enterprises Development Co., Ltd. (蘇州長光企業發展有限公司) as to 17.5%, China Nonferrous Engineering Co., Ltd. (中國有色工程有限公司) as to 6%, Beijing General Research Institute for Nonferrous Metals (北京有色金屬研究總院) as to 2%, and Powder Metallurgy Engineering Research Center of Central South University Co., Ltd. (中南大學粉末冶金工程研究中心有限公司) as to 1%, all of which are independent third parties.

(2) represents Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry

(3) represents Ninth Metallurgical Construction Co., Ltd., the remaining 37.5% of the equity interest is held by natural person shareholders as to 30.27%, and State-owned Assets Supervision and Administration Commission of Xianyang City as to 7.23%, both of whom are independent third parties.

(4) represents Chalco Shandong Engineering Technology Co., Ltd., the remaining 40% of the equity interest is held by Aluminum Corporation of China Limited.

(5) represents Beijing Zichen Investment Development Corporation Limited (北京紫宸投資發展有限公司)

(6) represents Qingdao Xinfu Gongchuang Asset Management Company Limited (青島新富共創資產管理有限公司), the remaining 10% of the equity interest is held by independent natural person shareholders.

(7) represents China Aluminum International Engineering (India) Private Limited (中鋁國際工程（印度）私人有限公司)

(8) represents Chalieco Hong Kong Corporation Limited (中鋁國際香港有限公司)

(9) represents China Aluminum International Aluminum Technological Development Co., Ltd.（中鋁國際鋁材科技產業有限公司）

(10) represents Chalco Southwest Construction Investment Co. Ltd.（中鋁西南建設投資有限公司）

(11) represents Duyun Tongda, Wenzhou Tonggang, Wenzhou Tongrun, etc.

MANAGEMENT DISCUSSION AND ANALYSIS

MANAGEMENT DISCUSSION AND ANALYSIS

I. BUSINESS OVERVIEW AND SEGMENT BUSINESS

Industry Overview in 2018

According to the statistics from Ministry of Industry and Information Technology, the production volume of nonferrous metals in China has maintained a stable growth in 2018. The production volume of ten kinds of nonferrous metals saw a year-on-year increase of 6%, whereas the production volumes of copper and aluminum grew by 14.5% and 2.6%, respectively. The investment in fixed assets of non-ferrous industry increased by 1.2% year-on-year, among which the investment in the segment of smelting and processing increased by 3.2% year-on-year, the investment in the segment of mining decreased by 8% year-on-year. While proactively undertaking new projects, the Company has gradually shifted its business focus to the research and development of the inventory market as well as upgrading and transformation and technological services.

The total production value of the PRC construction industry amounted to RMB23.5 trillion, representing a year-on-year increase of 9.9%, the building construction area of the construction industry reached 14.09 billion sq.m., representing a year-on-year increase of 6.9%, and the infrastructure investment among the investment in fixed assets increased by 3.8%. As profit from traditional business has been diminished due to fierce competition, the Company has commenced transformation by expanding markets in the sectors including municipal works and transportation.

MANAGEMENT DISCUSSION AND ANALYSIS

Business Operation Overview for 2018

In 2018, the Company insisted on making progress on a steady pace, focusing on innovation and changes, and enhancing development quality. As a result, our operation remained healthy and stable.

(I) Focusing on full commitment with new start points from the Listing of A Shares

On 31 August 2018, the Company were officially listed on the SSE. As such, the Company's returning to A-share market from the H-share market has successfully completed. The Company became the first non-ferrous engineering technology company with listed A Shares and H Shares, and has established two capital market platforms in the PRC and Hong Kong, laying a foundation for the rapid development and scientific advancement of the Company in the future.

(II) Focusing on tapping regional capability to capture new ground in market development

Committed to leading the non-ferrous market. Taking technology, capital and service as breakthrough points, the Company has actively developed the non-ferrous metals projects and maintained its market leading position in the design area of the PRC nonferrous metallurgical industry.

Regional strategies were consolidated. Following the implementation of market layout of "1+3+x" or "1+5+x", the Company formulated the "3531" Implementation Plan of Market Strategies (《"3531"市場策略實施方案》)", which set out the comprehensive layout for the regional market. The Company's regional markets development including Southwestern China and Inner Mongolia have showed strong momentum.

MANAGEMENT DISCUSSION AND ANALYSIS

Remarkable results in major projects. The Company attached great efforts on the market development of the business of investment, finance and construction, such as PPP projects on municipal transportation infrastructure, and actively promoted the implementation of major projects. The "2+8+1" domestic and overseas highway projects cooperated with Yunnan Communications Investment & Construction Group Co., Ltd. and Yunnan Construction and Investment Holding Group Co., Ltd. are the largest project of investment, finance and construction undertook by the Company. Currently, we have received tender confirmation letter in relation to Miyu National Highway Project (彌玉國高項目), and 6 regional highway projects, including Ningyong and others, are actively progressing.

Strong progress in overseas business. The Company enhanced its overseas business layout and strengthened its effort in market development. Capitalizing on its core technologies, the Company has signed several project contracts in Saudi Arabia, Laos, Indonesia, Guinea, Zambia and Kazakhstan.

Continuous promotion of aluminum for industrial use. The Company actively promoted aluminum for industrial use with aluminum overpasses, aluminum template, aluminum trailer and municipal facilities in particular. It undertook the construction of 11 aluminum overpasses over the country in 2018. After the completion of aluminum overpasses in Dongdan Beijing, the Company became one of the first 10 members of Haidian District Meticulous Management Cooperation Union (海淀區精細化管理合作聯盟). In Xiongan, the Company developed all-aluminum fabricated enclosure and transparent enclosure, which was recognized as the only designated enclosure product for project construction by Xiongan New Area, and was included in the "Construction Standard" (《建設工程標準》) of Xiongan New Area.

MANAGEMENT DISCUSSION AND ANALYSIS

(III) Focusing on achievement and innovation to write a new chapter for technology R&D

Accelerating development pace by innovation. The Company strengthened the innovation effort in technology and aimed at the key technology with promising market prospects, which resulted in great outcomes. In 2018, the Integrated Intelligent Manufacturing Standardization and New Model Application (智能製造綜合標準化與新模式應用) project being implemented by SAMI was the only standardized national project in the industry; and the Zinc Cleaning and Smelting and Efficient Use of Key Technologies and Equipment (鋅清潔冶煉與高效利用關鍵技術和裝備) project implemented by Changsha Institute was awarded the Second Class Award of the National Science and Technology Award. In 2018, the Company was shortlisted in the Top 1000 Global Innovative Enterprise (全球創新企業1000強).

Further development of platform construction. The Company currently has 6 national scientific research platforms, and 1 more provincial scientific research platform was added in 2018. 3 national "863 projects" and 1 international cooperation project undertaken by the Company were fully completed and have passed the acceptance.

(IV) Focusing on leading and benchmarking, and the project construction is getting standardized

Fulfillment of major projects. The Southeast copper project (東南銅項目) realized the full operation of copper smelting with fire assay system (銅冶煉火法系統) earlier than expected. The construction took 17 months to complete, which was the shortest construction duration project in the industry. The overall of Chi Feng Yun copper project (赤峰雲銅項目) was implemented gradually as planned. Our philosophy of "Undertaking it, Accomplishing it, and Winning it (幹一個成一個贏一個)" has gained great impressive.

Leading by benchmarking projects demonstration. In 2018, the Company convened two benchmarking project conferences and exchange sessions. Through the demonstration of benchmarking projects, it provided model for safety standardized management of construction projects. In 2018, our 14 projects were awarded as provincial quality constructions.

Ongoing safety efforts. The Company implemented the "7 must-dos" for safety production, in which solving the frontline safety management problems and effectively increasing the safety management level of grassroots of the Company. By conducting safety and quality "pilot inspections" on projects under construction, and putting greater efforts in elimination of potential safety issues with preventive measures, the overall safety condition was maintained during the year.

MANAGEMENT DISCUSSION AND ANALYSIS

(V) Focusing on optimization and efficiency improvement, and enhancing vitality of the enterprise

Remarkable effect in streamlining. After three years' hard work for resolving various difficulties, the Company had completed the closure of 35 legal entities, and handled and solved historical problems. As such, the burden of the enterprise was alleviated.

Continuous effort in decreasing account receivable and inventory. The Company carried on its work in decreasing account receivable and inventory by measures such as clear division of duties, strengthening management process and establishing long-term effective mechanism.

Contracts

During 2018, the Company entered into 6,844 contracts in total, the total amount of which was RMB48.56 billion. Details are as followings:

Types of contract		Total in 2018 Number	Amount (RMB100 million)
Design and advisory of geotechnical investigations		5,102	27.9
Construction	Industrial projects	801	160.6
	Civil buildings	311	162.3
	Highways and municipal works	51	117.9
Manufacture of equipment		579	16.9
Total		6,844	485.6

MANAGEMENT DISCUSSION AND ANALYSIS

As at 31 December 2018, the amount of uncompleted contracts of the Company was RMB58.01 billion in aggregate, details of which are as followings:

Types of contract		31 December 2018 Number	Amount (RMB100 million)
Design and advisory of geotechnical investigations		2,483	21.8
Construction	Industrial projects	485	148.5
	Civil buildings	202	161.7
	Highways and municipal works	66	235.1
Manufacture of equipment		483	13.0
Total		3,719	580.1

Credit Ratings

Standard & Poor's continued to assign the Company an issuer rating of "BB+" with a stable outlook.

Scientific Research

Technological innovation platform

Technology Center of Sixth Metallurgical Company (六冶技術中心) and Technology Center of Ninth Metallurgical Company (九冶技術中心) established by the associated enterprises of the Group have successfully passed the qualification evaluation conducted by National Development and Reform Commission and were honourly qualified as national enterprise technology centers. The National & Local United Engineering Research Center in Energy-saving and Environment-friendly Technology (鋁工業節能環保技術國家地方聯合工程研究中心) established by SAMI has passed the qualification evaluation conducted by National Development and Reform Commission to act as the "National & Local United Engineering Research Center" (國家地方聯合工程研究中心), while the application of the Nonferrous Metallurgy Intelligent Manufacturing Engineering Technology Research Center in Hunan Province (湖南省有色冶金智能製造工程技術研究中心) established by Changsha Institute for the same qualification was also granted. As at 31 December 2018, the Group had six engineering technical research centers and enterprise technology centers reaching the national level, two postdoctoral science research workstations reaching the national level, 13 technology centers reaching the provincial level, one engineering laboratory reaching the provincial level and played the main role in the edition and participation of the preparation of more than 130 national and industrial standards or regulations.

MANAGEMENT DISCUSSION AND ANALYSIS

Science and Technology Talents

As of 31 December 2018, the Company had three national survey and design masters in engineering field and 50 provincial survey and design masters in nonferrous metals industry in total. The Company had a total of 26 doctors, 1,149 masters and 1,251 high-level technical talents. In addition, a total of 20 employees of the Company had been granted government subsidy by the State Council.

Application for Patents and Authorization

In 2018, the Group had totally 304 domestic patents applications (among which 149 are invention patents), 207 domestic authorized patents (among which 80 are invention patents), and 8 international authorized patents.

As at 31 December 2018, the Group has applied for 6,930 domestic patents and 5,116 were granted, while 217 for international patents were applied and 144 were granted, and had 14 national-level industrial methods.

Awards Attained

17 awards were granted to the Company the ministry-level scientific and technological prizes by the industry association, among which, seven First Prizes, eight Second Prizes and two Third Prizes were awarded. The Company was also granted a Prize of Excellence for the 20th China Patent Award. 27 construction industrial methods were awarded as ministry-level industrial methods.

Progress of Major Scientific Research Projects and Results

A batch of material scientific research projects were progressing well and the technological results were remarkable. "Aluminum electrolytic cell multi-parameter balance control technology and equipment" (鋁電解槽多參數平衡控制技術与装备) is a new-generation production control system developed by incorporating the technologies of "Internet +" and big data into the traditional sector of aluminum electrolytic cell control technology. It supports energy saving and consumption reduction, and can realize economic and social benefits in terms of consumption reduction and efficiency improvement. Such technological result has achieved international leading level in the sector of aluminum reduction energy-saving control; "National Standard 'Design Standards for Aluminum Electrolytic Cell Uninterrupted Switch for Aluminum Electrolysis'"(國家標準《鋁電解系列不停電停開槽設計規範》) is a series of technical standards based on research and practice, and includes aluminum electrolytic cell uninterrupted switch technology for aluminum electrolysis, DC load switch design principles, mechanic switching structure design principles, etc. It provides uniform standards to support further promotion of the aluminum electrolytic cell uninterrupted switch technology and for the guidance on engineering practice, filling the technology gap in China; "Technology and Equipment of Aluminum Oxide Baking Furnace Flue Gas Waste Heat Recycle Utilization"(氧化鋁焙燒爐煙氣餘熱回收利用技術與裝備) has developed the waste heat recycle technology by direct heat exchange with flue gas and ancillary technology for waste heat utilization. We have researched and manufactured high-efficiency heat exchange equipment for popular furnace types in China,

MANAGEMENT DISCUSSION AND ANALYSIS

which significantly reduces the energy consumption in aluminum oxide production, and plays an important role in improving the level of energy-saving technology in aluminum oxide industry as well as enhancing market competitiveness; the result of "Key Technology and Equipment for Zinc Cleaning and Smelting and High-efficiency Utilization" (鋅清潔冶煉與高效利用關鍵技術和裝備) focuses on common demands in zinc cleaning and smelting as well as high-efficiency utilization, it is based on three approaches, namely emission reduction at source, optimization in whole process and equipment upgrading, under the guidance of "Minimum Amount of Chemical Reaction Principle", and has achieved the new technologies of clean production in zinc smelting and comprehensive recycle of rare metals as well as intelligent large equipment, which were widely promoted and put into application; "Compressed Qxygen-leaching from Sulphide Ores in High Attitude and Extreme Cold Regions and Innovative Research and Application of Industrialization of Integrated Recycling Technology" (高海拔嚴寒地區硫化礦氧壓浸出及綜合回收技術的創新研究及產業化應用); "Bottom-mounted Single-roll Annealing Furnace Equipment Technology" (底置式單卷退火爐裝備技術) fits the demands of various mass annealing for various types of alloy, and is capable of meeting the requirements of rapid heating and high quality of single roll. It guarantees the better performance and good uniformity of produced materials, and therefore can significantly enhance our users' market competitiveness. "Online Mine — Open Pit Mine Online Mining Intelligent System"(露天礦山 Online Mine 在線採礦智能系統) is a holographic-sensing online mining intelligent system integrated with technologies of geographic information system, Internet of Things, automation control, mining, resource exploration and wireless communication, which significantly improves the collaborative production efficiency of mining equipment. It reduces energy consumption, realizes digital and efficient mining production, and provides scientific measures for green mining and high-efficiency mining. "The Key Technology for Slope Stability Evaluation of Joint Rock in Open Pit Mine" (露天礦山節理岩體邊坡穩定性評價關鍵技術) has solved the historical problems of long period, high cost and low precision in traditional open pit slope stability evaluation, and has led to a upgrade of open pit mine slope stability evaluation technology, creating huge safety and economic benefits to open-pit mining enterprises and has provided advanced security assurance for building the "beautiful China".

Investment in R&D of Science and Technology

For the year 2018, the Company continued its strong investment in research and development of science and technology. The expenditure on research and development of science and technology amounted to RMB794.0 million, representing 2.37% of the total revenue of the year.

MANAGEMENT DISCUSSION AND ANALYSIS

II. OPERATING RESULTS ANALYSIS AND DISCUSSION

Overview

Revenue continued to grow in 2018. Revenue amounted to RMB33,572.1 million, representing a decrease of RMB2,493.2 million or 6.9% from RMB36,065.3 million in 2017. Operating profit for the year amounted to RMB1,020.5 million, representing a decrease of RMB397.6 million or 28.0% from RMB1,418.1 million in 2017. Profit for the year amounted to RMB538.9 million, representing a decrease of RMB310.8 million or 36.6% from RMB849.7 million in 2017. Profit attributable to equity owners of the Company amounted to RMB329.2 million, representing a decrease of RMB287.7 million or 46.6% from RMB616.9 million in 2017.

Operating revenue

Our revenue was mainly generated from engineering design and consultancy, engineering and construction contracting and equipment manufacturing and trading.

Revenue in 2018 was RMB33,572.1 million, representing a decrease of RMB2,493.2 million or 6.9% from RMB36,065.3 million in 2017. The main reason for decrease was that some of the large-scale construction projects of the Group have almost come to an end, the revenue decreased as compared to the construction peak period of last year, and the Group focused its development on major business while decreasing the scale of trading business which has lower net profit margin.

	2018		2017		
	(RMB'000)	(% of total income before inter-segment elimination)	(RMB'000)	(% of total income before inter-segment elimination)	% of Change
Segment revenue					
Engineering design and consultancy	2,391,016	7.0	1,861,718	5.1	28.4
Engineering and construction contracting	21,719,697	64.0	23,908,777	65.5	(9.2)
Equipment manufacturing	1,509,979	4.5	1,541,157	4.2	(2.0)
Trading	8,299,196	24.5	9,203,833	25.2	(9.8)
Subtotal	33,919,888	100.0	36,515,485	100.0	(7.1)
Inter-segment elimination	(347,777)		(450,139)		
Total revenue	33,572,111		36,065,346		(6.9)

MANAGEMENT DISCUSSION AND ANALYSIS

Cost of sales

In 2018, cost of sales of the Group amounted to RMB30,269.0 million, representing a decrease of 7.5% as compared to that of RMB32,707.3 million in 2017, mainly because of the decrease in revenue.

Selling and marketing expenses, and tax and surcharges

In 2018, the selling and marketing expenses, and tax and surcharges of the Group amounted to RMB173.2 million, representing a decrease of 24.5% as compared to that of RMB229.5 million in 2017, mainly because of the decrease in tax and surcharges resulting from the decrease in revenue.

Administrative expenses

In 2018, the administrative expenses of the Group amounted to RMB2,091.9 million, representing an increase of 14.1% as compared to that of RMB1,832.7 million in 2017, mainly because of the increase in the amount of impairment losses.

Other income and other (loss)/gain – net

In 2018, the other income and other (loss) – net amounted to RMB17.6 million, representing an increase in losses of RMB139.9 million as compared to RMB122.3 million of other income and other gain – net amount of in 2017, mainly because of the increase of recognized transfer and reform expenses related to Three Supplies and One Property (三供一業, i.e. water, power and heat supply and property) during the year in accordance with the "Notice on Accelerating to Divest Social Obligations and Historical Issues" (Guo Fa [2016] No.19) (《關於印發加快剝離國有企業辦社會職能和解決歷史遺留問題工作方案的通知》國發[2016]19號) of the State Council.

Finance expense – net

In 2018, the net finance expenses of the Group amounted to RMB464.5 million, representing an increase of 23.7% as compared to that of RMB375.6 million in 2017, mainly because of in bank loan interest expenditure increased driven by the change of duration of the scaled of our current interest-bearing liabilities and the decrease in interest income recognized for this period due to the decrease in average daily deposit balance.

Operating profit

In 2018, the operating profit of the Group amounted to RMB1,020.5 million, representing a decrease of 28.0% as compared to that of RMB1,418.1 million in 2017, mainly because of the increase in impairment losses and recognized transfer and reform expenses related to Three Supplies and One Property.

MANAGEMENT DISCUSSION AND ANALYSIS

Profit before tax

In 2018, profit before tax of the Group amounted to RMB684.8 million, representing a decrease of 36.4% as compared to that of RMB1,077.3 million in 2017, mainly because of the decrease in profit margin and the increase in impairment losses resulting the decrease in the revenue scale.

Income tax

In 2018, the income tax expense of the Group was RMB145.9 million, representing a decrease of 35.9% from RMB227.6 million in 2017. The effective tax rate increased to 21.3% in 2018 from 21.1% in 2017, which was basically stable.

Profit for the year

In 2018, the Group's profit for the year was RMB538.9 million, representing a decrease of 36.6% from profit for the year of RMB849.7 million in 2017. Profit attributable to equity owners of the Company was RMB329.2 million, representing a decrease of 46.6% as compared to that of RMB616.9 million in 2017.

Segment operating results

The following table sets forth the gross profit and segment results of each of our business segments for the years indicated:

	2018		2017		Change	
	Gross Profit (RMB'000)	Segment Results (RMB'000)	Gross Profit (RMB'000)	Segment Results (RMB'000)	Gross Profit (RMB'000)	Segment Results (RMB'000)
Engineering design and consultancy	727,112	56,106	601,913	64,133	125,199	(8,027)
Engineering and construction contracting	2,250,852	937,249	2,468,608	1,202,611	(217,756)	(265,362)
Equipment manufacturing	173,202	(42,864)	156,858	80,060	16,344	(122,924)
Trading	156,501	66,630	139,502	79,472	16,999	(12,842)
Subtotal	3,307,667	1,017,121	3,366,881	1,426,276	(59,214)	(409,155)
Inter-segment elimination	(4,548)	3,352	(8,876)	(8,139)	4,328	11,491
Total revenue	3,303,119	1,020,473	3,358,005	1,418,137	(54,886)	(397,664)

MANAGEMENT DISCUSSION AND ANALYSIS

Engineering design and consultancy

The principal segment results data for our engineering design and consultancy business are as follows:

	2018		2017		
	(RMB'000)	% of Segment Revenue	(RMB'000)	% of Segment Revenue	% of Change
Segment revenue	2,391,016	100.0	1,861,718	100.0	28.4
Cost of sales	(1,663,904)	(69.6)	(1,259,805)	(67.7)	32.1
Gross profit	727,112	30.4	601,913	32.3	20.8
Selling and marketing expenses, and tax and surcharges	(60,700)	(2.5)	(63,513)	(3.4)	(4.4)
Administrative expenses	(619,433)	(25.9)	(507,448)	(27.3)	22.1
Other income and other gains or losses – net	9,127	0.4	33,181	1.8	(72.5)
Segment results	56,106	2.3	64,133	3.4	(12.5)

Segment revenue. Revenue from the engineering design and consultancy business before inter-segment elimination in 2018 amounted to RMB2,391.0 million, representing an increase of 28.4% compared with RMB1,861.7 million in 2017, primarily due to an increase in the revenue scale owing to the growth in the amount of orders on hand of engineering survey business.

Cost of sales. Cost of sales of the engineering design and consultancy business in 2018 amounted to RMB1,663.9 million, representing an increase of 32.1% compared with RMB1,259.8 million in 2017, primarily due to the increase in cost expense corresponding to the increase in revenue.

Gross profit. Gross profit of the engineering design and consultancy business in 2018 amounted to RMB727.1 million, representing an increase of 20.8% compared with RMB601.9 million in 2017, yet the gross profit margin decreased from 32.3% in 2017 to 30.4%, which was primarily due to the increase in segment's revenue scale, but the main revenue source was from the business of engineering survey which generated lesser gross profit. In addition, the remuneration of engineering design staff increased, which led to the decrease in gross profit margin of this segment.

Selling and marketing expenses, and tax and surcharges. In 2018, the selling and marketing expenses, and tax and surcharges of engineering design and consultancy business were RMB60.7 million, representing a decrease of 4.4% from RMB63.5 million in 2017, primarily due to a decrease in the remuneration of salespersons.

Administrative expenses. Administrative expenses of engineering design and consultancy business in 2018 amounted to RMB619.4 million, representing an increase of 22.1% from RMB507.4 million in 2017, primarily due to an increase in provision made and an increase in investment in research and development of this segment.

MANAGEMENT DISCUSSION AND ANALYSIS

Other income and other gains or losses – net. The other income and other gains or losses – net of the engineering design and consultancy business in 2018 were RMB9.1 million, representing a decrease of 72.5% as compared to RMB33.2 million in 2017. The main reason was that the government subsidies received decreased this year.

Segment results. Due to the abovementioned reasons, segment results for the year from engineering design and consultancy business were RMB56.1 million, representing a decrease of 12.5% from RMB64.1 million in 2017, which contributed 5.5% to the operating results of the Group.

Engineering and construction contracting

The principal segment results data for our engineering and construction contracting business are as follows:

	2018		2017		
	(RMB'000)	**% of Segment Revenue**	(RMB'000)	% of Segment Revenue	% of Change
Segment revenue	**21,719,697**	**100.0**	23,908,777	100.0	(9.2)
Cost of sales	**(19,468,845)**	**(89.6)**	(21,440,169)	(89.7)	(9.2)
Gross profit	**2,250,852**	**10.4**	2,468,608	10.3	(8.8)
Selling and marketing expenses, and tax and surcharges	**(66,444)**	**(0.3)**	(106,953)	(0.4)	(37.9)
Administrative expenses	**(1,213,976)**	**(5.6)**	(1,193,006)	(5.0)	1.8
Other income and other gains or losses – net	**(33,183)**	**(0.2)**	33,962	0.1	N/A
Segment results	**937,249**	**4.3**	1,202,611	5.0	(22.1)

Segment revenue. Revenue of engineering and construction contracting business before inter-segment elimination in 2018 was RMB21,719.7 million, representing a decrease of 9.2% from RMB23,908.8 million in 2017, which was mainly due to the fact that some of the large-scale construction projects of the Group have almost come to an end this year and such that, the revenue decreased as compared to the construction peak period of last year.

Cost of sales. Cost of sales of engineering and construction contracting business in 2018 was RMB19,468.8 million, representing a decrease of 9.2% from RMB21,440.2 million in 2017, primarily due to the decrease in cost of sales corresponding to the decrease in revenue.

Gross profit. Gross profit of engineering and construction contracting business in 2018 was RMB2,250.9 million, representing a decrease of 8.8% from RMB2,468.6 million in 2017. The gross profit margin increased from 10.33% in 2017 to 10.36%, which was basically stable.

MANAGEMENT DISCUSSION AND ANALYSIS

Selling and marketing expenses, and tax and surcharges. In 2018, the selling, marketing expenses and tax and surcharges of engineering and construction contracting business were RMB66.4 million, representing a decrease of 37.9% from RMB107.0 million in 2017, primarily due to a decrease in revenue resulting in a decrease in tax and a decrease in the remuneration of salespersons.

Administrative expenses. Administrative expenses of engineering and construction contracting business in 2018 were RMB1,214.0 million, representing an increase of 1.8% from RMB1,193.0 million in 2017, primarily due to an increase in the provision for credit impairment losses for this year as well as the reduction of the administrative expense for this year following the change of actuarial benefit policy by the subsidiaries. The abovementioned reasons resulted in the broadly unchanged administrative expenses as compared with the same period last year.

Other income and other gains or losses – net. The net losses of the engineering and construction contracting business in 2018 were RMB33.2 million, representing an increase in losses of RMB67.2 million as compared with the net gains of RMB34.0 million in 2017, primarily due to the segment recognized transfer and renovation expenses related to Three Supplies and One Property during the period, and an increase in exchange loss because of the appreciation of U.S. dollar.

Segment results. Due to the abovementioned reasons, segment results of our engineering and construction contracting business were RMB937.2 million, representing a decrease of 22.1% from RMB1,202.6 million in 2017, which contributed 92.2% to the operating results of the Group.

Equipment manufacturing

The principal segment results data of our equipment manufacturing business are as follows:

	2018		2017		
	(RMB'000)	% of Segment Revenue	(RMB'000)	% of Segment Revenue	% of Change
Segment revenue	1,509,979	100.0	1,541,157	100.0	(2.0)
Cost of sales	(1,336,777)	(88.5)	(1,384,299)	(89.8)	(3.4)
Gross profit	173,202	11.5	156,858	10.2	10.4
Selling and marketing expenses, and tax and surcharges	(27,691)	(1.8)	(28,186)	(1.8)	(1.8)
Administrative expenses	(192,370)	(12.7)	(84,222)	(5.5)	128.4
Other income and other gains or losses – net	3,995	0.3	35,610	2.3	(88.8)
Segment results	(42,864)	(2.8)	80,060	5.2	N/A

Segment revenue. Revenue of the equipment manufacturing business before inter-segment elimination in 2018 was RMB1,510.0 million, representing a decrease of 2.0% from RMB1,541.2 million in 2017, which was basically steady as compared to that of 2017.

MANAGEMENT DISCUSSION AND ANALYSIS

Cost of sales. Cost of sales of our equipment manufacturing business in 2018 was RMB1,336.8 million, representing a decrease of 3.4% from RMB1,384.3 million in 2017, primarily due to some of the provision made for inventories were reversed as the value increased.

Gross profit. Gross profit of our equipment manufacturing business in 2018 was RMB173.2 million, representing an increase of 10.4% from RMB156.9 million in 2017. The gross profit margin increased from 10.2% in 2017 to 11.5%, primarily due to some of the provision made for inventories were reversed as the value increased, which resulted an increase in gross profit as compared with that of 2017.

Selling and marketing expenses, and tax and surcharges. The selling and marketing expenses, and tax and surcharges of equipment manufacturing business in 2018 were RMB27.7 million, representing a decrease of 1.8% from RMB28.2 million in 2017, which was basically stable.

Administrative expenses. The administrative expenses of equipment manufacturing business in 2018 were RMB192.4 million, representing an increase of 128.4% from RMB84.2 million in 2017, primarily due to the increase of impairment loss of assets provision during the year.

Other income and other gains or losses – net. The other income and other gains or losses – net of the equipment manufacturing business in 2018 was RMB4.0 million, representing a decrease of RMB31.6 million as compared to that of RMB35.6 million in 2017. The main reason was that the segment received less government subsidies this year as compared with the same period last year.

Segment results. Due to the abovementioned reasons, the segment loss of our equipment manufacturing business for the year was RMB42.9 million, representing a decrease of RMB123.0 million from RMB80.1 million of segment results in 2017.

Trading

The principal segment results data of our trading business are as follows:

	2018		2017		
	(RMB'000)	**% of segment Revenue**	(RMB'000)	% of segment Revenue	% of Change
Segment revenue	**8,299,196**	**100.0**	9,203,833	100.0	(9.8)
Cost of sales	**(8,142,695)**	**(98.1)**	(9,064,331)	(98.5)	(10.2)
Gross profit	**156,501**	**1.9**	139,502	1.5	12.2
Selling and marketing expenses, and tax and surcharges	**(18,402)**	**(0.2)**	(30,809)	(0.3)	(40.3)
Administrative expenses	**(75,010)**	**(0.9)**	(48,777)	(0.5)	53.8
Other income and other gains or losses – net	**3,541**	**0.0**	19,556	0.2	(81.9)
Segment results	**66,630**	**0.8**	79,472	0.9	(16.2)

MANAGEMENT DISCUSSION AND ANALYSIS

Segment revenue. Revenue of trading business before inter-segment elimination in 2018 was RMB8,299.2 million, representing a decrease of 9.8% from RMB9,203.8 million in 2017, primarily due to the fact that the Group focused its development on major business while decreasing the scale of trading business which generate lower net profit margin.

Cost of sales. Cost of sales of trading segment in 2018 was RMB8,142.7 million, representing a decrease of 10.2% from RMB9,064.3 million in 2017, primarily due to the decrease in cost of sales corresponding to the decrease in revenue.

Gross profit. Gross profit of trading segment in 2018 was RMB156.5 million, representing an increase of 12.2% from RMB139.5 million in 2017. The gross profit margin increased from 1.5% in 2017 to 1.9%, mainly because the Group chose to develop some types of trading business that could generate higher gross profits.

Selling and marketing expenses, and tax and surcharges. Selling and marketing expenses, and tax and surcharges of trading segment in 2018 were RMB18.4 million, representing a decrease of 40.3% from RMB30.8 million in 2017, primarily due to the decrease in surcharge corresponding to the decrease in revenue.

Administrative expenses. Administrative expenses of trading business in 2018 were RMB75.0 million, representing an increase of RMB26.2 million from RMB48.8 million in 2017, primarily due to an increase in the provision for trade receivables.

Other income and other gains or losses – net. Other income and other gains or losses – net of the trading business in 2018 were RMB3.5 million, representing a decrease of RMB16.1 million as compared to that of RMB19.6 million in 2017, primarily due to an increase in exchange loss because of the appreciation of U.S. dollar.

Segment results. Due to the abovementioned reasons, segment results of trading business for the year were RMB66.6 million, representing a decrease of 16.2% from RMB79.5 million in 2017, which contributed 6.5% to the operating results of the Group.

Conditions of assets and liabilities

As at the end of 2018, the total assets of the Group were RMB49,031.0 million, and the total liabilities were RMB35,845.5 million.

Composition of assets:

As at 31 December 2018, in the composition of assets, due to the characteristics of our business, trade and note receivables were the largest item which amounted to RMB16,040.8 million, representing 32.7% of the total assets; the amount of contract assets was RMB12,244.5 million, representing 25.0% of the total assets; cash and cash equivalents amounted to RMB5,830.1 million, representing 11.9% of the total assets.

Composition of liabilities:

As at 31 December 2018, in the composition of liabilities, trade and other payables were the largest item which amounted to RMB19,423.5 million, representing 54.2% of the total liabilities, followed by the long-term and short-term borrowings of a balance of RMB12,623.6 million as at the end of 2018, representing 35.2% of the total liabilities.

MANAGEMENT DISCUSSION AND ANALYSIS

III. FINANCIAL REVIEW

Liquidity and Capital Resources

As of 31 December 2018, the Group had cash and cash equivalents of RMB5,830.1 million, representing a decrease of RMB449.8 million from the cash and cash equivalents of RMB6,279.9 million as at 31 December 2017. This was primarily due to: the Group redeemed the perpetual medium-term notes at an amount of RMB200 million and payment of RMB190 million during the year due to the maturity of bank's acceptance bills paid for purchasing subsidiaries in last year.

As of 31 December 2018, current assets amounted to RMB42,507.2 million, representing an increase of 14.9% as compared to that of RMB36,996.2 million as of 31 December 2017, primarily due to the increase in trade and note receivables and contract assets.

As of 31 December 2018, the current liabilities amounted to RMB32,787.4 million, representing an increase of 11.2% from RMB29,480.3 million as of 31 December 2017, primarily due to the increase in trade and other payables and contract liabilities.

As of 31 December 2018, the net current assets were RMB9,719.8 million, representing an increase of 29.3% from the net current assets of RMB7,515.9 million as of 31 December 2017, mainly due to the increase in working capital consumed.

As of 31 December 2018, the current ratio was 1.30, representing an increase of 0.05 compared to the current ratio of 1.25 as of 31 December 2017. The Company continued to maintain sufficient capability of repayment.

Borrowings

As of 31 December 2018, the Group had outstanding borrowings of RMB12,623.6 million (among which the bank borrowings are RMB10,324.5 million, and other borrowings are RMB2,299.1 million), representing an increase of RMB16.9 million from RMB12,606.7 million as at 31 December 2017. As at the end of 2018, net interest-bearing liabilities (interest-bearing liabilities less cash and cash equivalents) amounted to RMB6,793.5 million.

MANAGEMENT DISCUSSION AND ANALYSIS

Gearing Ratio

The Group monitors its capital structure on the basis of gearing ratio. As at 31 December 2018 and 31 December 2017, the Group's gearing ratios were 73.4% and 72.8%, respectively. The gearing structure is maintained within the reasonable range determined by the Company.

Capital Expenditure

The Group had capital expenditure of RMB671.8 million in 2018, representing a decrease of 11.1% from RMB755.6 million in 2017. Capital expenditure comprises additions to property, plant and equipment, land use rights, investment properties, intangible assets, investments accounted for using the equity method, unlisted equity securities and other non-current assets, including additions resulting from acquisitions through business combinations, among which, RMB20.9 million was for the engineering design and consultancy segment; RMB443.0 million was for the engineering and construction contracting segment; RMB202.5 million was for the equipment manufacturing segment; and RMB5.4 million was for the trading segment. Capital resources mainly included self-owned capital and borrowings from banks and other financial institutions.

Pledge of Assets

As of 31 December 2018, the Group pledged property, plant and equipment of RMB103.6 million, investment properties of RMB19 million, trade and notes receivable of RMB494 million and restricted bank deposits of RMB978.9 million to secure the short-term borrowing of RMB494.5 million, long-term borrowing of RMB20 million, and bills payable of RMB752.4 million.

Financial Guarantee

As of 31 December 2018, the Group's subsidiary Ninth Metallurgical Construction provided joint liability guarantees in respect of the following loans:

It provided the joint liability guarantee for the loan of RMB95,000,000 borrowed by Mianxian Urban Development Investment Limited (勉縣城市發展投資有限公司), which is due for repayment on 6 January 2023, and the remaining balance of the guarantee is RMB54,000,000 as at the end of the period; and

As of 31 December 2018, the Group's subsidiary, Hanzhong Ninth Metallurgical Construction Co., Ltd. (漢中九冶建設有限公司), provided a joint liability guarantee in respect of a bank loan of RMB100,000,000 borrowed by Mianxian Urban and Rural Infrastructure Construction Co., Ltd. (勉縣城鄉基礎設施建設有限公司), which is due for repayment on 19 October 2027, and the remaining balance of the guarantee is RMB81,800,000 as at the end of the period.

The Directors reviewed all of the relevant contracts and information, and assessed that the expected credit losses of the above financial guarantees were not material, as the repayments made by the above borrowers were on schedule and the risk of default was remote. Therefore, no provision was made for such financial guarantees.

MANAGEMENT DISCUSSION AND ANALYSIS

Contingent Liabilities

As of 31 December 2018, the Group did not have any material contingent liabilities.

Major Acquisitions and Disposals

(a) In October 2018, China Nonferrous Metals Processing Technology Co. Ltd., a 73.5% owned subsidiary of the Group, entered into an agreement regarding the acquisition of the 100% equity interest of Luoyang Kaiying Technology Co., Ltd. from Chinalco Henan Aluminum Fabrication Co., Ltd. at a consideration of approximately RMB205.8 million.

The acquisition was subsequently completed in January 2019 and will be accounted for as a business combination under common control in view that before and after the acquisition, the Company and Chinalco Henan Aluminum Fabrication Co., Ltd. are controlled by China Aluminum Group, and the control is not temporary. The combined account policy has been applied.

(b) In Decemeber 2018, the Company and China Nonferrous Metals Processing Technology Co., Ltd., its 73.5% owned subsidiary, received a gain of RMB124.80 million from disposal of 40.35% and 59.65% equity interest in its subsidiary Suzhou Engineering & Research Institute for Nonferrous Metal Research Co., Ltd. to Chinalco Asset Management Company (中鋁資產經營管理有限公司, a wholly owned subsidiary of the controlling shareholders of the Company) at a consideration of RMB79.0 million and RMB116.8 million respectively. Due to such disposal, the Group no longer holds any interest in Suzhou Engineering & Research Institute for Nonferrous Metal Research Co., Ltd. as of the end of the reporting period.

IV. RISK FACTORS

The operating activities of the Group are exposed to a variety of financial risks, including but not limited to operational risks (including the risks arising from cost overruns and project delay) and risks of foreign exchange rate fluctuation. The management of the Company monitors an array of risks to ensure the adoption of appropriate measures in a timely and effective manner.

Risks Relating to Cost Overruns

During the reporting period, the Group generated a substantial portion of revenue from contracts with a fixed price in our EPC contracting. The terms of these contracts required us to complete a project at a pre-agreed price and therefore exposed us to cost overruns risks. Our estimates of the costs for completing a project involved a multitude of assumptions, including economic outlook, cost and availability of labor and raw materials, subcontractors' performance, facility utilization rates, and applicable construction and technical standards of the project. However, these assumptions may prove to be inaccurate. Depending on the terms agreed in specific contracts, inevitably, we are subject to a certain extent of raw material price fluctuation risks in some projects. In addition to that, delays caused by inclement weather, technical issues, inability to obtain the requisite permits and approvals, as well as other variations and risks embodied in the performance of contracts, may cause substantial difference between the actual overall risks and costs and the original estimates, despite the buffers we have built into our bids for the factors of increase in labor, raw materials and other costs. Cost overruns could result in a profit lower than expected or a loss in a project.

MANAGEMENT DISCUSSION AND ANALYSIS

Risks Relating to Project Delay

We may be unable to complete a project in accordance with the schedule set forth in the relevant contract. A project could be delayed for a number of reasons, including but not limited to those relating to market conditions; policies and regulations of the PRC and other relevant jurisdictions; availability of funding; disputes with business partners, technology and equipment suppliers and other contractors, employees, local governments and communities; natural disasters; power and other energy supplies; and availability of technical or human resources. Our overseas engineering and construction contracting projects may also be affected by factors such as deteriorations in relationships between China and relevant foreign governments; war or other significant adverse developments in international relations. In addition, we may need to execute extra work or "change initiated by owner" work in connection with our contracts from time to time. "Change initiated by owner" work is necessary when the project owner changes the design for non-technical reasons after the design plan is confirmed. This may result in disputes in defining work performed beyond the scope as stipulated in the original project specifications, or over the price that the customer should pay for the extra work. Even if the customer agrees to pay for the extra work or "change initiated by owner" work, prior to the approval of changes in the design by the owner and the receipt of funds, we may need to finance the cost of the work for a prolonged period of time. In addition to that, any delay caused by the extra work may affect the progress of our projects and our ability to complete the specific contract project on time. Costs may also incur due to design changes not approved by the project owner or any contractual disputes.

Risks Relating to Foreign Exchange Rate Fluctuation

A majority of the Group's operations are conducted in the PRC, with the use of Renminbi as the functional currency. A substantial portion of our revenues and cost of sales were denominated in Renminbi during the financial year ended 31 December 2018. However, we conduct part of our engineering and construction contracting business overseas, and may make significant equity and other investments in overseas projects. Our assets and liabilities denominated in foreign currency are expected to increase significantly as we further expand our overseas business, particularly when undertaking more EPC projects. We are, therefore, exposed to risks associated with foreign exchange rate fluctuations.

Changes in the value of foreign currencies could affect our Renminbi costs and revenues, and the prices of our exported products and imported equipment. Any increased costs or reduced revenues as a result of foreign currency fluctuations could adversely affect our profits and profit margins. The fluctuation of foreign exchange rates also affects the value of our monetary and other assets and liabilities denominated in foreign currencies. Generally, an appreciation of Renminbi against the U.S. dollar and other relevant foreign currencies could result in a foreign exchange loss for assets denominated in the U.S. dollars and other foreign currencies, and a foreign exchange gain for liabilities denominated in the U.S. dollars and other foreign currencies. Conversely, a devaluation of Renminbi against the U.S. dollar and other relevant foreign currencies could result in a foreign exchange gain for assets denominated in the U.S. dollars and other foreign currencies and a foreign exchange loss for liabilities denominated in the U.S. dollars and other foreign currencies.

MANAGEMENT DISCUSSION AND ANALYSIS

The changes in the exchange rate of Renminbi may be subject to changes in China's governmental policies and international economic and political developments. There can be no assurance that the exchange rate of Renminbi will remain stable against the U.S. dollar or other foreign currencies in the market. Although the international community generally welcomes the Renminbi revaluation, it still put great pressure on the Chinese government in order to have a more flexible monetary policy, which may lead to a further significant increase in Renminbi against the U.S. dollar or other foreign currencies, possibly leading to the decrease in the revenue of our overseas business. Fluctuations in exchange rates may adversely affect the value, converted into the U.S. dollars or Hong Kong dollars, of our net assets, profits and any declared dividends.

Risks Relating to Price Fluctuation

Our success is relying on whether we can acquire sufficient labor, raw materials, auxiliary materials, energy, water supply and other products from the suppliers with acceptable price and quality on time. We are in face with various market risks relating to the price fluctuation of certain raw material and other products, for example, steel, cement, aluminum, wood, sand, explosives, waterproofing material and additives, etc. used in our engineering and construction contracting, and equipment manufacturing business. The price and supply of such materials may have significant fluctuation according to customers' needs, manufacturers' production capacity, market condition and costs of materials in different times; especially, the prices for our main raw materials in need for operation, such as steel, cement and aluminum, may be influenced by cyclical fluctuation of price level and periodic supply shortage in China. In addition to that, our relationship with the raw material suppliers will have severe adverse influence and may further lead to negative effects on our business operation if we cannot meet the payment deadline to pay those suppliers according to the contracts of raw material supply. Conditions of price increase of energy (including the prices of fuel and electricity or water supply) may also adversely influence our business, especially our equipment manufacturing business.

Risks Relating to Cash Flows

The Group includes construction enterprises. Those enterprises are required to make payment for deposits of tendering and prepayment of materials and construction when expanding new markets and constructing the projects. The refund of deposits requires a period of time if the tender is rejected, and as a result a large amount of idle capital cannot be used in a short period of time. And as project delay and lagging of project settlement result in excessive amount of receivables, the capital turnover will be reduced and may lead to cash flows difficulties.

Risks Relating to Overseas Operation

Risks relating to overseas operation refer to the impact on the enterprise to meet its business objectives due to the changes in the conditions of politics, economics and legal in the countries in which the enterprises operate, as well as the uncertainties caused by other sudden events. These mainly reflect on the differences in laws, culture, labor, tax policies of the countries in which it operates, and risks arising from exchange rate fluctuations and political changes.

MANAGEMENT DISCUSSION AND ANALYSIS

In the meantime, since we have selectively entered into certain overseas markets and strategically developed overseas business, we expect to continue to generate considerable income and profits from international projects and other overseas business in the foreseeable future. Therefore, we are exposed to various risks relating to the business expansion in overseas countries and regions, including but not limited to political risks, instabilities of economy, finance and market and credit risks, risks relating to the appointment of foreign agents for operating overseas business, the periodicity and demand of international engineering design and construction market, competition, preferential measures or commercial bribe of other international and local companies, tax increase or unfavorable tax policies, foreign exchange control and fluctuation.

V. BUSINESS PROSPECTS IN 2019

Industry Outlook in 2019

The nonferrous industry is facing various challenges. Firstly, the deep-root difficulties on the industrial structure were conspicuous due to excessive production of low-end products and dreadful weakness. Secondly, the increasing cost and sluggish consumer spending put great pressure on industry development. The Company will capitalize on its own technical advantages, strive for structural adjustment of the nonferrous industry and enterprise, expand markets by focusing on energy saving and consumption reduction, improving labor productivity, attaining essential safety and environmental protection compliance, and capture market opportunities brought by capacity replacement and technology upgrade.

Putting greater efforts to remedy disadvantages in the infrastructure field remains an important means for the PRC to maintain a stable economic growth in 2019. PPP business model is more mature and standardized. The Company will put more resources advantages in the segments of infrastructure business and transportation business to achieve further scale boost as well as the efficiency improvement.

Business Outlook of the Company in 2019

(I) Speeding up for technological innovation and solving problems for better synergies

1. **Building up “big technology” system.** Taking the quality upgrade as an opportunity and the major construction project as a link, the Company will focus on major science and technology projects, promote resources optimization and gain significant breakthrough on technology, and develop a series of key technologies in order to solve technological problems in the industry and establish a standardized service system and product portfolio with consultancy, design, construction and equipment as a bundle.

MANAGEMENT DISCUSSION AND ANALYSIS

2. **Innovation-driven transformation.** Focusing on the three aspects of "reducing emission and consumption and increasing efficiency in inventory market of core business", "research and development of major key technologies and equipment of non-ferrous industry" and "breakthrough on iconic technologies in the municipal and environmental protection fields", the Company will first develop a series of new product and new technology, concentrate the resources to complete the implementation of industrialization of "new technology on producing aluminum oxide from low-grade bauxite" and further proceed the application of red mud comprehensive treatment technology.

3. **Accelerating the conversion of results.** The Company will focus on achieving bigger breakthrough on energy saving and consumption reduction, environmental governance and waste utilization, and improve the profit contribution rate of scientific results. It will also strengthen scientific research project management and performance appraisal to encourage the research and development team to generate results and create benefits as soon as practicable.

4. **Greater investment in research and development.** The Company will promote the development of "big technology" through greater research and development investment in labor, talents and objects. It will also increase the support on major scientific research projects in order to facilitate greater results.

(II) Implementing new measures to improve quality and efficiency and diversifying market for more profits

1. **Focusing on traditional market.** The Company will grasp the business opportunities brought by production capacity replacement of traditional non-ferrous business, technology upgrades, group merger and acquisition and engineering services, and expand market capacity by proposing solutions around the topics of energy saving and consumption reduction, labor productivity enhancement, essential safety and environmental protection compliance of existing technologies. It will put great efforts in developing the general contracting business of non-ferrous projects and implementing a number of high-quality general contracting projects.

2. **Achieving good performance in emerging business.** Firstly, the Company will develop the urban infrastructure business, including the design and construction of large-scale urban complexes, characteristic towns, industrial parks, urban landscapes, urban roads and urban aluminum application. Secondly, the Company will tap into the traffic road business, including the investment and construction of national and local highways, tunnels and bridges. Thirdly, the Company will set foot on the energy conservation and environmental protection business, including the business of industrial solid waste treatment, black and foul water treatment, industrial flue gas purification, mine ecological restoration and soil treatment. Fourthly, the Company sets its sight on the intelligent manufacturing business which will be contributed to every manufacturing process from research and development, design, production, management and service, serving the entire process of production in non-ferrous industry.

MANAGEMENT DISCUSSION AND ANALYSIS

3. **Promoting international business.** On top of the existing three major overseas businesses of aluminum oxide, electrolytic aluminum and carbon, the Group will put great efforts in developing the businesses of heavy non-ferrous metallurgy and mineral resources, with an aim to forge our three flagship businesses, namely light non-ferrous, heavy non-ferrous, and mineral resources, alongside. Given the "Belt and Road" Initiative, the Group will focus on building its presence in Africa and China-Kazakhstan Economic Corridor in 2019.

4. **Expanding engineering application of aluminum.** The Group will consolidate and expand the market for inventory products and increase efforts in research and development of incremental products. In particular, it will speed up the promotion for well established and successfully developed products such as aluminum template, aluminum enclosure, aluminum overpass and aluminum trailer, and improve the economic benefits of engineering application of aluminum.

5. **Insisting on regional development strategy.** The Company will continue to strengthen and expand the five regional institutions, and establish close collaboration relationship with local governments and platform companies. The construction enterprises shall deeply explore the key areas and develop their own advantageous areas; the survey and design enterprises shall increase efforts in technology research and development, actively expand non-ferrous market and civilian business that match with their own technological strength, accumulate a number of key customers, and promote the in-depth development of the Company's regional strategy.

(III) Upgrading the standard of project management and producing quality products to reinforce brandname reputation

1. **Improving process management and control.** Establishing the control of project cost as the principle of project operation, the Group sets to strengthen its project systems by in-depth integrating the design and the EPC contracting, and making efforts in controlling construction duration, quality, safety and cost. The Group will implement refined cost management, reduce cost and expense in whole process and level, and increase the gross profit margin of our core business.

2. **Creating brand competitiveness.** The Group will continue to work intensively for creating benchmark projects so as to acquire national-level awards (such as Luban Prize and National Quality Award), standardize construction sites with AAA-rated security, and focus on achieving high quality to realize standardization, regularization and informational intelligent construction sites, thus to create a new brand of Chalieco.

3. **Addressing 3 major difficult issues.** The Group will reinforce the "five development concepts", adhere to the people-oriented principle and care for lives, and earnestly implement safety and environmental-friendly production works. The Group will make efforts in the solutions of safety production and pay more attention to safety production. It also establishes a special safety monitoring and warning system, and strengthens the training and education on safety production, in order to vigorously build a safety culture, foster the safety and self-management capabilities of operators, and prevent major personal injury and death accidents, with which the long-term stability of safety production will be achieved.

MANAGEMENT DISCUSSION AND ANALYSIS

(IV) Adhering to the new norm of precise management and improving internal capabilities to enhance management ability

1. **Precise capital management.** The Group will take the advantages of a company with A+H shares listed in Hong Kong and mainland and utilize external capital to provide financial support for the projects of the Company. The Group will optimize the allocation of the corporate resources, and apply the advantageous resources to the advantageous enterprises and advantageous projects to maximize the overall efficiency of the Company.

2. **Precise financial management.** The Group will carry out the core financial work with five courses, mainly maximizing benefits, increasing cash surplus, optimizing the proportion of costs and expenses, implementing intelligent financial construction and formulating talents development plan, so as to raise the awareness of cash profit, strengthen the control over free cash flow and prevent capital risk.

3. **Precise management of account receivable and inventory.** The Group will set up target, time, personnel and a system of reward and punishment, and continuously reducing the account receivable and inventory as well as the entrusted loans.

(V) Promoting a new journey of transformation and upgrading and striving to be on top step by step

1. **Promoting six constructions.** The six constructions refer to marketization, professionalization (differentiation), regionalization, standardization, informatization (intelligence) and internationalization. Taking into the account of the corporate development and market demand, the Group will formulate implementation plans, accelerate the process of the Company's six constructions, and promote the competitiveness of the Company.

2. **Application for qualification.** The Group will apply comprehensive Grade A qualifications for design as soon as possible, and speed up the plan to apply for extra-grade qualifications for construction. The key enterprises will make efforts to obtain dual-level qualifications and make progress in business qualifications of municipal, environmental protection, railway transportation and system integration, so as to obtain market access permit for the transformation and upgrading of the Company.

CORPORATE MILESTONES IN 2018

13 January	Chalieco entered into the strategic cooperation agreement with Yunnan Construction and Investment Holding Group Co., Ltd..
March	Technology center of Sixth Metallurgical Company has passed the joint accreditation by National Development and Reform Commission, Ministry of Science and Technology, Ministry of Finance, General Administration of Customs, State Administration of Taxation, and was granted the recognition as the state-level enterprise technology center.
23 April	Ninth Metallurgical Company and Tianjin Construction won the honorable title of "National Outstanding Construction Enterprise in 2017" in the 33rd Annual Congress of China Association of Construction Enterprise Management and Engineering and Construction Industry Development Forum 2018.
June	The "Resources Recycling Project of Zhuzhou Smelter Group Co., Ltd. in Relation to Lead Direct Smelting with Zinc Leached Residue (株洲冶煉集團股份有限公司搭配鋅浸出渣直接煉鉛資源循環利用項目)" designed and EPC contracted by Changsha Institute was selected as the one of the first-batch typical examples of resources recycling in Hunan Province. The project brought a major subversive revolution to the traditional production method of smelting lead and zinc, and it has promoted the improvement of clean production level of lead and zinc smelting in China.
8 June	The initial public offering of A Shares of Chalieco was successfully approved by CSRC, and the number of issued Shares did not exceed approximately 296 million shares. The validity period was within 12 months from the date of approval.
July	Technology center of Ninth Metallurgical Company was jointly recognized as the state-level enterprise technology center by six authorities including National Development and Reform Commission.
23 August	Engineering News-Record (ENR), a magazine in the U.S., announced the two lists of "Top 250 International Contractors" and "Top 250 Global Contractors" for 2018. Chalieco ranked No.186 on the "Top 250 International Contractors", which moved up 59 places compared with that of 2017, and was the enterprise with largest improvement among all the Chinese enterprises in the list. Chalieco ranked No.87 on the list of "Top 250 Global Contractors", which moved up 34 places compared with that of 2017.
31 August	Chalieco was listed on the main board of SSE.

CORPORATE MILESTONES IN 2018

September	In the scientific and technological achievement evaluation meeting convened by China Non Ferrous Metals Industry Association, the two scientific results "Research and Manufacture on Hot Rolling Mill Unit with 1200mm Neutron Absorption Board (1200mm 中子吸收板熱軋機組裝備研製)" and "Bottom-Set Single-Roll Annealing Furnace (底置式單卷退火爐)" researched and developed by CNPT were unanimously recognized by the experts of the association, indicating that CNPT has a number of self-developed intellectual property rights, and its key technical indicators have all reached the international leading level with promising application prospect.
11 September	At the scientific and technological achievements evaluation meeting organized by the China Nonferrous Metals Industry Association, two scientific research achievements, namely "Aluminum Electrolytic Cell Flue and Gas Deep Purification Technology and Device" and "Aluminum Electrolytic Cell Multi-parameter Balance Control Technology and Device" developed by GAMI have been appraised by 7 experts and scholars as at international leading level, which further promoted the development of GAMI in the technical field of digital intelligent control of Aluminum electrolysis and PM2.5 dust control technology.
October	The "Research and Application of Big Data Integration of Nonferrous Metal Mines and Heavy Metal Smelting" independently submitted by Changsha Institute and the "Research, Development and Demonstration of Key Technologies for Green Deep Metal Mining" participated by Changsha Institute were approved by the Ministry of Science and Technology and established as the national key research and development planning projects.
October	The China Nonferrous Metals Industries Construction Association announced the 2018 awards for excellent engineering survey, design, consultancy results and information technology. Chalieco was awarded 58 awards, among which, there were 17 excellent engineering survey awards, 12 excellent engineering design awards, 28 excellent engineering consultancy results awards, and 1 excellent information technology results award.
18 October	In the 2018 Infrastructure Annual Glorious Awards held in London, England, the "Application Achievements of Digital Design Technology of Chalieco Indonesia International Capacity Cooperation Project" undertaken by SAMI was awarded the "Glorious Award of Manufacture".

CORPORATE MILESTONES IN 2018

November

Chalieco has learned from the China Securities Golden Bauhinia Awards Committee that Chalieco was awarded the "Best Investor Relations Management Listed Company" in the contest of the Eighth China Securities Golden Bauhinia Awards. This marks Chalieco's fourth consecutive years in winning the "China Securities Golden Bauhinia Award" since 2015.

November

In the 2018 Distributed Energy Development and Enterprise Integrated Energy Service Transformation Forum hosted by China Energy News, Changsha Institute was listed in the "Top 100 Distributed Energy Enterprises of 2018". This shortlisting means that the design capabilities of Changsha institute is being highly recognized in the field of distributed energy.

8 December

The contract signing ceremony for the Saudi SCPC Calcined Petroleum Coke EPC Project contracted by SAMI was held in Dubai. The project is located in the Jubail Industrial Zone of the Kingdom of Saudi Arabia with a construction scale of 0.67 million tons of calcined petroleum coke per year, which is the first calcined petroleum coke project in Saudi.

25 December

The 20th China Patent Award was announced in Beijing. The "Method for Controlling the Pressure Leaching of Grain Size of Material of Sulfide Zinc Concentrate (一種控制硫化鋅精礦加壓浸出物料粒徑的方法)" developed by Changsha Institute received the 20th China Patent Excellence Award.

DIRECTORS' REPORT

PRINCIPLE BUSINESS

The Group is principally engaged in engineering design and consultancy, engineering and construction contracting, equipment manufacturing and trading. Details of major subsidiaries, associates and joint ventures of the Company are set out in Note 43 and note 20(b) to the consolidated financial statements, respectively.

THE BUSINESS REVIEW

The business review of the Group for the year ended 31 December 2018 is set out respectively as follows:

a.	Fair review of the Group's business	Management Discussion and Analysis	P.8-33
b.	Description of the principal risks and uncertainties the Group is facing	Management Discussion and Analysis	P.8-33
c.	Particulars of important events affecting the Group that have occurred since the year ended 31 December 2018	Note 45 to the financial statements	P.306
d.	Indication of likely future development of the Group's business	Management Discussion and Analysis	P.8-33
e.	Analysis using financial key performance indicators	Financial Summary, Financial Highlights and Management Discussion and Analysis	P.3-33

EXPLANATION ON THE MAJOR RELATIONSHIP BETWEEN THE COMPANY AND ITS EMPLOYEES, CUSTOMERS, SUPPLIERS AND OTHER PARTIES WITH SIGNIFICANT INFLUENCE ON THE COMPANY

1. The Group and its employees. Group companies uphold the principle of "people-oriented". The development of the Company is "for people". The products and services provided by the Company should meet the demand of "people" as possible as they can. The Company will keep on customer-oriented, keep abreast of the changes in market conditions, seek market development opportunities, and vigorously expand service areas and regions. The development of the Company is "dependent on people". Employees are our most valuable assets and providers of products and services. Through the enhancement of employees' knowledge, skills and abilities, we can continuously improve the quality of work and work standards and strengthen the overall competitiveness of the Company. The development of the Company is to "achieve success". On the basis of the Company's development, individual achieves all-round development, including fair career development opportunities, competitive remuneration system and harmonious interpersonal environment. Based on such an understanding, the Company has long regarded the employees' education and training as a basic work to continuously improve the overall quality of the employee teams, update the employees' knowledge, and cultivate professional talents with unremitting determination and strict implementation. In the employee education and training, based on the team building condition of the employees and in accordance with the Company's strategy, customers' needs and personal abilities, we aim to improve the employees' political theory level and business performance ability. By adhering to the strategy of "going out and coming in", and insisting on the working concept of organic combination of centralized-training and self-improvement, we invest a large amount of human and financial resources to create a training environment for employees and to implement the measures of employee education and training in an effective manner. In 2018, the cumulative number of employees received training reached 21,046, of which 6,616 were operation and management personnel, 12,420 were engineering technicians, 1,663 were production and operation personnel, and 347 were service and other personnel.

DIRECTORS' REPORT

The Company vigorously implements employee care projects to provide employees with fair career development opportunities, competitive remuneration system and harmonious interpersonal environment. The Company pursues the harmony between internal and external environments, realizes the win-win situation among stakeholders, embodies the interests of employees and the return of Shareholders, and simultaneously takes into account short-term interests and long-term development. We care for health, safety and environmental affairs, and achieve win-win situation among all kinds of stakeholders. We take better understanding and attention into the production and living conditions of grassroots employees, promote the principle of "lifelong learning, healthy living", commit to building staff relationships that are "warm as sunshine, open, simple and friendly", and constantly strengthen the ideological guidance, democratic management and care to let employees feel care and assistance from organizations at all levels.

2. The Group and its customers. The Group takes the provision of satisfactory products and services to its customers and the creation of values for its customers as its corporate faith. As such, we have established a result-oriented executive team to develop an executive culture which takes customer value as its faith. We have been dedicated to continuously upgrading our products and services for maximizing our customers' values, enabling the mutual benefits and mutual development between the Group and its customers.

3. The Group and its suppliers. The Group insists on the principle of "selecting the best, retaining the excellence and eliminating the inferiors, cooperating for mutual benefits and mutual development" when managing suppliers through e-commerce procurement platform, which has preliminarily established a database of procurement costs and categorized management on varieties of procurement, built and improved the appraisal system, incentive mechanism and elimination mechanism of suppliers, and promoted the consistent improvement on the supplying capacity of suppliers so as to realize the mutual benefits and mutual development between the Group and its suppliers.

4. The Group, the governments and large enterprises as business partners. In respect of the development of the domestic business, the Group focuses on the reinforcement of a profound connection with local governments and well-known enterprises. The Group successively entered into strategic cooperation agreements with local governments and enterprises including Sichuan Railway Investment Group and Hebei Jicai Fund for attempt of PPP models on areas such as transport and municipality.

5. The Group's donation.

   The Group made monetary and non-monetary charitable donations in aggregate of approximately RMB0.4 million.

ENVIRONMENTAL POLICIES AND PERFORMANCE OF THE COMPANY

In 2018, the Company strived to enhance its environmental work performance with strengthened environmental awareness and proactively responded to environmental issues. The Company adopts various kinds of energy saving and waste reduction measures in its business operation process to reduce the consumption of natural resources with the use of environmental-friendly products and certified materials.

DIRECTORS' REPORT

The headquarter of the Company has set up an environmental management system, by which the environmental protection duties would be carried out through annual training and system operation; the certification of the environmental management system will be certified and reviewed by third party certification authorities every year and the system certification will be issued after review. Each of the design units continues to strengthen and refine the design of energy-saving and waste reduction technology solutions in the design process, carries out research on new technology and new techniques, actively promotes the research and development of new technologies, new materials and new products, and provides technical services of good quality to the owners to comprehensively promote and facilitate environmental protection work. Each of the construction enterprises, project departments/project companies strengthens the management and control of noise, sewage, waste, dust and exhaust gas during the construction and production process. We eliminate high-energy consumption electricity (water) facilities, promote the use of energy (water) saving devices, and assign special personnel to be responsible for the pipeline inspections in order to prevent run, emit, drip, and leak of pipelines. We set up sedimentation and circulation pools for construction works, such as concrete mixing on site, to use loop water as much as possible. We promote advanced construction technologies, transform obsolete techniques, improve construction efficiency, and achieve energy saving and waste reduction through technological innovation and improvement.

MATERIAL EVENTS SUBSEQUENT TO THE END OF THE FINANCIAL YEAR

Nil.

ISSUE OF SHARES

As at 31 August 2018, the A Shares of the Company were listed on the SSE and 295,906,667 A Shares were issued at RMB3.45 per share. After the issuance of A Shares, the total number of issued Shares of the Company is 2,959,066,667 Shares (comprising 399,476,000 H Shares and 2,559,590,667 A Shares).

ISSUE OF DEBENTURES

During the year, there was no new debt equity issued by the Group included the renewable corporate bonds.

RESULTS

The audited results of the Company and its subsidiaries for the year ended 31 December 2018 are set out in the consolidated statement of comprehensive income on pages 138 to 139. The financial positions of the Company and its subsidiaries as at 31 December 2018 are set out in the consolidated balance sheet on pages 140 to 141. The consolidated cash flows of the Company and its subsidiaries for the year ended 31 December 2018 are set out in the consolidated statement of cash flows on pages 144 to 145. Results performance, discussion and analysis of important factors affecting results and financial position of the Group for the year are set out in the Management Discussion and Analysis on pages 8 to 33 of this annual report.

DIRECTORS' REPORT

PROPERTY, PLANT AND EQUIPMENT

Details of movements in property, plant and equipment of the Company and its subsidiaries for the year are set out in Note 16 to the consolidated financial statements.

CAPITAL STRUCTURE

The Group monitors its capital structure on the basis of gearing ratio. As at 31 December 2018 and 31 December 2017, the Group's gearing ratios were 73.4% and 72.8%, respectively. The gearing structure is maintained within the reasonable range determined by the Company.

SHARE CAPITAL

As at 31 August 2018, the Company conducted an initial public offering of 295,906,667 shares of A Shares on SSE, which transferred 2,263,684,000 shares of original domestic shares into A Shares. As of 31 December 2018, the total issued share capital of the Company amounted to RMB2,959,066,667, which was divided into 2,959,066,667 shares (comprising 399,476,000 H Shares and 2,559,590,667 A Shares), with a nominal value of RMB1.00 each.

TAXATION

Current and deferred income tax

The tax expense during this reporting period comprises current and deferred income tax. Income tax is recognized in the consolidated statement of comprehensive income, except for the taxation relating to items recognized in other comprehensive income or directly in equity, which is recognized in equity. In this case, the income tax is also recognized in other comprehensive income or directly in equity, respectively.

The current income tax expense is calculated on the basis of the tax laws enacted or substantively enacted at the balance sheet date in the countries where the Company and its subsidiaries and Associates operate and generate taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It makes provision for tax payable based on tax amounts expected to be paid to the tax authorities where applicable.

Deferred income tax is determined using the liability method, and provision for deferred income tax is made on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements. However, deferred income tax liabilities are not recognized if they arise from the initial recognition of goodwill; deferred income tax is not recognized if it arises from the initial recognition of an asset or a liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profits or losses. Deferred income tax is determined using tax rates (and laws) that have been enacted or substantially enacted by the balance sheet date and are expected to apply when the deferred income tax asset is realized or the deferred income tax liability is settled.

DIRECTORS' REPORT

Deferred income tax assets are recognized to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilized. Deferred income tax is provided on temporary differences arising from the Group's investments in subsidiaries and Associates, while the deferred income tax liability is not recognized where there is evidence that the timing of the reversal of the temporary differences is controlled by the Group and it is probable that such temporary differences will not be reversed in the foreseeable future.

Deferred income tax assets and deferred income tax liabilities are shown on a net basis after offsetting when meeting all the following conditions: 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 the 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

Sales of goods of the Group are subject to VAT. VAT payable is determined by the taxable sales calculated by applying the applicable tax rates on the taxable revenue arising from sales of goods and provision of service after deducting deductible input VAT of the period. The applicable VAT rate for the sales of goods business of the Group is 17%, from 1 January to 30 April 2018, while the VAT rate for sales business is adjusted to 16% from 1 May in 2018. The applicable VAT rate for the modern service industry in 2018, including design, is 6%.

According to the Circular on "Comprehensively Promoting the Pilot Program of the Collection of Value-added Tax in Lieu of Business Tax" (Cai Shui [2016] No.36) jointly released by the PRC Ministry of Finance and the State Administration of Taxation, effective from 1 May 2016, the Group's revenue resulting from providing construction services is subject to a VAT at an applicable tax rate of 11% from 1 January to 30 April 2018, which has adjusted to 10% from 1 May.

RESERVES

The details of movements in reserves of the Group and the Company during the year are set out in Note 30 and Note 47 to the consolidated financial statements, among which the details of the Company's reserves available for distribution to Shareholders are set out in Note 47 to the consolidated financial statements.

EVENTS AFTER THE BALANCE SHEET DATE

Save as major acquisition and disposal of (a) as set out in Management Discussion and Analysis and the distribution of profits for the year 2018 as announced in this Director's Report, there was no other significant subsequent event after 31 December 2018.

DIRECTORS' REPORT

DISTRIBUTION OF PROFITS AND PROPOSED DIVIDENDS

The Company may distribute dividends in cash, in shares, or in a combination of both cash and shares, while it gives priority to profit distribution in cash.

Subject to the conditions of dividend distribution, the Company shall distribute profits at least once a year, while interim profit distribution may also be made provided that the Company is guaranteed for normal operation and development.

The Board of the Company shall put forward differentiated cash dividend distribution policies in accordance with the procedures stipulated in the Articles of Association, after considering a combination of factors, including characteristics of the industry where it operates, development stage, business model of its own, profitability, as well as whether there is any substantial capital expenditure arrangement(s):

(1) where the Company is at the developed stage with no substantial capital expenditure arrangement, cash dividend shall be not less than 80% of the profit distribution at the time of profit distribution;

(2) where the Company is at the developed stage with substantial capital expenditure arrangement, cash dividend shall be not less than 40% of the profit distribution at the time of profit distribution;

(3) where the Company is at the development stage with substantial capital expenditure arrangement, cash dividend shall be not less than 20% of the profit distribution at the time of profit distribution;

(4) where the Company has difficulty in identifying the development stage but there is substantial capital expenditure arrangement, dividend distribution may be made in accordance with the preceding provision.

"Substantial capital expenditure arrangement" means the proposed external investment, asset acquisition or purchase of assets by the Company in the next twelve months in an aggregate expenditure amounting to or exceeding 10% of the latest audited net assets of the Company.

Except for special circumstances, the Company shall give priority to dividend payment in cash out of its post-tax profits for the year after the accumulated loss (if any) are made up and legal and discretionary reserves are allocated. The cash distribution shall be no less than 20% of the distributable profits for the year. Actual and reasonable factors such as corporate growth and dilution of net asset value per share should be taken into account when profit is distributed in dividends on shares.

The Company may not distribute the cash dividends in the following special circumstances:

(1) The auditors issue the non-standard qualified opinion in relation to the annual financial report of the Company.

(2) The net operating cash flows for the year are negative.

(3) The Company has major investment plan or significant cash expenditure (except for fund raising projects).

DIRECTORS' REPORT

The Board shall, during the formulation of the specific cash dividend distribution plan by the Company, carefully study and analyse the matters such as timing, conditions and minimum ratio, adjustment conditions and decision-making procedures regarding the cash dividend distribution, and independent directors shall express their opinions explicitly.

Independent Directors may solicit opinions from small and medium Shareholders and put forward a dividend distribution proposal which shall be submitted directly to the Board for its consideration.

Prior to the consideration of a specific cash dividend distribution proposal at the Shareholders' general meeting, the listed company shall proactively communicate and exchange views with Shareholders, especially small and medium Shareholders, through various channels in order to understand the views and demands of small and medium Shareholders. The concerns of small and medium Shareholders shall also be addressed promptly.

The Board of the Company shall disclose the reasons of not distributing dividends and the usage of such funds that are remained unused for dividend distribution retained in the Company, if no cash profit distribution is proposed, and independent Directors shall express their independent opinions in this regard.

After the audits of WUYIGE Certified Public Accountants LLP, based on the combined financial statements summary for the year 2018 prepared by China Aluminum International in accordance with the China Accounting Standards for Enterprises, the net profit attributable to shareholders of the listed companies amounted to RMB305,687,021.63 and undistributed profit of the parent company amounted to RMB101,492,156.99. The Company proposed to distribute cash dividends of RMB0.31 (including tax) every 10 shares based on a total amount of shares of 2,959,066,667, amounting to an aggregate of cash dividend of RMB91,706,106.49. The remaining undistributed profit of RMB9,786,050.50 will be distributed next year. The proposed total cash dividend of the solution accounted for 30% of the net profit attributable to the listed shareholders in the combined financial statements summary of China Aluminum International for the year 2018. Such solution is yet to be delivered and approved at the 2018 general meeting.

The expected payment date of the H-shares annual cash dividend of the Company is on or before 8 August 2019.

DIRECTORS' REPORT

PURCHASE, REDEMPTION OR SALE OF LISTED SECURITIES

Neither the Company nor any of its subsidiaries purchased, sold or redeemed any of the Company's listed securities during the year ended 31 December 2018.

USE OF PROCEEDS FROM FUND RAISING

(I) The total amount of fund raised from the Listing of H Shares of the Company was HK$1,318.0 million. As of 31 December 2014, our fund raised has been fully utilized. The fund was primarily used in the industrialization of the Company and overseas engineering projects in compliance with the use of fund disclosed in the Prospectus.

(II) In order to further explore financing channel, optimize capital structure, meet the capital contribution requirement for enterprise transformation and upgrade, enhance domestic notability of the Company and promote a better enterprise development, and with the approval under the Approval in Relation to the Initial Public Offering of Shares by China Aluminum International Engineering Corporation Limited (Zheng Jian Xu Ke [2018] No. 934) (《關於核准中鋁國際工程股份有限公司首次公開發行股票的批覆》(證監許可[2018]934號)) issued by the China Securities Regulatory Commission on 8 June 2018, the Company issued 295,906,667 ordinary shares in Renminbi (A Shares) to the public. The issue price per share was RMB3.45/share, with the gross proceeds of RMB1,020.878 million. The net proceeds after deducting the issuance fees of approximately RMB41.295 million was RMB979.583 million. For details, please refer to the Company's announcements dated 30 August 2018 in relation to the initial public offering of A Shares and the 2018 interim financial report and the announcement in relation to the completion of the issue of A Shares, which were all published on the websites of SSE and the Stock Exchange.

As of 31 December 2018, interest income from the proceeds deposited in bank amounted to RMB0.558 million. As of 31 December 2018, the Company has utilized a total amount of RMB904.445 million of the proceeds, and the remaining balance amounted to RMB75.591 million.

In accordance with the disclosure of the Proposal for the Public Issuance of A Shares of the Company, the net proceeds intended to be raised in this public issuance was RMB979.583 million, of which is used for replenishment of working capital of EPC contracting business. As of 31 December 2018, the Company has utilized RMB904.445 million of the proceeds for replenishment of the working capital.

WUYIGE Certified Public Accountants LLP conducted specific audit work in respect of the use of proceeds of the Company in 2018 and issued an Audit Report on A Shares Proceeds Deposit and Actual Usage of China Aluminum International Engineering Corporation Limited in 2018 (Da Xin Zhuan Shen Zi [2019] No.1-00940) (《中鋁國際工程股份有限公司2018年度A股募集資金存放與實際使用情況的審核報告》(大信專審字[2019]第1-00940號)). It is believed that the preparation of the report on proceeds deposit and actual usage of Chalieco is based on the requirements of the Guidelines for the Supervision and Administration on Listed Companies No.2 – Supervision and Administration Requirements for Listed Companies on the Management and Use of Proceeds (Zheng Jian Hui Gong Gao [2012] No.44) (《上市公司監管指引第2號－上市公司募集資金管理和使用的監管要求》(證監會公告[2012]44號)) of China Securities Regulatory

DIRECTORS' REPORT

Commission and the Measures of Shanghai Stock Exchange for the Proceeds of Listed Companies (2013 Amendment) (Shang Zheng Gong Zi [2013] No.13) (《上海證券交易所上市公司募集資金管理辦法(2013年修訂)》(上證公字[2013]13號)). The report truly presented, in all material aspects, the deposit and actual use of proceeds of Chalieco as of 31 December 2018.

China Merchants Securities Co., Ltd., the sponsor, issued a specific audit report in respect of the deposit and actual use of proceeds of the Company in 2018. After the examination, the sponsor considered that the deposit and use of proceeds of Chalieco in 2018 were complied with the relevant requirements of the Measures for the Administration of the Sponsorship of the Offering and Listing of Securities (《證券發行上市保薦業務管理辦法》), the Guidelines for the Supervision and Administration on Listed Companies No.2 – Supervision and Administration Requirements for Listed Companies on the Management and Use of Proceeds, the Measures of Shanghai Stock Exchange for the Proceeds of Listed Companies (2013 Amendment) and the Measures of the Use of Proceeds of China Aluminum International Engineering Corporation Limited (《中鋁國際工程股份有限公司募集資金使用管理辦法》). The Company has conducted specific deposit and usage for the proceeds and fulfilled its obligations to disclose relevant information on a timely basis. The particular use of proceeds is consistent with the disclosure made by the Company, and there were no violations regarding the use of proceeds.

MAJOR CUSTOMERS AND SUPPLIERS

Major customers

For the year ended 31 December 2018, the sales to the top five customers of the Group represented 17.9% of the turnover income of the Group during the year.

During the year, to the knowledge of the Directors, three out of the top five customers of the Group were the related parties of the Group. Among which, Chinalco Southeast Copper Limited (中鋁東南銅業有限公司), Shanxi Chalco China Resources Co., Ltd. (山西中鋁華潤有限公司) and Chi Feng Yun Copper Nonferrous Metals Co., Ltd. (赤峰雲銅有色金屬有限公司) were the fellow subsidiaries (at which Chinalco being the ultimate controlling party), with the transaction amount of this year amounted to RMB1.73 billion, RMB1.06 billion and RMB0.74 billion respectively.

DIRECTORS' REPORT

Major suppliers

For the year ended 31 December 2018, the total purchases from the top five suppliers of the Group represented 11.0% of the turnover cost of the Group during the year.

During the year, to the knowledge of the Directors, none of the Directors, Associates of Director or Shareholders (who to the knowledge of the Directors owns more than 5% of the Company's share capital) had any interest in the Group's five largest suppliers or customers during the year.

BANK BORROWINGS AND OTHER BORROWINGS

Details of bank borrowings and other borrowings of the Company and its subsidiaries as at 31 December 2018 are set out in Note 33 to the consolidated financial statements.

CHARITABLE DONATIONS

During the year ended 31 December 2018, the Group made monetary and non-monetary charitable donations in aggregate of approximately RMB0.4 million.

EQUITY-LINKED AGREEMENTS

During the year ended 31 December 2018, the Group did not enter into any equity-linked agreements that would or could result in the issue of Shares by the Company.

DIRECTORS' REPORT

DIRECTORS, SUPERVISORS AND SENIOR MANAGEMENT

Part of the information of Directors, Supervisors and senior management of the Company for the year ended 31 December 2018 are set out in the table below.

Name	Office in the Company	Appointment date
Directors		
HE Zhihui (1)	Chairman and executive Director	23 May 2017
WANG Jun	Non-executive Director	23 May 2017
LI Yihua	Non-executive Director	23 May 2017
ZONG Xiaoping	Executive Director	23 May 2017
WU Zhigang	Executive Director	23 May 2017
ZHANG Jian	Executive Director	23 May 2017
SUN Chuanyao(2)	Former independent non-executive Director	23 May 2017
GUI Weihua(2)	Independent non-executive Director	27 February 2018
CHEUNG Hung Kwong	Independent non-executive Director	23 May 2017
FU Jun	Independent non-executive Director	23 May 2017
Supervisors		
HE Bincong(4)	Former chairman of Supervisory Board and employee representative Supervisor	20 March 2017
FAN Guangsheng(4)	Chairman of Supervisory Board and employee representative Supervisor	26 March 2019
OU Xiaowu	Supervisor	23 May 2017
LI Wei	Supervisor	23 May 2017
Senior Management		
ZONG Xiaoping	President	23 May 2017
WANG Yonghong(3)	Vice President	9 October 2018
WU Zhigang	Vice President	23 May 2017
CHANG Yaomin(3)	Former Vice President	23 May 2017
LIU Ruiping(3)	Vice President	9 October 2018
ZHANG Jian	Chief Financial Officer	23 May 2017
BI Xiaoge(3)	Vice President	9 October 2018
ZHAI Feng	Assistant to President, Secretary to the Board and Company Secretary	23 May 2017

Notes:

(1) Mr. HE Zhihui resigned as the chairman, Director, member and chairman of the Risk Management Committee of the Board, member and chairman of the Nomination Committee of the Board, member and chairman of the Strategy Committee of the Board of the Company due to work redeployment on 21 February 2019.

(2) Due to other business commitments, Mr. SUN Chuanyao resigned as the independent non-executive Director of the Company on 5 January 2018 while he resigned as the chairman of Remuneration Committee, the member of Nomination Committee and the member of the Strategy Committee of the Board of the Company. After resignation, Mr. SUN Chuanyao no longer holds any position of the Company. Mr. GUI Weihua has been appointed in place of Mr. SUN Chuanyao as the independent non-executive Director from 27 February 2018.

(3) Mr. CHANG Yaomin resigned as the vice president of the Company due to work redeployment on 9 October 2018. Mr. WANG Yonghong, Mr. LIU Ruiping and Mr. BI Xiaoge have been the vice presidents of the Company since 9 October, 2018

(4) Mr. HE Bincong resigned as the chairman of Supervisory Board and employee representative Supervisor on 26 March 2019 due to work redeployment. Mr. FAN Guangsheng has been appointed in place of Mr. HE Bincong as the chairman of Supervisory Board and employee representative Supervisor on 26 March 2019.

DIRECTORS' REPORT

The Company has received annual confirmation of independence from each of the independent non-executive Directors who presented the confirmation pursuant to Rule 3.13 of the Listing Rules and considered that each of the independent non-executive Directors was independent from the Company.

DIRECTORS' AND SUPERVISORS' SERVICE CONTRACTS

The Company entered into service contracts with each Director. The details of such service contracts mainly consist of: (1) term of three years from 23 May 2017 (Mr. GUI Weihua was appointed in place of Mr. SUN Chuanyao as the independent non-executive Director on 27 February 2018 and the service contract commenced from 27 February 2018 and will end upon the date of the election of the next session of the Board); and (2) termination subject to terms of each contract.

For compliance with relevant regulations and the Articles of Associations and the provisions of arbitration, the Company had entered into contracts with each Supervisor.

Save as disclosed above, none of Directors entered into a service contract with the Company which was not determinable by the Company within one year without payment of compensation (other than statutory compensation).

DIRECTORS', SUPERVISORS' AND SENIOR MANAGEMENT'S REMUNERATION

Details of Directors', Supervisors' and senior management's remuneration of the Company are set out in Note 14 to the consolidated financial statements.

MATERIAL INTERESTS OF THE DIRECTORS AND SUPERVISORS IN CONTRACTS, TRANSACTIONS OR ARRANGEMENTS

During the reporting period, none of Directors, Supervisors or other connected entities had directly or indirectly entered into significant contracts, transactions or arrangements in which they have material interests in with the Company.

DIRECTORS' REPORT

DIRECTORS' INTERESTS IN COMPETING BUSINESS

Save as disclosed below, during the year of 2018, none of Directors or their Associates had any competing interest in any business which competes or may compete, directly or indirectly, with the Group's business:

Name of Director	Post in the Company	Other interest
WANG Jun	Non-executive Director	The chief financial officer and secretary of board of directors of Chalco; Former deputy chief accountant, former directors of the finance department and assets operating department of China Aluminum Group
LI Yihua	Non-executive Director	Director of assets operating department and former director of law department of China Aluminum Group

RESIGNATION OF DIRECTORS

Due to other business commitment, Mr. SUN Chuanyao, the independent non-executive Director, resigned as the independent non-executive Director of the Company's third session of the Board on 5 January 2018 while he resigned as the chairman of Remuneration Committee, the member of Nomination Committee and the member of the Strategy Committee of the Company's third session of the Board. After resignation, Mr. SUN Chuanyao no longer holds any position of the Company. The resignation of Mr. SUN Chuanyao has been effective since 27 February 2018.

Due to other business commitment, Mr. HE Zhihui, the Director of the Company, resigned as the chairman of the Company's third session of the Board, Director, the member and chairman of each of the Risk Management Committee, the Nomination Committee and the Strategy Committee of the Board on 21 February 2019. The resignation of Mr. HE Zhihui took effect from 21 February 2019.

DIRECTOR'S, SUPERVISORS' AND SENIOR MANAGEMENT'S INTERESTS AND SHORT POSITIONS IN SHARE, UNDERLYING SHARES AND DEBENTURES

As at 31 December 2018, none of the Directors, Supervisors and senior management of the Company had any interest or short position in the Shares, underlying Shares or debentures of the Company or any of its associated corporations (within the meaning of Part XV of the SFO) which was required to be notified to the Company and the Stock Exchange pursuant to Divisions 7 and 8 of Part XV of the SFO (including interests and short positions which any such Director, Supervisor, and senior management was taken or deemed to have under such provisions of the SFO), or which are required, pursuant to Section 352 of the SFO, to be entered in the register referred to therein, or which are required, pursuant to the Model Code, to be notified to the Company and the Stock Exchange.

DIRECTORS' INSURANCE

As of the date of this report, the Company has purchased the effective Directors' insurance for (existing and resigned) Directors.

PERMITTED INDEMNITY

The Company has arranged sufficient and proper insurance for Directors to better perform their responsibilities and risk aversion pursuant to the provision A.1.8 of the Corporate Governance Code as contained in Appendix 14 to the Listing Rules. Save for the above, during the financial year of 2018 and as at the date of this annual report, the Company has no other provision of permitted indemnity (as defined in Section 470 of the Companies Ordinance).

DIRECTORS' INTERESTS

At no time during the year and up to the date of this annual report was the Company or any of its subsidiaries or holding company or any subsidiaries of the Company's holding company a party to any arrangements to enable the Directors to acquire benefits by means of the acquisition of Shares or debentures of the Company or any other body corporate, and none of the Directors or their spouse and children under the age of 18 was given any right to subscribe the shares or debt securities of the Company or other body corporates, or had exercised any such rights.

THE FINANCIAL, BUSINESS AND FAMILY RELATIONSHIPS AMONG THE BOARD, SUPERVISORS AND SENIOR MANAGEMENT

As at the date of this report, there were no financial, business or family relationships among members of the Board, Supervisors and senior management of the Company.

SHARE INCENTIVES ACQUIRED BY DIRECTORS, SUPERVISORS AND SENIOR MANAGEMENT

In October 2013, the Company implemented share appreciation rights scheme targeting on specific Directors, senior management and management officers and key employees who made significant influence on the development of the Company. As of October 2017, the initial grant scheme became invalid. The Company has not again granted new share appreciation rights and any other forms of share incentive.

SUBSTANTIAL SHAREHOLDERS' INTERESTS IN SHARES

As at 31 December 2018, so far as known to the Directors of the Company, the following persons (other than the Directors and senior management of the Company) had interests or short positions in the Shares and underlying Shares of the Company which would fall to be disclosed pursuant to Divisions 2 and 3 of Part XV of the SFO:

DIRECTORS' REPORT

Name of Shareholder	Class of Shares	Capacity	Number of Shares/ underlying shares held (Share)	Percentage of shareholding in relevant class of Shares (%) (Note 1)	percentage of shareholding in total share capital (%)
China Aluminum Group	A Share	Beneficial owner/ Interest of controlled corporation	2,263,684,000 (Long position) (Note 2)	88.44%	76.50%
The Seventh Metallurgical Construction Corp. Ltd.	H Share	Beneficial owner	69,096,000 (Long position)	17.30%	2.34%
CNMC Trade Company Limited	H Share	Beneficial owner	59,225,000 (Long position)	14.83%	2.00%
Leading Gain Investments Limited	H Share	Nominee of another person (other than passive trustee)	29,612,000 (Long position)	7.41%	1.00%
China XD Group	H Share	Beneficial owner	29,612,000 (Long position)	7.41%	1.00%
Yunnan Tin (Hong Kong) Yuan Xing Company Limited	H Share	Beneficial owner	29,612,000 (Long position)	7.41%	1.00%
Global Cyberlinks Limited	H Share	Beneficial owner	20,579,000 (Long position)	5.15%	0.70%

Notes:

1. The percentage is calculated by dividing number of relevant class of Shares in issue of the Company as at 31 December 2018 by total number of Shares.

2. China Aluminum Group is beneficially interested in 2,263,684,000 A Shares, representing approximately 76.50% of the total share capital of the Company. Luoyang Institute is a wholly-owned subsidiary of China Aluminum Group and is interested in 86,925,466 A Shares, representing approximately 2.94% of the total share capital of the Company. China Aluminum Group is therefore also deemed to be interested in the A Shares held by Luoyang Institute under the SFO.

DIRECTORS' REPORT

COMPLIANCE WITH OFAC UNDERTAKINGS

During the Listing of the Company, an undertaking was made to the Stock Exchange by the Company that the Company would not use any proceeds from the Global Offering and any other fund raised through the Stock Exchange for any projects conducted in any sanctioned countries, or for compensation for losses of the Iran company due to the default of relevant Iran contracts, if any, by the Company (the "OFAC Undertakings"). During the reporting period, the Company issued the list of relevant sanctioned countries to business department to forbid the Company from conducting any business with the sanctioned countries, regions or organizations and organized training on relevant legal knowledge. Hence, the Directors of the Company confirmed that the Company complied with the OFAC Undertakings during the reporting period and will continue to comply with the OFAC Undertakings in the normal course of business of the Company in future.

MANAGEMENT CONTRACT

The Company did not enter into or establish any management and administrative contracts relating to all or any material part of business in 2018.

SIGNIFICANT CONTRACTS

Save for disclosed under the heading of the "Connected Transactions" in this annual report, neither the Company nor any of its subsidiaries has signed contracts of significance with the controlling shareholder or any of its subsidiaries other than the Group, and no contracts of significance for delivery of service has been signed between the Group and the controlling shareholder or any of its subsidiaries other than the Group.

CONNECTED TRANSACTIONS

The significant related party transactions of the Group during the year ended 31 December 2018 are set out in Note 44 to the financial statements. Certain transactions in China Aluminum International Engineering Corporation Limited's transactions also constitute connected transactions as prescribed in Chapter 14A under the Listing Rules and are subject to reporting, annual review, announcement and the independent shareholders' approval (if necessary) in accordance with the requirements of Chapter 14A under the Listing Rules. The aforementioned related party transactions have complied with the requirements of Chapter 14A under the Listing Rules. Particulars of them are as follow:

(1) Non-exempt one-off connected transactions

1. Acquisition of 100% equity interest of Luoyang Kaiying Technology Co., Ltd.

On 26 October 2018, China Nonferrous Metals Processing Technology Co., Ltd. ("CNPT") signed the agreement of acquisition of Kaiying Technology with Chinalco Henan Aluminum Fabrication Co., Ltd. ("Chinalco Henan"), pursuant to which CNPT acquired 100% equity interests in Kaiying Company at a cash consideration of RMB205.8 million.

DIRECTORS' REPORT

China Aluminum Group is a controlling shareholder of the Company. Pursuant to the Listing Rules, China Aluminum Group and its subsidiaries are the connected persons of the Company. China Aluminum Group directly holds 87% shares of Chinalco Henan, and is a controlling shareholder of Chinalco Henan, and thus Chinalco Henan is also a connected person of the Company.

Following the acquisition of Kaiying Technology, CNPT will leverage Kaiying Technology's information-based technology service, and existing lands and properties, to deliver technology services with collaborative and innovative alliance in industrial, academic and research aspects. CNPT also plans to build a network platform for nonferrous metal processing industrial technology service, industrial big data center and a research and development center for nonferrous metal intelligent equipment, which will benefit CNPT in speeding up the integration of information technology into traditional nonferrous industry services, building a business model for industry services that leads the transformation and upgrade of the nonferrous industry, and quickening the pace to deliver the strategic plan for the Company to become an integrated supplier of nonferrous metal processing engineering technology and equipment with international competitiveness.

Please refer to the announcements of the Company dated 29 October, 30 October and 27 November 2018 for details.

2. **Transfer of 100% equity interests in Suzhou Engineering & Research Institute for Nonferrous Metal Co., Ltd.**

The Company, China Nonferrous Metals Processing Technology Co., Ltd. ("CNPT", the subsidiary of the Company), and Chinalco Asset Management Company ("Chinalco Asset") jointly signed the agreement in relation to transfer of equity interests of Suzhou Engineering & Research Institute for Nonferrous Metal Co., Ltd. ("Suzhou Research Institute") on 20 December 2018. The Company and CNPT hold 40.35% and 59.65% equity interests of Suzhou Research Institute respectively, with the transfer price of RMB79.0 million and RMB116.8 million respectively. Chinalco Asset settled the consideration for the acquisition in form of cash.

China Aluminum Group is a controlling shareholder of the Company. China Aluminum Group and its subsidiaries are the connected persons of the Company pursuant to the Listing Rules. China Aluminum Group directly holds 100% shares of Chinalco Asset, and is a controlling shareholder of Chinalco Asset, and thus Chinalco Asset is also a connected person of the Company.

Following the transfer of the entire equity in Suzhou Research Institute, Chinalco Asset will take over the existing property, land, equipment and other assets and property management personnels of Suzhou Research Institute. Through the equity transfer, the Company and CNPT can further focus on the main business to revitalize idle assets, optimize assets structure, and increase working capital.

Please refer to the announcement of the Company dated 21 December 2018 for details.

DIRECTORS' REPORT

(2) Non-exempt continuing connected transactions

The Group conducted certain connected transactions during the year which constituted non-exempt continuing connected transactions under Chapter 14A of the Listing Rules.

The annual caps and actual transaction amount of such continuing connected transactions for 2018 are set out in the following table:

Events of connected transactions	Connected persons	Annual cap for 2018 (RMB' million)	Actual transaction amount for 2018 (RMB' million)
1. Provision of engineering services by the Group	Chinalco (currently China Aluminum Group)	6,600	5,762
2. Provision of commodities by the Group	Chinalco (currently China Aluminum Group)	700	653
3. Provision of general services to the Group	Chinalco (currently China Aluminum Group)	160	104
4. Provision of commodities to the Group	Chinalco (currently China Aluminum Group)	1,400	493
5. Provision of financial services-deposit services to the Group	Chinalco Finance	2,800	2,799
6. Provision of factoring facility services to the Group	China Aluminum Business	600	333

1. Provision of engineering services by the Group

The Company entered into an engineering service general agreement with Chinalco (currently China Aluminum Group) on 20 March 2017, pursuant to which, the Group could provide engineering services, including construction engineering, transfer of technologies (right of use), project supervision, surveying, engineering design, engineering consultation, device agency and sale of device, engineering management and other services related to engineering to China Aluminum Group and/or its Associates from time to time.

The initial term of the engineering service general agreement commenced from 1 January 2017 and shall expire on 31 December 2019, unless terminated at any time by either party giving at least three months' prior written notice to the other party with mutual consensus after negotiation.

DIRECTORS' REPORT

Chinalco (currently China Aluminum Group) is the controlling shareholder of the Company. Pursuant to the Listing Rules, Chinalco (currently China Aluminum Group) and its subsidiaries are the connected persons of the Company. During the reporting period, the annual cap of this continuing connected transaction for 2018 was RMB6,000 million and the actual transaction amount was RMB5,762 million.

Please refer to the announcement of the Company dated 20 March 2017 for details.

2. Provision of commodities by the Group

The Company entered into a general sale and purchase agreement of commodities with Chinalco (currently China Aluminum Group) on 20 March 2017, pursuant to which, the Group could provide products of the Group to Chinalco (currently China Aluminum Group) and/or its Associates from time to time as portion of our equipment manufacturing business. These products mainly include the equipment, raw materials and commodities required for the production and operation of Chinalco (currently China Aluminum Group).

The initial term of the general sale and purchase agreement of commodities commenced from 1 January 2017 and shall expire on 31 December 2019, unless terminated at any time by either party giving at least three months' prior written notice to the other party with mutual consensus after negotiation. Relevant subsidiaries or Associates of both parties shall enter into a separate contract which states specific terms and conditions based on the principles provided under the general sale and purchase agreement of commodities.

Chinalco (currently China Aluminum Group) is the controlling shareholder of the Company. Pursuant to the Listing Rules, Chinalco (currently China Aluminum Group) and its subsidiaries are the connected persons of the Company. During the reporting period, the annual cap of this continuing connected transaction for 2018 was RMB700 million and the actual transaction amount was RMB653 million.

Please refer to the announcement of the Company dated 20 March 2017 for details.

3. Provision of general services to the Group

The Company entered into a general agreement of general services with Chinalco (currently China Aluminum Group) on 20 March 2017, pursuant to which, Chinalco (currently China Aluminum Group) and/or its Associates could provide certain categories of services to the Group from time to time, mainly including warehousing, transportation and property leasing services and provision of technical services, back-up services, labour services and labour services related to training.

The initial term of the general agreement of general services commenced from 1 January 2017 and shall expire on 31 December 2019, unless terminated at any time by either party giving at least three months' prior written notice to the other party with mutual consensus after negotiation. Relevant subsidiaries or Associates of both parties shall enter into a separate contract which states specific terms and conditions based on the principles provided under the general agreement of general services.

DIRECTORS' REPORT

Chinalco (currently China Aluminum Group) is the controlling shareholder of the Company. Pursuant to the Listing Rules, Chinalco (currently China Aluminum Group) and its subsidiaries are the connected persons of the Company. During the reporting period, the annual cap of this continuing connected transaction for 2018 was RMB160 million and the actual transaction amount was RMB104 million.

Please refer to the announcement of the Company dated 20 March 2017 for details.

4. Provision of commodities to the Group

The Company entered into a general sale and purchase agreement of commodities with Chinalco (currently China Aluminum Group) on 20 March 2017, pursuant to which, the Group could purchase certain commodities from Chinalco (currently China Aluminum Group) and/or its Associates which shall be used in our engineering and construction contracting business. These commodities mainly include materials such as nonferrous products, manufacturing equipment, cement and engineering equipment and component related to nonferrous industry.

The initial term of the general sale and purchase agreement of commodities commenced from 1 January 2017 and shall expire on 31 December 2019, unless terminated at any time by either party giving at least three months' prior written notice to the other party with mutual consensus after negotiation. Relevant subsidiaries or Associates of both parties shall enter into a separate contract which states specific terms and conditions based on the principles provided under the general sale and purchase agreement of commodities.

Chinalco (currently China Aluminum Group) is the controlling shareholder of the Company. Pursuant to the Listing Rules, Chinalco (currently China Aluminum Group) and its subsidiaries are the connected persons of the Company. During the reporting period, the annual cap of this continuing connected transaction for 2018 was RMB1,400 million and the actual transaction amount was RMB493 million.

Please refer to the announcement of the Company dated 20 March 2017 for details.

5. Provision of financial services to the Group

The Company entered into a financial services agreement with Chinalco Finance on 8 August 2016, pursuant to which, Chinalco Finance shall provide financial services to the Group, including deposit services, settlement services, credit services and other financial services. The term of this financial services agreement commenced from 27 September 2016 to 31 December 2018.

The general terms are as follow:

- Providing financial services for the Group, including deposit services, settlement services, credit services and other financial services;

DIRECTORS' REPORT

- The interest rates for deposits on the deposit services to be offered will not be lower than the benchmark interest rate for deposits published uniformly by the People's Bank of China from time to time for the deposits with the same term and type, not lower than the interest rate for deposits offered by major commercial banks in the PRC for deposits with the same type during the same period, and not lower than the interest rate for deposits offered by Chinalco Finance to China Aluminum Group and its group companies for deposits with the same type during the same period;

- Providing favourable interest rate for loans, which shall not be higher than the benchmark interest rate for loans published uniformly by the People's Bank of China from time to time for loans with the same type and term, and not higher than the interest rate charged by major commercial banks in the PRC for the loans with the same type during the same period;

- The fees charged for the provision of other financial services will comply with the fee standards prescribed by the People's Bank of China or China Banking and Insurance Regulatory Commission for such type of services, and shall be no higher than the fee rate charged by major commercial banks in the PRC for the same type of financial services;

- During the effective period of this agreement, the daily deposit balance (including any interest accrued thereon) shall not exceed RMB2.8 billion.

Chinalco (currently China Aluminum Group) is the controlling shareholder of the Company, and Chinalco Finance is the wholly-owned subsidiary of China Aluminum Group. Pursuant to the Listing Rules, Chinalco Finance is the connected person of the Company. Chinalco Finance undertakes to provide high-quality and efficient financial services to the Company and to timely notify the Company of certain agreed events in order to safeguard the financial assets of the Company and to adopt proper mitigation measures. In respect of the deposit services, the daily deposit balance (including any interest accrued thereon) for the Group with Chinalco Finance shall not exceed RMB2.8 billion (including any interest accrued thereon) during the term of the financial services agreement. The Company shall enter into a separate contract in respect of deposit services, settlement services, credit services and other financial services with Chinalco Finance to stipulate the specific matters for the provision of these services.

During the reporting period, the cap of daily deposit balance of the deposit services under this continuing connected transaction for 2018 was RMB2,800 million and the actual maximum daily deposit balance was RMB2,799 million.

Please refer to the announcement of the Company dated 8 August 2016 for details.

DIRECTORS' REPORT

6. Provision of factoring services to the Group

The Company entered into the factoring cooperation framework agreement with China Aluminum Business on 21 August 2017. The Group transferred the Account Receivables under the Elementary Transaction Contracts to China Aluminum Business. China Aluminum Business agreed to the transfer of the aforesaid Account Receivables and provides the Group with one or more factoring services including factoring facility, sales subsidiary ledger management, accounts receivable collection, credit investigation and evaluation, credit risk controls and bad debt guarantees. With reference to the anticipated financing need of China Aluminum Business by the subsidiaries of the Group, the Company expected that the original annual cap for 2018 would no longer satisfy the actual business needs and revised the original annual cap for 2018 from RMB250 million to RMB600 million on 12 March 2018. The factoring cooperation framework agreement has a term commencing on 21 August 2017 and ending on 31 December 2019.

Chinalco (currently China Aluminum Group) is the controlling Shareholder of the Company. Pursuant to the Listing Rules, Chinalco (currently China Aluminum Group) and its subsidiaries are the connected persons of the Company. China Aluminum Business is the wholly-owned subsidiary of Chinalco Capital, the wholly-owned subsidiary of Chinalco (currently China Aluminum Group), and thus the connected persons of the Company. During the reporting period, the annual cap of this continuing connected transaction for 2018 was RMB600 million and the actual transaction amount was RMB333 million.

Please refer to the announcements of the Company dated 21 August 2017, 26 October 2017 and 12 March 2018 for details.

The independent non-executive Directors of the Company had reviewed each of the above continuing connected transactions and confirmed the transactions were:

(1) conducted in the normal course of business of the Group;

(2) conducted on normal commercial terms; if the comparable transactions could not be relied on to judge whether the terms of these transactions were normal commercial terms, those terms should not be less favorable than the terms accepted or provided by independent third parties so far as the Group was concerned; and

(3) conducted in accordance with the terms of agreement related to relevant transactions and the terms were fair and reasonable and in the interests of Shareholders as a whole.

DIRECTORS' REPORT

The Company has engaged an external auditor to report on the Group's continuing connected transactions in accordance with the Hong Kong Standard on Assurance Engagements 3000 "Assurance Engagements Other Than Audits or Reviews of Historical Financial Information" and with reference to the Practice Note 740 "Auditor's Letter on Continuing Connected Transactions under the Hong Kong Listing Rules" issued by the Hong Kong Institute of Certified Public Accountants (HKICPA). The auditor has issued its letter containing its findings and conclusions in respect of the above transactions in accordance with Rule 14A.56 of the Listing Rules. The Company has provided a copy of the said letter to the Stock Exchange. Based on the work performed, the auditor of the Company has provided a letter to the Board confirming the following matters in relation to the continuing connected transactions as disclosed above:

(1) Nothing has come to the auditor's attention that would cause the auditor to believe that the disclosed continuing connected transactions have not been approved by the Board of Directors.

(2) For transactions involving the provision of goods or services by the Group, nothing has come to the auditor's attention that would cause the auditor to believe that the transactions were not, in all material respects, in accordance with the pricing policies of the Group.

(3) Nothing has come to the auditor's attention that would cause the auditor to believe that the transactions were not entered into, in all material respects, in accordance with the relevant agreements governing such transactions.

(4) With respect to the aggregate amount of each of the continuing connected transactions set out above, nothing has come to the auditor's attention that would cause the auditor to believe that such continuing connected transactions have exceeded the maximum aggregate annual cap formulated by the Company.

For the above connected transactions, the Directors also confirmed that the Company had complied with the disclosure requirements of Chapter 14A of the Listing Rules.

DIRECTORS' REPORT

COMPLIANCE WITH NON-COMPETITION AGREEMENT

The Company entered into a non-competition agreement with Chinalco (currently China Aluminum Group) on 2 June 2012, pursuant to which, Chinalco (currently China Aluminum Group) provided certain non-competition undertakings to the Company and granted the options to seek any new business opportunities and options for acquisition and the relevant pre-emptive rights to the Company. Pursuant to the agreement, the independent non-executive Directors are responsible for reviewing and considering whether or not to exercise such options and pre-emptive rights and are entitled, on behalf of the Company, to review the implementation of the undertakings under the agreement on an annual basis.

In June 2016, Chinalco (currently China Aluminum Group) submitted the commitment letter in relation to competitions and has committed, as required by Chalieco, that the businesses of Henan Huahui Nonferrous Engineering Design Co., Ltd. and Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry which are related to Chalieco would be transferred or entrusted to Chalieco or non-related third parties by ways of equity transfer, entrusted management or other appropriate methods within five years from the date of the signing of the commitment letter.

In September 2017, the commitment letter submitted by Chinalco (currently China Aluminum Group) is described as below: (1) Henan Huahui Nonferrous Engineering Design Co., Ltd., CHALCO Shanxi Industry Service Co., Ltd., Henan Zhongzhou Aluminum Construction Co., Ltd., Yuxi Feiya Mining Industry Development Management Co., Ltd. and Shanxi Aluminum Plant Design Institute Co., Ltd. (together the "Five Companies") will complete its business which coincides with the engineering survey, consultancy, design, construction, engineering contracting and relevant equipment manufacturing business engaged by Chalieco and/or its subsidiaries with customers which are third parties outside the organization of Chinalco as soon as possible. From the date of the submission of this commitment letter, the Five Companies will no longer launch new business in respect of the aforementioned aspects with third parties outside the organization of Chinalco, and only provide related services to companies within the organization of Chinalco. (2) The Five Companies will no longer upgrade its existing qualifications related to business which coincides with the engineering survey, consultancy, design, construction, engineering contracting and relevant equipment manufacturing business engaged by Chalieco and/or its subsidiaries. (3) The company will be in strict compliance with the "Non-competition Agreement signed by Aluminum Corporation of China and China Aluminum International Engineering Corporation Limited". (4) If breach of the aforesaid commitments occurs, the company would accept full responsibility incurred thereunder, and would thereby fully indemnify or compensate all the direct or indirect loss incurred to Chalieco and other Shareholders of Chalieco. If the Five Companies breaches this commitment by executing new business contracts which coincide with the engineering survey, consultancy, design, construction, engineering contracting and relevant equipment manufacturing business engaged by Chalieco and/or its subsidiaries with third parties outside the organization of Chinalco, Chalieco would be entitled, from the date of such business contracts become effective, to reduce the amount equal to the amount of such business contracts from unpaid but payable profit distribution in cash corresponding to Shares of Chalieco held by the company until the elimination of the event of breach of this commitment.

DIRECTORS' REPORT

During the year, the independent non-executive Directors had reviewed the implementation of the non-competition agreement and confirmed that Chinalco (currently China Aluminum Group) had been in full compliance with the agreement and there was no breach by Chinalco (currently China Aluminum Group).

During the report period, there is no breach of the aforesaid agreement or commitment by China Aluminum Group.

ARRANGEMENT OF PRE-EMPTIVE RIGHTS AND SHARE OPTIONS

There are no requirements for pre-emptive rights under the Articles of Association and the PRC laws which would require the Company to offer new Shares on a pro-rata basis to existing Shareholders.

DIRECTORS' AND SUPERVISORS' RIGHTS TO ACQUIRE SHARES OR DEBENTURES

As at the end of 2018, no right to acquire shares in or debentures of the Company or any other body corporate were granted to any Directors or Supervisors or their Associates by the Company or any of its subsidiaries or were any such rights exercised by them.

RETIREMENT AND EMPLOYEES BENEFIT SCHEME

Details of the Group's retirement and employees benefit scheme are set out in Note 32 to the consolidated financial statements.

In accordance with regulations applicable to enterprises and the relevant requirements of various local governments in areas in which we operate, we established the pension insurance, medical insurance, unemployment insurance, maternity insurance and workers' compensation injury insurance for our employees and workers. In addition, the Company and some of its subsidiaries also set up a corporate annuity system for providing retired employees with further pension security. In accordance with applicable PRC laws and regulations, the amount of contributions to the aforesaid social insurance is strictly complied with state, provincial, autonomous region and municipal requirements of the PRC. We also established an employee housing fund according to applicable PRC regulations.

DIRECTORS' REPORT

COMPLIANCE WITH THE CORPORATE GOVERNANCE CODES

The Company adhered to maintain a high standard of corporate governance as a listed company on the Stock Exchange.

Since Mr. He Zhihui has resigned his duties including being the chairman and Director of the Company, a majority of the Directors of the Company jointly recommended Mr. Zong Xiaoping, the executive director and president, to take his place as the chairman during the period between the resignation of Mr. He Zhihui until a new chairman is elected by the Company. According to the code provision A.2.1 set out in the Corporate Governance Codes contained in Appendix 14 to the Listing Rules, the roles of the chairman and chief executive officer should be separated and should not be performed by the same individual. The Company will ensure sound corporate governance practice during Mr. Zong Xiaoping's tenure of both positions. The Board is of the view that the balance of power and authority will not be affected as for the current arrangement, and this structure will enable the Company to make and implement decisions more promptly and effectively. After a new Chairman is elected by the Company, the duties between the chairman and the president will be separated.

During the year ended 31 December 2018, the Company has complied with all code provisions (excluding provision A.2.1) set out in the Corporate Governance Code contained in Appendix 14 to the Listing Rules, and adopted in its best practice proposed in which as appropriate. For details, please refer to the Corporate Governance Report set out on pages 71 to 88 of this annual report.

BOARD DIVERSIFICATION POLICY

Believing the diversification of the composition of the Board would be helpful in enhancing the Company's performance, the Company formulated the Board Diversification Policy of China Aluminum International Engineering Corporation Limited in August 2013, which stipulates that the diversification of the composition of the Board takes account of a variety of aspects when determining the composition of the Board, including but not limited to age, cultural and educational background, professional experience, skill and knowledge. The Board made all the appointments based on talents and had considered the benefits, which would be brought about by diversifying the composition of the Board under the objective conditions, when selecting the candidates. The Board will select its members based on an array of diversification standards, including but not limited to age, cultural and educational background, professional experience, skill and knowledge.

The Nomination Committee will disclose the composition of the Board in the Corporate Governance Report on an annual basis and will oversee the enforcement of the Policy. The Nomination Committee will review the policy when appropriate to ensure its effectiveness. It will also discuss and propose any necessary revisions to the Board for consideration and approval.

ARTICLES OF ASSOCIATION

The Articles of Association was amended on 9 October 2018 by the Board of Directors of the Company in accordance with the results of the A Share in issue and the authorization of the general meeting.

DIRECTORS' REPORT

PUBLIC FLOAT

Based on information publicly available to the Company and so far as the Directors are aware, the issued A Shares and H Shares held by the public as at the Latest Practicable Date prior to the publication of this annual report was in compliance with the requirements under the Listing Rules.

MATERIAL LEGAL PROCEEDINGS

(I) Litigation and arbitration issues that have been disclosed in the provisional announcements and without subsequent development

Summary and type of event	Query index
The dispute between Guiyang Aluminum and Magnesium Design Institute Construction Contracting Co., Ltd. (貴陽鋁鎂設計研究院工程承包有限公司), a wholly-owned subsidiary of GAMI, a wholly-owned subsidiary of the Company, and Guizhou Huada Real Estate Development Co., Ltd. arising from EPC and advance payment repayment agreement.	For details, please refer to provisional Announcement No.2018-028 issued by the Company on 24 December 2018 in the designated information disclosure media
The litigation dispute between the Company and Qinghai Western Hydropower Co., Ltd. (青海西部水電有限公司) arising from engineering EPC contract.	For details, please refer to provisional Announcement No.2019-001 issued by the Company on 1 January 2019 in the designated information disclosure media
The litigation dispute between China Aluminum Equipment, a wholly-owned subsidiary of the Company, and Qinghai Western Hydropower Co., Ltd. (青海西部水電有限公司) arising from equipment procurement contract.	For details, please refer to provisional Announcement No.2019-001 issued by the Company on 1 January 2019 in the designated information disclosure media
The dispute between Guiyang Aluminum and Magnesium Design Institute Construction Contracting Co., Ltd. (貴陽鋁鎂設計研究院工程承包有限公司), a wholly-owned subsidiary of GAMI, a wholly-owned subsidiary of the Company, and Guizhou Construction Group No.7 Construction Engineering Co., Ltd. (貴州建工集團第七建築工程有限責任公司) arising from the engineering and construction contract.	For details, please refer to provisional Announcement No.2019-005 issued by the Company on 24 January 2019 in the designated information disclosure media
The dispute between Sixth Metallurgical Company, a wholly-owned subsidiary of the Company, and Xinjiang Qinghua Investment Holdings Co., Ltd. (新疆慶華投資控股有限公司) arising from construction and installation contract.	For details, please refer to provisional Announcement No.2019-007 issued by the Company on 20 February 2019 in the designated information disclosure media

DIRECTORS' REPORT

(II) Litigation and arbitration not disclosed in provisional announcements or with subsequent development

During the reporting period: Unit: Yuan Currency: RMB

Plaintiff (claimant)	Defendant (respondent)	Joint liability party	Type of litigation or arbitration	Basic status of litigation (arbitration)	Amount involved in litigation (arbitration) (RMB)	Whether litigation (arbitration) forms estimated liabilities or not and amount	Progress of litigation (arbitration)	Trial result and effect of litigation (arbitration)	Enforcement of judgment of litigation (arbitration)
China Nonferrous Metals Industry's 12th Metallurgical Construction Co., Ltd.	Taiyuan Jiaxin Palm Real Estate Development Co., Ltd.	None	Litigation	Construction projects contract dispute	53.31 million	No	In trial	None	None
Aluminum International Shandong Construction Co., Ltd.	People's Government of Donghu District, Nanchang, Dongjia Yao Street Office, Donghu District, Nanchang	None	Litigation	Contract dispute	180.38 million	No	Closed	Note 1	In enforcement
Sixth Metallurgical Construction Company of China Nonferrous Metals Industry	Henan Hongxuan Real Estate Co., Ltd. (河南鴻軒房地產有限公司)	None	Litigation	Construction projects contract dispute	79.54 million	No	In trial	None	None
Sixth Metallurgical Construction Company of China Nonferrous Metals Industry	Zhengzhou Hand in Hand Group Co., Ltd. (鄭州手拉手集團有限公司)	None	Litigation	Construction projects contract dispute	110.23 million	No	Closed	Note 2	In enforcement
Lu Yikui (呂宜奎)	Shenyang Aluminum & Magnesium Engineering & Research Institute Co., Ltd.	Panjin Hetai Real Estate Development Co., Ltd. (盤錦和泰房地產開發有限公司), Liaoning Jindi Second Construction Engineering Co., Ltd. (遼寧金帝第二建築工程有限公司)	Litigation	Construction projects contract dispute	56.01 million	No	Closed	Note 3	In enforcement

DIRECTORS' REPORT

During the reporting period: Unit: Yuan Currency: RMB

Plaintiff (claimant)	Defendant (respondent)	Joint liability party	Type of litigation or arbitration	Basic status of litigation (arbitration)	Amount involved in litigation (arbitration) (RMB)	Whether litigation (arbitration) forms estimated liabilities or not and amount	Progress of litigation (arbitration)	Trial result and effect of litigation (arbitration)	Enforcement of judgment of litigation (arbitration)
Ninth Metallurgical Construction Co., Ltd.	Shaanxi Huangling Coking Coal Chemical Industry Group Co., Ltd. (陝西黃陵焦化煤化工集團有限責任公司)	None	Litigation	Construction contract dispute	68.69 million	No	In trial	None	None

Note 1: (1) People's Government of Donghu District, Nanchang shall return the compensation fund of RMB149 million to Shandong Construction within 10 days after the judgment comes into effect.

(2) Other litigation claims brought by Shandong Construction were dismissed.

(3) If the payment obligation has not been fulfilled within the period as specified in the judgment, double interest on the outstanding amount shall be charged for the period of late payment concerned in accordance with Article 253 of the Civil Procedure Law of the People's Republic of China.

(4) The first instance case accepted fee of RMB943,700 was prepaid by Shandong Construction, of which RMB471,800 was borne by Shandong Construction, RMB471,800 was borne by People's Government of Donghu District, Nanchang. People's Government of Donghu District, Nanchang is required to make payment to Shandong Construction within 10 days after the judgment comes into effect.

Note 2: On 8 April, 2018, the Intermediate People's Court of Zhengahou issued a civil resolution to reach a repayment agreement: Zhengzhou Hand in Hand Group Co., Ltd. (鄭州手拉手集團有限公司) paid RMB18.347 million, RMB18.347 million and RMB24.462 million to Sixth Metallurgical Company before 30 June 2018, 30 December, 2018 and 30 June, 2019, respectively.

Note 3: All parties reached the resolution agreement:

(1) Lu Yikui (呂宜奎) applied for unblocking and SAMI paid RMB5.64 million to Liaoning Jindi Second Construction Engineering Co., Ltd. (遼寧金帝第二建築工程有限公司).

(2) The balance is RMB30.13 million (deducting the guarantee interest of RMB5.50 million as required in the agreement), and within the amount of the payment received, SAMI will give priority payment to Liaoning Jindi Second Construction Engineering Co., Ltd. until the payment is completed.

DIRECTORS' REPORT

COMPLIANCE WITH THE MAJOR LAWS AND REGULATIONS

The operation of the Group has always complied with the national and local laws and regulations. It upholds honesty and integrity, and performs its social responsibility. The Company and its staffs have exercised their best endeavors to strictly follow the applicable rules, laws and industry standards. The Directors are not aware of any breach of laws or regulations which have a significant impact on the Group, nor are they aware of any cases of corruption, bribery, extortion, fraud or money laundering involving the Group in 2018.

The Company continues to review its current systems and procedures, emphasizes and strives to comply with 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 Listing Rules, the SFO, the applicable Hong Kong Companies Ordinance and other relevant laws and regulations which have a significant impact on the Company. The Company is committed to safeguard the interest of Shareholders, improve its corporate governance and enhance the functions of the Board.

The Group insists on reinforcing the risk control throughout the whole lifecycle and building of legal governance. It ensures a 100% legal review for contracts, regulatory systems and major decisions of its subsidiaries. It broadens legal knowledge throughout the Company and fosters all staff to build up the concept of acting by law and to develop a habit of doing business according to principles. The Company establishes a "legal culture" based on the core principles of decision-making, operating and managing according to law. Legal governance becomes the core concept of the Company and all staff follows voluntarily. The concept and means of legal governance are realized in every aspect of corporate governance, operation and management.

PROMOTING THE CONSTRUCTION OF CORPORATE LEGAL GOVERNANCE

The Company implements the primary responsible person requirement of corporate legal governance, strengthens the review of legality and compliance of major decisions; as well as facilitates the scientific and standardized decisions of the Company. It also develops legality and compliance assessment and actively promotes the implementation of regulatory system in order to ensure each operation management part of the corporates is granted rules and a system basis to follow. The efficiency of business process across departments, professions and levels can thus be enhanced. It also reinforces legal support and capability to uphold its rights in accordance with the law and pursues legal risk management to avoid prosecution. The Company strengthens its case management and avoids increasing of cases and at the same time reducing the caseload, which would effectively reduce the Company-involved number of lawsuits. The Company focuses its risk management on major sectors by integrating audits and monitoring resources. It also strengthens management and control of major segments such as construction projects and does its utmost to prevent corruption risk.

DIRECTORS' REPORT

AUDIT COMMITTEE

The Audit Committee of the Company has reviewed the Group's 2018 annual results and the combined financial statements for the year ended 31 December 2018 prepared in accordance with the PRC Accounting Standards and IFRSs.

AUDITOR

PKF Hong Kong Limited was appointed as the auditor to audit the financial statements for the year ended 31 December 2018 prepared in accordance with the IFRSs. PKF Hong Kong Limited has audited the accompanying financial statements which are prepared in accordance with IFRSs. The Company reviewed and approved the re-appointment of PKF Hong Kong Limited and the re-appointment of WUYIGE Certified Public Accountants LLP as the international auditor and the domestic auditor of the Company at the 2017 Annual General Meeting on May 8, 2018.

FINANCIAL SUMMARY IN FIVE YEARS

The summary of operating results, assets and liabilities of the Group in the past five financial years is set out on pages 3 to 5 of this annual report.

By order of the Board

ZONG Xiaoping
Director, President
China Aluminum International Engineering Corporation Limited

Beijing, 28 March 2019

SUPERVISORY BOARD'S REPORT

The current session of the Supervisory Board was established in the election of the 13th meeting of the second session of the Supervisory Board convened on 17 March 2017. The current session of the Supervisory Board comprises three Supervisors in total. In 2018, the Supervisory Board of the Company strictly conformed to the laws, regulations, rules and regulatory documents such as the Company Law of the People's Republic of China and the relevant requirements set out in the Articles of Association, the Rules of Procedure of the Supervisory Board of China Aluminum International Engineering Corporation Limited (《中鋁國際工程股份有限公司監事會議事規則》) and the Listing Rules. In terms of the long-term interests of the Company and the interests of the Shareholders, the Supervisory Board had carefully exercised its supervision over the behavior on execution of the Company's duties of Directors and the senior management of the Company. The principal work during the reporting period are as follows:

1. MEETINGS CONVENED BY THE SUPERVISORY BOARD

During the reporting period, the Supervisory Board held four meetings, studied and considered ten issues. Details are as follows:

The 4th meeting of the third session of the Supervisory Board was held on 12 March 2018, which has considered and approved: the resolution of the announcement of annual results and the annual report of the Company for 2017; the resolution of the report on final accounts for 2017; the resolution of the financial budget report for 2018; the resolution of the profit distribution and dividend distribution plan for 2017; the resolution of the financial accounting reports for the years of 2015, 2016 and 2017; the resolution of the Supervisory Board's work report for 2017; and the resolution of the remuneration plan for Supervisors in 2018.

The 5th meeting of the third session of the Supervisory Board was held on 27 August 2018, which has considered and approved the resolution of the interim report and the announcement of interim results of the Company for 2018.

The 6th meeting of the third session of the Supervisory Board was held on 26 October 2018, which has considered and approved the resolution of the quarterly report for the third quarter of the Company for 2018.

The 7th meeting of the third session of the Supervisory Board was held on 20 December 2018, which has considered and approved the resolution on changes in accounting policy on impairment allowance for contract assets of the Company.

SUPERVISORY BOARD'S REPORT

2. DUTIES OF THE SUPERVISORY BOARD

The current session of the Supervisory Board mainly implemented the following duties:

1. Inspection of legal compliance of the Company's operation

During the reporting period, members of the Supervisory Board attended all general meetings convened by the Company and attended all meetings of the Board as non-voting participants, and also reviewed the resolutions proposed to the Board for consideration. The Supervisory Board supervised the major decision-making processes of the Company and the duties performed by the members of the Board and the senior management through attending such meetings as participants and non-voting participants. The Supervisory Board is of the opinion that the major decision-making processes of the Company had been in compliance with laws and regulations, and that all Directors and the senior management of the Company had faithfully performed their duties with due diligence, earnestly implemented the resolutions of the general meetings, adhered to lawful operation and prudent decision-making without any breach of laws, regulations, the Articles of Association or prejudice to the interests of the Shareholders of the Company during the execution of their respective duties.

2. Inspection of the financial information of the Company

During the reporting period, the Supervisory Board reviewed the relevant financial information of the Company and its subsidiaries, and the auditor's report of the Company and its subsidiaries. The Supervisory Board is of the opinion that the accounts and audit work of the Company and its subsidiaries are in compliance with the requirements of Accounting Law of the People's Republic of China (《中華人民共和國會計法》), the accounting systems promulgated by the Ministry of Finance and the Hong Kong Financial Reporting Standards, for which no concerns have been found. Having duly reviewed the 2018 financial report and relevant information to be submitted by the Board to the general meeting, and as audited by the independent auditor with an unqualified opinion, the Supervisory Board is of the opinion that the report reflected the financial position and operating results of the Company on a consistent basis and in an accurate, true and fair manner.

SUPERVISORY BOARD'S REPORT

3. Inspection of the Company's connected transactions

During the reporting period, the Supervisory Board reviewed relevant information related to the Company's connected transactions with the controlling Shareholders. The Supervisory Board is of the opinion that such connected transactions were conducted at reasonable price and in a fair and just manner, without prejudice to the interest of the Company and other Shareholders. The Directors, president and other senior management of the Company had exercised the rights granted by the Shareholders and discharged their obligations in good faith and with due diligence. So far, the Supervisory Board is not aware of any abuse of authority which impairs the interests of the Shareholders and the legitimate rights of the employees of the Company.

4. Inspection of the Company's information disclosure

During the reporting period, the Supervisory Board reviewed all the relevant documents publicly disclosed by the Company. The Supervisory Board is of the opinion that the Company had disclosed the relevant information in a legitimate, timely and comprehensive manner in accordance with the requirements of the Stock Exchange and no false information was found.

FAN Guangsheng
Chairman of the Supervisory Board

Beijing, 28 March 2019

CORPORATE GOVERNANCE REPORT

The Board of Directors hereby presents to the Shareholders the corporate governance report for the year ended 31 December 2018.

CORPORATE GOVERNANCE PRACTICES

The corporate governance practices adopted by the Company are summarized as follows:

1. THE BOARD

1.1 Composition of the Board

As of 31 December 2018, the Board consisted of nine Directors, including four executive Directors, two non-executive Directors and three independent non-executive Directors.

The profile details of the Directors as at the date of this report are set out on pages 122 to 128 of this annual report. There are no relationships (including financial, business, family or other material or relevant relationship) among members of the Board. The structure of the Board is well balanced with each Director possessing sound knowledge, experience and expertise relevant to the business operation and development of the Group. All Directors are deeply aware of their joint and several liabilities to the Shareholders.

Since the Listing of the Company, the Board has been in compliance with the requirements of the Listing Rules regarding the appointment of at least three independent non-executive Directors, and that the appointed independent non-executive Directors shall represent at least one-third of the members of the Board. The qualifications of the three independent non-executive Directors of the Company are in full compliance with the requirements under Rules 3.10(1) and (2) of the Listing Rules. In addition, the Company has received annual confirmations from each independent non-executive Director as to their independence pursuant to Rule 3.13 of the Listing Rules. The Company, therefore, considered all independent non-executive Directors to be in compliance with the independence requirements as set out in the Listing Rules.

CORPORATE GOVERNANCE REPORT

As at 31 December 2018, the members of the Board of the Company are set out as follows:

Name	Position in the Company	Date of Appointment
Director		
HE Zhihui[1]	Chairman and executive Director	23 May 2017
WANG Jun	Non-executive Director	23 May 2017
LI Yihua	Non-executive Director	23 May 2017
ZONG Xiaoping	Executive Director	23 May 2017
WU Zhigang	Executive Director	23 May 2017
ZHANG Jian	Executive Director	9 June 2015
SUN Chuanyao[2]	Independent non-executive Director	23 May 2014
GUI Weihua[2]	Independent non-executive Director	27 February 2018
CHEUNG Hung Kwong	Independent non-executive Director	23 May 2017
FU Jun	Independent non-executive Director	23 May 2017

Note:

(1) Due to work redeployment, Mr. HE Zhihui has resigned as the chairman of the Board, Director, the member and chairman of each of the Risk Management Committee, the Nomination Committee and the Strategy Committee of the Board on 21 February 2019.

(2) Due to other work commitments, Mr. SUN Chuanyao resigned from the post of independent non-executive Director on 5 January 2018, and at the same time, he resigned as the chairman of the Remuneration Committee of the Board of Directors and the member of each of the Nomination Committee and the Strategy Committee. Mr. SUN Chuanyao will cease to hold any position in the Company upon his resignation. Mr. GUI Weihua has been appointed in place of Mr. SUN Chuanyao as the independent non-executive Director from 27 February 2018.

Pursuant to the latest amendments and requirement of the Corporate Governance Code and the Corporate Governance Report in the Listing Rules, the Company prepared the Board Diversification Policy of China Aluminum International Engineering Corporation Limited (《中鋁國際工程股份有限公司董事會成員多元化政策》) and submitted the same to the Nomination Committee for consideration and approval.

1.2 Board Meetings

Pursuant to the Articles of Association of the Group, the Board is required to hold at least four meetings every year. The Board meetings shall be convened by the chairman.

A notice of a regular Board meeting shall be given at least 14 days prior to the date at which it is held. The notice shall state the time, venue and means by which the Board meeting will be convened.

Except for the Board's consideration of matters in relation to connected transactions as stipulated in the Articles of Association, the quorum for a Board meeting is the presentation of more than half of the total number of the Directors. A Director may attend the Board meeting in person, or appoint another Director in writing to attend the Board meeting on his/her behalf. The secretary to the Board is responsible for preparing and keeping the minutes of the Board meetings.

CORPORATE GOVERNANCE REPORT

In 2018, the Board held 12 meetings in total. The attendance of the Directors at Board meetings is as follows:

Name	Position	Number of Meetings Attended in Person/Held	Number of Meetings Attended by Proxy in Writing/Held	Attendance
HE Zhihui(1)	Chairman and executive Director	12/12	0/12	100%
WANG Jun	Non-executive Director	9/12	3/12	100%
LI Yihua	Non-executive Director	8/12	4/12	100%
ZONG Xiaoping	Executive Director	10/12	2/12	100%
WU Zhigang	Executive Director	12/12	0/12	100%
ZHANG Jian	Executive Director	12/12	0/12	100%
SUN Chuanyao(2)	Independent non-executive Director	2/12	0/12	100%
GUI Weihua(2)	Independent non-executive Director	8/12	2/12	100%
CHEUNG Hung Kwong	Independent non-executive Director	12/12	0/12	100%
FU Jun	Independent non-executive Director	11/12	1/12	100%

Notes:

(1) Mr. HE Zhihui resigned as the chairman and Director of the Company on 21 February 2019 due to work redeployment.

(2) Due to other work commitments, Mr. SUN Chuanyao resigned from the post of independent non-executive Director of the Company on 5 January 2018. Mr. GUI Weihua has been appointed in place of Mr. SUN Chuanyao as the independent non-executive Director from 27 February 2018.

1.3 Functions and Powers Exercised by the Board and the Management

The rights and duties of the Board and the management have been clearly provided in the Articles of Association, which aims to ensure adequate check and balance mechanism for good corporate governance and internal control.

The Board is responsible for deciding the Company's business and investment plans as well as the establishment of the Company's internal management structure, formulating the Company's basic management system, determining other material business and administrative matters of the Company and monitoring the performance of the management.

Under the leadership of the president (who is also an executive Director), the management of the Company is responsible for implementing the resolutions approved by the Board and administering the daily operation and management of the Company.

CORPORATE GOVERNANCE REPORT

1.4 Chairman and President

Since Mr. HE Zhihui has resigned his duties including being the chairman and Director of the Company, a majority of the Directors of the Company recommended Mr. ZONG Xiaoping, the executive Director and president, to take his place as the chairman during the period between the resignation of Mr. HE Zhihui until a new chairman is elected by the Company. According to the code provision A.2.1 set out in the Corporate Governance Codes contained in Appendix 14 to the Listing Rules, the roles of the chairman and chief executive officer should be separated and should not be performed by the same individual. The Company will ensure sound corporate governance practice during Mr. ZONG Xiaoping's tenure of both positions. The Board is of the view that the balance of power and authority will not be affected as for the current arrangement, and this structure will enable the Company to make and implement decisions more promptly and effectively. After a new chairman is elected by the Company, the duties between the chairman and the president will be separated.

1.5 Appointment and Re-election of Directors

Pursuant to the Articles of Association, Directors shall be elected at general meetings with a term of office of no more than three years for each session and may offer themselves for re-election. The Company has implemented a set of effective procedures for the appointment of new Directors. Nomination of new Directors shall be first considered by the Nomination Committee, whose recommendations will then be given to the Board for consideration. All candidates are subject to election and approval at general meetings.

The Company has entered into service contracts with each of the Directors (including non-executive Directors). Such service contracts are for a term of three years.

1.6 Directors' Remuneration

Directors' remuneration is proposed by the Remuneration Committee according to principles such as positions, performance and qualifications, etc. and determined by the Board with reference to Directors' experience, work performance, job responsibilities and the prevailing market conditions after approval from general meetings.

The remuneration of each independent non-executive Director was RMB10,000 per month, net of tax. The remuneration of the chairman and non-independent Directors of the Company who serve as senior management of the Company is determined according to the remuneration policies of Directors and the relevant remuneration policies of senior management set by the Company, respectively. The non-independent Directors who do not serve as senior management of the Company shall not receive remuneration from the Company.

CORPORATE GOVERNANCE REPORT

1.7 Directors' Training

During 2018, all Directors participated in continuous professional development to develop and refresh their knowledge and expertise so as to ensure their continuous contribution to the Board when informed and necessary. The details of training for all Directors are as follows:

Name	Position	Training time	Training content
HE Zhihui(1)	Chairman and executive Director	13 hours	including compliance of listed company and corporate governance
WANG Jun	Non-executive Director	7 hours	including compliance of listed company and corporate governance
LI Yihua	Non-executive Director	7 hours	including compliance of listed company and corporate
ZONG Xiaoping	Executive Director	7 hours	including compliance of listed company and corporate
WU Zhigang	Executive Director	7 hours	including compliance of listed company and corporate
ZHANG Jian	Executive Director	13 hours	including compliance of listed company and corporate
SUN Chuanyao(2)	Independent non-executive Director	2 hours	including compliance of listed company and corporate
GUI Weihua(2)	Independent non-executive Director	7 hours	including compliance of listed company and corporate
CHEUNG Hung Kwong	Independent non-executive Director	7 hours	including compliance of listed company and corporate
FU Jun	Independent non-executive Director	7 hours	including compliance of listed company and corporate

Notes:

(1) Mr. HE Zhihui resigned as the chairman and Director of the Company on 21 February 2019 due to work redeployment.

(2) Due to other work commitments, Mr. SUN Chuanyao resigned from the post of independent non-executive Director of the Company on 5 January 2018. Mr. GUI Weihua has been appointed in place of Mr. SUN Chuanyao as the independent non-executive Director from 27 February 2018.

1.8 Training for Company Secretary

Mr. ZHAI Feng, the company secretary of the Company, received relevant trainings in 2018, which is in accordance with the requirements set out in Rule 3.29 of the Listing Rules.

CORPORATE GOVERNANCE REPORT

1.9 Corporate Governance Functions

The Company's corporate governance function is performed by the Board. The corporate governance function is to develop and review the Company's policies and practices on corporate governance in order to comply with Corporate Governance Code and other legal or regulatory requirements, and make recommendations to the Board; to oversee the induction program for new Directors; to review and oversee the training and continuous professional development for the Directors and senior management; to develop, review and oversee the code of conduct and compliance manual (if any) applicable to employees and the Directors; and to review the Company's disclosure in the Corporate Governance Report.

2. BOARD COMMITTEES

There are five committees under the Board, namely the Audit Committee, Remuneration Committee, Nomination Committee, Risk Management Committee and Strategy Committee.

2.1 Audit Committee

The Audit Committee consists of three Directors, namely: Mr. CHEUNG Hung Kwong, Mr. WANG Jun (independent non-executive Director) and Mr. FU Jun (independent non-executive Director). Mr. CHEUNG Hung Kwong serves as the chairman.

Audit Committee is given the function of corporate governance of the Company. The main duties of Audit Committee include: to direct the construction of internal corporate control mechanism, and to examine and assess the compliance and effectiveness of significant operation activities of the Company; to make recommendations to the Board in respect of engaging or replacement of intermediaries such as accounting firms as well as their remuneration; to review the Company's financial information and its disclosure, to review the significant financial system of the Company and its implementation, to oversee the financial operations position, to oversee the truthfulness of the financial reports and the effectiveness of the implementation of financial reporting procedures by the management, and to make suggestions to the Board; to make recommendations to the Board in respect of appointment or removal of person-in-charge of its internal audit department; to supervise the formulation and implementation of its internal auditing system; to assess and supervise the completeness of the corporate auditing system and the effectiveness of its operations; to supervise the independence and objectivity of external audit firm, auditing procedures and work, and to maintain good communications with the Supervisory Board as well as internal and external audit firms, to review external audit report; to review, supervise and reflect on the Company's financial controls, internal control and risk management systems, and to provide advice and recommendations in respect of the completeness and comprehensiveness of the Company's internal control systems and the risk management systems; to review the self-evaluation reports on internal control; to review concern required by the Company and raised by the employees in respect of the misconduct during financial reporting; and to supervise the rectification and improvement of material issues. The Audit Committee exercises its authority pursuant to the requirements under Rule D.3.1 of the Corporate Governance Code.

During the reporting period, the Audit Committee convened five meetings in total, which has reviewed and considered 11 resolutions, particulars of which are as follows:

CORPORATE GOVERNANCE REPORT

1. The fourth meeting of the Audit Committee of the third session of the Board was held on 9 March 2018, at which the resolution on the Announcement of Annual Results and the Annual Report of the Company for 2017 (《公司2017年度業績公告和年度報告》); the resolution on the Report on Final Accounts of the Company for 2017 (《公司2017年度財務決算報告》); the resolution on the Financial Budget Report of the Company for 2018 (《公司2018年度財務預算報告》); the resolution on Profit Distribution and Dividend Distribution Plan of the Company for 2017 (《公司2017年度利潤分配及股息派發方案》); the resolution on the Financial Accounting Reports for the years of 2015, 2016, 2017 (《2015年度、2016年度、2017年度財務會計報告》); and the resolution on 2017 Internal Control Evaluation Report of the Company (《公司2017年內部控制評價報告》) were considered.

The fifth meeting of the Audit Committee of the third session of the Board was held on 19 March 2018, at which the Resolution on the Re-appointment of the International Auditor and the Domestic Auditor (《關於續聘國際核數師和國內審計師的議案》) was considerated and approved.

The sixth meeting of the Audit Committee of the third session of the Board was held on 24 August 2018, at which the Resolution of the Interim Report and the Announcement of Interim Results of the Company for 2018 (《公司2018年中期報告及中期業績公告的議案》) was considered.

The seventh meeting of the Audit Committee of the third session of the Board was held on 25 October 2018, at which the resolution on the Quarterly Report for the Third Quarter of the Company for 2018 (《公司2018年第三季度季度報告》); and the resolution on CNPT's acquisition of 100% equity interests in Luoyang Kaiying Company (洛陽開盈公司) were considered.

The eighth meeting of the Audit Committee of the third session of the Board was held on 18 December 2018, at which the resolution on the change in accounting policy on impairment allowance for contract assets was considered.

The attendance of the meetings is as follows:

Name	Position	Number of Meetings Attended/Held	Attendance
CHEUNG Hung Kwong	Chairman of the Audit Committee	5/5	100%
WANG Jun	Member of the Audit Committee	5/5	100%
FU Jun	Member of the Audit Committee	5/5	100%

2.2 Remuneration Committee

The Remuneration Committee consists of three Directors, namely: Mr. GUI Weihua (independent non-executive Director), Mr. WANG Jun (independent non-executive Director) and Mr. FU Jun (independent non-executive Director). Mr. GUI Weihua serves as the chairman.

The Company has adopted the model, in which the Remuneration Committee recommended to the Board in order to determine the remuneration packages of executive Directors and senior management.

CORPORATE GOVERNANCE REPORT

The main duties of the Remuneration Committee include: to make recommendations to the Board on the overall remuneration policy and structure of the Directors and the senior management of the Company and on the establishment of a formal and transparent procedure for developing such remuneration policies; to make recommendations to the Board in respect of the specific remuneration packages of all executive Directors and the senior management, including benefits in kind, pension rights and compensation payments (including compensation payable for loss or termination of office or appointment), and make recommendations to the Board in respect of the remuneration of non-executive Directors; to assess the performance of the executive Directors, approve the terms in the service contract with the executive Directors and to review and approve performance-based remuneration with reference to corporate objectives as approved by the Board from time to time; to review and approve the compensation payable to executive Directors and the senior management in connection with any loss or termination of office or appointment to ensure that such compensation is determined in accordance with relevant contractual terms and that such compensation is otherwise fair and reasonable and not excessive for the listed company; to review and approve compensation arrangements relating to dismissal or removal of Directors for misconduct to ensure that such arrangements are determined in accordance with relevant contractual terms and that such compensation payment is otherwise reasonable and appropriate; to ensure that no Director or any of his/her Associates is involved in determining his/her own remuneration.

During the reporting period, the Remuneration Committee of the third session of the Board convened two meetings, at which three resolutions have been reviewed and considered. The first meeting of the Remuneration Committee of the third session of the Board was convened on 12 March 2018 in Beijing, at which the resolution on the remuneration of the Directors for 2018 and the resolution on the remuneration of the senior management for 2018 of the Company were considered and passed. The second meeting of the Remuneration Committee of the third session of the Board was held on 27 August 2018 in Beijing, at which the Resolution on the Performance Remuneration Allocation Plan of the Senior Management of the Company for 2017 (《關於審議2017年度公司高級管理人員業績薪酬分配方案的議案》) was passed.

The attendance of the meeting is as follows:

Name	Position	Number of Meetings Attended/Held	Attendance
SUN Chuanyao(1)	Former Chairman of the Remuneration Committee	0	0
GUI Weihua(1)	Chairman of the Remuneration Committee	2/2	100%
WANG Jun	Member of the Remuneration Committee	2/2	100%
FU Jun	Member of the Remuneration Committee	2/2	100%

Note:

(1) Due to other work commitments, Mr. SUN Chuanyao resigned from the post of independent non-executive Director on 5 January 2018, and at the same time, resigned as the chairman of the Remuneration Committee of the Board and the member of each of the Nomination Committee and the Strategy Committee. Mr. SUN Chuanyao will cease to hold any position in the Company upon his resignation. Mr. GUI Weihua has been appointed in place of Mr. SUN Chuanyao as the independent non-executive Director from 27 February 2018.

2.3 Nomination Committee

The Nomination Committee consists of three Directors, namely: Mr. HE Zhihui (former executive Director), Mr. GUI Weihua (independent non-executive Director) and Mr. FU Jun (independent non-executive Director). Mr. HE Zhihui served as the former chairman.

CORPORATE GOVERNANCE REPORT

The main duties of the Nomination Committee include: to review the structure, size and composition (including the skills, knowledge and experience) of the Board on a regular basis and make recommendation to the Board regarding any proposed changes in order to promote the corporate strategy of the Issuer; to widely search for and identify individuals who are suitable to become a member of the Board and the president of the Company (may extend to the senior management of the Company, where necessary, the same below), to examine and make recommendations to the Board on the election of individuals nominated for Directors and the president; to assess the independence of the independent non-executive Directors; to examine the selection criteria and procedure for the Directors and the president and make recommendations in this regard; to make recommendations to the Board on matters relating to the appointment or reappointment of Directors or the president and succession plans for Directors (including the chairman) or the president; to seek independent professional advice, if necessary, in order to perform its duties.

In accordance with the requirements of relevant laws and regulations and the Articles of Association, the Nomination Committee shall examine the selection criteria and procedures and the terms of office for the proposed Directors with reference to the Company's actual condition. Any resolution made in this regard shall be filed and submitted to the Board for consideration, approval and implementation. Detailed procedures are as follows: the Committee shall communicate with the relevant departments of the Company to examine the Company's demand for new Directors and to prepare the written proposal; carry out an extensive search for candidates of Directors within the Company, its holding company or other companies; seek consents from proposed candidates for the nomination, otherwise he/she shall not be put on the list of candidates of Directors; upon consideration and approval at the general meeting or Board meeting, carry out other work in relation to holding office in accordance with the resolutions of the general meeting or board meeting.

The Nomination Committee considered that the composition of members of the Board during the reporting period was in compliance with the requirement of the "Board Diversification Policy".

During the reporting period, the Nomination Committee of the third session of the Board convened two meetings, at which 2 resolutions have been reviewed and considered. The first meeting of the Nomination Committee of the third session of the Board was convened on 5 January 2018, at which the resolution on the resignation of Mr. SUN Chuanyao and appointment of Mr. GUI Weihua as an independent director of the Company. The second meeting of the Nomination Committee of the third session of the Board was held on 9 October 2018, at which the resolution on Appointing the Vice President of China Aluminum International Engineering Corporation Limited (《關於聘任中鋁國際工程股份有限公司副總裁的議案》) was considered and passed, agreeing to nominate Mr. WANG Yonghong, Mr. LIU Ruiping and Mr. Bi Xiaoge as Vice President of the Company.

The attendance of the meeting is as follows:

Name	Position	Number of Meetings Attended/Held	Attendance
HE Zhihui [(1)]	Chairman of the Nomination Committee	2/2	100%
SUN Chuanyao [(2)]	Former Member of the Nomination Committee	0	0
GUI Weihua [(2)]	Member of the Nomination Committee	2/2	100%
FU Jun	Member of the Nomination Committee	2/2	100%

CORPORATE GOVERNANCE REPORT

Note:

(1) Due to work redeployment, Mr. HE Zhihui has resigned as the chairman of the Board, Director, the member and chairman of each of the Risk Management Committee, the Nomination Committee and the Strategy Committee of the Board on 21 February 2019.

(2) Due to other work commitments, Mr. SUN Chuanyao resigned from the post of independent non-executive Director on 5 January 2018, and at the same time, resigned as the chairman of the Remuneration Committee of the Board of directors and the member of each of the Nomination Committee and the Strategy Committee. Mr. SUN Chuanyao will cease to hold any position in the Company upon his resignation. Mr. GUI Weihua has been appointed in place of Mr. SUN Chuanyao as the independent non-executive Director from 27 February 2018.

2.4 Risk Management Committee

The Risk Management Committee consists of three Directors, namely: Mr. HE Zhihui (former executive Director), Mr. LI Yihua and Mr. FU Jun (independent non-executive Director). Mr. HE Zhihui serves as the former chairman.

The main duties of Risk Management Committee include: to consider judgment standard or mechanism for material business decisions, material risks, events and business processes and the risk assessment report of major decisions; to supervise, assess and inspect the completeness and operating effectiveness of the Company's internal risk management system and report the same to the Board; to examine, approve or verify the matters related to investment, financing and external transactions contracts submitted by the president pursuant to the authority granted by the Board; to handle other matters entrusted by the Board.

During the reporting period, the Risk Management Committee of the third session of the Board convened 1 meeting and has reviewed and considered 2 resolutions, details of which are as follows:

The resolution on the compliance with the OFAC undertakings in 2017 and the resolution on the overall risk management of the Company for 2018 were considered and passed at the meeting.

The attendance of the meetings is as follows:

Name	Position	Number of Meetings Attended/Held	Attendance
HE Zhihui[(1)]	Chairman of the Risk Management Committee	1/1	100%
LI Yihua	Member of the Risk Management Committee	1/1	100%
FU Jun	Member of the Risk Management Committee	1/1	100%

Note:

(1) Due to work redeployment, Mr. HE Zhihui has resigned as the chairman of the Board, Director, the member and chairman of each of the Risk Management Committee, the Nomination Committee and the Strategy Committee of the Board on 21 February 2019.

CORPORATE GOVERNANCE REPORT

2.5 Strategy Committee

The Strategy Committee consists of three Directors, namely Mr. HE Zhihui (former executive Director), Mr. ZONG Xiaoping and Mr. GUI Weihua (independent non-executive Director). Mr. HE Zhihui serves as the former chairman.

The main duties of Strategy Committee include: to conduct research and provide advice on the Company's development strategy and medium– and long-term development plan, and to assess and monitor their implementation; to conduct research and provide advice on the plan of increasing or decreasing registered capital, issuance of bonds, merger, separation, dissolution of the Company; to conduct research and provide advice for the Company on the acquisition, merger, disposal of assets of which required review of the Board; to conduct research and provide advice for the Company on the expansion of new market and new business; to conduct research and provide advice for the Company on the problems such as investment and financing, asset operation and capital operation of which required review of the Board; to conduct research and provide advice for the Company on major restructuring and adjustment plan; to conduct examination and assessment for the implementation of the above-mentioned matters and provide written opinions on the results of examination and assessment; to guide and supervise the Board in respect of the execution of the relevant resolutions; and other duties delegated by the Board.

During the reporting period, no Strategy Committee meeting was held.

3. INDEPENDENCE OF THE BOARD

Each of the independent non-executive Directors has met the requirement on independence guidelines set out in Rule 3.13 of the Listing Rules and has provided to the Company the requisite annual confirmation as to his independence. None of the independent non-executive Directors of the Company has any business with or significant financial interests in the Company or its subsidiaries, and accordingly the Company considered that all the independent non-executive Directors continue to be independent.

4. DIRECTORS' RESPONSIBILITY FOR THE FINANCIAL STATEMENTS

The Board acknowledged its responsibility for preparing the financial statements of the Group for the year ended 31 December 2018.

The Board is responsible for presenting a clear and understandable assessment of annual and interim reports, price-sensitive information and other disclosures as required under the Listing Rules and other regulatory requirements. The management has provided the Board with such necessary explanation and information to enable the Board to make an informed assessment of the financial information and position of the Group for the consideration and approval by the Board.

There are no material uncertainties relating to events or conditions that may cast significant doubt on the Company's ability to operate as a going concern.

In addition, appropriate insurance coverage has been arranged by the Company against possible legal proceedings and liabilities to be taken against the Directors.

CORPORATE GOVERNANCE REPORT

5. COMPLIANCE WITH THE CODE FOR SECURITIES TRANSACTIONS

The Company has adopted the Model Code set out in Appendix 10 to the Listing Rules as the code of conduct for dealings in the securities of the Company by all of our Directors and Supervisors. Having made specific enquiries with the Directors and Supervisors, all Directors and Supervisors have confirmed that they have strictly complied with the standards stipulated in the Model Code during the reporting period. The Company has also set up guidelines in respect of the dealings by its relevant employees (as defined in the Listing Rules) in the Company's securities, which are on no less exacting terms than the Model Code. The Company is not aware of any breach of the guidelines by its relevant employees.

The Board will examine the corporate governance practices and operation of the Company from time to time so as to ensure the compliance with relevant requirements under the Listing Rules and to safeguard Shareholders' interests.

6. INTERNAL CONTROL

The Company aims to strengthen the development of the internal control systems, ensure that its operation and management are in compliance with relevant laws and regulations, safeguard its assets, maintain the authenticity and completeness of financial reports and related information, enhance operating efficiency and effect as well as facilitate its corporate development strategies. Achieving the vision and mission of becoming "a competitive technology and service provider in the international market" is the ultimate goal of the Company to develop such internal control systems.

The Company has attached prime importance to internal control. An internal control system covering the headquarters of the Company and each branch and subsidiary has been established to safeguard the investments of Shareholders and the assets of the Company. Based on the Requirements of Application Guidelines for Internal Control of SASAC (國資委內部控制應用指引要求) and COSO framework's Five Components, the internal control system includes five aspects, namely internal environment, risk assessment, control activities, information and communications, and supervision. On the level of the Company, the internal control system includes internal environment, risk assessment, information and communications, and internal supervision, which involves a total of 98 control standards, while on the process level, the internal control system includes 16 processes and 500 control standards in total. There are a total of 598 control standards at both company level and process level.

The Company believes that good internal control plays an important role in corporate operations. The Company has established Audit Committee and Risk Management Committee to perform internal audit functions and conduct analysis and independent assessments on the adequacy and effectiveness of the risk management and internal control systems of the Company. The Board is dedicated to establishing effective internal control systems, and implementing and supervising internal control. The Board is ultimately responsible for the internal control, risk management and compliance management of the Company. It makes decisions for internal control, risk management and compliance policies and reviews the effectiveness of such policies, as well as monitoring the design, implementation and supervision of risk management and internal control systems by the Board. The Board also approves the internal control

CORPORATE GOVERNANCE REPORT

assessment report, risk assessment report and compliance report for the year, reviews the resources, employees' qualifications and experiences in respect of the accounting, internal audit and financial reporting functions, as well as the adequacy of training courses received by employees and the relevant budget. The Board continues to monitor the risk management and internal control systems of the Company. In 2018, the risk management and internal control systems of the Company and its subsidiaries, including financial control, operation control and compliance control, were reviewed by the Board.

The Company conducted two internal control tests in 2018 and did not identify any material and significant deficiency. The Board considers that such risk management and control systems are adequate and effective.

In terms of rules and regulations, the Company consecutively formulated various internal control measures of the Company, such as the Measures on Auditing and Administration of Internal Control of China Aluminum International Engineering Corporation Limited (《中鋁國際工程股份有限公司內部控制審計管理辦法》), the Measures on Assessment and Management of Corporate Risks of China Aluminum International Engineering Corporation Limited (《中鋁國際工程股份有限公司企業風險評估管理辦法》), the Measures on Administration of Internal Audit Statistic Works of China Aluminum International Engineering Corporation Limited (《中鋁國際工程股份有限公司內部審計統計工作管理辦法》), the Measures on Assessment, Control and Administration of Risk Management of China Aluminum International Engineering Corporation Limited (《中鋁國際工程股份有限公司風險管理測評及監控管理辦法》), the Implementation of Articles of the Decision-making System on "Three Important Matters and One Big Concern" of Chalieco (《中鋁國際「三重一大」決策制度實施細則》), the Measures on Administration for the Appointment of Intermediaries of China Aluminum International Engineering Corporation Limited to Conduct Auditing (《中鋁國際工程股份有限公司委托中介機構審計管理辦法》), the Regulations on Documentation for Internal Auditing of China Aluminum International Engineering Corporation Limited (《中鋁國際工程股份有限公司內部審計檔案工作規範》) and the Internal Control Manual of China Aluminum International Engineering Corporation Limited (《中鋁國際工程股份有限公司內部控制手冊》).

The effective implementation of the internal systems ensured the orderly development of the Company's operating and management activities as well as effective risks control, safeguarded the security and integrity of the Company's property and guaranteed the realization of the Company's operating and management objectives.

In terms of organizational structure, the Company has established the discipline inspection, monitoring and audit department which is responsible for discipline inspection, efficiency supervision, inspection on the tendering and bidding of various engineering projects, risk management, evaluation on internal control, audit for construction projects, review of economic responsibilities and other specific audit works. The functional arms or operations units including business, finance and investment of the Company and all our subsidiaries assume primary responsibilities in their respective internal control systems. Specialized organizations or departments including risk management department and the internal control and compliance department are responsible for the coordination and planning as well as organization and implementation before and during risk management and internal control and compliance; internal audit organizations or departments are responsible for supervising and carrying out periodic auditing on the effectiveness of risk management, internal control and compliance, and investigating the accountability for any behavior violating the requirements.

CORPORATE GOVERNANCE REPORT

In terms of the disclosure of inside information, the Company has established standardized control procedures to collect, organize, review and disclose information. The Company will ensure that the information is kept confidential before it is fully disclosed to the public. For information that is difficult to keep confidential, the Company will disclose it in a timely manner to effectively protect the benefit of investors and stakeholders.

Based on the results of risk management and internal control in 2018, no material failure or weakness was found in respect of risk monitoring. The management procedures of financial reports and information disclosure of the Company is in strict compliance with the regulations under the Listing Rules. The Board considers that the risk management and internal control of the Company is in effective operation according to its assessment.

Each department of the Company is able to smoothly submit to the Board any data which is needed to be submitted. Being the most senior point of contact to each department, the president of the Company is able to effectively report to the Board in relation to the operation of each department, and to coordinate the demands of each department and carry out relevant mobilization to facilitate reasonable decision making within the Company. Accordingly, any possible significant matter (if disclosure to the market is required) identified by the staff can be reported to the management of the Company in a timely, accurate and effective manner, and the decisions made by the management of the Company can be carried out accurately and timely under supervision. Through the assessment of the internal control systems of the Group by the Audit Committee and internal control department, the Board was of the view that, in 2018 and as at the date of publication of this report, the Company continues to have comprehensive internal control and risk management systems including corporate governance, operations, investment, finance and administration and human resources. Such internal control and risk management systems are in full effect.

In 2018, the Company adopted the following measures to implement risk management and internal control:

Based on the practical situation in operations, the Company collected relevant information internally and externally and systematically sorted out business and management flows. It carried out in-depth analysis on every risk event in the risk event database from the perspectives including policies, systems and implementation, organizational responsibilities, human resources, finance and daily operations. Through reorganization, identification and screening of risk events, the annual risk event database was eventually established. Each department of the Company determined the significant risks of the Company after comprehensive rating upon prudent investigation and assessment. Corresponding preventive measures against significant risks were formulated by the Company under the regular monthly supervision by the responsible department. The Company summarized the monitoring of significant risk on a monthly, quarterly and annual basis, and reported to China Aluminum Group the risk management statement.

CORPORATE GOVERNANCE REPORT

The Company integrated comprehensive risk and internal control into operational management procedures in daily operations to achieve prevention beforehand and control on procedures, continuously improved various systems, strengthened the risk control on projects and enhanced risk prevention capability by various tasks including conducting due diligence and project evaluation. At the same time, risk events were monitored by the Company on monthly and quarterly basis respectively in order to supervise and manage the monitoring and control of the significant risks and the rectification of the deficiencies of internal control. The risk awareness of all relevant departments in our daily operations is raised, guaranteeing the smooth production and operation of the Company.

Pursuant to the arrangement of assessments on internal control system by China Aluminum Group, the Company conducts a total of two internal control assessments each year, in which the annual and interim internal control are assessed respectively. The discipline inspection, monitoring and audit department formed inspection teams to carry out independent reviews on internal control of member companies and provided rectification measures for individual member in need. In 2018, the Board has obtained the approval from the management in respect of the effectiveness of the risk management and internal control systems of the Company.

In order to review and continuously enhance the effectiveness of the internal control systems of the Company, in 2018, the Board and the Audit Committee have heard and discussed the 2018 internal control assessment report of the Company while the Board and the Risk Management Committee have heard and discussed the 2018 risk assessment report and compliance report of the Company. Such internal control systems aim at managing, but not eliminating, risk related to failure of achieving business goals and the Board only provides reasonable but not absolute assurance on the absence of material misstatement or loss.

7. AUDITORS AND THEIR REMUNERATION

PKF Hong Kong Limited and WUYIGE Certified Public Accountants LLP were appointed and re-appointed as the international auditor and the domestic auditor of the Company in 2016 and 2018, respectively, for the year ended 31 December 2018.

During the year, the total remuneration for audit and non-audit services provided by PKF Hong Kong Limited and WUYIGE Certified Public Accountants LLP was RMB6.90 million, including audit service fee of RMB5.2 million and non-audit service fees, in which fee charged for review of interim financial report was RMB1.70 million.

The statement of reporting obligation of PKF Hong Kong Limited, as the external auditor of the Company, in respect of the financial statements is set out on pages 135 to 137 of this annual report.

CORPORATE GOVERNANCE REPORT

8. SHAREHOLDERS’ MEETING

During the reporting period, the Company held five general meetings.

The first extraordinary general meeting of 2018 was held by the Company on 27 February 2018, at which the resolution of the resignation of Mr. SUN Chuanyao as an independent Director and the appointment of Mr. GUI Weihua as an independent Director of the Company were considered and approved.

On 8 May 2018, the annual general meeting of 2017, the first Domestic Share class meeting of 2018 and the first H Share class meeting of 2018 were held by the Company, at which 18 resolutions, including the Directors’ Work Report for 2017, the Supervisors’ Work Report for 2017, the Report on Final Accounts for 2017 and the Financial Budget Report for 2018, were reviewed and passed.

The second extraordinary general meeting of 2018 was held by the Company on 26 November 2018, at which 4 resolutions, including resolution on renewal of financial services agreement were considered and approved.

9. COMMUNICATIONS WITH SHAREHOLDERS

The Company chronically, highly and continuously maintains and develops relationship with its investors, delivers the information of the Company to public in a timely and efficient manner, enhances transparency of the information regarding the Company and builds an effective channel for it to maintain the relationship with investors.

9.1 Shareholders’ Rights

The Board is committed to maintaining communications with Shareholders and discloses significant development of the Company to Shareholders and investors when appropriate. The annual general meeting of the Company provides a good communication opportunity between Shareholders and the Board. In the event of convening a general meeting, a written notice, which specifies the meeting agenda and the date and venue of the meeting, should be sent to all Shareholders whose names appear on the share register 45 days prior to the convening of the meeting (convening date inclusive). Shareholders who intend to attend the general meeting should serve the reply in writing to the Company 20 days prior to convening the meeting for attending the meeting.

Two or more Shareholders individually or collectively holding more than ten percent (inclusive) of the outstanding Shares of the Company carrying voting rights may, by written requisition(s) stating the object of the meeting, require the Board to convene an extraordinary general meeting or a class Shareholders’ meeting. The Board shall as soon as practicable within two months after the receipt of such written requisition(s) proceed to convene the extraordinary general meeting or class Shareholders’ meeting. The shareholdings referred to above shall be calculated as at the date of the delivery of the written requisition(s).

Where the Board fails to issue notice of convening meeting within thirty days upon receipt of the above-written requisition(s), Shareholder(s) individually or collectively holding more than ten percent (inclusive) of the outstanding Shares of the Company carrying voting rights are entitled to request by written requisition(s) the Supervisory Board to convene the extraordinary general meeting or class Shareholders' meeting. The Supervisory Board may convene the meeting on their own accord within four months upon the Board having received such request. In case the Supervisory Board does not convene and hold meetings, Shareholder(s) individually or collectively holding more than ten percent of the Shares for 90 consecutive days may convene meetings on their own accord. The convening procedures shall as much as possible be equivalent to those of for meeting convened by the Board.

9.2 Enquires of and Communication with Shareholders

The Company publishes its announcements, financial information and other relevant information on its website at www.chalieco.com.cn, as a channel to promote effective communication. Shareholders are welcomed to make enquiries directly to the Company at its principal place of business in Hong Kong. The Company will respond to all enquiries on a timely and proper basis.

The Board welcomes Shareholders' views and encourages them to attend general meetings in order to propose any concerns they might have directly to the Board or the management. The chairman of the Board and the chairmen of all Committees usually attend the annual general meeting and other general meetings to address questions raised by the Shareholders.

Detailed procedures of voting and resolutions voted by way of poll have been set out in the circular previously dispatched to the Shareholders.

10. COMPLIANCE WITH THE CORPORATE GOVERNANCE CODES

The Company adhered to maintain a high standard of corporate governance as a listed company on the Stock Exchange.

Since Mr. HE Zhihui has resigned his duties including being the chairman and Director of the Company, a majority of the Directors of the Company recommended Mr. ZONG Xiaoping, the executive Director and president, to take his place as the chairman during the period between the resignation of Mr. HE Zhihui and a new chairman is elected by the Company. According to the code provision A.2.1 set out in the Corporate Governance Codes contained in Appendix 14 to the Listing Rules, the roles of the chairman and chief executive officer should be separated and should not be performed by the same individual. The Company will ensure sound corporate governance practice during Mr. ZONG Xiaoping's tenure of both positions. The Board is of the view that the balance of power and authority will not be affected as for the current arrangement, and this structure will enable the Company to make and implement decisions more promptly and effectively. After a new chairman is elected by the Company, the duties between the chairman and the president will be separated.

CORPORATE GOVERNANCE REPORT

During the year ended 31 December 2018, the Company has complied with all code provisions (excluding provision A.2.1) set out in the Corporate Governance Code contained in Appendix 14 to the Listing Rules, and adopted in its best practice proposed in which as appropriate. Details of which refer to the Corporate Governance Report set out on page 71 to 88 of this annual report.

11. INVESTOR RELATIONS

11.1 Investor Relations Activities

Announcement of Results and Results Roadshows

On 20 August 2018, the management of the Company held an online roadshow for the initial public offering of A Shares. It conducted online communication with the investors via the interactive platform provided by Shanghai Stock Exchange Roadshow and CN Stock (中國證券網).

Investors' Routine Visits

In 2018, the Company had sufficient communication with investors through inviting investors for site visit, on-site meeting and teleconference, etc.

11.2 Information Disclosure

The Company has published more than 200 announcements on the website of the Stock Exchange and SSE.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Chalieco issued the first *Environmental, Social and Governance (ESG) report* in 2016. This is our third ESG report, which has been approved by the Board of Directors and forms part of the Company's annual report. The business entities covered by this report are the same as those covered by the annual report. This report mainly discloses the operation of Chalieco and its member companies in the fields of responsibility governance, engineering quality, R&D, innovation, environmental protection, and community building for the period of January 1 to December 31, 2018. The report follows provisions and requirements of the *Environmental, Social and Governance Reporting Guide as set out in Appendix 27 to the Listing Rules of the Stock Exchange of Hong Kong Limited* and *the Notice on Strengthening the Social Responsibility of Listed Companies* and the *Issuance of the Guidelines on Environmental Information Disclosure of Listed Companies* of the Shanghai Stock Exchange. Unless specified, all information and data in this report came from the Company's official documents, statistical reports and financial reports, as well as the environmental, social and governance information counted, aggregated and verified by the Company.

1. RESPONSIBILITY GOVERNANCE

1.1 Compliance with Laws and Regulations

Chalieco continues to promote deep integration of legal compliance and business management, embedding legal review into the management process and improving the legal risk prevention mechanism. Our barrier of risk prevention and control has moved forward, making legal review a necessary link in business management.

The Group formulated the *Measures for Implementation of the Responsibilities of the First Responsible Persons for Chalieco Executives in Advancing Rule of Law Building* and the *Administrative Measures on Legal Disputes of Chalieco* among other policies. A compliance management system was established. With the general legal counsel at the helm, the system is led by the legal department, involving relevant departments that make concerted efforts to continuously improve the rule of law building.

The Group ensures that 100% of economic contracts, rules and regulations, and material decisions are legally reviewed and legal risks are analyzed, evaluated, and warned. The Company's material decision-making, important personnel appointments and dismissals, major project arrangements and large sums of capital operations comply with national laws and regulations and the rules and regulations of the Company to ensure that the content and procedures of decision-making are legal and compliant.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

1.2 Risk Control and Management

The Group continuously improves the risk management and control system. On one hand, we continue to strengthen institutional building by formulating a risk management and control system on all fronts such as *Detailed Rules for the Implementation of the Overall Risk Management of Chalieco, Detailed Rules for the Implementation of the Overall Risk Management Monitoring and Reporting, Measures for Testing and Evaluating Overall Risk Management System*, and *Measures for Internal Control Audit Management of Chalieco*. On the other hand, adhering to the principle of "checking erroneous ideas at the outset, front-end governance and source control", the Company conducts risk monitoring on both daily and periodic bases, and has established a systematic, standardized and efficient risk management mechanism.

Chalieco established three interactive and comprehensive lines of defense for risk management at different levels. The Group constantly monitors, records, analyses, evaluates and develops timely response strategies for the risks caused by the economic environment, the policy environment, external supervision, channel changes, technological transformation, competitors' actions, etc.

▼ Three Lines of Defense for Risk Management in Chalieco

Lines for Risk Management	Subjects of Risk Management	Risk Management Description
The First Line	Functional Management Departments and Business Units	To compile a monthly comprehensive risk management monitoring report that identifies risks, develops corrective measures and implements them.
The Second Line	Legal and Risk Control Department	To follow up the implementation of the measures, evaluate their effectiveness, compile a monthly and annual comprehensive risk management monitoring reports.
The Third Line	The Company's Risk Assessment Committee	To review the risk assessment reports for major decisions; supervise, evaluate and inspect the integrity and operational effectiveness of the Company's internal risk management system, and report to the Board.

In response to business risks, Chalieco always adheres to the concept of "risk is more important than profit", continuously strengthens risk prevention in operations, and improves its internal control system. Insisting in stability as priority, the Company prudently runs its business, strictly controls risks, and keeps stable while seeking progress and quality upgrade, which leads to high-quality development of the Company. This year, the Group achieved an enriched industrial chain and a higher capacity to resist risks, laying a good foundation for the steady development of the Company.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

1.3 Anti-Corruption and Integrity

In accordance with the *Anti-Unfair Competition Law of the People's Republic of China*, the *Provisional Regulations on the Prohibition of Commercial Bribery*, and relevant laws and regulations, the Group developed such internal policies as the *Responsibility System for Combating Corruption and Building Clean Governance, Measures for the Prevention of Corruption in Leaders*, and *Several Provisions on Integrity of Purchasing Personnel*. The Company pays close attention to clean governance building, starting with integrity and self-discipline while grounding itself in case verification, sparing no efforts in supervision and enforcement. In 2018 Chalieco had no corruption cases.

Chalieco firmly implements the *Eight-Point Regulation of the CPC Central Committee* by vigorously rectifying irregularities and enforcing disciplines and resolutely ridding the four forms of decadence: formalism, bureaucratism, hedonism and extravagance. During the reporting period, the Group issued *Guiding Opinions on Building "Zero-tolerance" Systems and Mechanisms* and revised 23 systems such as the *Decision-making System on Three Material Issues and Large Sums of Capital Use*. A comprehensive ban on alcohol was reaffirmed for internal corporate affairs. The "four forms of decadence" were prevented during the festival period. The institutional "cage" was tightened by investigating formalism and bureaucratism and strictly dealing with cases that had violated the *Eight-Point Regulation of the CPC Central Committee*.

In terms of building a clean company and party, the Group's party committee fulfills its responsibilities and leads the way forward. The *2018 Program for Dividing Responsibilities for Party Conduct, Anti-Corruption and Clean Governance* was issued, and five member companies were assessed in terms of party conduct and clean governance. This year, the Group organized three democratic life meetings and listened to six reports on building a clean company and party. The Group's Disciplinary Committee duly implemented its supervisory responsibility by targeting key leaders. This year, the Group signed 57 copies of the *Letter of Commitment to Anti-Corruption and Integrity*, reminded 60 party members and leading cadres, and supervised 69 party members and leading cadres in their performance of building a clean company and party. In addition, according to the requirements of the State-Owned Assets Supervision and Administration Commission of the State Council (SASAC), international corruption cases were studied and the Report on Risks in Countries along the "Belt and Road" was prepared to reduce the risk of corruption.

1.4 Social Responsibility Management

With the core vision of "Technology Leading to Realizing Our Dream", Chalieco regards "working conscientiously to create a better future" as our mission, integrating the concept of social responsibility into corporate strategy and operational decision-making. It is committed to the sustainable development of the Company and plays an important supporting role in building a first-class comprehensive engineering company in the world.

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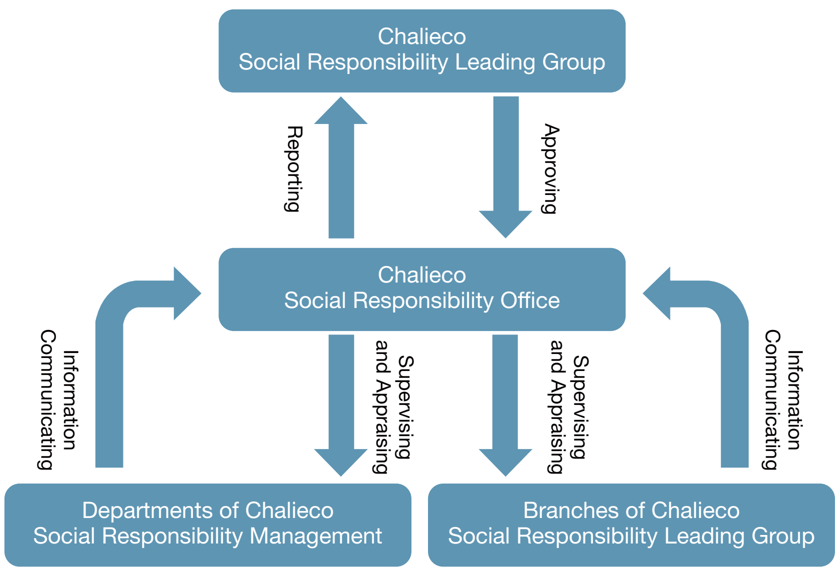
Responsibility Management System

The Group strengthens the organic integration of social responsibility and management, incorporating social responsibility in development strategies and daily operations. Working procedures to prevent social responsibility risks are promoted in all departments and levels for decision-making and daily operation and management.

The Company formulated and issued the *Detailed Rules for Implementation of Social Responsibility Work of Chalieco* to standardize the process and structure of social responsibility management. The Company established a leading group on social responsibility work, comprising of the Company's party chief and chairman as the leader, president as the executive deputy leader, the other members of the leadership and related personnel as deputy leaders, and heads of various departments as other members. The leading group is responsible for reporting the progress of social responsibility work to superiors, passing down the guidance of Chinalco on social responsibility work, and coordinating the implementation of the Company's social responsibility work. An office affiliating with the leading group is responsible for the daily work on social responsibility and managed by the president's office (the office of the Board of Directors), the head of which is also the director of the leading group's office.

In addition, the Company formulated the *Social Responsibility Management Modules and Negative Lists of Chalieco* to clarify the tasks of social responsibility management and the personnel with responsibility, and set responsibility indicators and negative lists for all relevant departments and member companies.



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Stakeholder Engagement

Chalieco pays great attention to stakeholder engagement, promoting the Company's social responsibility concepts through various channels, understanding stakeholders' needs, and performing correspondent measures to meet stakeholders' reasonable expectations and demands.

Stakeholders	Expectations and Requirements	Communication and Response
Government and Regulatory Authorities	Implementing national policies, laws and regulations consistently Promoting local economic development Promoting the development of the industry	Reporting materials Offering advice and suggestions Special reports Negotiation and cooperation
Shareholders	Revenue and returns Compliant operations Safe production	Company announcements Special reports Field visits
Customers and Partners	Performing contracts legally Integrity in operations High quality products and services	Business communication Customer feedback Exchange and discussion meetings
Environment	Compliant emissions Energy conservation and emission reduction Ecology protection	Work reports Report submission Visits and investigations
Employees	Protecting employee rights Occupational health Compensation and benefits Career development	Employees' congress Collective negotiations Democratic communications platform
Community and the Public	Improving the environment of communities Participation in public service Openness and transparency	Company website Company announcements Interviews and communication

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Materiality Analysis

In order to understand the ESG expectations, demands and requirements of stakeholders, we have identified material issues for sustainable development by conducting a materiality analysis. In this regard, with reference to the *Environmental, Social and Governance Reporting Guide* and the *GRI Sustainability Reporting Standards (GRI Standards)*, we established a standardized approach to materiality analysis to identify the sustainability issues that pertain to Chalieco. Based on the degree of importance to stakeholders, and to the sustainable development of Chalieco, we have identified material issues as the basis of the Company's sustainable management objectives.

Analysis Procedure of Environmental, Social and Governance Topics

Topic Sources

- Corporate Management Suggestions
- Analysis and Suggestion from Internal and External Experts
- Media Information Analysis
- National and International Peer Companies Benchmarking Study
- Social Responsibility Standard Guidelines

Screening Standards

- Contribution to Sustainable Development
- Stakeholders' Concerns In General
- Emphasis and Request by Social Responsibility Guidelines
- Catering the Needs of Corporate Strategic Development

Results of Materiality Analysis

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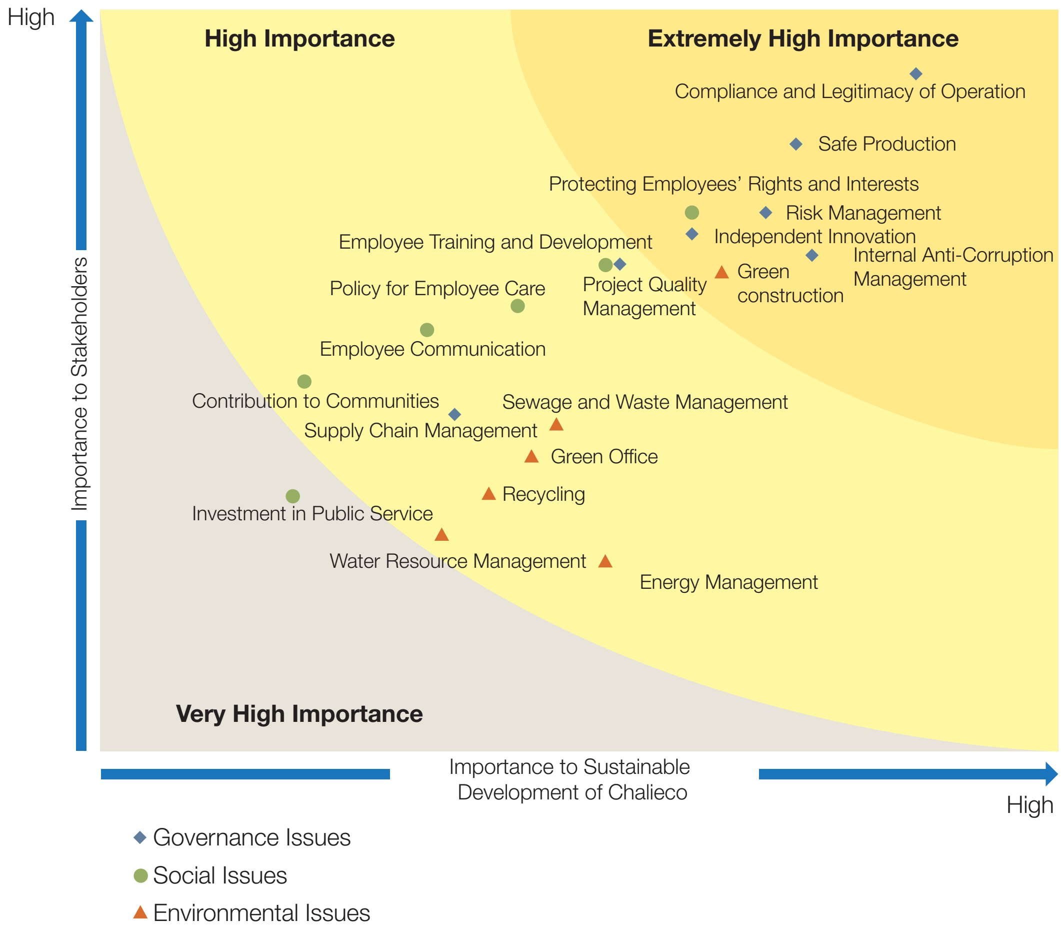
In 2018, based on annual business review and summary as well as internal review by senior management, we revised the results of Chalieco ESG materiality analysis and formed the following ESG materiality matrix:

ESG Materiality Matrix of Chalieco in 2018



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2. QUALITY AND INNOVATION: TO DRIVE INDUSTRIAL DEVELOPMENT

Chalieco pays attention to business quality and service, continuously integrates resources, and deepens the level of scientific research and innovation. We improve the intellectual property management and protection system, and actively implement the application of information technology to gain industry recognition for quality engineering. At the same time, to fulfill its mission of promoting the progress of the industry, we strictly implement supplier management and drives the progress of the entire industry chain.

2.1 Creating High Quality Projects

The Group earnestly observes the relevant laws and regulations such as the *Product Quality Law of the People's Republic of China, Regulations on the Quality Management of Construction Projects*, etc. We established the *Quality Management Measures of Chalieco* and other systems to refine quality-first management and create quality projects. In 2018, to manage project quality, the Group formed "eight mandatory standards and eight recommended standards" to guide the general contracting work on the right track, while continuously strengthening its general contracting capacity with strict control of engineering quality and in strict compliance with commitment on progress.

In order to promote the advanced experience of project management internally, Chalieco formulated and issued the *Benchmarking Project Selection Methods of Chalieco*. In 2018, two meetings on benchmarking project observation and exchange were held respectively in Chifeng Yuntong Project and Xianyang Fangnancheng Project. Excellent experience and practices were summarized for learning and promotion at all levels within the Group. Externally, the Group formulated and issued the *Measures to Award Engineering Excellence of Chalieco* to encourage member companies to strive for quality projects. Up to now, a total of 14 projects by member companies have been named the "provincial high-quality project".

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Shenyang Institute won the recognition of customers with its high-quality service and leading technology. It formulated the *Overall Plan for Safe and Standard Construction* with high standards to emulate the electric power industry and strived to create high-quality projects. Considering from the customers' perspective, the Company gave full play to technological advantages and organized experts to carry out multi-round design optimizations to reduce the cost of projects. Thus, the Company gained recognition from the customers.

Twelfth Metallurgical Company attaches great importance to project management and quality control. It continuously strengthened its capabilities in project management and control by strengthening project training, vigorously promoting the application of BIM and other technologies, and establishing the "craftsman team" on project management and the "bodyguard team" on industrial service. In 2018, the Twelfth Metallurgical Company won 4 ministerial-level QC Group Achievement Awards, 85.3% satisfaction with the 19 projects under construction in a customer survey, and 100% passing rate of unit projects upon completion. Its project quality is steadily improving.

2.2 Enhancing Innovation

The Group always puts scientific and technological innovation at the core of enterprise development and strategic transformation. We constantly standardize intellectual property and patent management and improve scientific research and innovation management to encourage scientific and technological research and development, while promoting the Group's application and practice of new technologies in aspects such as processes and information.

Encouraging Technological Innovation

To encourage scientific research and innovation as well as protect the achievements of R&D personnel, the Group formulated the *Scientific Research Management Provisions of Chalieco*, *Scientific Research Fund Management System of Chalieco*, *Interim Measures of Chalieco for Technology Innovation Award*, and *Measures for Technology Transfer and Licensing Management of Chalieco* to guarantee the rights and achievements of scientific research personnel and standardize the management of scientific research and innovation. In 2018, the Group invested RMB794 million in technology research and development, representing 2.37% of the total revenue of the year.

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Chalieco attaches great importance to the protection of intellectual property rights. We formulated the *Patent Management Measures of Chalieco* to regulate patent work, protect scientific research results, and stimulate the enthusiasm of employees for invention and creation. In 2018, Chalieco applied for 304 domestic patents, including 149 invention patents, and was authorized 207 domestic patents, including 80 invention patents, and 8 international patents.

During the reporting period, 17 awards were granted to the Group at the ministry-level scientific and technological prizes by the industry association, among which, 7 First Prizes, 8 Second Prizes and 2 Third Prizes were awarded. The Group was also granted a Prize of Excellence for the 20th China Patent Award. 27 construction industrial methods were awarded as ministry-level industrial methods.

In 2018, the Integrated Intelligent Manufacturing Standardization and New Model Application project being implemented by Shenyang Institute was the only standardized national project in the industry; and the Zinc Cleaning and Smelting and Efficient Use of Key Technologies and Equipment project implemented by Changsha Institute was awarded the Second Class Award of the National Science and Technology Award. Two scientific research achievements, namely "Aluminum Electrolytic Cell Flue and Gas Deep Purification Technology and Device" and "Aluminum Electrolytic Cell Multi-Parameter Balance Control Technology and Device" developed by GAMI have been appraised as "international leading". Besides, the Group continued to carry out R&D and scientific research and innovation in alumina and electrolytic aluminum by establishing the National Research Center for Aluminum and Magnesium Electrolysis Equipment Engineering Technology. Three projects under the national "863 Program" and 1 project of international cooperation undertaken by the Center were all successfully completed as planned and passed the acceptance evaluation in 2018.

Promoting the Application of Information Technology Innovation

By vigorously integrating internal resources, Chalieco continuously promotes the application of information technology. The Group fully utilizes and integrates advanced technologies such as big data, cloud computing and artificial intelligence to make breakthroughs in applied technology, conducts independent R&D, and accelerates the industrial translation of scientific research and innovation achievements. In 2018, Chinalco achieved breakthroughs in system integration, intelligent manufacturing, intelligent parks, and automation projects, providing a full range of information services for owners and customers, realizing technological innovation to lead enterprise development.

The Group pays great attention to information security, establishing internal management systems such as *Wide Area Network (WAN) Management Measures of Chalieco, Management Measures for Computer Virus Prevention and Control of Chalieco*, and *Management Measures for Information System Security of Chalieco* to strengthen the security of information systems.

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Guiyang Institute Builds “Remote Big Data Diagnostic Service Center for Aluminum Electrolysis”

In 2018, Guiyang Institute’s project “Remote Big Data Diagnostic Service Center for Aluminum Electrolysis” submitted to “Digital Economy (Cultivation) Project” and “2018 Big Data Industry Development Pilot Project” of the Big Data Development Administration of Guizhou Province was approved. Guiyang Institute vigorously promoted the “Remote Big Data Diagnostic Service Center for Aluminum Electrolysis”, committed to building a centralized data center and integrated information integration service platform. The center used new technologies and Internet+ to conduct data-based remote diagnosis and technical services for aluminum electrolysis enterprises. A special task force on intelligent manufacturing was also set up to carry out pain-point analysis of alumina and electrolytic aluminum production enterprises and to formulate an action plan on intelligent manufacturing.

In 2018, Guiyang Institute and India Vedanta Aluminum initially established a remote diagnosis and technical service platform for aluminum electrolysis cells.

Shenyang Institute Continues to Upgrade Engineering Technology and Won an International Award for its 3D Collaborative Design Technology

In 2018, Shenyang Institute formed a complete digital 3D collaborative design standard and system, and established a coding system and database in line with international design standards. It has the obverse 3D collaborative design ability from intelligent P&ID to digital 3D model to intelligent break-out section. The Company’s digital 3D collaborative design level leads the aluminum industry. The Company successfully applied digital 3D collaborative design in many international projects such as Indonesian alumina, Jamaican alumina, Venezuelan electrolytic aluminum, Saudi petroleum coke calcination, etc., ensuring standardization and uniformity of design drawings from the source, hence the design results widely praised.

In October 2018, Shenyang Institute won the Glory Award in the field of manufacturing in the final of the “Bentley 2018 Infrastructure Glory Grand Prix”. Its application capability of 3D collaborative design technology was recognized by foreign peers.

“Intelligent Manufacturing” Unit of Changsha Institute Was Recognized and Granted 10 Software Copyrights

In 2018, Changsha Institute established the “Intelligent Manufacturing Unit”, formed a professional team of intelligent manufacturing, and obtained 10 related software copyrights. This year, Changsha Institute completed the information security system certification and carried out the information system service standard certification with the Ministry of Industry and Information Technology (MIIT). It established the first intelligent manufacturing center as a platform and big data research demonstration project in Hunan Province. The platform was approved as the “Research Center of Intelligent Manufacturing Engineering Technology for Nonferrous Metallurgy of Hunan Province” and the project approved by the MIIT as the “Research and Application of Big Data Integration for Non-Ferrous Metals Mining and Heavy Metals Smelting”.

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2.3 Optimizing Supply Management

In addition to strict self-discipline, Chalieco sets requirements for suppliers' operational performance. The Group implemented *Regulations on Qualified Supplier Management*, *Measures for Management of Credit Risks of Customers and Suppliers as Trading Partners of Chalieco (Provisional)*, and *Interim Measures for Credit Management of Customers and Suppliers*. The specifications cover management systems for supplier access, evaluation and exit from the whole life cycle. In the supplier access link, the Group takes suppliers' quality, environment and Quality, Health, Safety and Environment Management (QHSE) management system and related qualifications as prerequisites for admittance. Those with energy-saving and environment-friendly products are given priority.

The Group evaluates suppliers through regular monitoring, site visits, regular dynamic quantitative assessment, compliance reviews and other measures. To keep improving supplier resources, the Company organizes at least one regular supplier assessment every year, and set incentive measures according to the assessment results.

In 2018, the Group further optimized the supplier management system in tendering and bidding for project construction. During the reporting period, the Group formulated and issued a series of management systems, including the *Implementation Rules for Management and Supervision of Tendering and Bidding for Construction Projects of Chalieco*, *Measures for Supervision and Inspection of Tendering and Bidding for Construction Projects of Chalieco*, *Implementation Rules for the Measures of Supervision and Inspection of Tendering and Bidding for Construction Projects of Chalieco*, and *Regulations on Management and Supervision of Tendering and Bidding for Expenditure of Chalieco Headquarters*, etc. With these systems, supervision and rectification of practices in tendering and bidding were strengthened to sustain the Company's improvement in tendering and bidding management.

3. GREEN AND SAFE OPERATIONS: TO PROMOTE SUSTAINABLE DEVELOPMENT

The Group thoroughly implements the national strategy on safe development and ecological conservation. To meet the implementation requirements of the *Three Critical Battles* (i.e. battles against poverty, pollution and risks), the Group implements green operation based on actual business conditions. We vigorously carry out market-oriented green technology innovation and continue to strengthen safe production. Aiming at improving environmental quality and promoting high-quality development, the Group takes the social responsibility of consolidating ecological conservation and safe production and construction.

3.1 Green Operations

The Group strictly abides by national laws and regulations such as the *Law of the People's Republic of China on the Prevention and Control of Air Pollution* and the *Law of the People's Republic of China on the Prevention and Control of Water Pollution* by discharging pollutants of various types in accordance with law. The Group established a QHSE management system and updated the *QHSE Procedure Document* and *Manual of QHSE Management System* in 2017 to make them more in line with the actual business operations, while continuously strengthened environmental risk management and control. In 2018, the Group organized internal auditor training, internal audit of system documents and external audit by third parties on the QHSE management system, and continuously improved the quality management system PDCA (Plan-Do-Check-Act) to achieve complementarity between standard requirements and practical work.

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Energy Conservation and Emission Reduction

In 2018, the Group focused on improving its work on environmental protection like strengthening environmental awareness and actively responding to environmental issues. We adopted various measures for energy conservation and emission reduction during business operations to reduce natural resource consumption. We also actively use materials certified as environmental friendly as possible to make a positive contribution to lowering the environmental burden on our planet. In 2018, total energy consumption of the Group was 10,589.6 tons of standard coal, total energy consumption per 10,000 yuan revenue was 0.00315 tons of standard coal, emission of carbon dioxide equivalent (CO_2e) was 46,713.4 tons, and emission of CO_2e per 10,000 yuan revenue was 0.01391 tons.

Chalieco 2018 Work Framework for Energy Conservation and Emission Reduction

Optimizing project design	Eliminating high energy-consuming equipment	Technological innovation and transformation
• Requiring all design units to continuously optimize the design of technological solutions for energy saving and emission reduction • Actively advocating the research and development of new technologies, new materials and new products to promote the work on environmental protection in all respects	• Eliminating high-energy electricity (water) facilities and promoting the use of energy-saving (water-saving) devices • Designating personnel to be responsible for pipeline inspections to prevent leakage	• Setting up sedimentation and circulating tanks and using recycled water as much as possible for such construction operations as concrete mixing • Promoting advanced construction techniques, transforming backward processes, and improving construction efficiency

The Resources Consumption of Chalieco from 2017 to 2018

	Unit	2017	2018
Total water consumption	tons	2,964,730.2	**2,726,551.8**
Total water consumption per 10,000 yuan revenue	tons	0.822	**0.812**
Total power consumption	kWh	41,929,637.8	**36,471,384.9**
Natural gas consumption	m^3	2,017,826.0	**1,915,934.7**
Fuel consumption	L	3,596,903.7	**3,325,120.4**

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Green Construction

The Group advocates green construction in harmony with nature. We formulated *Regulations on Civilization Construction Management of Engineering Projects* and *Regulations on Environmental Protection Management of Projects*, requiring all projects to implement land-saving, water-saving, energy-saving and material-saving measures on site, thus to reduce air pollution and noise, and to properly dispose solid waste to reduce the adverse impact on environment and resources.

Dust Reduction

Construction sites inevitably generate flying dust due to the use of sand, lime, mortar and other building materials. Dust lowers air quality and adversely affects human health. In response to dust and other air pollutants generated during the construction process, the Company formulated the *Regulations on Dust and Poison Management of Engineering Projects* which clearly stipulates "Six-100%" target for dust management. To maintain a safe and clean construction site, the site must be equipped with dust remover, denoiser, sprinkler, spray gun machine, dust detector and other environmental facilities in strict accordance with those requirements of the government where the project is located.

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Noise Prevention

During the process of project construction, the Group strictly abides by the *Law of the People's Republic of China on Prevention and Control of Pollution from Environmental Noise*. We formulated *Regulations on Construction Noise Control of Construction Projects* clarifying noise control standards and measures during project construction. Noise is reduced by reducing noise from the source and installing denoiser. Noise pollution caused by project construction is also strictly prevented to protect physical and mental health of employees and surrounding residents.

- **Noise reduction from the source:** During the construction, the operation of equipment with large noise such as earthwork excavator, rotary excavator and dregs transport vehicle should be scheduled reasonably to avoid construction at night.

- **Protection and noise reduction:** Silencers are installed onto high noisy equipment; these silencers are regularly inspected and their repair and maintenance is strengthened; noise detectors such as decibel meter are installed at construction sites to detect on-site noises, so as to take timely measures to reduce noises; mechanical equipment that produces louder noises in close proximity to villages and residential areas are enclosed by soundproofing sheds or walls to minimize interference with surrounding residents; temporary noise barriers are constructed near relatively immobile mechanical equipment to reduce noise transmission.

Solid Waste Disposal

For solid waste disposal, the Company gives priority to recycling and formulates the *Regulations on Solid Waste Management of Engineering Projects* which clearly stipulates the disposal methods of waste rocks, waste sand, dregs, steel scrap and other wastes generated during the construction process to reduce waste amount and implement green construction consistently.

- The construction waste is transported to the designated place for dumping.

- Necessary solid waste collection facilities are installed at construction sites, so that materials, leftovers, wastes, garbage, etc. can dispose of on site as soon as the work is done. Materials that cannot be cleared immediately are neatly arranged.

- All kinds of solid wastes are sorted and put in the designated place, and a garbage clearing contractor or subcontractor is promptly contacted for proper disposal.

- Hazardous waste is collected before being disposed and transferred to environmental protection authorities or qualified third-party agencies to prevent potential damage to the environment.

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Resources Conservation

The Group encourages installation of solar street lamps at construction sites to save power consumption. The Company formulated the *Regulations for Water Management at Construction Sites of Engineering Projects*, clarifying measures for management of on-site water resources utilization and systems for domestic sewage and production wastewater discharge. These measures and systems reduce water consumption and avoid water pollution incidents. We aim to build resource-saving and environment-friendly projects.

Recycling water resources to reduce fresh water demand

- Installing rainfall collection systems at construction sites, collecting rainwater for vegetation watering, toilet flushing and vehicle cleaning
- Connecting all links of water using part to enhance recycling and reduce water consumption and wastewater discharge

Treating wastewater properly to prevent environmental pollution

- Domestic sewage is discharged to municipal sewage pipes
- Wastewater with more suspended solids is treated with sedimentation before being discharged
- Entrusting qualified sewage treatment stations for treating pipeline cleaning solution with high acidity

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Green Office

The Group advocates green office and green life. We commit to sinking the concept of green operation into daily work and life of employees. The Group always practices low-carbon environmental protection. While continuously improving employees' awareness of energy saving and consumption, we actively call on employees to save water, electricity, paper and collect used batteries to prevent harmful pollution.

- Kunming Survey and Design Institute adopted the OA system in 2018 to reduce use of paper, saving 20% of paper compared with 2017.

- Shandong Engineering uses acousto-optic control lamp, saving 5,000 kWh of electricity per year.

- Shandong Construction Equipment Manufacturing Company, the branch of Changsha Institute, have installed solar lamps, saving 180,000 kWh of electricity per year.

- Tianjin Construction has installed water-saving equipment, saving 5 tons of water resources every year.

The Solid Waste and Wastewater of Chalieco from 2017 to 2018

		Unit	2017	2018
Hazardous waste	Toner cartridge consumption	kg	771.7	**1,137.4**
	Fluorescent tube consumption	kg	1,568.9	**1,458.6**
Non-hazardous waste	Kitchen waste	tons	111.1	**132.4**
	Waste concrete	tons	–	**81.5**
	Waste earth and stone	tons	–	**3,209.0**
	Steel scrap	tons	–	**140.6**
	Waste wood	tons	–	**75.1**
Wastewater	Wastewater emissions	tons	1,553,475.4	**1,444,731.0**
	Wastewater emissions per 10,000 yuan revenue	tons	0.43	**0.43**

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3.2 Promoting Environmental Protection Technology

The Group actively responds to the *Air Pollution Prevention and Control Action Plan, Water Pollution Prevention and Control Action Plan* and *Soil Pollution Prevention and Control Action Plan* of the state by implementing the concept of green development. We vigorously develop and promotes environmental protection technologies, undertakes green projects and improves the quality of ecological environment, thereby promote the organic unity of economic value and ecological value.

While undertaking various green projects such as water pollution control, air pollution control, soil remediation and mine remediation, the Group pays attention to integrate the concept of environmental protection start from the design stage of new projects and actively adopts environmental protection technologies to achieve sustainable development of projects throughout the life cycle.

- Adhering to the concept of innovative, coordinated, green, open and sharing development, Changsha Institute ensures that mines throughout the life cycle are always in harmony with the surrounding environment from the beginning of design, to create green mines with Chinese characteristics. Nearly 30 mines co-designed by Changsha Institute such as Pingguo Bauxite Mine and Fankou Lead-Zinc Mine were rated as National Green Mines Pilot Unit.

- Four new environmental protection technologies such as "two-channel countercurrent" dry purification of flue gas from electrolysis and "PAC (powdered activated carbon) multi-point feeding" asphalt smoke purification developed by Guiyang Institute, were applied to 8 projects. Two environmental technology achievements "Aluminum Electrolytic Cell Flue Gas Deep Purification Technology and Equipment" and "Aluminum Electrolytic Cell (Kiln) PM2.5 Control Technology and Equipment" of the "863 Program" passed expert appraisal.

- The MVR solvent recovery technology self-developed by China Nonferrous Metals Processing Technology Co., Ltd. was awarded the "Clean Production Demonstration Project" by Ministry of Industry and Information Technology. Its ultra-filtration membrane products for sewage treatment and fresh water filtration obtained 13 relevant invention patents.

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Kunming Survey and Design Institute Launched Pulang Copper Mine Recovery Project

From May to August 2018, Kunming Survey and Design Institute carried out the environmental restoration project for the first phase of Pulang Copper Mine in Yunnan. The project included works such as slope treatment by net-suspended spray-sowing on thick-layer base, site remediation by covering soil and spraying grass seeds for greening and building cyclopean concrete trenches:

- there are a lot of stones, trunks, branches and other debris mixed in the topsoil of the mine's spoil ground, which is not conducive to spraying. It is necessary to first screen the soil to remove the debris, and dry it. The soil for planting should be covered to avoid exposure to rain;

- through research on vegetation planting techniques for slope protection, a principle is adopted, i.e. "shrubs as the mainstay, supplemented by herbs on slope surface, and trees as the mainstay, supplemented by vines at slope toe" and "trees and vines being mainly transplanted, and herbs and shrubs being mainly sowed in mixture", thus to promote the positive succession of the ecosystem;

- slope and site remediation is carried out by combining artificial and mechanical means. Mud, loose and protruding block stones, trunks and branches, etc. are removed from surface, laying a good foundation for artificial soil greening and natural restoration.

Due to scientific research, meticulous restoration, strict management and quality control, Kunming Survey and Design Institute repaired 16,000 m^2 and greened 190,000 m^2 of slope around the mine. With valuable experience and technology accumulated of mine restoration, the Institute has become a solid and reliable force to win the battle of ecological restoration of mines.

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Shenyang Institute Develops Alumina Roaster Waste Heat Utilization Technology for Energy Saving

During the high-temperature calcination of aluminum hydroxide to obtain alumina, a large amount of flue gas containing heat, water vapor, alumina particles and a small amount of SO_2 is discharged into the atmosphere, which not only causes loss of heat and water vapor, but also causes air pollution with alumina particles and SO_2.

Shenyang Institute innovatively developed the alumina roaster waste heat utilization technology to recover heat and water vapor in flue gas, and reduce particulate matter and SO_2 emissions. After this technology is adopted, every year, 120,000 tons of water resources can be recycled; the heat recovered is equivalent to about 15,000 tons of standard coal; carbon dioxide emissions reduce by 39,800 to 47,900 tons; about 55 tons of alumina in flue gas is recovered. The annual net income is about 9 million yuan. The technology was rated as a major energy-saving technology in the alumina industry by China Nonferrous Metals Industry Association. Having reached the international leading level, the technology won the second prize of Science and Technology of China Nonferrous Metals Industry in 2018.

Alumina Roaster Waste Heat Utilization

Heating red mud washing water

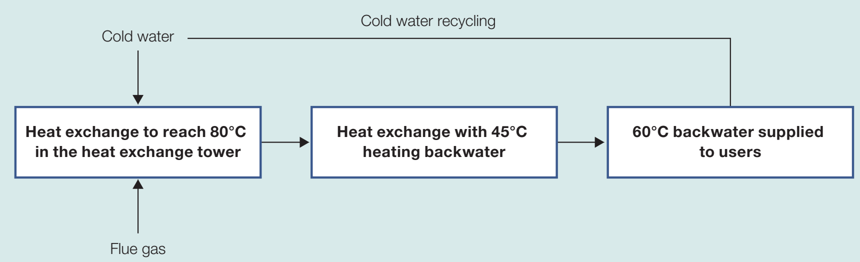
- Red mud washing water and hot flue gas discharged from the roaster's induced-draft fan directly exchange heat in the heat exchange tower, so that the cold water is heated to 95°C for cleaning red mud.

For winter heating

- The cold water exchanges heat with hot flue gas in the heat exchange tower to reach 80°C which then exchanges heat with the 45°C heating backwater, causing the latter to reach 60°C. The heated backwater is supplied to users, and the cold water returns to the heat exchange tower to continue being heated.

Reducing particulate matter and SO_2 emissions

- The alumina dust recovered by the heat exchange tower is concentrated at the bottom of the tower, and the concentrated slurry flows to the slurry tank and then sent to the aluminum hydroxide slurry tank by submerged pump to reduce the alumina dust and SO_2 emission.



Heating Recycled Water with Waste Heat from Boiler for Winter Heating

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3.3 Strengthening Safety Management

The Group thoroughly implements the National 13th Five-Year Plan for Safe Production and always adheres to the safety management concept that all risks can be controlled and all accidents can be prevented. Following the safety policy of people as orientation, prevention as foundation, continuous improvement and building harmony, we establish a sound safety management system and effectively strengthen grassroots safety management by carrying out various types of safety inspections.

Safety Management System

The Company strictly abides by *Work Safety Law of the People's Republic of China* and *Law of the People's Republic of China on the Prevention and Control of Occupational Diseases*. We formulated the *Safety Production Responsibility System of the Project Department* which stipulates safety management of project sites and safety production responsibility of each rank. Risks are controlled in a hierarchical manner for which corresponding management levels and risk control measures are determined, thus ensuring the personal safety of construction workers and reducing occupational diseases. The Company actively improves the QHSE management system and conducts internal audits on a regular basis to effectively build a four-in-one risk management and control system of quality, health, safety and environment.

In addition, based on the QHSE management system, the Company established the Chalieco Accurate Management System of Quality, Health, Safety and Environment (CAHSE), and in May 2018 issued *Evaluation Standard for CAHSE*. Combining the actual characteristics of engineering, we organized experts to prepare 6 CAHSE evaluation standards respectively for industrial construction, civil construction, municipal road construction, non-coal mine construction, surveying and mapping and processing, and established a comprehensive health, environment and safety management system which is applicable to the Group. Each member company was audited in relation to CAHSE, so that the Group's safety production could enter a new stage.

Safety Inspection

Grassroots safety management is always a top priority for safe production. To this end, the Company formulated the *Regulations on Safety Inspection and Hazards Rectification of Engineering Projects*, which stipulates that the Group shall conduct safety inspections and hidden dangers rectification actions on a regular basis to comprehensively improve its risk management. In 2018, the Group actively carried out safety inspections for non-traditional construction industries such as maintenance operations, industrial services, mine construction, municipal roads, etc., and sorted out safety issues for rectification. "Seven-Musts" special inspections and "unannounced inspections" of first-line personnel of projects were conducted. On-site rigorous assessment was carried out to reduce project safety hazards. Each member company was organized to carry out special safety inspections of subcontractors and equipment and facilities, truly implementing safety management at the grassroots level.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

- **Unannounced safety inspections:** In 2018, the Group hired a third-party professional organization to conduct unannounced inspections on safety and quality of 9 projects under construction by 9 member companies. The results showed that the actual pass rate of physical works in each project was 86.21%, higher than 81.97% in 2017; the pass rate in relation to safety and civilization was 76.89%, 6.39% higher than that in 2017.

- **"Seven-Musts" safety inspections:** The Group organizes enterprise self-inspection, cross-check, random inspection by the Group, third-party inspection, etc., urging enterprises to implement the requirements of *Top Ten Bans* and "Seven-Musts". A follow-up assessment is strictly carried out for those with violations in the first place.

Chalieco Top Ten Bans for Safe Production	
It is strictly forbidden for people who have not received "three-level" safety education to get on the job. It is strictly forbidden to smoke in places prone to inflammation and explosion. It is strictly forbidden to enter confined space to work without approval. It is strictly forbidden to shut down for maintenance or troubleshooting without reference to specifications. It is strictly forbidden to stack too high.	It is strictly forbidden for unlicensed personnel to engage in special operations. It is strictly forbidden to do electrical work without work permits. It is strictly forbidden to work high above the ground without wearing seat belts. It is strictly forbidden to cross or enter operating facilities in violation of rules and regulations. It is strictly forbidden to enter production area or construction site after drinking.

Chalieco "Seven-Musts" System for Safe Production		
Chinalco's *Top Ten Bans* for safe production must be strictly observed.	Full-time safety management personnel at the working site must be equipped as required.	Temporary employees must sign a contract with the labor service company and be trained to qualify before getting on the job.
Dangerous operations must be approved step by step.	Special safety programs must be prepared for more dangerous sub-projects.	Workers entering the working site must wear helmets properly.
Protective measures must be in place according to requirements at working sites prone to accidents.		

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

3.4 Promoting Safe Production

The Group consistently implements various safety and security measures. We enhance employees' safety awareness and pay attention to safeguarding employees' occupational health. We require subcontractors to enhance safety management and control and effectively improve the safety management of project sites, ensuring the Group to operate in a solid and stable manner.

Implementing Safety Guarantee

The Group formulated the *Eight-Prohibition Regulations for the Commencement of Construction Projects*, stipulating that safety inspections are conducted before the start of construction, while encouraging member companies to implement various safety protection measures.

- The second phase of Xianyang Fangnancheng rundown area renovation project set up a VR experience hall on site, where employees can intuitively experience the five major injuries such as falling, object strike, collapse, electric shock and mechanical injury to effectively enhance their safety awareness.

- Tianjin Construction actively carried out activities to reward suggestions and reports of hidden dangers. Those who propose reasonable proposals on safety, environmental protection and Standard construction or report hidden dangers are rewarded after being identified and approved. So far, 56 people have participated in these activities, reporting and eliminating 58 hidden dangers.

- China Nonferrous Metals Processing Technology Co., Ltd. has established an online safety education training and examination system, and set up 10 modules of safety education including construction management, safety supervision, and workshop operation to effectively solve the problem that employees cannot participate in training due to business trips and absenteeism.

In 2018, the Group pushed hard the implementation of "List of Two Responsibilities for One Post in Safety Work" system. Combined with the Company's adjustment of organizational structure and division of labor among employees, the "List of Two Responsibilities for One Post" was reviewed and filed for the management, department heads, new recruits, and personnel transferred to other positions. At the same time, through irregular sampling, year-end CAHSE system review and other methods, all levels of employees were urged to constantly improve their own "List of Two Responsibilities for One Post in Safety Work" and perform their duties according to the list.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Improving Safety Awareness

Enhancing employees' awareness of safe production is the starting point to promote safe production. The Group conducts a wide range of activities such as safety warning education, safety training and "Safe and Clean" team appraisal. We adopt a diversified and modern approach to build a safe production culture, strengthening employee awareness of safety and ensuring safe and effective development of construction projects.

- **Safety education and training:** the Group adopts an organic combination of training methods such as training by external lecturers, internal communication and innovative experience. More targeted and effective safety training courses are designed for the actual needs of employees in different positions and ranks. In 2018, the Group's employee safety training exceeded 280,000 hours with 100% coverage of employees.

- **Safety emergency drills:** the Group regularly organizes safety drills for emergencies. We apply safety management and training content to drill practice and explore long-acting mechanisms for safety management and training. In 2018, the Group carried out 211 safety emergency drills, involving 5,594 people.

- **Safety Warning Conference:** in 2018, the Group organized a safety warning conference for grassroots management personnel and construction personnel in the first line of projects. A total of 1,043 employees participated, among which grassroots management personnel, project construction personnel and subcontractors' employees accounted for 91.2%, establishing a top-down awareness of safe production at all levels.

- **"Safe and Clean" team appraisal:** in 2018, the Group carried out a "safe and clean" team selection activity internally to promote safety with fineness and cleanness and to guarantee development with safety and cleanness, thus to improve the safety awareness across the Company. For the safe and clean teams to play a leading role, the Group filmed the refined practices of four excellent teams and produced a promo video to spread internally.

In 2018, the Company Produced Animation Videos to Promote Safe Production

Given the high mobility and low education of construction workers, the Company produced vivid animation videos with real scenes and typical cases, considering safety focus, weak links and prominent factors of the construction site, while combining the Group's safety concept and *Top Ten Bans*. Highly pertinent and effective, the animation for training can be adjusted and customized according to the safety focus of the engineering sector, so that workers receive safety education more intuitively and clearly, thereby effectively improving the effectiveness of training.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Protecting Employees' Physical and Mental Health

The Group pays highly attention to the occupational health of employees. We formulated *Measures for Management of Occupational Health, Safety and Environment*, stipulating measures and responsible personnel of occupational health protection for employees in various positions to ensure their physical and mental health from the institutional level. The Group regularly organizes employees to take physical checkups every year. An occupational health record was established for each employee. Employees are also equipped with protective gears according to the actual situation of different positions to ensure the occupational health of all employees.

The Group cares about the mental health of employees by actively promoting the balance between work and life and striving to create a pleasant and harmonious working atmosphere. In 2018, the Group invited psychologists to conduct psychological lectures for employees, helping employees better manage negative emotions and work and live with a positive and optimistic attitude.

Strengthening Sub-Contractors' Safety Management

The Company continuously strengthens the management of subcontractors. In accordance with the requirements of "Seven-Steps" for contractor management, combined with its own characteristics, the Company formulated the *Key Measures for Management and Control of Subcontractors' Safety of Chalieco (Trial)* to strengthen assessment of subcontractor access, process management and reward and punishment mechanism. Self-inspection, cross-check and external inspection are carried out for subcontractors. With its own high standards and strict requirements, the Company mobilizes subcontractors to improve safety and jointly build a healthy, safe, comfortable and harmonious environment for project construction.

4. SHARING AND INTEGRATING: TO GO FORWARD TOGETHER

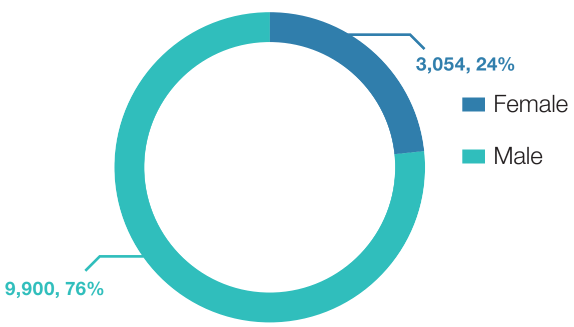
The Group is committed to leading all stakeholders to make continuous progress and build a community of common destiny through sustained and stable operation and development. We actively establish development platform for its employees in order to accomplish the corporate mission of "For people" and "To make people great". By following the country's strategies, we put continuous efforts to overseas cooperation and establish excellent engineering projects. We promote community inclusion, devote to public welfare work, pay close attention to philanthropy and share the development results together with the whole society.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

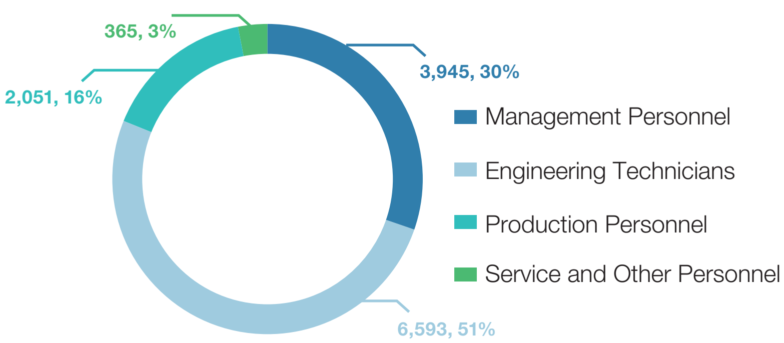
4.1 Protecting Employees' Rights and Interests

The Group strictly recruits and manages employees in accordance with national laws including the *Labour Law of the People's Republic of China, Employment Contract Law of the People's Republic of China* and the *Law of the People's Republic of China on the Protection of the Minors*. The Company formulated internal rules and regulations such as the *Employee Recruitment and Management Measures for Chalieco Headquarters* and the *Employment Contract Management Measures for China Aluminum International Engineering Corporation Limited (Trial Implementation)*. The Company standardizes the employment system, eliminates forced labor and job discrimination, guarantees equal employment, implements ethnic policies, strictly prohibits the use of child labor in all areas and resolutely protects employees' rights and interests. As of the end of the reporting period, there are 12,954 employees in the Group, with a total staff turnover rate of 3.81% in 2018.

Number of Employees by Gender



Number of Employees by Professions



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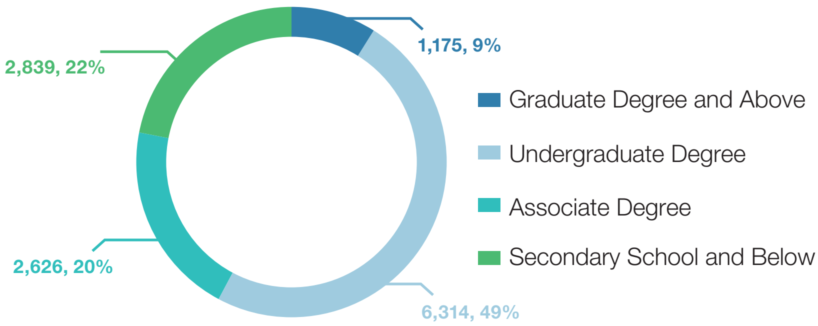
Number of Employees by Education



The Group formulated the *Employees' Welfare Management Measures for Chalieco Headquarters* and established a complete salary and welfare system. The Company provides with competitive salaries and pays social insurance and provident fund for employees, implements flexible vacation policies and establishes standard enterprise annuity system. The Company also set up special incentive fund to reward employees who make outstanding contributions by continuously providing them with incentives and enhance their sense of identity and belonging to the Company.

The Group cares for female employees' health and life, resolutely protects their legitimate rights and special interests, implements the provisions of pregnancy leave, maternity leave and lactation leave for creating a fair and friendly working environment for female employees. In 2018, the Company organized a series of activities for female employees including seminars and floriculture courses, so that female employees can feel the attention and warmth from the Company.

4.2 Supporting the Growth of Employees

Concerning the Group's strategic orientation and serving the needs of transformation development, employee training and talent team construction are highly enhanced. Centering on employees' capability building, based on the *Measures on* Staff *Education and Training*, the Group innovates on the methods of training to build a high-level, high-quality and high-standard employee team.

The Company continuously improves all employees' capabilities of political theories understanding and professional performance. Insisting on the strategies of going out and inviting in, the Company creates a learning atmosphere and helps employees realize individual values by both centralized training and self-study. In 2018, altogether 21,046 employees in the Group attended training programs, and the total training time has reached 173,765 hours.

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4.3 Caring for Employees

The Company vigorously implements projects for employee care, advocates the philosophy of "Lifelong study and Healthy life", implements democratic management, devotes itself to establish "Bright, Comfortable, Sincere and Friendly" employee relations, deeply understands and pays close attention to the living conditions of grassroots employees, endeavors to improve their living qualities, actively launches various recreational and sports activities and cares for employees in difficulties. The Company enhances employees' identification to the value of the Company through people-oriented approach.

- **Launching recreational and sports activities**: The Company established staff home and continuously constructs and expands venues for recreational and sports activities and equipped them with sports facilities. In 2018, the Company held the 2nd Fun Sports Game and the 3rd Employee's Basketball Match, which further enriched the cultural life of employees and strengthened team cohesion.

- **Caring for employees in all respects**: The Company visits and greets front-line employees before festivals including the Lunar New Year, Dragon Boat Festival and Mid-Autumn Festival, distributes movie cards, park cards and birthday cake cards to them. The Company attentively cares for each employee by building maternal and infant rooms for female employees, installing charging stations for employees who commute with electric vehicles and providing free working meals and showers, etc.

- **Helping employees in difficulties**: The Company and some member companies have established supporting systems for employees in difficulties or formulated measures for charity fund management, which specifies the source of the fund, refines the scope of assistance, unifies the amount of subsidies and regulates the implementation procedure, in order to alleviate employees' difficulties from the source.

- **Implementing democratic management**: All member companies have established and improved their democratic management systems and enterprise affairs publicity systems based on employee congress through which employee representatives' proposals can be widely collected. The Company introduced monthly *Leadership Listening Days*, carries out activities on leadership listening days to establish a platform for the face-to-face communication between company leaders and employees, where the real demands of employees can be heard and their difficulties can be solved in good time.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

4.4 Enhancing Overseas Cooperation

The Group continues to improve its overseas platform construction. With world's leading professional technologies and customer service, the Group continuously expands its overseas market layout.

The 2nd Fun Sports Game

The 3rd Employee Basketball Match

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Intimately centering on the country's "Belt and Road" Initiative, the Group fulfills its responsibilities of overseas project development and leads the world's first-class engineering technologies. In the reporting period, the Group altogether signed 68 overseas projects with a total project sum of RMB2.15 billion.

- As the Group's overseas financing platform and overseas business platform, the Hong Kong Company have established effective communication mechanisms with Sixth Metallurgical Company and Malaysia Company to keep abreast of project progress and project needs.

- Malaysia Company has signed 360 affordable housing projects LOA with house owners in Kylantan State and paid bid deposit.

- Cooperating with China Nonferrous Metals Industry, Maishake Trade and Logistics Co., Ltd. and local Chinese-funded enterprises, Kunming Survey and Design Institute is carrying out four geological technology service projects.

- Shenyang Institute has increased investment in developing overseas market. It signed the Saudi Petroleum Coke Calcinations Project and Laos Alumina EP Project, which laid solid foundation for the Group's long-term development.

Under the background of the country's "Belt and Road" Initiative, Shenyang Institute actively implement the strategies of "going out", transformation and upgrading. Relying on the world's leading "G2 tank calciner" technology, the Institute signed Saudi SCPC Petroleum Coke EPC General Contracting Project in December 2018, which fully indicates that the "G2 tank calciner" has become the world's leading technology. After the accomplishment of construction, the project will not only play an important role in Saudi Arabia, but also make great active impacts on the downstream industries in the Middle East as well as on the local social and economic development and job market. The Project will also further promote and improve the Company's brand image in the international market, which will lay a solid foundation for the in-depth business development in the global market.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

4.5 Promoting the Well-Being of People's Livelihood

Bearing in mind the mission of improving people's livelihood, the Company vigorously carries out precise poverty alleviation programs, actively constructs the economic development consortium, organizes volunteer service teams, conducts community welfare activities and makes efforts to encourage the wide participation of stakeholders into philanthropy. The Company developed the policy *Administration Measures for Donations of Chalieco* to standardize the amount and process of charitable donations, which becomes a system guarantee for carrying out public welfare programs. In 2018, the Company invested RMB370,239 for precise poverty alleviation.

Targeted poverty alleviation

The Company deeply implements the country's strategy of Targeted poverty alleviation, resolutely completes the task of winning the tough battle against poverty and actively carries out poverty alleviation by education. The Company has supported 9 impoverished students in Haiyan County, Qinghai Province for three consecutive years. The Company conducts consumption-based poverty alleviation in order to boost the sales of products in poor areas. By means of "buying instead of donating", "buying instead of helping", the Company purchases products and services from impoverished areas and helps them get rid of poverty.

- In September of 2015, China Nonferrous Metals Industry started the partner assistance work in Wang Village, Cangtou Town, Xin'an County, Luoyang City. From 2014 to 2018, it has helped 87 households, a total of 298 people, get rid of poverty. In 2018, another 24 households, 75 people got rid of poverty and the poverty rate in the village has been reduced to 0.73%, which means the whole village has realized complete poverty alleviation.

- Changsha Institute carries out precise poverty alleviation work in Minshi Village, Shatang Township, Shuangfeng County between 2018-2020. 52 members of poverty alleviation team partner with 72 impoverished households in the village and go deeply into their home to understand their basic condition, causes of poverty and intentions of poverty alleviation, according to which they propose targeted and effective poverty alleviation plans to effectively help them get rid of poverty.

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Volunteer Service

The Company actively sets up volunteer service teams and promotes the volunteer service spirits of dedication, friendship, mutual assistance and progress. The Company organized a volunteer service team which aims to take inspiration from Lei Feng. On special days including “Learn from Lei Fun Day” and Volunteer Service Day, the team goes deep into communities and carries out various volunteer service activities. In addition, member companies actively organize employees to implement environment protection activities including green cycling and green tree-planting, to contribute strengths of both individuals and the Company to the environmental quality improvement and the creation of ecological civilization.


Green Cycling Activity


Volunteer activities on “Learn from Lei Feng Day”

PROFILES OF DIRECTORS AND SENIOR MANAGEMENT

DIRECTORS

Mr. WANG Jun (王軍): aged 48, is currently the non-executive Director of the Company. He is a senior accountant with a master's degree in business administration. He has been accredited the SIFM qualification certificate and obtained the qualification of Chartered Institute of Management Accountants (CIMA) and has also been admitted to the National Training Program for Accounting Army Leading Backup (全國會計領軍(後備)人才培養工程). He has worked in Chinalco as the general representative of the Peru office and has served in various positions, including the executive Director, the chief financial officer and the secretary to the Board of the Company; the chief financial officer and the manager of the finance department of China Aluminum Mineral Resources Co., Ltd. (中鋁礦產資源有限公司); a director of China Aluminum Insurance Broker (Beijing) Co. Ltd (中鋁保險經紀(北京)股份有限公司); a director of Chinalco Asset Management Company (中鋁資產經營管理公司); a supervisor of Chalco; and the deputy chief accountant, the director of the finance department and the director of capital operation department of China Aluminum Group (中鋁集團). Mr. WANG is the chief financial officer and the secretary of board of Chalco (中國鋁業). He is also the chairman of the supervisory board of China Rare Earth Holdings Limited (中國稀有稀土股份有限公司), a director and the president of Aluminum Corporation of China Overseas Holdings Limited (中鋁海外控股有限公司), a director of Chinalco Finance Company Limited, a director of Chinalco Capital Holdings Limited (中鋁資本控股有限公司), a director of Chinalco Asset Management Company (中鋁資產經營管理有限公司), an executive director and manager of Beijing Silver Aluminum Investment Co. Ltd. (北京銀鋁投資有限責任公司), the chairman of the board of directors and legal representative of Beijing National Aluminum Investment Management Co. Ltd. (北京國鋁投資管理有限公司), the legal representative and a member of investment decision making committee of Beijing China Adjustment Chalco Copper Industry Development Fund (Limited Partnership) (北京國調中鋁銅產業發展基金(有限合夥)).

Mr. LI Yihua (李宜華): aged 40, is currently the non-executive Director of the Company. He is an economist with a master's degree in business administration. He has worked as the project manager in Yunnan Huawen Hengye Investment Company (雲南華文恒業投資公司) and has served as the director of legal affairs department and deputy head of investment and development department in Yunnan Sino-platinum Metals Co., Ltd. (雲南貴研鉑業股份有限公司), the deputy director of the corporate development department in Yunnan Tin Group (Holding) Co., Ltd. (雲南錫業集團(控股)有限責任公司), the secretary for board of directors, and the director of the securities department in Yunnan Tin Co., Ltd. (雲南錫業股份有限公司), the vice president of Yunnan Investment Holding Group Co., Ltd. (雲南投資控股集團有限責任公司), the deputy director of the legal department of Chinalco (中鋁公司), and the director of the legal affairs department in China Aluminum Group (中鋁集團). Mr. LI is a director of capital operation department of China Aluminum Group (中鋁集團), a director of China Aluminum International Trading Corporation Limited (中鋁國際貿易有限公司), and a director of Aluminum Corporation of China Iron Ore Holdings Limited (中鋁鐵礦控股有限公司).

PROFILES OF DIRECTORS AND SENIOR MANAGEMENT

Executive Directors

Mr. HE Zhihui (賀志輝): aged 56, has been served as the chairman of the Board, the executive Director, the Party secretary, and the chairman of the labor union of the Company during the reporting period. He is an excellent senior engineer with a master's degree in engineering, and received the special government allowance from the State Council. Mr. HE served as the dean of the Guiyang Aluminum Magnesium Design & Research Institute (貴陽鋁鎂設計研究院) and acted as the deputy general manager and the president of the Company. He served as the chairman of the board of directors of China Nonferrous Metals Processing technology Co., Ltd.. Mr. HE is the assistant to the general manager of China Aluminum Group (中鋁集團), and the director of the joint board of directors of RTCI (中鋁－力拓技術合作中心). Due to work redeployment, Mr. HE has resigned as the chairman of the Board, the executive Director, the member and the chairman of the Risk Management Committee, the member and the chairman of the Nomination Committee, and the member and the chairman of the Strategy Committee of the Board of the Company on 21 February 2019.

Mr. ZONG Xiaoping (宗小平): aged 50, is currently the executive Director, the president, the deputy Party secretary and the member of the Strategy Committee of the Board of the Company. He is an excellent senior engineer with a master's degree in business administration. He served as the responsible person for project technology and project manager, the deputy director in chief engineer office, deputy general manager and the general manager of the Third Construction Company of East China Sea Development and Construction Corporation of China State Construction Eighth Engineering Corporation Limited (中國建築第八工程局有限公司東海開發建設總公司第三建築公司); the general manager of Guangzhou Branch of China State Construction Eighth Engineering Corporation Limited (中國建築第八工程局有限公司廣州分公司); the deputy general manager in the headquarter of southwest region of China State Construction Engineering Corporation Limited (中國建築股份有限公司); and the executive director and legal representative of China Construction Aluminum Advanced Material (Chengdu) Co., Ltd. (中建鋁新材料成都有限公司). Mr. ZONG is also the chairman and legal representative of China Construction Aluminum Advanced Material Co., Ltd. (中建鋁新材料有限公司).

Mr. WU Zhigang (吳志剛): aged 58, is currently the executive Director and the vice president of the Company. He is a senior engineer with a college degree. Mr. WU served as the deputy manager of Machinery Engineering Company in Sixth Metallurgical Construction Company of China Nonferrous Metals Industry Co., Ltd. (中國有色金屬工業第六冶金建設公司機械化工程公司), the chief deputy manager and the standing deputy manager of its Hainan Branch, the deputy general manager and the general manager in Sixth Metallurgical Construction Company of China Nonferrous Metals Industry Co., Ltd. and an executive director and the general manager in Sixth Metallurgical Construction Company of China Nonferrous Metals Industry Co., Ltd.. Mr. WU is also served as the executive director of the China Aluminum International Investment Management (Shanghai) Co., Ltd. (中鋁國際投資管理(上海)有限公司).

PROFILES OF DIRECTORS AND SENIOR MANAGEMENT

Mr. ZHANG Jian (張建): aged 47, is currently the executive Director and the chief financial officer of the Company. He is an accountant with a master's degree in business administration. Mr. ZHANG served as the deputy section head and head of the cost estimation section of the finance department of Henan Branch of Chalco (中國鋁業河南分公司); the business manager of the general office, deputy manager of the accounting office and deputy manager of the budget analysis office in the finance department of Chalco (中國鋁業); the deputy manager of the finance department (taking charge of the work) of Zhongzhou Branch of Chalco (中國鋁業中州分公司); the deputy manager of the accounting office (taking charge of the work) and the manager of the general management office of the finance department of Chalco (中國鋁業); the chief financial officer of Chalco Hong Kong Limited (中國鋁業香港有限公司); and the chief legal adviser of the Company. Mr. ZHANG is also the director of the Chinalco Finance Company Limited.

Independent Non-Executive Directors

Mr. GUI Weihua (桂衛華): aged 68, is currently the independent non-executive Director, the member and the chairman of the Remuneration Committee, the member of the Nomination Committee, and the member of the Strategy Committee of the Board. He is a professor holding master postgraduate qualification. Mr. GUI is the academician of the Chinese Academy of Engineering, an academic leader among the Innovative Research Groups of the National Natural Science Foundation of China (國家自然科學基金創新研究群體), the head of the Nonferrous Metallurgical Automation, the Ministry of Education's Engineering Research Center (有色冶金自動化教育部工程研究中心), the head of the Institute of Information Science and Engineering, Central South University (中南大學信息科學與工程學院控制工程研究所), as well as a professor and instructor of doctorate students of Central South University (中南大學). Mr. GUI also served as a director of Changsha Wuhua Technology Development Co., Ltd.(長沙伍華科技開發有限公司).

Mr. CHEUNG Hung Kwong (張鴻光): aged 51, is currently the independent non-executive Director of the Company, the member and the chairman of the Audit Committee of the Board. He is a member of the American Institute of Certified Public Accountants and a chartered financial analyst qualified by the CFA Institute. Mr. CHEUNG obtained master postgraduate qualification and served as a manager of the transaction service department/audit department of PricewaterhouseCoopers. He served as the chief financial officer of the Boto Company Limited (寶途集團), and the chief financial officer, company secretary and joint authorized representative of the Kaisa Group Holdings Ltd. (佳兆業集團控股有限公司).

PROFILES OF DIRECTORS AND SENIOR MANAGEMENT

Mr. FU Jun (伏軍): aged 47, is the currently independent non-executive Director of the Company, the member of the Audit Committee, the member of the Remuneration Committee and the member of the Nomination Committee of the Board. He is a Professor with a doctoral degree of law. Mr. FU went on an exchange and interviewed with Harvard University as a senior visiting scholar of Fulbright (福布賴特高級訪問學者). He served as a teaching assistant and associate professor in University of International Business and Economics (對外經濟貿易大學), and an independent non-executive director of CCB Principal Asset Management Co., Ltd. (建信基金管理有限責任公司). He is a professor of the Law School of University of International Business and Economics (對外經濟貿易大學); an arbitrator of China International Economic and Trade Arbitration Commission (中國國際經濟貿易仲裁委員會), an arbitrator of South China International Economic and Trade Arbitration Commission (Shenzhen Court of International Arbitration) (華南國際經濟貿易仲裁委員會（深圳國際仲裁院）), an arbitrator of Guangzhou Arbitration Commission (廣州仲裁委員會), an arbitrator of Shanghai International Economic and Trade Arbitration Commission (Shanghai International Arbitration Center) (上海國際經濟貿易仲裁委員會（上海國際仲裁中心）) and an arbitrator of Cairo Regional Centre for International Commercial Arbitration (開羅國際商事仲裁中心). Mr. FU is the deputy secretary general and permanent member of Institute of International Economic Law under China Law Society (中國法學會國際經濟法學研究會), the deputy director of the Professional Committee of the International Financial Law under China Law Society (中國法學會國際金融法專業委員會) and an executive director of China Banking Law Society (中國銀行法學研究會).

SUPERVISORS

Mr. HE Bincong (賀斌聰): aged 56, the former chairman of the Supervisory Board, the staff representative Supervisor, the deputy Party secretary, and the secretary to discipline inspection commission of the Company. He is a senior engineer with a bachelor's degree in engineering. Mr. HE served as the supervisor at deputy director level of the supervision bureau in China Nonferrous Metals Corporation (中國有色金屬工業總公司), the manager of the general affairs department of Beijing Xinou Technology Development Ltd. (北京鑫歐科技發展有限公司), the deputy Party secretary and secretary to discipline inspection commission of Shanxi Carbon Plant (山西碳素廠), the deputy general manager of the human resources department in Chalco (中國鋁業), the deputy general manager of China Aluminum Development Ltd. (中鋁置業發展有限公司), the chairman of the labor union of the Company, and the director of Zhuzhou Tianqiao Crane Co., Ltd. (株洲天橋起重機股份有限公司). Due to work redeployment, Mr. HE ceased to hold the duties of the deputy Party secretary and the secretary to discipline inspection commission of the Company since 27 February 2019, and resigned as the chairman of the Supervisory Board and the staff representative Supervisor of the Company on 26 March 2019. Mr. HE ceases to hold any position in the Company upon his resignation.

PROFILES OF DIRECTORS AND SENIOR MANAGEMENT

Mr. FAN Guangsheng (范光生): aged 52, is currently the chairman of Supervisory Board and employee representative Supervisor of the Company, deputy Party secretary and the secretary to discipline inspection commission. He is a senior engineer with a master's degree in business administration. Mr. FAN served as a technician of the design management office, the deputy secretary of the Communist Youth League, and deputy director of the Party Committee Office in Qinghai Aluminum Factory (青海鋁廠), the director of the Party Committee Office, the assistant to the general manager, the director of the manager office, the deputy Party secretary, the secretary to discipline inspection commission, and the chairman of the labor union of Qinghai Aluminum Co., Ltd. (青海鋁業有限責任公司), the deputy Party secretary, the secretary to discipline inspection commission, and the chairman of the labor union of the Qinghai Branch of Chalco (中國鋁業青海分公司), the Party secretary, the secretary to discipline inspection commission, and the chairman of the labor union of the Northwest Aluminum Processing Branch of Chalco (中國鋁業西北鋁加工分公司), the Party secretary, the secretary to discipline inspection commission, and the chairman of the labor union of Northwest Aluminum Processing Factory (西北鋁加工廠), the Party secretary, the chairman of the labor union, the general manager, and the director of Shanxi Huaxing Aluminum Co., Ltd. (山西華興鋁業有限公司), and the member of Shanxi Work Promotion Office of Chalco (中鋁山西工作推進辦公室). Mr. FAN is also currently serving as the director of China Aluminum Shanxi Lvliang Mining Corporation Limited (中鋁山西呂梁礦業有限公司).

Mr. LI Wei (李衛): aged 48, is currently the Supervisor of the Company. He obtained a master's degree in law and served in various positions, including the probation deputy division head of the 2nd Factory of Beijing Coal Corporation (北京市煤炭總公司), the discipline inspector of the Research Office under the Integrated Inspection Office of the Discipline Commission of the Communist Party of China (director-level), the office director of the Accredited Institution of the Integrated Inspection Office (director-level), the director of the 2nd division of seconded cadres of organization department, the deputy director of the department of discipline inspection and supervision (inspection office) of Chinalco, the regional center director (Southwest region) of discipline inspection and supervision. Mr. LI is the director of the department of discipline inspection and supervision, the director of the inspection office and the deputy head of the department of discipline inspection of the Party Committee of China Aluminum Group (中鋁集團). He is also the supervisor of Southwest Aluminum (Group) Co., Ltd. (西南鋁業(集團)有限責任公司).

Mr. OU Xiaowu (歐小武): aged 54, is currently the Supervisor of the Company. He is a senior auditor with a bachelor's degree in economics. Mr. OU served as the director of 1st division of the audit department in China Nonferrous Metals Industry Corporation (中國有色金屬工業總公司), the deputy director of the finance department and audit department of China Copper Lead Zinc Group Corporation (中國銅鉛鋅集團公司), the director of the finance department (audit department) in Chinalco, a general manager of the finance department of Chalco (中國鋁業), the chairman of the supervisory board of China Aluminum Insurance Broker (Beijing) Co. Ltd (中鋁保險經紀(北京)股份有限公司), the director and chief financial officer of China Copper Co., Ltd. (中國銅業有限公司), and the supervisor of Guangxi Huayin Aluminum Co., Ltd. (廣西華銀鋁業有限公司). Mr. OU is the deputy chief auditor and the director of the audit department of China Aluminum Group (中鋁集團) and is also the director of China Copper Co. Ltd, the supervisor of Chalco Energy Co., Ltd. (中鋁能源有限公司), the chairman of the supervisory board of Qinghai Yellow River Hydropower Renewable Aluminum Co., Ltd. (青海黃河水電再生鋁業有限公司), and the supervisor of Southwest Aluminum (Group) Co., Ltd. (西南鋁業(集團)有限責任公司).

PROFILES OF DIRECTORS AND SENIOR MANAGEMENT

SENIOR MANAGEMENT

Mr. ZONG Xiaoping: For details of the profile of Mr. ZONG Xiaoping, please refer to the sub-section headed "Directors" above.

Mr. WU Zhigang: For details of the profile of Mr. WU Zhigang, please refer to the sub-section headed "Directors" above.

Mr. ZHANG Jian: For details of the profile of Mr. ZHANG Jian, please refer to the sub-section headed "Directors" above.

Mr. WANG Yonghong (王永紅): aged 55, is currently the vice president and the safety officer of the Company. He is an excellent senior engineer with a master's degree in engineering. Mr. WANG served as a technician in Shanxi Wenxi Fertilizer Factory (山西聞喜化肥廠); the officer of the engineering department and Alumina Engineering Supervising Unit of Shanxi Aluminum Plant (山西鋁廠); the deputy head of the engineering division of Alumina Engineering Supervising Unit (氧化鋁工程指揮部) of Shanxi Aluminum Plant (山西鋁廠); the deputy head of the general deployment unit, the head of the mechanical engineering division, and the head of the third Alumina sub-branch of Shanxi Aluminum Plant (山西鋁廠); the deputy general manager, the deputy general manager (taking charge of the work), and general manager of Zhongzhou Branch of Chalco (中國鋁業中州分公司); a member of the tenth session of the Jiaozuo Committee of Communist Party of China; the executive director, general manager, Party secretary, chairman of the labour union of Chinalco Shenyang Non-Ferrous Metals Processing Co., Ltd. (中鋁瀋陽有色金屬加工有限公司); the assistant to president of China Rare Earth Holdings Limited (中國稀有稀土股份有限公司); the ombudsman of aluminum processing division of China Aluminum Group (中鋁集團); and the deputy head of Work Promotion Office of Chinalco Henan. Mr. WANG is also the director of Chalco Tendering Company Limited (中鋁招標有限公司).

Mr. LIU Ruiping (劉瑞平): aged 51, is currently the vice-president of the Company. He is an excellent senior engineer with a postgraduate degree from Party School of the Central Committee. Mr. LIU served as the chief engineer and deputy director of economic planning division of SAMI; the deputy manager and manager of the Alumina Project of Investment Management Department and manager of the First Division of Chalco (中國鋁業); and the senior manager, deputy general manager and general manager of the Investment Management Department of Chalco. Mr. LIU is also the executive director and the Party secretary of China Nonferrous Metals Industry's 12th Metallurgical Construction Co., Ltd. (中色十二冶金建設有限公司).

PROFILES OF DIRECTORS AND SENIOR MANAGEMENT

Mr. BI Xiaoge (畢效革): aged 51, is currently the vice president of the Company. He is a senior engineer and graduated from Party School of the Central Committee. He served as various positions in Shandong Aluminum Company (山東鋁業公司), including a technician in quality management department of the Alumina Plant; the deputy director of Alumina Plant Workshop No.62, the deputy head of quality management department, and the head of Workshop No.2. He served as the director of quality management department of Shandong Aluminum Holdings Limited (山東鋁業股份有限公司); the deputy head of quality management department of Shandong Aluminum Company (山東鋁業公司); the deputy manager of the production operation department (quality management department), the deputy manager (taking charge of the work) and general manager of planning operation department of Shandong Branch of Chalco (中國鋁業山東分公司); the manager of the investment management department of Chalco Shandong Co., Ltd. (中鋁山東有限公司); a member of the enterprise transformation and upgrading workgroup of Chinalco Zhengzhou (中鋁鄭州); the deputy general manager of Henan Branch of Chalco (中國鋁業河南分公司); a standing member of the Party Committee of China Great Wall Aluminum Corporation Limited (中國長城鋁業有限公司); the deputy general manager of Chinalco Mining Corporation Limited (中鋁礦業有限公司). Mr. BI is also the executive director of China Aluminum International Technology Development Co., Ltd..

SECRETARY TO THE BOARD

Mr. ZHAI Feng (翟峰): aged 42, is currently the assistant to president, the secretary to the Board and the company secretary of the Company. He is an economist with a master's degree in business administration. Mr. ZHAI served as an auditor and the assistant manager of KPMG Huazhen (畢馬威華振會計師事務所), the operation manager of the secretary to the Board office (office of chief executive officer) of Chalco (中國鋁業), the operation manager of the operation department, senior operation manager and deputy manager of the capital operation division of Chalco (中國鋁業); and a director of the capital market division of the capital operation department of Chinalco.

HUMAN RESOURCES

HUMAN RESOURCES OVERVIEW

As of 31 December 2018, the Company had a total of 12,934 employees, of which 9,885 are male and 3,049 are female, representing 76% and 24% of the total staff, respectively. In addition, the Company has off-post reserve labor force of 2,323.

Table I: The following table shows a breakdown of our employees by business segment as of 31 December 2018:

No.	Category	Number of individuals	Percentage
1	Operation and management personnel	3,925	30%
2	Engineering technicians	6,593	51%
3	Production and operation personnel	2,051	16%
4	Service and other personnel	365	3%
Total		12,934	100%

Table II: The following table shows a breakdown of our employees by level of education as of 31 December 2018:

No.	Category	Number of individuals	Percentage
1	Graduate degree and above	1,170	9%
2	Undergraduate degree	6,305	49%
3	Associate degree	2,621	20%
4	Secondary school and below	2,838	22%
Total		12,934	100%

HUMAN RESOURCES

INCENTIVES FOR EMPLOYEES

The Company keeps responding to the development needs. It further established and optimized an effective employees' performance assessment system based on clear objectives of each position. The employees' performance is objectively and accurately assessed by breaking down the key tasks of the Company in the year, clarifying performance objective of different roles and setting performance standards. The assessment results are linked to the performance-based salaries in employees' remuneration to encourage innovation of the potential and devotion of employees.

EMPLOYEES' TRAINING

In order to foster the employee teams in an accelerated pace and enhance employees' work skills and professional qualifications, the Company compiles an annual training plan for employees based on the Company's development strategies, post requirements and demands of personal development. In adherence to the plan, the employees' training will be implemented accordingly through various training projects with an aim of generally improving management and technical skills of different categories of employees.

EMPLOYEES' REMUNERATION POLICY

The employees' remuneration comprises of basic salary, performance-based salary, various allowances and subsidies as well as benefits. The performance-based salary is determined based on the results of the Company and the performance assessment results of the employees.

INDEPENDENT AUDITOR'S REPORT

大信梁學濂(香港)會計師事務所有限公司

PKF
Accountants &
business advisers

26/F, Citicorp Centre
18 Whitfield Road
Causeway Bay
Hong Kong

To the shareholders of China Aluminum International Engineering Corporation Limited
(incorporated in the People's Republic of China with limited liability)

OPINION

We have audited the consolidated financial statements of China Aluminum International Engineering Corporation Limited (the "Company") and its subsidiaries (together, the "Group") set out on pages 138 to 312, which comprise the consolidated balance sheet as at 31 December 2018, and the consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the consolidated financial statements give a true and fair view of the Group's financial position as at 31 December 2018, and of its financial performance and cash flows for the year then ended in accordance with International Financial Reporting Standards 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. Our responsibilities under those standards are further described in the "Auditor's Responsibilities" 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.

INDEPENDENT AUDITOR'S REPORT

KEY AUDIT MATTERS

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

REVENUE RECOGNITION ON CONSTRUCTION CONTRACTS

The Group's revenue recognition on construction contracts as disclosed in Notes 3, 4 and 24 to the consolidated financial statements was determined to be a key audit matter because of its significance to the Group's revenue and profit and it involves a high level of management estimates of total contract revenue and contract costs; the stage of completion; the probability of customer approval of variations and claims; and the project completion dates.

Our procedures included, amongst others:

- evaluating accounting policy and disclosures;
- understanding, assessing and testing of the effectiveness of related key internal control design in relation to construction contracts;
- evaluating the performance and progress of the contracts through re-computation of percentage of completion; site observations and enquiries with the relevant project management on a sampling basis;
- testing the Group's estimates for the total contract revenue and contract costs through examination of external evidence, such as the contracts, approved variations and correspondences; enquiries with the relevant management; inventories taking; circularization and reviewing the outcome of the estimation made in prior period on a sampling basis;
- analysing the Group's major contract revenue, contract costs and gross margin; and
- assessing the adequacy of provision for loss making contracts.

INDEPENDENT AUDITOR'S REPORT

IMPAIRMENT OF FINANCIAL ASSETS AT AMORTISED COST AND CONTRACT ASSETS

The Group's loss allowances for expected credit losses on financial assets measured at amortised cost and contract assets as disclosed in Notes 3, 4, 22, 23 and 24 to the consolidated financial statements was determined to be a key audit matter because of the significance of the balances, and the inherent subjectivity involved in making judgement in relation to expected credit losses and estimating the loss allowances.

Our procedures included, amongst others:

- evaluating the accounting policy and disclosure;
- understanding, assessing and testing of the effectiveness of related key internal control design in relation to the credit approval and impairment loss allowances;
- assessing the recoverability of a sample of outstanding balances by reviewing the historical patterns of receipts, customers' financial position and ability to repay, ageing analyses, arranging circularization and assessing cash received subsequent to year end;
- assessing management's provision policy for expected credit losses on receivables and contract assets by selecting samples and:
  - noting the historical repayment patterns;
  - assessing cash received subsequent to year end;
  - evaluating the plans for recovering the outstanding balances, such as realization of the pledged assets and enforcement of guarantees;
  - questioning management's knowledge of future conditions that may impact the expected customer receipts;
  - reviewing and verifying the ageing analyses and the related provisions; and
  - performing overall analytics on the reasonableness of the impairment provisions.

INDEPENDENT AUDITOR'S REPORT

SUPPLEMENTAL DEFINED BENEFIT RETIREMENT SCHEME

The Group's supplemental defined benefit retirement scheme as disclosed in Notes 4 and 32(b) to the consolidated financial statements were determined to be a key audit matter because of the significant estimation uncertainty resulted from the use of actuarial assumptions, including discount rates, mortality, average medical expense increase rate, cost of living adjustment for beneficiaries and medical costs paid to early retirees.

Our procedures included, amongst others:

- evaluating accounting policy and disclosures;
- challenging and evaluating the valuation method adopted, assumptions made and data used by the management's expert in valuing the defined benefit obligations;
    - challenging the adequacy of the sensitivity calculations over the estimation;
    - reviewing the subsequent events relevant to the estimation;
    - determining whether indication of possible management bias exists; and
- evaluating the expert's competence and independence; and
- reviewing the outcome of the estimation made in prior period.

OTHER INFORMATION

The directors are responsible for the other information which comprises the information included in the Company's annual report for the year ended 31 December 2018 ("Annual Report") other than 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.

INDEPENDENT AUDITOR'S REPORT

DIRECTORS' RESPONSIBILITIES FOR THE CONSOLIDATED FINANCIAL STATEMENTS

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

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

The directors are assisted by the Audit Committee in discharging their responsibilities for overseeing the Group's financial reporting process.

AUDITOR'S RESPONSIBILITIES

Our responsibility is to express an opinion on these consolidated financial statements based on our audit and to 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.

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with International Standards on Auditing 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 of the consolidated financial statements taken on the basis of these consolidated financial statements.

INDEPENDENT AUDITOR'S REPORT

As part of an audit in accordance with International Standards on Auditing, 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.

INDEPENDENT AUDITOR'S REPORT

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.

PKF Hong Kong Limited
Certified Public Accountants
Hong Kong

Wan Tak Shing
Practising Certificate Number P04844

28 March 2019

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

	Note	Year ended 31 December 2018 RMB'000	2017 RMB'000
Revenue	6	**33,572,111**	36,065,346
Cost of sales	7	**(30,268,991)**	(32,707,341)
Gross profit		**3,303,120**	3,358,005
Tax and surcharges	7	**(74,166)**	(97,787)
Selling and marketing expenses	7	**(99,022)**	(131,674)
Administrative expenses	7	**(2,091,858)**	(1,832,716)
Other income	8	**78,598**	100,002
Other (losses)/gains – net	9	**(96,199)**	22,307
Operating profit		**1,020,473**	1,418,137
Finance income	10	**226,750**	266,547
Finance expenses	10	**(691,222)**	(642,161)
Gain on disposal of a subsidiary	42(a&c)	**124,801**	8,402
Gain on bargain purchase from business combination	42(b)	**–**	134
Share of profits of investments accounted for using equity method	20(b)	**3,984**	26,224
Profit before income tax		**684,786**	1,077,283
Income tax expense	11	**(145,856)**	(227,615)
Profit for the year		**538,930**	849,668
Other comprehensive income			
Items that may be reclassified to profit or loss			
Fair value losses on available-for-sale financial assets, net of tax		**–**	(13,845)
Currency translation differences		**47,347**	(79,361)
Item that will not be reclassified subsequently to profit or loss			
Fair value losses on financial assets at fair value through other comprehensive income, net of tax		**(39,026)**	–
Remeasurements of post-employment benefit obligations, net of tax		**(35,816)**	83,703
Other comprehensive loss for the year, net of tax		**(27,495)**	(9,503)
Total comprehensive income for the year		**511,435**	840,165

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

	Note	Year ended 31 December 2018 RMB'000	2017 RMB'000
Profit attributable to:			
Equity owners of the Company		**329,193**	616,879
Non-controlling interests		**209,737**	232,789
		538,930	849,668
Total comprehensive income attributable to:			
Equity owners of the Company		**301,278**	606,200
Non-controlling interests		**210,157**	233,965
		511,435	840,165
		RMB	RMB (restated)
Earnings per share for profit attributable to equity owners of the Company			
– Basic	12	**0.08**	0.20
– Diluted	12	**0.08**	0.20

The notes on pages 146 to 312 form an integral part of these consolidated financial statements.

CONSOLIDATED BALANCE SHEET

		At 31 December	
		2018	2017
	Note	**RMB'000**	RMB'000
Assets			
Non-current assets			
Property, plant and equipment	16	**2,480,553**	2,484,652
Land use rights	17	**700,277**	727,022
Investment properties	18	**212,449**	219,627
Intangible assets	19	**67,050**	207,985
Investments accounted for using the equity method	20(b)	**480,523**	249,098
Available-for-sale financial assets	21	**–**	318,921
Financial assets at fair value through other comprehensive income	21	**207,655**	–
Trade and notes receivables	22	**218,573**	1,991,852
Prepayments and other receivables	23	**1,476,000**	1,566,419
Deferred income tax assets	35	**676,003**	608,469
Other non-current assets		**4,671**	3,528
Total non-current assets		**6,523,754**	8,377,573
Current assets			
Available-for-sale financial assets	21	**–**	530,592
Financial assets at fair value through profit or loss	21	**156,670**	–
Trade and notes receivables	22	**15,822,274**	13,579,920
Prepayments and other receivables	23	**3,996,687**	4,024,297
Contract assets	24(a)	**12,244,506**	–
Amounts due from customers for contract work	24(c)	**–**	8,322,206
Inventories	25	**3,432,855**	3,033,803
Current income tax prepayments		**45,258**	14,784
Restricted cash	26	**978,857**	1,199,865
Time deposits	27	**–**	10,856
Cash and cash equivalents	28	**5,830,124**	6,279,894
Total current assets		**42,507,231**	36,996,217
Total assets		**49,030,985**	45,373,790
Equity			
Share capital	29	**2,959,067**	2,663,160
Reserves	30	**7,193,583**	6,515,070
Consolidated equity attributable to equity owners of the Company		**10,152,650**	9,178,230
Non-controlling interests		**3,032,815**	2,949,341
Total equity		**13,185,465**	12,127,571

CONSOLIDATED BALANCE SHEET

	Note	At 31 December 2018 RMB'000	2017 RMB'000
Liabilities			
Non-current liabilities			
Deferred income	31	**40,814**	44,007
Retirement and other supplemental benefit obligations	32	**713,871**	857,358
Long-term borrowings	33	**2,223,000**	2,792,675
Trade and other payables	34	**5,606**	5,608
Deferred income tax liabilities	35	**74,822**	66,251
Total non-current liabilities		**3,058,113**	3,765,899
Current liabilities			
Financial liabilities at fair value through profit or loss	21	**22**	–
Contract liabilities	24(b)	**2,707,597**	–
Amounts due to customers for contract work	24(c)	**–**	677,018
Retirement and other supplemental benefit obligations	32	**105,210**	124,426
Short-term borrowings	33	**10,400,642**	9,814,047
Trade and other payables	34	**19,417,876**	18,700,429
Dividends payable	36	**30,000**	30,000
Current income tax liabilities		**126,060**	134,400
Total current liabilities		**32,787,407**	29,480,320
Total liabilities		**35,845,520**	33,246,219
Total equity and liabilities		**49,030,985**	45,373,790
Net current assets		**9,719,824**	7,515,897
Total assets less current liabilities		**16,243,578**	15,893,470

The notes on pages 146 to 312 form an integral part of these consolidated financial statements.

The consolidated financial statements were approved by the Board of Directors on 28 March 2019 and were signed on its behalf.

He Zhihui
Director

Zhang Jian
Director

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

	Attributable to equity owners of the Group											
	Share capital RMB'000 (Note 29)	Capital reserve RMB'000	Statutory surplus reserve RMB'000 (Note 30)	Investment revaluation reserve RMB'000	Remeasurements of post-employment benefit obligations RMB'000	Currency translation differences RMB'000	Special reserve RMB'000 (Note 30)	Other equity instruments RMB'000 (Note 30)	Retained earnings RMB'000	Total RMB'000	Non-controlling interests RMB'000	Total equity RMB'000
At 1 January 2017	2,663,160	1,058,524	130,454	(1,090)	75,781	158,501	15,266	1,402,731	3,788,040	9,291,367	4,705,975	13,997,342
Profit for the year	–	–	–	–	–	–	–	–	616,879	616,879	232,789	849,668
Other comprehensive income:												
Fair value loss on available-for-sale financial assets – gross	–	–	–	(16,288)	–	–	–	–	–	(16,288)	–	(16,288)
Fair value loss on available-for-sale financial assets – tax	–	–	–	2,443	–	–	–	–	–	2,443	–	2,443
Remeasurements of post employment benefit obligations – gross	–	–	–	–	101,084	–	–	–	–	101,084	1,383	102,467
Remeasurements of post employment benefit obligations – tax	–	–	–	–	(18,557)	–	–	–	–	(18,557)	(207)	(18,764)
Currency translation differences	–	–	–	–	–	(79,361)	–	–	–	(79,361)	–	(79,361)
Total comprehensive income	–	–	–	(13,845)	82,527	(79,361)	–	–	616,879	606,200	233,965	840,165
Dividends to equity owners	–	–	–	–	–	–	–	–	(231,695)	(231,695)	(1,401)	(233,096)
Dividends paid to the holders of renewable corporate bonds and perpetual medium-term notes	–	–	–	–	–	–	–	–	(100,700)	(100,700)	–	(100,700)
Dividend paid to the holders of senior perpetual capital securities	–	–	–	–	–	–	–	–	–	–	(154,939)	(154,939)
Net proceeds from offering of renewable corporate bonds	–	–	–	–	–	–	–	497,500	–	497,500	–	497,500
Redemption of senior perpetual capital securities	–	–	–	–	–	–	–	–	–	–	(2,059,650)	(2,059,650)
Capital contributions from non-controlling interest of the subsidiaries	–	–	–	–	–	–	–	–	–	–	27,400	27,400
Capital reserve upon deregistration of subsidiaries recognised	–	563	–	–	–	–	–	–	–	563	–	563
Derecognition of non-controlling interests upon deregistration of subsidiaries	–	–	–	–	–	–	–	–	–	–	(8,960)	(8,960)
Derecognition of non-controlling interests upon disposal of a subsidiary	–	–	–	–	–	–	–	–	–	–	(25,352)	(25,352)
Appropriation to non-controlling interests	–	(231,339)	–	–	–	–	–	–	–	(231,339)	231,339	–
Non-controlling interests arising from business combination	–	–	–	–	–	–	–	–	–	–	1,015	1,015
Appropriation to special reserve	–	–	–	–	–	–	25,669	–	(25,669)	–	–	–
Appropriation to statutory surplus reserve	–	–	36,909	–	–	–	–	–	(36,909)	–	–	–
Appropriation to capital reserve	–	51	–	–	–	–	–	–	–	51	(51)	–
Consideration paid for business combinations under common control	–	(653,717)	–	–	–	–	–	–	–	(653,717)	–	(653,717)
At 31 December 2017	2,663,160	174,082	167,363	(14,935)	158,308	79,140	40,935	1,900,231	4,009,946	9,178,230	2,949,341	12,127,571

The notes on pages 146 to 312 form an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

	Attributable to equity owners of the Group											
	Share capital RMB'000 (Note 29)	Capital reserve RMB'000	Statutory surplus reserve RMB'000 (Note 30)	Investment revaluation reserve RMB'000	Remeasure-ments of post-employment benefit obligations RMB'000	Currency translation differences RMB'000	Special reserve RMB'000 (Note 30)	Other equity instruments RMB'000 (Note 30)	Retained earnings RMB'000	Total RMB'000	Non-controlling interests RMB'000	Total equity RMB'000
At 1 January 2018												
As originally presented	2,663,160	174,082	167,363	(14,935)	158,308	79,140	40,935	1,900,231	4,009,946	9,178,230	2,949,341	12,127,571
Change in accounting policy (Note 2.2(a)(1))	–	–	–	2,689	–	–	–	–	–	2,689	(796)	1,893
As restated	2,663,160	174,082	167,363	(12,246)	158,308	79,140	40,935	1,900,231	4,009,946	9,180,919	2,948,545	12,129,464
Profit for the year	–	–	–	–	–	–	–	–	329,193	329,193	209,737	538,930
Other comprehensive income:												
Fair value loss on financial assets at fair value through OCI – gross	–	–	–	(45,918)	–	–	–	–	–	(45,918)	5	(45,913)
Fair value loss on financial assets at fair value through OCI – tax	–	–	–	6,888	–	–	–	–	–	6,888	(1)	6,887
Remeasurements of post employment benefit obligations – gross	–	–	–	–	(43,020)	–	–	–	–	(43,020)	490	(42,530)
Remeasurements of post employment benefit obligations – tax	–	–	–	–	6,788	–	–	–	–	6,788	(74)	6,714
Currency translation differences	–	–	–	–	–	47,347	–	–	–	47,347	–	47,347
Total comprehensive income	–	–	–	(39,030)	(36,232)	47,347	–	–	329,193	301,278	210,157	511,435
Dividends to equity owners	–	–	–	–	–	–	–	–	–	–	(1,750)	(1,750)
Dividends paid to the holders of renewable corporate bonds and perpetual medium-term notes	–	–	–	–	–	–	–	–	(100,700)	(100,700)	–	(100,700)
Dividend paid to the holders of senior perpetual capital securities	–	–	–	–	–	–	–	–	–	–	(130,765)	(130,765)
Net proceeds from offering of new shares (Note 29)	295,907	683,676	–	–	–	–	–	–	–	979,583	–	979,583
Capital contributions from non-controlling interest of the subsidiaries	–	–	–	–	–	–	–	–	–	–	4,620	4,620
Redemption of 2015 perpetual medium-term notes	–	429	–	–	–	–	–	(200,429)	–	(200,000)	–	(200,000)
Additional consideration paid for business combination under common control	–	(8,430)	–	–	–	–	–	–	–	(8,430)	–	(8,430)
Derecognition of non-controlling interests upon disposal of a subsidiary (Note 42(a))	–	–	–	–	–	–	–	–	–	–	2,008	2,008
Appropriation to special reserve	–	–	–	–	–	–	23,506	–	(23,506)	–	–	–
Appropriation to statutory surplus reserve	–	–	21,551	–	–	–	–	–	(21,551)	–	–	–
At 31 December 2018	2,959,067	849,757	188,914	(51,276)	122,076	126,487	64,441	1,699,802	4,193,382	10,152,650	3,032,815	13,185,465

The notes on pages 146 to 312 form an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENT OF CASH FLOWS

	Note	Year ended 31 December 2018 RMB'000	2017 RMB'000
Cash flows from operating activities			
Cash generated from operations	39(a)	**719,053**	1,858,958
Income tax paid		**(236,503)**	(278,971)
Interest received		**88,416**	60,129
Net cash generated from operating activities		**570,966**	1,640,116
Cash flows from investing activities			
Purchase of property, plant and equipment		**(177,717)**	(303,088)
Purchase of intangible assets		**(9,029)**	(2,404)
Payments for concession right		**(67,882)**	–
Purchase of available-for-sale financial assets		**–**	(5,050,992)
Purchase of financial assets at FVTOCI		**(6,000)**	–
Purchase of financial assets at FVTPL		**(3,865,734)**	–
Refund of/(prepayment for) investment	23(i)	**100,000**	(195,600)
Prepayment for business combination under common control	42(d)	**(8,000)**	–
Cash outflows arising from business combination	42(b)	**–**	(8,966)
Consideration paid for business combination under common control		**(190,000)**	–
Proceeds from disposal of a subsidiary	42(a&c)	**94,796**	13,325
Payment for investments accounted for using the equity method		**(104,415)**	(83,500)
Return from available-for-sale financial assets		**–**	13,557
Return from financial assets at FVTPL		**11,768**	–
Interest received from time deposits		**330**	766
Decrease in time deposits		**10,856**	27,570
Decrease in restricted cash		**20,000**	–
Proceeds from disposal of property, plant and equipment		**5,156**	5,723
Proceeds from disposal of intangible assets		**–**	583
Proceeds from disposal of land use rights		**–**	51,217
Proceeds from disposal of available-for-sale financial assets		**–**	4,445,088
Proceeds from disposal of financial assets at FVTOCI		**36,380**	–
Proceeds from disposal of financial assets at FVTPL		**4,186,844**	–
Proceeds from disposal of investments accounted for using the equity method		**5,228**	256
Receipt of government grants		**–**	13,250
Financing provided to proprietors and others		**(16,855)**	(538,632)
Receiving payment of financing provided to proprietors		**179,229**	1,169,145
Dividends received from an associate		**194**	–
(Deposits paid)/refund of futures margins		**(15,000)**	30,000
Net cash generated from/(used in) investing activities		**190,149**	(412,702)

CONSOLIDATED STATEMENT OF CASH FLOWS

	Note	Year ended 31 December 2018 RMB'000	2017 RMB'000
Cash flows from financing activities			
Capital contributions made by the non-controlling interests		**4,620**	27,400
Draw down of bank borrowings		**9,717,110**	8,488,837
Repayments of bank borrowings		**(8,010,192)**	(7,763,168)
Borrowings received from a financial institution		**220,000**	100,000
Repayments of borrowings received from a financial institution		**(190,400)**	(735,848)
Repayment of borrowing received from a related company		**–**	(498,150)
Borrowings received from related parties	33(vii)	**4,772,500**	2,868,783
Repayment of borrowings received from related parties	33(vii)	**(5,028,783)**	(1,421,000)
Net cash (outflows)/inflows arising from notes financing		**(850,880)**	134,930
Interests paid		**(730,535)**	(622,268)
Dividends paid to shareholders of the Company		**–**	(231,695)
Dividends paid to non-controlling interests		**(1,750)**	(1,703)
Dividends paid to the equity owners of the subsidiaries before transferred to the Group pursuant to the Reorganisation before Listing		**–**	(53,080)
Net proceeds from issuance of renewable corporate bonds	30(iii)	**–**	497,500
Net proceeds from offering of new shares		**977,605**	–
Issuance fee paid for senior perpetual capital securities		**–**	(6,422)
Redemption of senior perpetual capital securities		**(200,000)**	(2,059,650)
Consideration paid for business combinations under common control		**–**	(211,246)
Dividends paid to the holders of renewable corporate bonds and perpetual medium-term notes		**(100,700)**	(70,700)
Dividends paid to the holders of senior perpetual capital securities	37	**(130,765)**	(154,939)
Net proceeds from issuance of short-term bonds	33(vi)	**998,667**	3,992,133
Repayment of short-term bonds	33(vi)	**(2,500,000)**	(5,000,000)
Repayment of long-term bonds	33(vi)	**(199,980)**	–
Deposits paid for notes financing		**–**	(20,000)
Net cash used in financing activities		**(1,253,483)**	(2,740,286)
Net decrease in cash and cash equivalents		**(492,368)**	(1,512,872)
Cash and cash equivalents at beginning of year		**6,279,894**	7,901,834
Exchange gains/(losses) on cash and cash equivalents		**42,598**	(109,068)
Cash and cash equivalents at end of year		**5,830,124**	6,279,894

The notes on pages 146 to 312 are an integral part of these consolidated financial statements.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

1. GENERAL INFORMATION AND REORGANISATION

1.1 General information

China Aluminum International Engineering Corporation Limited (中鋁國際工程股份有限公司, the "Company") and its subsidiaries (together, the "Group") is principally engaged in engineering design and consultancy, engineering and construction contracting and equipment manufacturing and trading.

The Company was established as a company with limited liability under the name of China Aluminum International Engineering Co., Ltd. (中鋁國際工程有限責任公司) in the People's Republic of China (the "PRC") on 16 December 2003 under the Company Law of the PRC. The address of its registered office is Building C, No. 99 Xingshikou Road, Haidian District, Beijing, the PRC.

The directors of the Company (the "Directors") regard Aluminum Corporation of China (中鋁集團, "Chinalco") 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. The Company has completed its primary listing (the "Listing") on the Main Board of The Stock Exchange of Hong Kong Limited (the "Stock Exchange") on 6 July 2012.

In 2015, the Company has made application to relevant PRC regulatory authorities for issuing no more than 1,141,000,000 A shares with a nominal value of RMB1.00 each (the "A-share Issuance"). On 8 June 2018, the Company's application for A-share Issuance has been approved by the Main Board Issuance Approval Committee of the China Securities Regulatory Commission (the "CSRC") (中國證監會主板發行審核委員會). On 31 August 2018, 295,906,667 shares were issued under the A-share Issuance and listed on the Shanghai Stock Exchange.

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

1.2 Reorganisation

Pursuant to a reorganisation of the engineering and construction contracting and design consultation business (the "Core Business") of Chinalco and its subsidiaries (collectively, the "Chinalco Group") in preparation for the Listing of the Company's shares on the Main Board of the Stock Exchange (the "Reorganisation"), the Company became the holding company of the subsidiaries now comprising the Group. The Company then transformed into a joint stock company with limited liability and renamed as China Aluminum International Engineering Corporation Limited (中鋁國際工程股份有限公司) on 30 June 2011.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

2. BASIS OF PREPARATION AND ACCOUNTING STANDARDS CHANGE

2.1 Basic of preparation

The consolidated financial statements set out in this report have been prepared in accordance with all applicable International Financial Reporting Standards ("IFRSs").

The consolidated financial statements have been prepared under the historical cost convention, as modified by the revaluation of financial assets at fair value through profit or loss and other comprehensive income, and certain property, plant and equipment, investment properties, land use rights and intangible assets, which are carried at deemed cost.

Pursuant to a corporation restructure (企業改制) of a subsidiary acquired under common control. The subsidiary then transformed into a limited company with limited liability and renamed as Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry ("Kunming Survey and Design Institute") (中國有色金屬工業昆明勘察設計研究院有限公司) on 30 June 2016. Pursuant to relevant PRC laws and regulations and as part of the corporation restructure, property, plant and equipment, investment properties, land use rights, other intangible assets, deferred income and retirement and other supplemental benefit obligations of that subsidiary is revalued on 30 June 2016 by the independent qualified valuer, ZhongHe Appraisal Co., Ltd. (中和資產評估有限公司) and approved by relevant government authorities upon the completion of the corporation restructure.

Pursuant to relevant PRC laws and regulations and as part of the Reorganisation, property, plant and equipment, investment properties, land use rights and other intangible assets of certain subsidiaries were revalued on 31 March 2011 by the independent qualified valuer, Beijing Zhongfeng Assets Evaluation Co., Ltd. (北京中鋒資產評估有限責任公司) and approved by relevant government authorities upon the completion of the Reorganisation on 31 March 2011.

The Amendment to IFRS1 allows first-time adopters to use an event-driven fair value as deemed cost for assets and liabilities, even if the event occurs after the date of transition to IFRS, but before the first set of IFRS financial statements are issued. The Group has elected the exemption granted under the Amendment to IFRS 1 in applying such values as the deemed cost in its first IFRS financial statements.

The preparation of financial statements in conformity with IFRSs requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the accounting policies of the Group. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the financial statements are disclosed in Note 4 below.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

2. BASIS OF PREPARATION AND ACCOUNTING STANDARDS CHANGE (CONTINUED)

2.2 Impact on accounting standards change

(a) Initial application of IFRSs

In the current year, the Group initially applied the following IFRSs:

IFRS 9	Financial instruments
IFRS 15	Revenue from contracts with customers
IFRIC 22	Foreign currency transactions and advance consideration
Amendments to IAS 40	Transfers of Investment Property
Amendments to IFRS 2	Classification and Measurement of Share-based Payment Transactions
Amendments to IFRS 4	Applying IFRS 9 Financial Instruments with IFRS 4 Insurance Contracts
Annual Improvements (2014-2016)	Amendments to IFRS 1 and IAS 28

The Group has not applied any new standard or interpretation that is not yet effective for the current accounting period, except for the amendments to IFRS 9, Prepayment features with negative compensation which have been adopted at the same time as IFRS 9.

The adoption of the above IFRSs has no significant impact except for the followings:

(1) IFRS 9, Financial instruments

IFRS 9 replaces IAS 39, Financial instruments: Recognition and measurement. IFRS 9 introduces new requirements for classification and measurement of financial assets, including the measurement of impairment for financial assets and hedge accounting. On the other hand, IFRS 9 incorporates without substantive changes the requirements of IAS 39 for recognition and derecognition of financial instruments and the classification and measurement of financial liabilities.

The Group has applied IFRS 9 retrospectively to items that existed at 1 January 2018 in accordance with the transition requirements. The Group has recognised the cumulative effect of initial application as an adjustment to the opening equity at 1 January 2018. Therefore, comparative information continues to be reported under IAS 39.

2. BASIS OF PREPARATION AND ACCOUNTING STANDARDS CHANGE (CONTINUED)

2.2 Impact on accounting standards change (continued)

(a) Initial application of IFRSs (continued)

(1) IFRS 9, Financial instruments (continued)

Classification and measurement

IFRS 9 contains three principal classification categories for financial assets: measured at (1) amortised cost, (2) fair value through profit or loss (FVTPL) and (3) fair value through other comprehensive income (FVTOCI):

- The classification for debt instruments is determined based on the entity's business model for managing the financial assets and the contractual cash flow characteristics of the asset. If a debt instrument is classified as FVTOCI then interest revenue, impairment and gains/losses on disposal will be recognised in profit or loss.

- For equity securities, the classification is FVTPL regardless of the entity's business model. The only exception is if the equity security is not held for trading and the entity irrevocably elects to designate that security as FVTOCI. If an equity security is designated as FVTOCI then only dividend income on that security will be recognised in profit or loss. Gains, losses and impairments on that security will be recognised in other comprehensive income without recycling.

The Group has assessed that its financial assets measured at amortised cost would continue with their classification and measurements upon the adoption of IFRS 9.

With respect to the Group's financial assets classified as "available-for-sale", these include investments in equity securities which the Group has the option to irrevocably designate as FVTOCI (without recycling) on transition to IFRS 9. The Group elected this designation option for any of the investments held on 1 January 2018 and recognized any fair value changes in respect of these investments in other comprehensive income as they arise. This gives rise to a change in accounting policy as certain available-for-sale investments were measured at cost. In addition, the short-term investments representing commercial bank products (Note 21) are reclassified from available-for-sale financial assets to finance assets at fair value through profit or loss on 1 January 2018. As a result of the changes in the entity's accounting policy, certain reclassifications and the adjustments are therefore not reflected in the restated statement of financial position as at 31 December 2017, but are recognised in the opening statement of financial position on 1 January 2018.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

2. BASIS OF PREPARATION AND ACCOUNTING STANDARDS CHANGE (CONTINUED)

2.2 Impact on accounting standards change (continued)

(a) Initial application of IFRSs (continued)

(1) IFRS 9, Financial instruments (continued)

The following table shows the original measurement categories for each class of the Group's financial assets under IAS 39 and reconciles the carrying amounts of those financial assets determined in accordance with IAS 39 to those determined in accordance with IFRS 9.

	IAS 39 carrying amounts at 1 January 2018 RMB'000	Reclassification RMB'000	Remeasurement RMB'000	IFRS 9 carrying amounts at 1 January 2018 RMB'000
Non-current assets				
Financial assets at fair value through other comprehensive income	–	318,921	2,227	321,148
Available-for-sale financial assets	318,921	(318,921)	–	–
Current assets				
Financial assets at fair value through profit or loss	–	530,592	–	530,592
Available-for-sale financial assets	530,592	(530,592)	–	–
Non-current liabilities				
Deferred income tax liabilities	66,251	–	334	66,585
Equity				
Investment revaluation reserve – Note	(14,935)	–	2,689	(12,246)
Non-controlling interests	2,949,341	–	(796)	2,948,545

Note: Investment revaluation reserve was designated as non-recycling on 1 January 2018.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

2. BASIS OF PREPARATION AND ACCOUNTING STANDARDS CHANGE (CONTINUED)

2.2 Impact on accounting standards change (continued)

(a) Initial application of IFRSs (continued)

(2) IFRS 15, Revenue from contracts with customers

The Group has applied IFRS 15 for the first time in the current year. IFRS 15 superseded IAS 18 Revenue, IAS 11 Construction Contracts and the related interpretations.

The Group recognises revenue from the following four segments:

- Engineering design and consultancy
- Engineering and construction contracting
- Equipment manufacturing
- Trading

The Group has applied IFRS 15 retrospectively with the cumulative effect of initially applying this Standard recognised at the date of initial application, 1 January 2018. Furthermore, in accordance with the transition provisions in IFRS 15, the Group has elected to apply the Standard retrospectively only to contracts that are not completed at 1 January 2018 and has used the practical expedient for all contract modifications that occurred before the date of initial application, the aggregate effect of all of the modifications was reflected at the date of initial application. Accordingly, certain comparative information may not be comparable as comparative information was prepared under IAS 18 Revenue and IAS 11 Construction Contracts and the related interpretations.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

2. BASIS OF PREPARATION AND ACCOUNTING STANDARDS CHANGE (CONTINUED)

2.2 Impact on accounting standards change (continued)

(a) Initial application of IFRSs (continued)

(2) IFRS 15, Revenue from contracts with customers (continued)

FRS 15 introduces a 5-step approach when recognising revenue:

- Step 1: Identify the contract(s) with a customer
- Step 2: Identify the performance obligations in the contract
- Step 3: Determine the transaction price
- Step 4: Allocate the transaction price to the performance obligations in the contract
- Step 5: Recognise revenue when (or as) the entity satisfies a performance obligation

Under IFRS 15, the Group recognises revenue when (or as) a performance obligation is satisfied, i.e. when control of the goods or services underlying the particular performance obligation is transferred to the customer.

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

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

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

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

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

2. BASIS OF PREPARATION AND ACCOUNTING STANDARDS CHANGE (CONTINUED)

2.2 Impact on accounting standards change (continued)

(a) Initial application of IFRSs (continued)

(2) IFRS 15, Revenue from contracts with customers (continued)

A contract asset represents the Group's right to consideration in exchange for goods or services that the Group has transferred to a customer that is not yet unconditional. It is assessed for impairment in accordance with IFRS 9. In contrast, a receivable represents the Group's unconditional right to consideration, i.e. only the passage of time is required before payment of that consideration is due.

A contract liability represents the Group's obligation to transfer goods or services to a customer for which the Group has received consideration (or an amount of consideration is due) from the customer.

The adoption of IFRS15 does not have a significant impact on when the Group recognizes revenue from four segments. There was also no material impact of transition to IFRS 15 on retained profits at 1 January 2018.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

2. BASIS OF PREPARATION AND ACCOUNTING STANDARDS CHANGE (CONTINUED)

2.2 Impact on accounting standards change (continued)

(a) Initial application of IFRSs (continued)

(2) IFRS 15, Revenue from contracts with customers (continued)

The following adjustments were made to the amounts recognised in the consolidated balance sheet at 1 January 2018. Line items that were not affected by the changes have not been included.

	Carrying amounts at 1 January 2018 RMB'000	Reclassification RMB'000	Carrying amounts under IFRS 15 at 1 January 2018 RMB'000
Non-current assets			
Intangible assets – Note	207,985	(123,824)	84,161
Trade and notes receivables – Note	1,991,852	(1,694,151)	297,701
Current assets			
Trade and notes receivables – Note	13,579,920	(1,008,795)	12,571,125
Amounts due from customers for contract work	8,322,206	(8,322,206)	–
Contract assets	–	11,148,976	11,148,976
Current liabilities			
Trade and other payables	18,700,429	(1,270,756)	17,429,673
Amounts due to customers for contract work	677,018	(677,018)	–
Contract liabilities	–	1,947,774	1,947,774

Note: IFRIC-Int 12 Service Concession Arrangements as amended by IFRS 15 requires the intangible assets and financial assets are classified as a contract asset during the construction or upgrade period.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

2. BASIS OF PREPARATION AND ACCOUNTING STANDARDS CHANGE (CONTINUED)

2.2 Impact on accounting standards change (continued)

(b) IFRSs in issue but not yet effective

The following IFRSs in issue at 31 December 2018 have not been applied in the preparation of the Group's consolidated financial statements for the year then ended since they were not yet effective for the annual period beginning on 1 January 2018:

IFRS 16	Leases[1]
IFRS 17	Insurance Contracts[2]
IFRIC 23	Uncertainty over Income Tax Treatments[1]
Amendments to IAS 19	Plan Amendment, Curtailment or Settlement[1]
Amendments to IAS 28	Long-term Interests in Associates and Joint Ventures[1]
Amendment to IFRS 9	Prepayment Features with Negative Compensation[1]
Annual Improvements (2015-2017)	Amendments to IFRS 3, IFRS 11, IAS 12 and IAS 23[1]

1 Effective for annual periods beginning on or after 1 January 2019
2 Effective for annual periods beginning on or after 1 January 2021

The Group is in the process of making an assessment of what the impact of these amendments, new standards and interpretations is expected to be in the period of initial application. So far the Group has identified some aspects of IFRS 16 which may have a significant impact on the consolidated financial statements. Further details of the expected impacts are discussed below. While the assessment has been substantially completed for IFRS 16, the actual impact upon the initial adoption of this standard may differ as the assessment completed to date is based on the information currently available to the Group, and further impacts may be identified before the standard is initially applied in the Group's interim financial report for the six months ended 30 June 2019. The Group may also change its accounting policy elections, including the transition options, until the standard is initially applied in that financial report.

IFRS 16, *Leases*

As disclosed in Note 3.26, currently the Group classifies leases into finance leases and operating leases and accounts for the lease arrangements differently, depending on the classification of the lease. The Group enters into some leases as the lessor and others as the lessee.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

2. BASIS OF PREPARATION AND ACCOUNTING STANDARDS CHANGE (CONTINUED)

2.2 Impact on accounting standards change (continued)

(b) IFRSs in issue but not yet effective (continued)

IFRS 16, *Leases* (continued)

IFRS 16 is not expected to impact significantly on the way that lessors account for their rights and obligations under a lease. However, once IFRS 16 is adopted, lessees will no longer distinguish between finance leases and operating leases. Instead, subject to practical expedients, lessees will account for all leases in a similar way to current finance lease accounting, i.e. at the commencement date of the lease the lessee will recognise and measure a lease liability at the present value of the minimum future lease payments and will recognise a corresponding "right-of-use" asset. After initial recognition of this asset and liability, the lessee will recognise interest expense accrued on the outstanding balance of the lease liability, and the depreciation of the right-of-use asset, instead of the current policy of recognising rental expenses incurred under operating leases on a systematic basis over the lease term. As a practical expedient, the lessee can elect not to apply this accounting model to short-term leases (i.e. where the lease term is 12 months or less) and to leases of low-value assets, in which case the rental expenses would continue to be recognised on a systematic basis over the lease term.

IFRS 16 will primarily affect the Group's accounting as a lessee of leases for properties, plant and equipment which are currently classified as operating leases. The application of the new accounting model is expected to lead to an increase in both assets and liabilities and to impact on the timing of the expense recognition in the statement of profit or loss over the period of the lease.

IFRS 16 is effective for annual periods beginning on or after 1 January 2019. The Group will apply the new definition of a lease in IFRS 16 only to contracts that are entered into on or after the date of initial application. In addition, the Group plans to elect the practical expedient for not applying the new accounting model to short-term leases and leases of low-value assets.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

2. BASIS OF PREPARATION AND ACCOUNTING STANDARDS CHANGE (CONTINUED)

2.2 Impact on accounting standards change (continued)

(b) IFRSs in issue but not yet effective (continued)

IFRS 16, *Leases* (continued)

The Group plans to elect to use the modified retrospective approach for the adoption of IFRS 16 and will recognise the cumulative effect of initial application as an adjustment to the opening balance of equity at 1 January 2019 and will not restate the comparative information. As disclosed in Note 38(b), the Group's future minimum lease payments under non-cancellable operating leases amount to RMB10,959,000 for properties at 31 December 2018. Upon the initial adoption of IFRS 16, some of the amount may therefore need to be recognised as lease liabilities and the corresponding right-of-use assets as at 1 January 2019.

Other than the recognition of lease liabilities and right-of-use assets, the Group expects that the transition adjustments to be made upon the initial adoption of IFRS 16 will not be material.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

3.1 Subsidiaries

(a) Consolidation

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

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.1 Subsidiaries (continued)

(a) Consolidation (continued)

(1) Business combinations

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

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

Acquisition-related costs are expensed as incurred.

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

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

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.1 Subsidiaries (continued)

(a) Consolidation (continued)

(1) Business combinations (continued)

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

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

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

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

(3) Disposal of subsidiaries

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

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.1 Subsidiaries (continued)

(b) Separate financial statements

Investments in subsidiaries, other than those acquired under common control are accounted for at cost less impairment. Cost includes direct attributable costs of investment. The results of subsidiaries are accounted for by the Company on the basis of dividend received and receivable.

Impairment testing of the investments in subsidiaries is required upon receiving a dividend from these investments if the dividend exceeds the total comprehensive income of the subsidiary in the period the dividend is declared or if the carrying amount of the investment in the separate financial statements exceeds the carrying amount in the consolidated financial statements of the investee's net assets including goodwill.

3.2 Associates

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

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

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

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.2 Associates (continued)

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

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

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

3.3 Joint arrangements

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

Under the equity method of accounting, interests in joint ventures are initially recognised at cost and adjusted thereafter to recognise the Group's share of the post-acquisition profits or losses and movements in other comprehensive income. When the Group's share of losses in a joint venture equals or exceeds its interests in the joint ventures (which includes any long-term interests that, in substance, form part of the Group's net investments in the joint ventures), the Group does not recognise further losses, unless it has incurred obligations or made payments on behalf of the joint ventures.

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

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.4 Segment reporting

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision-maker. The chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the executive directors and certain senior management (including chief accountant) (together referred to as the "Senior Management") that makes strategic decisions.

3.5 Foreign currency translation

(a) Functional and presentation currency

Items included in the 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 Company's functional currency and the Group's presentation currency.

(b) Transactions and balances

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

All foreign exchange gains and losses are presented in the consolidated statement of comprehensive income within "other (losses)/gains – net".

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.5 Foreign currency translation (continued)

(c) 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:

i. assets and liabilities for each balance sheet presented are translated at the closing rate at the date of that balance sheet;

ii. income and expenses for each income statement 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

iii. all resulting currency translation differences are recognised in other comprehensive income.

3.6 Property, plant and equipment

Property, plant and equipment, apart from construction-in-progress (“CIP”), are stated at historical cost less accumulated depreciation and accumulated impairment loss except for certain property, plant and equipment, which are stated at deemed 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.

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 profit or loss during the financial period in which they are incurred.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.6 Property, plant and equipment (continued)

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	
– Buildings	8-45 years
– Temporary used facilities	2-3 years
– Equipment plant and machinery	8-20 years
– Transportation equipment	5-14 years
– Furniture, office and other equipment	4-10 years

CIP represents buildings and plant under construction and is stated at cost. Cost includes costs of construction of buildings, cost of plant and other direct costs. No provision for depreciation is made on CIP until 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 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 3.10).

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount and are recognised within 'Other gains/(losses) – net' in the consolidated statement of comprehensive income.

3.7 Land use rights

Land use rights represent upfront prepayments made for the land use rights at historical cost, except for certain land use right stated at deemed cost, and are expensed in profit or loss on a straight-line basis over the terms of the leases. Whenever there is impairment, the impairment is recognised in profit or loss.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.8 Investment properties

Property that is held for long-term yields or for capital appreciation or both, and that is not occupied by the Group, is classified as investment property. Investment properties are stated at cost including related transaction costs, less accumulated depreciation and impairment losses except for certain investment property stated at deemed cost. Subsequent expenditure is charged to the asset's carrying amount 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. All other repairs and maintenance costs are expensed in profit or loss during the financial period in which they are incurred.

If an investment property becomes owner-occupied, it is reclassified as property, plant and equipment. Property that is being constructed or developed for future use as investment property is stated at cost until construction or development is completed, at which time it is reclassified and subsequently accounted for as investment property.

Depreciation is calculated using the straight-line method to amortise and write off the cost of the asset over a period ranging from 20 to 40 years. The assets' residual values and useful lives 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 3.10).

Gains and losses on disposals are determined by comparing proceeds with carrying amount, and are recognised in the consolidated statement of comprehensive income.

Rental income from investment property is recognised in profit or loss on a straight-line basis over the term of the lease.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.9 Intangible assets

(a) Goodwill

Goodwill arises on the acquisition of subsidiaries represents the excess of the consideration transferred, the amount of the non-controlling interest in the acquiree and the acquisition-date fair value of any previous equity interest in the acquiree over the fair value of the identified net assets acquire.

For the purpose of impairment testing, goodwill acquired in a business combination is allocated to each of the cash-generating units ("CGUs"), or groups of CGUs, that is expected to benefit from the synergies of the combination. Each unit or group of units to which the goodwill is allocated represents the lowest level within the entity at which the goodwill is monitored for internal management purposes. Goodwill is monitored at the operating segment level.

Goodwill impairment reviews are undertaken annually or more frequently if events or changes in circumstances indicate a potential impairment. The carrying value of the CGU containing the goodwill is compared to the recoverable amount, which is the higher of value in use and the fair value less costs of disposal. Any impairment is recognised immediately as an expense and is not subsequently reversed.

(b) Computer software

Costs associated with maintaining computer software programmes are recognised as an expense as incurred. Development costs that are directly attributable to the design and testing of identifiable and unique software products controlled by the Group are recognised as intangible assets when the following criteria are met:

- It is technically feasible to complete the software product so that it will be available for use;
- Management intends to complete the software product and use or sell it;
- There is an ability to use or sell the software product;
- It can be demonstrated how the software product will generate probable future economic benefits;
- Adequate technical, financial and other resources to complete the development and to use or sell the software product are available; and
- The expenditure attributable to the software product during its development can be reliably measured.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.9 Intangible assets (continued)

(b) Computer software (continued)

Directly attributable costs that are capitalised as part of the software product include the software development employee costs and an appropriate portion of relevant overheads.

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.

Computer software development costs recognised as assets are amortised over their estimated useful lives, which does not exceed 3 years.

(c) Trademarks and licences

Separately acquired trademarks and licences are shown at historical cost except for certain patent and proprietary technologies stated at deemed cost. Trademarks and licences acquired in a business combination are recognised at fair value at the acquisition date. Trademarks and licences have a finite useful life and are carried at cost less accumulated amortisation. Amortisation is calculated using the straight-line method to allocate the cost of trademarks and licences over their estimated useful lives of 5 to 10 years.

Acquired computer software licences are capitalised on the basis of the costs incurred to acquire and bring to use the specific software. These costs are amortised over their estimated useful lives of 4 to 6 years.

3.10 Impairment of non-financial assets

Assets that have an indefinite useful life – for example, goodwill or intangible assets not ready to use are not subject to amortisation and are tested annually for impairment. Assets that are subject to amortisation are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units). Non-financial assets other than goodwill that suffered impairment are reviewed for possible reversal of the impairment at each reporting date.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.11 Financial assets

(a) Debt and equity securities

The Group's policies for investments in debt and equity securities, other than investments in subsidiaries, associates and joint ventures, are set out below.

Investments in debt and equity securities are recognised/derecognised on the date the Group commits to purchase/sell the investment. The investments are initially stated at fair value plus directly attributable transaction costs, except for those investments measured at fair value through profit or loss (FVTPL) for which transaction costs are recognised directly in profit or loss. These investments are subsequently accounted for as follows, depending on their classification.

Non-equity instruments

Non-equity investments held by the Group are classified into one of the following measurement categories:

– Amortised cost, if the investment is held for the collection of contractual cash flows which represent solely payments of principal and interest. Interest income from the investment is calculated using the effective interest method (see Note 3.23(f)).

– Fair value through other comprehensive income (FVTOCI) – recycling, if the contractual cash flows of the investment comprise solely payments of principal and interest and the investment is held within a business model whose objective is achieved by both the collection of contractual cash flows and sale. Changes in fair value are recognised in other comprehensive income, except for the recognition in profit or loss of expected credit losses, interest income (calculated using the effective interest method) and foreign exchange gains and losses. When the investment is derecognised, the amount accumulated in other comprehensive income is recycled from equity to profit or loss.

– Fair value at profit or loss (FVTPL) if the investment does not meet the criteria for being measured at amortised cost or FVOCI (recycling). Changes in the fair value of the investment (including interest) are recognised in profit or loss.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.11 Financial assets (continued)

(a) Debt and equity securities (continued)

Equity instruments

An investment in equity securities is classified as FVTPL unless the equity investment is not held for trading purposes and on initial recognition of the investment the Group makes an election to designate the investment at FVTOCI (non-recycling) such that subsequent changes in fair value are recognised in other comprehensive income. Such elections are made on an instrument-by-instrument basis, but may only be made if the investment meets the definition of equity from the issuer's perspective. Where such an election is made, the amount accumulated in other comprehensive income remains in the investment revaluation reserve (non-recycling) until the investment is disposed of. At the time of disposal, the amount accumulated in the fair value reserve (non-recycling) is transferred to retained earnings. It is not recycled through profit or loss. Dividends from an investment in equity securities, irrespective of whether classified as at FVTPL or FVOCI, are recognised in profit or loss in accordance with the policy set out in Note 3.23(e).

(b) Derivative financial instruments

Derivative financial instruments are recognised at fair value. At the end of each reporting period the fair value is remeasured. The gain or loss on remeasurement to fair value is recognised immediately in profit or loss, except where the derivatives qualify for cash flow hedge accounting or hedges of net investment in a foreign operation, in which case recognition of any resultant gain or loss depends on the nature of the item being hedged.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.12 Credit losses and impairment of assets

(a) Credit losses from financial instruments and contract assets

The Group recognises a loss allowance for expected credit losses (ECLs) on the following items:

– financial assets measured at amortised cost;

– debt securities measured at FVTOCI (recycling); and

– contract assets (see Note 3.22).

ECLs are a probability-weighted estimate of credit losses. Credit losses are measured as the present value of all expected cash shortfalls (i.e. the difference between the cash flows due to the Group in accordance with the contract and the cash flows that the Group expects to receive).

The expected cash shortfalls are discounted using the following discount rates where the effect of discounting is material:

– fixed-rate financial assets, trade and other receivables and contract assets: effective interest rate determined at initial recognition or an approximation thereof; and

– variable-rate financial assets: current effective interest rate.

The maximum period considered when estimating ECLs is the maximum contractual period over which the Group is exposed to credit risk.

In measuring ECLs, the Group takes into account reasonable and supportable information that is available without undue cost or effort. This includes information about past events, current conditions and forecasts of future economic conditions.

ECLs are measured on either of the following bases:

– 12-month ECLs: these are losses that are expected to result from possible default events within the 12 months after the reporting date; and

– lifetime ECLs: these are losses that are expected to result from all possible default events over the expected lives of the items to which the ECL model applies.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.12 Credit losses and impairment of assets (continued)

(a) Credit losses from financial instruments and contract assets (continued)

Loss allowances for trade receivables and contract assets are always measured at an amount equal to lifetime ECLs. ECLs on these financial assets are estimated using a provision matrix based on the Group's historical credit loss experience, adjusted for factors that are specific to the debtors and an assessment of both the current and forecast general economic conditions at the reporting date.

For all other financial instruments, the Group recognises a loss allowance equal to 12-month ECLs unless there has been a significant increase in credit risk of the financial instrument since initial recognition, in which case the loss allowance is measured at an amount equal to lifetime ECLs.

In assessing whether the credit risk of a financial instrument has increased significantly since initial recognition, the Group compares the risk of default occurring on the financial instrument assessed at the reporting date with that assessed at the date of initial recognition. In making this reassessment, the Group considers that a default event occurs when (i) the borrower is unlikely to pay its credit obligations to the Group in full, without recourse by the Group to actions such as realising security (if any is held); or (ii) the financial asset is 90 days past due. 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.

In particular, the following information is taken into account when assessing whether credit risk has increased significantly since initial recognition:

– failure to make payments of principal or interest on their contractually due dates;

– an actual or expected significant deterioration in a financial instrument's external or internal credit rating (if available);

– an actual or expected significant deterioration in the operating results of the debtor; and

– existing or forecast changes in the technological, market, economic or legal environment that have a significant adverse effect on the debtor's ability to meet it obligation to the Group.

Depending on the nature of the financial instruments, the assessment of a significant increase in credit risk is performed on either an individual basis or a collective basis. When the assessment is performed on a collective basis, the financial instruments are grouped based on shared credit risk characteristics, such as past due status and credit risk ratings.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.12 Credit losses and impairment of assets (continued)

(a) Credit losses from financial instruments and contract assets (continued)

ECLs are remeasured at each reporting date to reflect changes in the financial instrument's credit risk since initial recognition. Any change in the ECL amount is recognised as an impairment gain or loss in profit or loss. The Group recognises an impairment gain or loss for all financial instruments with a corresponding adjustment to their carrying amount through a loss allowance account, except for investments in debts securities that are measured at FVTOCI (recycling), for which the loss allowances are recognised in other comprehensive income and accumulated in the fair value reserve (recycling).

Interest income recognised in accordance with Note 3.23(f) is calculated based on the gross carrying amount of the financial asset unless the financial asset is credit-impaired, in which case interest income is calculated based on the amortised cost (i.e. the gross carrying amount less loss allowance) of the financial asset.

At each reporting date, the Group assesses whether a financial asset is 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 events:

- significant financial difficulties of the debtor;

- a breach of contract, such as a default or delinquency in interest or principal payments;

- it becoming probable that the borrower will enter into bankruptcy or other financial reorganisation;

- significant changes in the technological, market, economic or legal environment that have an adverse effect on the debtor; or

- the disappearance of an active market for a security because of financial difficulties of the issuer.

The gross carrying amount of a financial asset or contract 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.

Subsequent recoveries of an asset that was previously written off are recognised as a reversal of impairment in profit or loss in the period in which the recovery occurs.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.12 Credit losses and impairment of assets (continued)

(b) Credit losses from financial guarantees issued

Financial guarantees are contracts that require the issuer (i.e. the guarantor) to make specified payments to reimburse the beneficiary of the guarantee (the "holder") for a loss the holder incurs because a specified debtor fails to make payment when due in accordance with the terms of a debt instrument.

Financial guarantees issued are initially recognised within "trade and other payables" at fair value, which is determined by reference to fees charged in an arm's length transaction for similar services, when such information is obtainable, or to interest rate differentials, by comparing the actual rates charged by lenders when the guarantee is made available with the estimated rates that lenders would have charged, had the guarantees not been available, where reliable estimates of such information can be made. 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.

Subsequent to initial recognition, the amount initially recognised as deferred income is amortised in profit or loss over the term of the guarantee as income from financial guarantees issued (see Note 3.23(h)).

3.13 Inventories and other contract costs

(a) 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.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.13 Inventories and other contract costs (continued)

(b) Other contract costs

Other contract costs are either the incremental costs of obtaining a contract with a customer or the costs to fulfil a contract with a customer which are not capitalised as inventory, property, plant and equipment or intangible assets.

Incremental costs of obtaining a contract are those costs that the Group incurs to obtain a contract with a customer that it would not have incurred if the contract had not been obtained e.g. an incremental sales commission. Incremental costs of obtaining a contract are capitalised when incurred if the costs relate to revenue which will be recognised in a future reporting period and the costs are expected to be recovered. Other costs of obtaining a contract are expensed when incurred.

Costs to fulfil a contract are capitalised if the costs relate directly to an existing contract or to a specifically identifiable anticipated contract; generate or enhance resources that will be used to provide goods or services in the future; and are expected to be recovered. Costs that relate directly to an existing contract or to a specifically identifiable anticipated contract may include direct labour, direct materials, allocations of costs, costs that are explicitly chargeable to the customer and other costs that are incurred only because the group entered into the contract (for example, payments to sub-contractors). Other costs of fulfilling a contract, which are not capitalised as inventory, property, plant and equipment or intangible assets, are expensed as incurred.

Capitalised contract costs are stated at cost less accumulated amortisation and impairment losses. Impairment losses are recognised to the extent that the carrying amount of the contract cost asset exceeds the net of (i) remaining amount of consideration that the Group expects to receive in exchange for the goods or services to which the asset relates, less (ii) any costs that relate directly to providing those goods or services that have not yet been recognised as expenses.

Amortisation of capitalised contract costs is charged to the consolidated statement of comprehensive income when the revenue to which the asset relates is recognised. The accounting policy for revenue recognition is set out in Note 3.23.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.14 Trade and other receivables

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

Trade and other receivables are recognised when the Group has an unconditional right to receive consideration. A right to receive consideration is unconditional if only the passage of time is required before payment of that consideration is due. They are measured at amortised cost using the effective interest method, less loss allowances for ECLs (Note 3.12).

3.15 Cash and cash equivalents

In the consolidated statement of cash flows, 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, and bank overdrafts. In the consolidated and entity balance sheet, bank overdrafts are shown within borrowings in current liabilities.

3.16 Share capital

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

3.17 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 comprehensive income over the period of the borrowings using the effective interest method.

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

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

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.18 Payables

Payables primarily include accounts payable and accrued liabilities, and are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method.

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

3.19 Employee benefits

The Group operates various post-employment schemes, including both defined benefit and defined contribution pension plans and post-employment medical plans.

(a) 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 balance sheet in respect of these defined benefit plans is the present value of the defined benefit obligation at the balance sheet date. The defined benefit obligation is calculated annually by independent qualified actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of government securities, which have maturity approximating to the terms of the related pension liability.

The current service cost of the defined benefit plan, recognised in the consolidated statement of comprehensive income in employee benefit expense, except where included in the cost of an asset, reflects the increase in the defined benefit obligation results from employee service in the current year, benefit changes, curtailments and settlements.

Past-service costs are recognised immediately in the consolidated statement of comprehensive income.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.19 Employee benefits (continued)

(a) Pension obligations (continued)

The net interest cost is calculated by applying the discount rate to the net balance of the defined benefit obligation. This cost is included in finance expense in the consolidated statement of comprehensive income.

Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to equity in other comprehensive income in the period in which they arise.

For defined contribution plans, the Group pays contributions to publicly or privately administered pension insurance plans on a mandatory, contractual or voluntary basis. The Group has no further payment obligations once the contributions have been paid. The contributions are recognised as employee benefit expense when they are due. Prepaid contributions are recognised as an asset to the extent that a cash refund or a reduction in the future payments is available.

(b) Other post-employment obligations

The Group provide post-retirement healthcare benefits to their retirees. The entitlement to these benefits is usually conditional on the employee remaining in service up to retirement age and the completion of a minimum service period. 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. Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to equity in other comprehensive income in the period in which they arise. These obligations are valued annually by independent qualified actuaries.

(c) Termination and early retirement benefits

Termination 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 benefits at the earlier of the following dates: (a) when the Group can no longer withdraw the offer of those benefits; and (b) when the entity recognises costs for a restructuring that is within the scope of IAS 37 and involves the payment of termination benefits. In the case of an offer made to encourage voluntary redundancy, the termination benefits are measured based on the number of employees expected to accept the offer. Benefits falling due more than 12 months after the end of the reporting period are discounted to their present value.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.19 Employee benefits (continued)

(d) Housing benefits

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

(e) 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.

3.20 Taxation

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

(a) Current income tax

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

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.20 Taxation (continued)

(b) Deferred income tax

Inside basis differences

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; the 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 consolidation 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 substantively enacted by the balance sheet date and are expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled.

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.

Outside basis differences

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

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

(c) Offsetting

Deferred income tax assets and deferred income tax liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred income tax assets and liabilities relate to income 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.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.20 Taxation (continued)

(d) Value-added taxation ("VAT")

Sales of goods of the Group and its modern business service such as design are subjected to VAT. VAT payable is determined by applying applicable tax rate on the taxable revenue arising from sales of goods after offsetting deductible input VAT of the period.

On 23 March 2016, the Ministry of Finance of the PRC and the State Administration of Taxation jointly released the Circular on "Comprehensively Promoting the Pilot Program of the Collection of Value-added Tax in Lieu of Business Tax" (Cai Shui [2016] No. 39). Effective from 1 May 2016, the Group's revenue resulting from providing construction services is subject to a VAT as follows:

– For the construction contracts commenced before 1 May 2016, the revenue from providing construction services is now subject to VAT at 3% which is deducted from the revenue.

– For the construction contracts commenced on or after 1 May 2016, the revenue from providing construction services is now subject to VAT at 11%, which is further adjusted to 10% since 1 May 2018 (for construction contracts) or 6% (for maintenance service contracts).

3.21 Provisions and contingent liabilities

(a) Provisions and contingent liabilities

Provisions are recognised when the Group has a legal or constructive obligation arising as a result of a past event, it is probable that an outflow of economic benefits will be required to settle the obligation and a reliable estimate can be made. Where the time value of money is material, provisions are stated at the present value of the expenditure expected to settle the obligation.

Where it is not probable that an outflow of economic benefits will be required, or the amount cannot be estimated reliably, the obligation is disclosed as a contingent liability, unless the probability of outflow of economic benefits is remote. Possible obligations, whose existence will only be confirmed by the occurrence or non-occurrence of one or more future events are also disclosed as contingent liabilities unless the probability of outflow of economic benefits is remote.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.21 Provisions and contingent liabilities (continued)

(b) Onerous contracts

An onerous contract exists when the Group has a contract under which the unavoidable costs of meeting the obligations under the contract exceed the economic benefits expected to be received from the contract. Provisions for onerous contracts are measured at the present value of the lower of the expected cost of terminating the contract and the net cost of continuing with the contract.

3.22 Contract assets and contract liabilities

A contract asset is recognised when the Group recognises revenue (see Note 3.23) before being unconditionally entitled to the consideration under the payment terms set out in the contract. Contract assets are assessed for ECLs in accordance with the policy set out in Note 3.12 and are reclassified to receivables when the right to the consideration has become unconditional.

A contract liability is recognised when the customer pays consideration before the Group recognises the related revenue (see Note 3.23). 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 (see Note 3.14).

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.

When the contract includes a significant financing component, the contract balance includes interest accrued under the effective interest method.

Policy prior to 1 January 2018

In the comparative period, Contract work-in-progress is valued at the cost of the work done, plus the expected profit upon completion of the project in proportion to the progress made and less progress billings and provisions. Provisions are recognised for expected losses on contract work-in-progress, as soon as they are foreseen, and deducted from the cost. The cost includes direct project costs, consisting of direct payroll costs, materials, costs of subcontracted work, borrowing costs directly attributable to the relevant contracts, rental charges, maintenance costs for the equipment used and other direct costs.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.22 Contract assets and contract liabilities (continued)

Policy prior to 1 January 2018 (continued)

Profits are not recognised unless a reliable estimate can be made of the result on completion of the project. The balance of the value of contract work-in-progress and progress billings is determined on a project-to-project basis. For projects where the progress billings exceed the value of contract work-in-progress, the balance is recognised under current liabilities instead of under current assets. The respective balance sheet items are "amounts due to customers for contract work" and "amounts due from customers for contract work". When the Group issues the progress billings, trade receivables will be recognised or the balance of advance from customers will be reduced accordingly, and there will be a corresponding decrease in the amount due from customers for contract work or increase in the amount due to customers for contract work.

3.23 Revenue and other income recognition

Income is classified by the Group as revenue when it arises from the sale of goods, the provision of services or the use by others of the Group's assets under leases in the ordinary course of the Group's business.

Revenue is recognised when control over a product or service is transferred to the customer, or the lessee has the right to use the asset, at the amount of promised consideration to which the Group is expected to be entitled, excluding those amounts collected on behalf of third parties. Revenue excludes value added tax or other sales taxes and is after deduction of any trade discounts.

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 recognized under that contract includes the interest expense accreted on the contract liability under the effective interest method.

(a) Engineering and construction contracting segment

A contract with a customer is classified by the Group as a construction contract when the contract relates to engineering and construction contracting projects on real estate, infrastructure and other assets under the control of customer and therefore the Group's engineering and construction contracting activities create or enhance an asset under the customer's control.

When the outcome of a construction contract can be reasonably measured, revenue from such contract is recognised progressively over time using the input cost-to-cost method, i.e. based on the proportion of the actual costs incurred relative to the estimated total costs, which faithfully depicts the use of the Group's resources to satisfy its performance obligation.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.23 Revenue and other income recognition (continued)

(a) Engineering and construction contracting segment (continued)

The likelihood of the Group earning contractual bonuses for early completion or suffering contractual penalties for late completion are taken into account in making these estimates, such that revenue is only recognised to the extent that 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 recognized only to the extent of contract costs incurred that are expected to be recovered. If at any time the costs to complete the contract are estimated to exceed the remaining amount of the consideration under the contract, then a provision is recognised in accordance with the policy set out in Note 3.21(b).

(b) Engineering design and consultancy segment

A contract with a customer is classified by the Group as a service contract when the contract relates to the provision of engineering and consultancy services. The engineering design service contract entitles the Group's enforceable right for the work performed to date.

Revenue from provision of engineering design service is recognised progressively over time using output method with reference to the milestone reached, i.e. based on the progress of the services relative to the total services, which faithfully depicts the relative value of the service provided to customer to date.

Revenue from provision of engineering consultancy service is recognised at a point in time when the consultancy report is delivered and accepted by customer, which indicates that the customer has obtained the ability to direct the use of the report and obtain substantially all the benefits of the report.

(c) Equipment manufacturing segment

A contract with a customer is classified by the Group as a manufacturing contract when the contract relates to the manufacturing of equipment.

Revenue from manufacturing contract related to customised equipment is recognised progressively over time using the input cost-to-cost method, which faithfully depicts the use of the Group's resources to satisfy its performance obligation.

Revenue from manufacturing contract related to non-customised equipment is recognised at a point in time when the customer takes possession of and accepts the equipment, which indicates that the customer has the ability to direct the use of and obtain substantially all of the remaining benefits from the equipment.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.23 Revenue and other income recognition (continued)

(d) Trading segments

A contract with a customer is classified by the Group as a trading contract when the contract relates to the sales of products.

Revenue from such contract is recognised at a point in time when the customer takes possession of and accepts the products, which indicates that the customer has the ability to direct the use of and obtain substantially all of the remaining benefits from the goods.

(e) Dividends

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

Dividend income from listed investments is recognised when the share price of the investment goes ex-dividend.

(f) Interest income

Interest income is recognised as it accrues using the effective interest method. For financial assets measured at amortised cost that are not credit-impaired, the effective interest rate is applied to the gross carrying amount of the asset. For credit impaired financial assets, the effective interest rate is applied to the amortised cost (i.e. gross carrying amount net of loss allowance) of the asset (see Note 3.12(a)).

(g) 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 costs are deferred and recognised in the consolidated statement of comprehensive income over the period necessary to match them with the costs that they are intended to compensate.

Government grants relating to the purchase of property, plant and equipment are included in non-current liabilities as deferred government grants and are credited to the consolidated statement of comprehensive income on a straight-line basis over the expected lives of the related assets.

(h) Income from financial guarantees issued

Income from financial guarantees issued to recognized over the term of the guarantees (see Note 3.12 (b)).

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.24 Research and development

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

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

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

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.25 Concession right and service concession arrangements

The Group entered into a service concession arrangement with government authority in the PRC, on a build-operate-transfer ("BOT") basis under its Engineering and construction contracting segment. The service concession arrangement generally involve the Group as an operator (i) constructing public services infrastructures for those arrangements on a BOT basis; and (ii) operating and maintaining the public services infrastructures at a specified level of serviceability on behalf of the relevant governmental authority for a specified period (the "Service Concession Period"), and the Group will be paid for its services over the relevant Service Concession Period at prices stipulated through a pricing mechanism.

The Group is generally entitled to use all the property, plant and equipment of the public services infrastructures, however, the relevant governmental authority as grantors will control and regulate the scope of services the Group must provide with the public services infrastructures, and retain the beneficial entitlement to any residual interest in the public services infrastructures at the end of the term of the Service Concession Period.

The service concession arrangement is governed by a contract entered into between the Group and the relevant governmental authority in the PRC that set out, inter alia, performance standards, mechanisms for adjusting prices for the services rendered by the Group, specific obligations levied on the Group to restore the public services infrastructures, to a specified level of serviceability at the end of the Service Concession Periods, and arrangements for arbitrating disputes.

The Group recognises the consideration received or receivable in exchange for the construction services rendered as an intangible asset as the Group receives a right to charge users of the public services.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.25 Concession right and service concession arrangements (continued)

Service concession arrangements are accounted for as follows if:

(i) the grantor controls or regulates what services the operator must provide with the infrastructure, to whom it must provide them, and at what price; and

(ii) the grantor controls through ownership, beneficial entitlement or otherwise any significant residual interest in the infrastructure at the end of the term of the arrangement.

The Group's rights over the infrastructure

Infrastructure constructed by the Group under service concession arrangement is not recognised as property, plant and equipment of the Group because the contractual service arrangement does not convey the right to control the use of the infrastructure to the Group. The operator has access to operate the infrastructure to provide the public service on behalf of the grantor in accordance with the terms specified in the contract.

Consideration received or receivable by the Group for the construction services

Consideration received or receivable by the Group for the construction services rendered under service concession arrangement are recognised at their fair value as a financial asset or an intangible asset.

A financial asset (loan and receivable) is recognised to the extent that (a) the Group has an unconditional right to receive cash or another financial asset from or at the direction of the grantor for the construction services rendered; and (b) the grantor has little, if any, discretion to avoid payment, usually because the agreement is enforceable by law.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.25 Concession right and service concession arrangements (continued)

Consideration received or receivable by the Group for the construction services (continued)

An intangible asset (concession right) is recognised to the extent that the Group receives a right to charge users of the public service, which is not an unconditional right to receive cash because the amounts are contingent on the extent that the public uses the service. The intangible asset (concession right) is subsequently accounted at cost less accumulated amortisation and impairment losses.

Both types of consideration are classified as a contract assets during the construction or upgrade period. When the construction or upgrade is completed, the Group reclassifies the contract asset as a financial asset and/or intangible asset.

Concession rights

Subsequent to initial recognition, concession rights are accounted at cost less accumulated amortisation and accumulated impairment losses.

Amortisation for the concession rights with finite useful lives is provided on straight-line basis over their estimated useful lives. Both period and method of amortisation are reviewed annually.

Construction or upgrade services

Revenue and costs relating to construction and upgrade services are accounted for in accordance with the policy set out in Note 3.23(a).

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

3.26 Leases

Where the Group acquires the use of assets under finance leases, the amounts representing the fair value of the leased asset, or, if lower, the present value of the minimum lease payments, of such assets are recognised as property, plant and equipment and the corresponding liabilities, net of finance charges, are recorded as obligations under finance leases. Depreciation is provided at rates which write off the cost or valuation of the assets over the term of the relevant lease or, where it is likely the Group will obtain ownership of the asset, the life of the asset, as set out in Note 3.6. Finance charges implicit in the lease payments are charged to profit or loss over the period of the leases so as to produce an approximately constant periodic rate of charge on the remaining balance of the obligations for each accounting period. Contingent rentals are charged to profit or loss in the accounting period in which they are incurred.

Where the Group has the use of assets held under operating leases, payments made under the leases are charged to profit or loss in equal instalments over the accounting periods covered by the lease term, except where an alternative basis is more representative of the pattern of benefits to be derived from the leased asset. 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.

3.27 Dividend distribution

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

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

4. CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENT

4.1 Construction contracts

Revenue from construction contracts is recognised over time under the input cost-to-cost method, which requires estimations by management. Anticipated losses are fully provided on contracts when identified. Because of the nature of the activity undertaken in construction businesses, the date at which the contract activity is entered into and the date when the activity is completed usually fall into different accounting periods. The Group reviews and revises the estimates of both contract revenue and contract costs (including material costs) in the budget prepared for each contract as the contract progresses. Management regularly reviews the progress of the contracts and the corresponding costs of the contract. If circumstances arise that may change the original estimates of revenues, costs or extent of progress toward completion, estimates are revised. These revisions may result in increases or decreases in estimated revenues or costs and are reflected in the consolidated income statement in the period in which the circumstances that give rise to the revision become known by management.

4.2 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. 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.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

4. CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENT (CONTINUED)

4.3 Impairment of financial assets measured at amortised cost and contract assets

The Group measures the loss allowances for ECLs on financial assets measured at amortised cost and contract assets. When estimating ECLs, the Group considers reasonable and supportable information that is available without undue cost or effort at the reporting date about past events, current conditions and forecasts of future economic conditions. 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. ECLs are a probability-weighted estimate amount that is determined by evaluating a range of possible outcomes. Credit losses take into account the time value of money and are measured as the present value of all cash shortfalls (i.e. the difference between the cash flows due to the entity in accordance with the contract and the cash flows that the Group expects to receive). The loss allowances are estimated using a provision matrix and deducted from the gross carrying amount of the assets. The impairment is subject to management's assessment at the end of the reporting period, and hence, the loss allowance is subject to uncertainty.

4.4 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, overall assets transfers and corporate restructuring. 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 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 periods in which such estimates are changed.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

4. CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENT (CONTINUED)

4.5 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, the average life expectancy of residents in the PRC, the average medical expense increase rate, the cost of living adjustment (COLA) for beneficiaries and the medical costs paid to early retirees are assumed to continue until the death of the retirees. 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 period. 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 government securities, which have maturity approximating to the terms of the related pension liability.

Other key assumptions for pension obligations are based in part on current market conditions. Additional information is disclosed in Note 32(b).

5. FINANCIAL RISK 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.

5.1 Financial risk factors

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.

(a) Market risk

(i) 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 certain 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.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

5. FINANCIAL RISK MANAGEMENT (CONTINUED)

5.1 Financial risk factors (continued)

(a) Market risk (continued)

(i) Foreign exchange risk (continued)

The Group is exposed to currency risk primarily through provision of engineering and contracting services, which give rise to receivables and payables, borrowings and cash balances 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 2018 and 2017.

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 balance sheet date to currency risk arising from recognised assets or liabilities denominated in a currency other than RMB to which they relate.

	As at 31 December			
	2018		2017	
	USD RMB'000	**Others RMB'000**	USD RMB'000	Others RMB'000
Restricted cash, time deposit and cash and cash equivalents (Note 26, 27, 28)	**1,068,348**	**12,276**	1,244,307	157,490
Financial assets at FVTPL (Note 21)	**50,982**	**–**	–	–
Trade receivables (Note 22)	**779,939**	**20,722**	105,325	476,890
Other receivables (Note 23)	**–**	**2,046**	–	1,839
Borrowings (Note 33)	**(98,144)**	**–**	(308,076)	–
Trade and other payables (Note 34)	**(128,350)**	**(24,102)**	(187,126)	(26,172)
Net exposure in RMB	**1,672,775**	**10,942**	854,430	610,047
Derivative assets				
Forward currency contract (Note 21)	**188**	**–**	–	–

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

5. FINANCIAL RISK MANAGEMENT (CONTINUED)

5.1 Financial risk factors (continued)

(a) Market risk (continued)

(i) Foreign exchange risk (continued)

A 5% strengthening of RMB against the USD as at 31 December 2018 and 2017 would have increased/(decreased), the net profit by the amounts shown below:

	2018 RMB'000	2017 RMB'000
Net profit change	**(71,093)**	(36,313)

A 5% weakening of RMB against USD as at 31 December 2018 and 2017 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 Group has set up a policy to manage their foreign exchange risk against their functional currency. The Group enters into foreign currency forward contracts in order to reduce the exposure to USD when necessary. As at 31 December 2018 and 2017, the notional principal amounts of the outstanding forward currency contract were USD14,300,000 (2017: Nil).

The stated changes represent management's assessment of reasonably possible changes in foreign exchange rates over the period until the next annual balance sheet date. The analysis is performed on the same basis for the years ended 31 December 2018 and 2017.

(ii) Interest rate risk

The Group's income and operating cash flows are substantially independent of changes in market interest rates as the Group has no significant floating interest-bearing assets and liabilities. As at 31 December 2018, the Group's borrowings of approximately RMB533 million (2017: RMB1,102 million), trade receivables of approximately RMB881 million (2017: RMB1,016 million) and financing to a supplier of approximately RMB185 million (2017: RMB185 million), were at floating rates. The interest rates and terms of repayment of the Group's borrowings and financing to a supplier are disclosed in Notes 33 and 23 (iv).

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

5. FINANCIAL RISK MANAGEMENT (CONTINUED)

5.1 Financial risk factors (continued)

(a) Market risk (continued)

(iii) Price risk

The Group is exposed to equity securities price risk and future price risk because the Group's listed equity securities investments and future contracts are required to be stated at their fair values.

The following table details the Group's sensitivity to a 5% increase and 5% decrease in equity securities price and future price at each balance sheet date while all other variables were held constant. Management has used 5% to illustrate the equity price risk as the fluctuation in equity securities price is unpredictable.

	As at 31 December	
	2018	2017
Change in market price	**5%**	5%

	For the year ended 31 December	
	2018 RMB'000	2017 RMB'000
Impact on profit or loss		
Increase/(decrease) in profit for the year		
– as a result of increase in future price	**292**	–
– as a result of decrease in future price	**(292)**	–
Impact on equity		
Increase/(decrease) in equity for the year		
– as a result of increase in equity securities price	**6,754**	8,438
– as a result of decrease in equity securities price	**(6,754)**	(8,438)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

5. FINANCIAL RISK MANAGEMENT (CONTINUED)

5.1 Financial risk factors (continued)

(b) Credit risk

The Group's credit risk is primarily attributable to restricted cash, time deposits, cash and cash equivalents, trade and other receivables, contract assets and other current assets.

The majority of the Group's time deposits, cash and cash equivalents are mainly deposited in the stated owned or controlled PRC banks and Hong Kong banks with high credit quality, which the Directors have assessed the credit risk to be insignificant.

The Group has policies in place to ensure that services are rendered and products are sold to customers with appropriate credit history and the Group performs periodic credit evaluations of its customers. Normally the Group does not require collaterals from trade debtors. However, the Group requires collaterals from the proprietors of certain construction contracts to minimise the credit risk involved in these contracts where the Group would normally undertake the financing of the project or provide financing to the proprietors. With regard to overseas companies of inadequate creditworthiness, the Group usually demands a payment in advance from the proprietors. Regarding balances with related parties, the Group assesses the credibility of the related parties by reviewing the operating results and gearing ratios periodically. The Directors consider the Group does not have a significant concentration of credit risk.

The maximum exposure to credit risk is represented by the carrying amount of each financial asset in the balance sheet after deducting any loss allowances for ECLs. The carrying amounts of trade and other receivables and contract assets are disclosed in Notes 22, 23 and 24.

Except for the financial guarantees given by the Group as set out in Note 41, the Group does not provide any other guarantees which would expose the Group to credit risk. The maximum exposure to credit risk in respect of these financial guarantees at the balance sheet date is disclosed in Note 5.1(c).

The Group measures ECLs allowances for trade and other receivables and contract assets at an amount calculated using a provision matrix. As the Group's historical credit loss experience does not indicate significantly different loss patterns for different customer segments, the loss allowance based on ageing analysis and past due status is not further distinguished between the Group's different customer bases.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

5. FINANCIAL RISK MANAGEMENT (CONTINUED)

5.1 Financial risk factors (continued)

(b) Credit risk (continued)

The Group performs the credit risk assessment and makes allowances for expected credit losses on the trade receivables, contract assets and other receivables using both specific and general provisions. The Group makes specific provision for the trade and other receivables and contract assets with outstanding balance above RMB5 million and for those trade and other debtors and customers whose credit risk are considered significantly increased or identified as credit-impaired. In respect of the remaining balances of trade and other receivables and contract assets, the Group makes general provision based on ageing analyses and project status.

The following tables provide information about the Group's exposure to credit risk and ECLs for trade receivables, contract assets and other receivables as at 31 December 2018:

Trade receivables General provision	As at 31 December 2018 Expected loss rate %	Gross carrying amount RMB'000	Loss allowance RMB'000
Age of trade debtor without specific credit term:			
Within 1 year	0.5	10,363,229	51,816
Between 1 and 2 years	10	1,910,809	191,081
Between 2 and 3 years	20	1,645,759	328,885
Between 3 and 4 years	30	1,101,788	327,403
Between 4 and 5 years	50	293,528	144,068
Over 5 years	100	358,955	358,955
	8.9	15,674,068	1,402,208
Long-term debtor age:			
Current	0.5	1,141,579	5,708
Within 1 year past due	10	75,389	7,539
Between 1 to 2 years past due	20	18,360	3,672
Between 2 to 3 years past due	30	837	251
Between 3 to 4 years past due	50	–	–
Over 4 years past due	100	–	–
	1.4	1,236,165	17,170
	8.4	16,910,233	1,419,378

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

5. FINANCIAL RISK MANAGEMENT (CONTINUED)

5.1 Financial risk factors (continued)

(b) Credit risk (continued)

Trade receivables Specific provision	Age	As at 31 December 2018 Expected loss rate %	Gross carrying amount RMB'000	Loss allowance RMB'000
Customer:				
Shougang Jingtang Iron and Steel Corporation Limited	Over 5 years	100	24,378	24,378
Henan Yongfeng Molybdenum Industry Co., Ltd.	Between 4 and 5 years	100	17,755	17,755
Malaysian Alunminum Plant	Over 5 years	100	14,413	14,413
Yunnan Qujing Shuangyou Iron and Steel Co., Ltd.	Between 1 to 3 years	29.5	12,460	3,677
Zouping Qixing Industrial Aluminum Material Co., Ltd.	Between 3 to 4 years	75.3	12,528	9,435
Shandong Fulion Iron and Steel Company	Within 3 years	19.4	12,440	2,408
Sichuan Quangyuan Qixing Aluminum Co., Ltd.	Over 5 years	100	7,000	7,000
Hegang Longjia Coal Chemical Co., Ltd.	Within 1 year, between 3 to 4 years	45.9	5,968	2,740
Guizhou Branch of China Aluminum Industry Co., Ltd.	Over 5 years	100	5,696	5,696
Shandong Dingbeizhuo International Trade Co., Ltd	Betwen 4 to 5 years	100	5,100	5,100
Others		98.8	52,388	51,759
		84.9	170,126	144,361

Contract assets General provision	As at 31 December 2018 Expected loss rate %	Gross carrying amount RMB'000	Loss allowance RMB'000
Project status:			
Incomplete	0.5	5,622,457	28,112
Complete	1.4	6,176,410	85,657
	1.0	11,798,867	113,769

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

5. FINANCIAL RISK MANAGEMENT (CONTINUED)

5.1 Financial risk factors (continued)

(b) Credit risk (continued)

Contract assets Specific provision	Expected loss rate %	As at 31 December 2018 Gross carrying amount RMB'000	Loss allowance RMB'000
Customer:			
Inner Mongolia Jinlian Aluminum Material Co., Ltd.	100	9,158	9,158
Gree Electrical Appliances (Zhengzhou) Co., Ltd.	31.5	25,345	7,980
Others	1.0	547,595	5,552
	3.9	582,098	22,690

Other receivables General provision	Expected loss rate %	As at 31 December 2018 Gross carrying amount RMB'000	Loss allowance RMB'000
Age of other debtor without specific credit term:			
Within 1 year – Note (i)	0.5	822,921	4,115
Between 1 and 2 years – Note (ii)	10	367,832	36,783
Between 2 and 3 years – Note (ii)	20	532,464	106,027
Between 3 and 4 years – Note (iii)	30	297,871	89,068
Between 4 and 5 years – Note (iii)	50	79,252	37,546
Over 5 years – Note (iii)	100	76,276	76,276
	16.1	2,176,616	349,815
Long-term other debtor age:			
Current – Note (ii)	0.5	1,485,916	7,495
	9.8	3,662,532	357,310

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

5. FINANCIAL RISK MANAGEMENT (CONTINUED)

5.1 Financial risk factors (continued)

(b) Credit risk (continued)

		As at 31 December 2018		
Other receivables Specific provision – Note (iii)	Age	Expected loss rate %	Gross carrying amount RMB'000	Loss allowance RMB'000
Other debtor:				
Huainan Zhongsheng Home Co., Ltd.	Between 1 and 5 years	45.0	672,622	302,617
Jiangxi Beiguo Real Estate Development Company	Between 3 and 5 years	100	25,812	25,812
Others		96.5	15,796	15,244
		48.1	714,230	343,673

Note:

(i) Representing 12 months ECLs (Level 1)

(ii) Representing lifetime ECLs on other debtors with significant increase in credit risk (Level 2)

(iii) Representing lifetime ECLs on credit-impaired debts (Level 3)

Expected loss rates are based on actual loss experience over the past 5 years. These rates are adjusted to reflect differences between economic conditions during the period over which the historic data has been collected, current conditions and the group's view of economic conditions over the expected lives of the receivables.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

5. FINANCIAL RISK MANAGEMENT (CONTINUED)

5.1 Financial risk factors (continued)

(b) Credit risk (continued)

The movements of provision for credit losses of trade receivables, contract assets and other receivables are as follows:

Trade receivables	2018 RMB'000	2017 RMB'000
At beginning of the year	1,287,809	1,143,842
Provisions	302,583	149,199
Receivables written off as uncollectible	(35,995)	(20,984)
Receivables written back	22,568	58,411
Reversal	(13,226)	(42,659)
At the end of the year	1,563,739	1,287,809

Contract assets	2018 RMB'000	2017 RMB'000
At beginning of the year		
As previously reported	–	–
Adoption of IFRS 15 – Note	100,026	–
As restated	100,026	–
Additions	36,433	–
At the end of the year	136,459	–

Note: ECLs of trade receivables of RMB100,026,000 was reclassified to contract assets upon adoption of IFRIC-Int 12 as amended by IFRS 15.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

5. FINANCIAL RISK MANAGEMENT (CONTINUED)

5.1 Financial risk factors (continued)

(b) Credit risk (continued)

Other receivables	Level 1 RMB'000	Level 2 RMB'000	Level 3 RMB'000	**2018 RMB'000**	2017 RMB'000
At beginning of the year	10,462	145,006	355,020	**510,488**	354,869
Transfer from level 1 to level 2	(1,839)	1,839	–	**–**	–
Transfer from level 2 to level 3	–	(59,155)	59,155	**–**	–
Additions	2,919	55,206	145,200	**203,325**	131,826
Receivables written off as uncollectible	–	–	(17,029)	**(17,029)**	(92)
Receivables written back	68	(86)	10,838	**10,820**	26,999
Reversal	–	–	(6,621)	**(6,621)**	(3,114)
At the end of the year	11,610	142,810	546,563	**700,983**	510,488

(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 businesses, the Group aims to maintain flexibility in funding by keeping committed credit lines available.

Management monitors the cash flow forecasts of the Group, which comprises the undrawn borrowing facility (Note 33), and cash and cash equivalents available as at each month end 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 balance sheet dates 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.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

5. FINANCIAL RISK MANAGEMENT (CONTINUED)

5.1 Financial risk factors (continued)

(c) Liquidity risk (continued)

	Within 1 year RMB'000	1–2 years RMB'000	2–5 years RMB'000	Over 5 years RMB'000	Total RMB'000
At 31 December 2018					
Borrowings	11,027,235	1,425,846	915,783	–	13,368,864
Trade and other payables (excluding non-financial liabilities)	19,070,875	5,606	–	–	19,076,481
Dividends payable	30,000	–	–	–	30,000
	30,128,110	1,431,452	915,783	–	32,475,345
Derivative assets: settled gross					
Forward currency contract (Note 21)					
– Inflow	98,143	–	–	–	98,143
– Outflow	97,955	–	–	–	97,955
Financial guarantees issued					
Maximum amount guaranteed	195,000	–	–	–	195,000

	Within 1 year RMB'000	1–2 years RMB'000	2–5 years RMB'000	Over 5 years RMB'000	Total RMB'000
At 31 December 2017					
Borrowings	10,126,461	840,849	2,144,738	19,266	13,131,314
Trade and other payables (excluding non-financial liabilities)	16,823,471	5,608	–	–	16,829,079
Dividends payable	30,000	–	–	–	30,000
	26,979,932	846,457	2,144,738	19,266	29,990,393
Financial guarantees issued					
Maximum amount guaranteed	325,000	–	–	–	325,000

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

5. FINANCIAL RISK MANAGEMENT (CONTINUED)

5.2 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 borrowings, other non-current liabilities, trade and other payables, as shown in the consolidated balance sheet) less restricted cash, time deposits and cash and cash equivalents. Total capital is calculated as equity, as shown in the consolidated balance sheet, plus net debts less non – controlling interest. The Group aims to maintain the gearing ratio to be within 60% and 90%.

	As at 31 December	
	2018	2017
	RMB'000	RMB'000
Total borrowings and other liabilities	**34,784,743**	32,019,777
Less: Restricted cash, time deposits and cash and cash equivalents (Note 26, 27, 28)	**(6,808,981)**	(7,490,615)
Net debt	**27,975,762**	24,529,162
Total equity attributed to equity owners of the Company	**10,152,650**	9,178,230
Total capital	**38,128,412**	33,707,392
Gearing ratio	**73%**	73%

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

5. FINANCIAL RISK MANAGEMENT (CONTINUED)

5.3 Fair value estimation

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 (i.e. as prices) or indirectly (i.e. derived from prices) (level 2).
- Inputs for the asset or liability that are not based on observable market data (i.e. unobservable inputs) (level 3).

The carrying amounts of the Group's financial assets and liabilities including restricted cash, time deposits, cash and cash equivalents, trade and other receivables, trade and other payables and borrowings and loans approximate their fair values due to their short maturities.

The following table presents the Group's assets/liabilities that are measured at fair value as at 31 December 2018 and 2017.

	At 31 December	
	2018 **RMB'000**	2017 RMB'000
Level 1		
Available-for-sale financial assets		
Listed equity securities	**–**	198,538
Financial assets at FVTOCI		
Listed equity securities	**158,907**	–
Derivative liabilities at FVTPL (Note 21)	**(22)**	–
Level 2		
Derivative assets at FVTPL (Note 21)	**188**	–
Level 3		
Available-for-sale financial assets		
Unlisted equity securities	**–**	120,383
Short-term investments	**–**	530,592
Financial assets at FVTOCI		
Unlisted equity securities	**48,748**	–
Financial assets at FVTPL		
Short-term investments	**156,482**	–
	364,303	849,513

There were no transfer between level 1 and level 2.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

5. FINANCIAL RISK MANAGEMENT (CONTINUED)

5.3 Fair value estimation (continued)

(a) Financial instruments in level 1

The fair value of financial instruments traded in active markets is based on quoted market prices at the balance sheet date. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets and financial liabilities held by the Group is the quoted prices from an exchange. These instruments are included in level 1. Instruments included listed equity investment in Zhuzhou Tianqiao Crane Co. Ltd. and future contracts, which are classified as financial assets at FVTOCI and financial liabilities at FVTPL respectively.

(b) Financial instruments in level 2

The fair value of financial instruments that are not traded in an active market (for example, over-the-counter derivatives) is determined by using valuation techniques. These valuation techniques maximise the use of observable market data where it is available and rely as little as possible on entity specific estimates. If all significant inputs required to calculate the fair value of an instrument are observable, the instrument is included in level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in level 3. Specific valuation techniques used to value financial instruments include:

- Quoted market prices or dealer quotes for similar instruments.
- The fair value of interest rate swaps is calculated as the present value of the estimated future cash flows based on observable yield curves.
- The fair value of forward foreign exchange contracts is determined using forward exchange rates at the balance sheet date, with the resulting value discounted back to present value.
- Other techniques, such as discounted cash flow analysis, are used to determine fair value for the remaining financial instruments.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

5. FINANCIAL RISK MANAGEMENT (CONTINUED)

5.3 Fair value estimation (continued)

(c) Financial instruments in level 3

Information about Level 3 fair value measurements:

The fair value of unlisted equity instruments is estimated by reference to the net assets value of investees. A change in net assets value by 10% would increase/decrease the fair value by approximately RMB4,875,000. The fair value of short-term investments is estimated based on cash flows discounted using expected return of 1.2%–4.9% (2017: 1.5%–4.1%) based on management judgement. A change in the return rate by 100 basic point would increase/decrease the fair value by RMB1,565,000.

The following table presents the changes in level 3 instruments for the year ended 31 December 2018:

	Financial assets at FVTOCI Unlisted equity securities RMB'000	FVTPL Short-term investments RMB'000
At 1 January 2018		
As previously reported	–	–
Change in accounting policy (Note)	122,610	530,592
As restated	122,610	530,592
Additions	6,000	3,865,734
Disposal/settlement on expiration	(73,580)	(4,239,844)
Fair value change for the year	(6,282)	–
At end of the year	48,748	156,482

Note: Upon adoption of IFRS9, unlisted equity securities of RMB122,610,000 (with fair value adjustment of RMB2,227,000) and short-term investment of RMB530,592,000 were reclassified to financial assets at FVTOCI and FVTPL respectively on 1 January 2018.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

5. FINANCIAL RISK MANAGEMENT (CONTINUED)

5.3 Fair value estimation (continued)

(c) Financial instruments in level 3 (continued)

The following table presents the changes in level 3 instruments for the year ended 31 December 2017:

	Available-for-sale financial assets	
	Unlisted equity securities RMB'000	**Short-term investments** RMB'000
At beginning of the year	18,973	18,000
Additions	101,410	530,592
Settlement on expiration	–	(18,000)
At end of the year	120,383	530,592

6. REVENUE AND SEGMENT INFORMATION

(a) Revenue

(i) Disaggregation of revenue

Disaggregation of revenue from contracts with customers by major products or service lines under IFRS 15 and other revenue is analysed as follows:

	Year ended 31 December	
	2018 **RMB'000**	2017 RMB'000
Disaggregated by major products or service lines under IFRS 15		
Engineering design and consultancy	**2,278,864**	1,719,784
Engineering and construction contracting	**21,679,821**	23,879,261
Equipment manufacturing	**1,273,988**	1,245,650
Trading	**8,292,733**	9,170,562
	33,525,406	36,015,257
Other revenue:		
Rental Income	**46,705**	50,089
	33,572,111	36,065,346

Disaggregation of revenue from contracts with customers by geographical regions is disclosed in Note 6(b).

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

6. REVENUE AND SEGMENT INFORMATION (CONTINUED)

(a) Revenue (continued)

(ii) Revenue expected to be recognised in the future arising from contracts with customers in existence at the reporting date

As at 31 December 2018, the aggregated amount of the transaction price allocated to the remaining performance obligations under the Group's existing contracts is RMB545.3 million. This amount represents revenue expected to be recognised in the future from pre-completion construction contracts and service contracts entered into by the customers with the Group. The Group will recognise the expected revenue in future when or as the work is completed.

The Group has applied the practical expedient in paragraph 121 of IFRS 15 to its construction contracts and service contracts such that the above information does not include information about revenue that the Group will be entitled to when it satisfies the remaining performance obligations under the construction contracts and service contracts that had an original expected duration of one year or less.

The above amount also does not include any amounts of completion bonuses that the Group may earn in the future by meeting the conditions set out in the Group's construction contracts with customers, unless at the reporting date it is highly probable that the Group will satisfy the conditions for earning those bonuses.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

6. REVENUE AND SEGMENT INFORMATION (CONTINUED)

(b) 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 design and consultancy; (ii) engineering and construction contracting; (iii) equipment manufacturing; and (iv) trading.

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, investment properties, intangible assets, financial assets at fair value through other comprehensive income, other non-current assets, financial assets at fair value through profit or loss, inventories, contract assets, trade and notes receivables, prepayments and other receivables, restricted cash, time deposits and cash and cash equivalents. Unallocated assets comprise deferred income tax assets, investments accounted for using equity method and current income tax prepayments.

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 16), land use rights (Note 17), investment properties (Note 18), intangible assets (Note 19), investments accounted for using the equity method (Note 20(b)), unlisted equity securities (Note 21) and other non-current assets, including additions resulting from acquisitions through business combinations.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

6. REVENUE AND SEGMENT INFORMATION (CONTINUED)

(b) Segment information (continued)

The segment information provided to the Senior Management for the reportable segments is as follows:

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

The segment results for the year ended 31 December 2018 are as follows:

	Engineering design and consultancy RMB'000	Engineering and construction contracting RMB'000	Equipment manufacturing RMB'000	Trading RMB'000	Inter-segment elimination RMB'000	Total RMB'000
Disaggregated by timing of revenue recognition under IFRS 15	2,363,939	21,705,533	1,507,957	8,295,698	(347,721)	33,525,406
Rental income	27,077	14,164	2,022	3,498	(56)	46,705
Segment revenue	2,391,016	21,719,697	1,509,979	8,299,196	(347,777)	33,572,111
Inter-segment revenue	(85,075)	(25,768)	(233,969)	(2,965)	347,777	–
Revenue	2,305,941	21,693,929	1,276,010	8,296,231	–	33,572,111
Segment result	56,106	937,249	(42,864)	66,630	3,352	1,020,473
Finance income	35,103	333,372	5,340	97,386	(244,451)	226,750
Finance expenses	(84,864)	(724,105)	(45,277)	(68,532)	231,556	(691,222)
Gain on disposal of a subsidiary	24,567	50,356	49,878	–	–	124,801
Share of profits of investments accounted for using equity method	568	825	2,591	–	–	3,984
Income tax expense						(145,856)
Profit for the year						538,930
Other segment items						
Amortisation	27,626	21,689	1,530	–	–	50,845
Depreciation	60,859	112,878	20,043	2,654	–	196,434
Provision for/(reversal of)						
– credit losses	106,675	376,038	11,211	28,570	–	522,494
– impairment of inventories	–	–	(5,852)	–	–	(5,852)
– impairment of investment in associate	293	–	4,608	–	–	4,901
– impairment on property plant and equipment	141	–	41,695	–	–	41,836
– impairment on intangible assets	–	–	4,998	–	–	4,998

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

6. REVENUE AND SEGMENT INFORMATION (CONTINUED)

(b) Segment information (continued)

(i) As at and for the year end 31 December 2018: (continued)

The segment assets and liabilities as at 31 December 2018 and capital expenditure for the year then ended are as follows:

	Engineering design and consultancy RMB'000	Engineering and construction contracting RMB'000	Equipment manufacturing RMB'000	Trading RMB'000	Inter-segment elimination RMB'000	Total RMB'000
Assets						
Segment assets	20,147,931	26,343,035	3,309,431	4,778,828	(6,750,024)	47,829,201
Unallocated assets						
– Deferred income tax assets						676,003
– Current income tax prepayments						45,258
– Investments accounted for using equity method						480,523
Total assets						49,030,985
Liabilities						
Segment liabilities	14,170,126	21,238,369	2,332,676	4,486,880	(6,583,413)	35,644,638
Unallocated liabilities						
– Deferred income tax liabilities						74,822
– Current income tax liabilities						126,060
Total liabilities						35,845,520
Capital expenditure	20,911	442,971	202,494	5,441	–	671,817

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

6. REVENUE AND SEGMENT INFORMATION (CONTINUED)

(b) Segment information (continued)

(ii) As at and for the year ended 31 December 2017:

The segment results for the year ended 31 December 2017 are as follows:

	Engineering design and consultancy RMB'000	Engineering and construction contracting RMB'000	Equipment manufacturing RMB'000	Trading RMB'000	Inter-segment elimination RMB'000	Total RMB'000
Disaggregated by timing of revenue recognition under IFRS 15	1,841,153	23,881,333	1,540,184	9,202,726	(450,139)	36,015,257
Rental income	20,565	27,444	973	1,107	–	50,089
Segment revenue	1,861,718	23,908,777	1,541,157	9,203,833	(450,139)	36,065,346
Inter-segment revenue	(121,369)	(2,072)	(294,534)	(32,164)	450,139	–
Revenue	1,740,349	23,906,705	1,246,623	9,171,669	–	36,065,346
Segment result	64,133	1,202,611	80,060	79,472	(8,139)	1,418,137
Finance income	42,769	251,317	11,512	110,251	(149,302)	266,547
Finance expenses	(96,745)	(552,685)	(67,721)	(74,312)	149,302	(642,161)
Gain on disposal of an associate	–	8,402	–	–	–	8,402
Gain on bargain purchase from business combination	–	134	–	–	–	134
Share of profits/(losses) of investments accounted for using equity method	2,015	26,128	(1,919)	–	–	26,224
Income tax expense						(227,615)
Profit for the year						849,668
Other segment items						
Amortisation	44,634	10,814	6,293	3,013	–	64,754
Depreciation	67,162	129,537	38,877	2,087	–	237,663
Provision for/(reversal of)						
– losses on construction contracts with customers	–	28,189	–	–	–	28,189
– credit losses	37,839	226,622	(39,805)	10,596	–	235,252
– impairment of inventories	10,917	–	17,023	–	–	27,940
– impairment on investment in an associate	–	8,372	–	–	–	8,372

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

6. REVENUE AND SEGMENT INFORMATION (CONTINUED)

(b) Segment information (continued)

(ii) As at and for the year ended 31 December 2017: (continued)

The segment assets and liabilities as at 31 December 2017 and capital expenditure for the year then ended are as follows:

	Engineering design and consultancy RMB'000	Engineering and construction contracting RMB'000	Equipment manufacturing RMB'000	Trading RMB'000	Inter-segment elimination RMB'000	Total RMB'000
Assets						
Segment assets	5,131,921	37,620,166	3,103,118	4,747,193	(6,100,959)	44,501,439
Unallocated assets						
– Deferred income tax assets						608,469
– Current income tax prepayments						14,784
– Investments accounted for using equity method						249,098
Total assets						45,373,790
Liabilities						
Segment liabilities	3,117,882	29,973,661	2,153,801	4,250,078	(6,449,854)	33,045,568
Unallocated liabilities						
– Deferred income tax liabilities						66,251
– Current income tax liabilities						134,400
Total liabilities						33,246,219
Capital expenditure	220,499	386,518	75,234	73,396	–	755,647

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

6. REVENUE AND SEGMENT INFORMATION (CONTINUED)

(b) Segment information (continued)

(iii) Analysis of information by geographical regions:

Revenue

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
The PRC	**32,574,386**	34,611,002
Other countries	**997,725**	1,454,344
	33,572,111	36,065,346

Non-current assets, other than financial instruments and deferred tax assets

	At 31 December	
	2018	2017
	RMB'000	RMB'000
The PRC	**5,609,873**	7,414,503
Other countries	**22,223**	35,680
	5,632,096	7,450,183

(iv) For the year ended 31 December 2018, revenue of approximately RMB1,265 million (2017: RMB1,772 million) and RMB1,735 million (2017: RMB1,902 million) were derived from a single largest third party and a single largest related party customer respectively. These revenues are attributed to the engineering and construction contracting and the trading segments.

For the years ended 31 December 2018 and 2017, the Group does not have any single customer with the transaction value over 10% of the total external sales.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

7. EXPENSES BY NATURE

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
Raw materials and consumables used	**14,142,706**	16,415,912
Purchased equipment	**1,153,464**	3,749,539
Subcontracting charges	**12,232,985**	9,953,636
Employee benefits	**1,540,489**	1,771,229
Depreciation and amortisation		
– property, plant and equipment	**189,256**	230,516
– investment properties	**7,178**	7,147
– land use rights	**20,640**	21,735
– intangible assets	**28,392**	36,802
– Other non-current assets	**1,813**	6,217
Tax and other transaction taxes	**82,844**	104,299
Travelling expenses and freight charges	**243,920**	234,258
Office expenses	**22,998**	27,166
Operating lease rentals	**149,711**	111,150
Provision for		
– ECLs of trade and notes receivables	**302,583**	149,199
– ECLs of other receivables	**203,325**	131,826
– losses on construction contracts with customers	**36,433**	28,189
– property, plant and equipment	**41,836**	–
– intangible assets	**4,998**	–
– inventories	**7,458**	27,940
Provision for impairment of investment in an associate	**4,901**	8,372
Reversal of		
– ECLs of trade and notes receivables	**(13,226)**	(42,659)
– ECLS of other receivables	**(6,621)**	(3,114)
– inventories	**(13,310)**	–
Research and development costs	**483,975**	505,261
Professional and technical consulting fees	**210,162**	137,464
Auditor's remuneration	**6,900**	6,751
Outsourcing charges	**–**	–
Bank charges	**59,885**	46,852
Business development and entertainment	**24,527**	59,692
Property management fees	**64,644**	53,251
Others	**1,299,171**	990,888
Total cost of sales, tax and surcharges, selling and marketing expenses and administrative expenses	**32,534,037**	34,769,518

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

8. OTHER INCOME

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
Return from short-term investments	**8,168**	1,630
Write-back of long outstanding payables (i)	**33,210**	29,841
Government grants (ii)	**25,126**	42,506
Others	**12,094**	26,025
	78,598	100,002

Notes:

(i) Write-back of long outstanding payables mainly related to amounts payable to vendors, which were no longer in existence or the obligation of settlement had been distinguished by court orders.

(ii) The Group obtained various grants from different government authorities of the PRC.

9. OTHER (LOSSES)/GAINS – NET

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
Net foreign exchange gains	**10,619**	20,984
Gains on disposal of available-for-sale financial assets	**–**	7,383
Gain on disposal of property, plant and equipment, land use right and intangible assets	**1,645**	16,486
Fair value gain on derivative assets at FVTPL	**188**	–
Fair value loss on derivative liabilities at FVTPL	**(22)**	–
Compensation loss	**(63,167)**	(12,815)
Expenses related to Three Supplies and One Property	**(41,208)**	–
Others	**(4,254)**	(9,731)
	(96,199)	22,307

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

10. FINANCE EXPENSES – NET

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
Interest income on deposits with banks	**48,307**	57,866
Interest income on receivables with interests	**147,265**	187,434
Interest income on deposit in related parties (Note 44(a))	**30,270**	12,253
Interest income on loans to third parties	**908**	8,994
Finance income	**226,750**	266,547
Interest expense of retirement and other supplemental benefit obligations	**40,713**	28,072
Interest expense on bank and other borrowings	**660,576**	628,137
Less: capitalised interest expense	**(10,067)**	(14,048)
Finance expenses	**691,222**	642,161
Net finance expenses recognised in the consolidated statement of comprehensive income	**464,472**	375,614

11. INCOME TAX EXPENSE

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
Current tax		
PRC enterprise income tax for the year (i)	**195,558**	228,891
Overseas income tax for the year	**2,586**	1,270
	198,144	230,161
Deferred tax		
Obligations and reversal of temporary differences (Note 35)	**(52,288)**	(2,546)
Income tax expense	**145,856**	227,615

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

11. INCOME TAX EXPENSE (CONTINUED)

Note:

(i) PRC enterprise income tax

The applicable income tax rate has been 25% since the Corporate Income Tax Law of the PRC became effective from 1 January 2008.

The Company and certain subsidiaries of the Group obtained the certificates of high and new tech enterprises from the Ministry of Science and Technology, Ministry of Finance and offices of the State Administration of Taxation and local taxation bureaus of all provinces, which granted tax preferential rate of 15% for three years.

Certain subsidiaries of the Group located in special regions of the PRC were granted tax concessions including preferential tax rates of 15%.

Except the Company and above subsidiaries taxed at preferential rate of 15%, the remaining companies now comprising the Group are subject to income tax rate of 25% for the year ended 31 December 2018.

The difference between the actual income tax charge in the consolidated statement of comprehensive income and the amounts which would result from applying the enacted tax rate to profit before income tax can be reconciled as follows:

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
Profit before income tax	**684,786**	1,077,283
Taxation calculated at the tax rate of 15% (2017: 15%)	**102,718**	161,592
Income tax effects of:		
Tax rate differential of certain companies	**21,096**	20,818
Over-provision in prior period	**(5,975)**	–
Gain on bargain purchase from business combination	**–**	(20)
Gain on disposal of a subsidiary	**(18,720)**	(1,260)
Non-deductible expenses	**24,730**	14,880
Others	**22,007**	31,605
Income tax expense	**145,856**	227,615
Effective income tax rate	**21%**	21%

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

12. EARNINGS PER SHARE

(a) Basic

The Company has right to defer the distribution to the perpetual bonds holders with no restriction unless the Company declares dividends to the ordinary shareholders during the 12-month period ending on the day before the contractual distribution payment date (See note 30(iii)).

After considering that the perpetual bonds holders have no preferential right of distribution to the ordinary shareholders except at the time of winding up and the Company's consolidated financial statements are prepared on a going concern basis, the management did not deduct the distribution to perpetual notes holders when calculating earnings per share in prior periods.

Following the listing of the Company's A shares on the Shanghai Stock Exchange, the management decided to change its policy on calculating earnings per share by deducting such distribution from the profits attributable to Company's equity owners as if the perpetual bonds are preference shares in 2018. The Company considers that the new policy provides more relevant information about the effects of the perpetual bonds. Accordingly, the earnings per share in 2017 is restated to conform with the current year EPS calculation.

The calculation of basic earnings per share for each of the years ended 31 December 2018 and 2017 is as follows:

	Year ended 31 December	
	2018	2017 (restated)
Profit attributable to equity owners of the Company (RMB'000)	**329,193**	616,879
Less: Distribution to perpetual bond holders (RMB'000)	**(96,185)**	(94,536)
	233,008	522,343
Weighted average number of ordinary shares in issue	**2,762,876,493**	2,663,160,000
Basic earnings per share (RMB)	**0.08**	0.20

(b) Diluted

As the Company had no dilutive ordinary shares for each of the years ended 31 December 2018 and 2017, dilutive earnings per share for the years ended 31 December 2018 and 2017 are the same as basic earnings per share.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

13. DIVIDENDS

Dividends represented dividends proposed by the Company during each of the years ended 31 December 2018 and 2017.

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
Final, proposed (2017: RMBnil)	**91,706**	–

Pursuant to the board meeting on 28 March 2019, the directors recommend the payment of final dividend of RMB0.31 (including tax) every 10 shares for the year ended 31 December 2018.

14. DIRECTORS' AND SUPERVISORS' EMOLUMENTS AND FIVE HIGHEST PAID INDIVIDUALS' EMOLUMENTS

(a) Details of directors' and supervisors' emoluments are as follows:

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
Directors and supervisors		
– Salaries, housing allowances, other allowances and benefits-in-kind	**1,170**	2,458
– Contributions to pension plans	**796**	417
– Discretionary bonuses and incentives (iii)	**1,884**	1,833
	3,850	4,708

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

14. DIRECTORS' AND SUPERVISORS' EMOLUMENTS AND FIVE HIGHEST PAID INDIVIDUALS' EMOLUMENTS (CONTINUED)

(a) Details of directors' and supervisors' emoluments are as follows: (continued)

The emoluments received by individual directors and supervisors are as follows:

For the year ended 31 December 2018

	Salaries, housing allowances, other allowances, and benefits-in-kind RMB'000	Contributions to pension plans RMB'000	Discretionary bonuses RMB'000	Total RMB'000
Directors				
– Mr. He Zhihui (賀志輝)	286	170	531	987
– Mr. Wang Jun (王軍) (i)	–	–	–	–
– Mr. Li Yihua (李宜華) (i)	–	–	–	–
– Mr. Zong Xiaoping (宗小平)	260	154	407	821
– Mr. Wu Zhigang (吳志剛)	260	163	316	739
– Mr. Zhang Jian (張建)	182	153	314	649
– Mr. Sun Chuanyao (孫傳堯) (ii)	24	–	–	24
– Mr. Gui Weihua (桂衛華) (ii)	119	–	–	119
– Mr. Cheung Hung Kwong (張鴻光)	143	–	–	143
– Mr. Fu Jun (伏軍)	143	–	–	143
Supervisors				
– Mr. Ou Xiaowu (歐小武) (i)	–	–	–	–
– Mr. He Bincong (賀斌聰)	182	156	316	654
– Mr. Li Hui (李衛) (i)	–	–	–	–
	1,599	796	1,884	4,279

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

14. DIRECTORS' AND SUPERVISORS' EMOLUMENTS AND FIVE HIGHEST PAID INDIVIDUALS' EMOLUMENTS (CONTINUED)

(a) Details of directors' and supervisors' emoluments are as follows: (continued)

For the year ended 31 December 2017

	Salaries, housing allowances, other allowances, and benefits-in-kind RMB'000	Contributions to pension plans RMB'000	Discretionary bonuses RMB'000	Total RMB'000
Directors				
– Mr. He Zhihui (賀志輝)	459	90	669	1,218
– Mr. Li Yihua (李宜華) (i)	–	–	–	–
– Mr. Wang Jun (王軍) (i)	–	–	–	–
– Mr. Zong Xiaoping (宗小平)	451	83	100	634
– Mr. Wu Zhigang (吳志剛)	399	89	308	796
– Mr. Cheung Hung Kwong (張鴻光)	143	–	–	143
– Mr. Sun Chuanyao (孫傳堯)	143	–	–	143
– Mr. Zhang Jian (張建)	360	74	381	815
– Mr. Fu Jun (伏軍)	143	–	–	143
Supervisors				
– Mr. Ou Xiaowu (歐小武) (i)	–	–	–	–
– Mr. He Bincong (賀斌聰)	360	81	375	816
– Mr. Li Hui (李衛) (i)	–	–	–	–
	2,458	417	1,833	4,708

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

14. DIRECTORS' AND SUPERVISORS' EMOLUMENTS AND FIVE HIGHEST PAID INDIVIDUALS' EMOLUMENTS (CONTINUED)

(a) Details of directors' and supervisors' emoluments are as follows: (continued)

Note:

(i) These directors and supervisors receive no emoluments for their services provided to the Group but they however receive emoluments from Chinalco for their services as directors and/or supervisors of Chinalco and a number of subsidiaries of Chinalco. These directors and supervisors consider the amount of emoluments relating to their services provided to the Group for each of the years ended 31 December 2018 and 2017 is minimal.

(ii) Mr. Sun Chuanyao resigned from the post of independent non-executive Director of the Company on 5 January 2018. Mr. GUI Weihua has been appointed to replace Mr. Sun Chuanyao as the independent non-executive Director from 27 February 2018.

(iii) Included in this part is the incentive payment of RMB543 to the directors and supervisors base on the performance assessment results for the three-year period from 2016 to 2018.

During the years ended 31 December 2018 and 2017, no emoluments were paid by the Group to the directors/supervisors as an inducement to join or upon joining the Group or as compensation for loss of office.

(b) Five highest paid individuals

The number of directors or supervisors and non-directors or supervisors included in the five highest paid individuals for the years ended 31 December 2018 and 2017 are set forth below:

	Year ended 31 December	
	2018	2017
Director or supervisor	**4**	3
Non-director or supervisor	**1**	2
	5	5

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

14. DIRECTORS' AND SUPERVISORS' EMOLUMENTS AND FIVE HIGHEST PAID INDIVIDUALS' EMOLUMENTS (CONTINUED)

(b) Five highest paid individuals (continued)

The aggregate of the emoluments in respect of the remaining highest paid individuals are as follows:

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
Basic salaries, housing allowances, other allowances and benefits-in-kind	**665**	1,128
Contributions to pension plans	**159**	174
Discretionary bonuses	**–**	308
	824	1,610

The emoluments of the remaining highest paid individuals who are not director or supervisor are within the following bands:

	Year ended 31 December	
	2018	2017
Nil to HK$1,000,000	**1**	2
HK$1,000,001 to HK$1,500,000	**–**	–
HK$1,500,001 to HK$2,000,000	**–**	–
	1	2

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

15. EMPLOYMENT BENEFITS

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
Salaries, wages and bonuses (iii)	**1,316,202**	1,267,261
Retirement benefits (i) and (iii)	**203,015**	201,474
Early retirement and supplemental pension benefit (Note 32)		
– interest cost	**40,713**	28,072
– past service cost	**(125,057)**	10,912
– current service cost	**870**	981
Housing fund (ii) and (iii)	**121,816**	116,819
Welfare, medical and other expenses (iii)	**308,174**	366,681
	1,865,733	1,992,200

Notes:

(i) Retirement benefits

The Group is required to make specific contributions to the state-managed retirement plan at a rate of 18%-20% of the salaries of the PRC employees for the years ended 31 December 2018 and 2017. 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.

In addition, the Group has committed to implement a supplemental defined contribution retirement scheme. Under this scheme, the employees of the Group make a specified contribution based on their service duration. The Group is required to make a contribution equal to 2 to 3 times of the staff's salaries. In addition, the Group may at their discretion, provide additional contributions to the retirement fund depending on the operating results of the year. The employees will receive the total contributions and any returns thereon, upon their retirements.

(ii) 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 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.

(iii) Certain employee benefits of RMB284 million (2017: RMB193 million) are included in research and development cost of RMB483,975,000 (2017: RMB505,261,000) as disclosed in Note 7.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

16. PROPERTY, PLANT AND EQUIPMENT

	Buildings and other facilities RMB'000	Equipment, plant and machinery RMB'000	Transportation equipment RMB'000	Furniture, office and other equipment RMB'000	Construction-in-progress RMB'000	Total RMB'000
Year ended 31 December 2017						
Opening net book amount	1,772,263	369,985	102,459	114,750	289,358	2,648,815
Transfers (Note 17)	51,824	6,414	–	839	(61,194)	(2,117)
Additions	94,624	37,008	18,951	34,960	110,582	296,125
Arising on business combination (Note 42(b))	–	–	–	143	–	143
Depreciation	(113,754)	(65,030)	(27,475)	(31,813)	–	(238,072)
Disposals	(4,231)	(10,924)	(2,609)	(422)	(139,190)	(157,376)
Disposal of a subsidiary (Note 42(c))	(27,504)	(31,965)	(55)	(278)	(1,353)	(61,155)
Transfer to investment properties (Note 18)	(1,711)	–	–	–	–	(1,711)
Closing net book amount	1,771,511	305,488	91,271	118,179	198,203	2,484,652
At 31 December 2017						
Cost	2,296,542	886,498	249,444	344,846	198,203	3,975,533
Accumulated depreciation	(524,799)	(580,325)	(158,173)	(226,667)	–	(1,489,964)
Impairment	(232)	(685)	–	–	–	(917)
Net book amount	1,771,511	305,488	91,271	118,179	198,203	2,484,652
Year ended 31 December 2018						
Opening net book amount	**1,771,511**	**305,488**	**91,271**	**118,179**	**198,203**	**2,484,652**
Transfers	**5,544**	**–**	**–**	**2,558**	**(8,102)**	**–**
Additions	**21,589**	**13,906**	**19,065**	**23,413**	**239,835**	**317,808**
Depreciation	**(90,553)**	**(50,230)**	**(24,520)**	**(23,953)**	**–**	**(189,256)**
Disposals	**(2,891)**	**(2,693)**	**(3,493)**	**(4,470)**	**(16,124)**	**(29,671)**
Disposal of subsidiary (Note 42(a))	**(52,212)**	**(2,728)**	**(354)**	**(5,850)**	**–**	**(61,144)**
Impairment	**–**	**(6,674)**	**(170)**	**(2,233)**	**(32,759)**	**(41,836)**
Closing net book amount	**1,652,988**	**257,069**	**81,799**	**107,644**	**381,053**	**2,480,553**
At 31 December 2018						
Cost	**2,250,719**	**833,197**	**256,296**	**338,854**	**413,812**	**4,092,878**
Accumulated depreciation	**(597,499)**	**(575,443)**	**(174,356)**	**(231,210)**	**–**	**(1,578,508)**
Impairment	**(232)**	**(685)**	**(141)**	**–**	**(32,759)**	**(33,817)**
Net book amount	**1,652,988**	**257,069**	**81,799**	**107,644**	**381,053**	**2,480,553**

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

16. PROPERTY, PLANT AND EQUIPMENT (CONTINUED)

Depreciation expenses recognised are analysed as follows:

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
Cost of sales	**109,248**	121,583
Selling and marketing expenses	**186**	5,526
Administrative expenses	**79,822**	103,407
	189,256	230,516

As at 31 December 2018, the Group secured property, plant and equipment with carrying amount of approximately RMB85 million (2017: RMB46 million) and approximately 18.6 million (2017: Nil) for bank borrowings (Note 33) and notes payable respectively.

Included above are certain buildings and transportation equipment with the respective carrying amounts of approximately RMB150 million (2017: RMB556 million) and RMB1 million (2017: RMB5 million) as of 31 December 2018, for which the Group has not yet obtained the relevant ownership certificates. The Directors confirmed that the Group will make application for the ownership certificates for such assets.

17. LAND USE RIGHTS

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
At beginning of year	**727,022**	814,693
Additions	**11,680**	129
Disposals	**–**	(68,182)
Transfer from property, plant and equipment (Note 16)	**–**	2,117
Disposal of a subsidiary (Note 42(a))	**(17,785)**	–
Amortisation	**(20,640)**	(21,735)
At end of the year	**700,277**	727,022

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

17. LAND USE RIGHTS (CONTINUED)

Notes:

(i) Land use rights represent prepayments made by the Group for the land use rights located in the PRC, which are held on leases between 30 years to 62 years.

Included above are certain land use rights with carrying amount of approximately RMB24 million (2017: RMB65 million) for which the Group has not yet obtained the relevant ownership certificates. The Directors confirmed that the Group will make application for the ownership certificates for such assets.

Amortisation expenses recognised is analysed as below:

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
Cost of sales	**1,028**	508
Administrative expenses	**19,612**	21,227
	20,640	21,735

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

18. INVESTMENT PROPERTIES

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
At beginning of the year	**219,627**	225,165
Addition	**–**	15,582
Transfer from property, plant and equipment (Note 16)	**–**	1,711
Disposal of a subsidiary (Note 42(c))	**–**	(15,582)
Disposal	**–**	(102)
Depreciation	**(7,178)**	(7,147)
At end of the year	**212,449**	219,627
Fair value at end of the year	**590,368**	556,455

All of the Group's investment properties are located in the PRC and have lease periods between 10 to 40 years.

As of 31 December 2018, the Group secured an investment property with carrying amount of RMB19 million (2017: RMBnil) for bank borrowings (Note 33).

(a) Amounts recognised in the consolidated statement of comprehensive income for investment properties:

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
Rental income	**31,755**	25,324
Depreciation recorded as rental costs	**7,178**	7,147

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

18. INVESTMENT PROPERTIES (CONTINUED)

(b) Valuation basis

Cost method has been adopted as a measurement of investment properties. Independent professionally qualified valuer, ZhongHe Appraisal Co., Ltd., has conducted the fair valuation of investment properties at 31 December 2018.

The Group's finance department reviews the valuations performed by the independent valuer for financial reporting purpose and reports directly to the Senior Management and the audit committee. Discussions of valuation processes and results are held between the management, audit committee and valuer after each valuation by the independent qualified valuer, which is normally done once every six months, in line with the Group's interim and annual reporting dates.

At each financial year end the finance department:

- Verifies all major inputs to the independent valuation report;
- Assess property valuations movements when compared to the prior year valuation report;
- Holds discussions with the independent qualified valuer.

Fair values of investment properties are derived using the income approach by taking into account the net rental income of the property derived from the existing leases and/or achievable in the existing market with due allowance for the reversionary income potential of the leases, which have been then capitalised to determine the fair value at an appropriate capitalisation rate.

There were no changes in the valuation techniques during the year. The fair values are within level 3 of the fair value hierarchy.

There were no transfer between the level 1, 2 and 3 during the reporting period.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

19. INTANGIBLE ASSETS

	Goodwill RMB'000	Patent RMB'000	Computer software RMB'000	Concession right RMB'000 (Note (a))	Others RMB'000	Total RMB'000
Year ended 31 December 2017						
Opening net book amount	9,250	85,967	18,592	–	16,675	130,484
Additions	–	11,321	6,944	123,824	933	143,022
Transfers	–	–	650	–	(650)	–
Amortisation	–	(26,595)	(6,573)	–	(3,634)	(36,802)
Disposals	–	(3,235)	(19)	–	(2,625)	(5,879)
Disposal of a subsidiary (Note 42(c))	(2,586)	(13,590)	–	–	–	(16,176)
Deregistration of subsidiaries	(6,664)	–	–	–	–	(6,664)
Closing net book amount	–	53,868	19,594	123,824	10,699	207,985
At 31 December 2017						
Cost	–	263,117	106,918	123,824	18,394	512,253
Accumulated amortisation	–	(209,249)	(87,324)	–	(7,695)	(304,268)
Net book amount	–	53,868	19,594	123,824	10,699	207,985
Year ended 31 December 2018						
Opening net book amount – as previously reported	**–**	**53,868**	**19,594**	**123,824**	**10,699**	**207,985**
– reclassification to contract assets on adoption of IFRS 15 – Note 2.2(a)(2)	**–**	**–**	**–**	**(123,824)**	**–**	**(123,824)**
	–	**53,868**	**19,594**	**–**	**10,699**	**84,161**
Additions	**–**	**48**	**12,173**	**–**	**4,058**	**16,279**
Transfers	**–**	**–**	**1,891**	**–**	**(1,891)**	**–**
Amortisation	**–**	**(18,942)**	**(6,045)**	**–**	**(3,405)**	**(28,392)**
Impairment	**–**	**(1,065)**	**(361)**	**–**	**(3,572)**	**(4,998)**
Closing net book amount	**–**	**33,909**	**27,252**	**–**	**5,889**	**67,050**
At 31 December 2018						
Cost	**–**	**261,000**	**119,072**	**–**	**16,929**	**397,001**
Accumulated amortisation	**–**	**(227,091)**	**(91,820)**	**–**	**(11,040)**	**(329,951)**
Net book amount	**–**	**33,909**	**27,252**	**–**	**5,889**	**67,050**

Note:

(a) Pursuant to a concession arrangement between the Group and a relevant authority in the PRC in January 2017. The Group obtained the right to operate certain toll roads and underground comprehensive pipe gallery located in Shanxi Province in the PRC for a period of 15 years on a BOT basis.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

19. INTANGIBLE ASSETS (CONTINUED)

Amortisation expense recognised is analysed as below:

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
Cost of sales	**5,432**	7,406
Administrative expenses	**22,960**	29,396
	28,392	36,802

20. SUBSIDIARIES AND INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD

(a) Material non-controlling interests

The total non-controlling interest as at 31 December 2018 is RMB3,033 million of which RMB335 million is for Ninth Metallurgical Construction Co., Ltd. (九冶建設有限公司), RMB2,444 million (Note 37) is for Chalieco Hong Kong Corporation Limited (中鋁國際香港有限公司), RMB55 million is for China Nonferrous Metals Processing Technology Co., Ltd. (中色科技股份有限公司) and RMB154 million is attributed to Chalco Shandong Engineering Technology Co., Ltd. (中鋁山東工程技術有限公司). The non-controlling interests in respect of other non-wholly-owned subsidiaries are immaterial.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

20. SUBSIDIARIES AND INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD (CONTINUED)

(a) Material non-controlling interests (continued)

Set out below are the summarised financial information for Ninth Metallurgical Construction Co., Ltd., China Nonferrous Metals Processing Technology Co., Ltd., Chalco Shandong Engineering Technology Co., Ltd. and Chalieco Hong Kong Corporation Limited that has non-controlling interests that are material to the Group.

Summarised balance sheets

	Ninth Metallurgical Construction Co., Ltd. (Consolidated)		China Nonferrous Metals Processing Technology Co., Ltd. (Consolidated)		Chalco Shandong Engineering Technology Co., Ltd. (Consolidated)		Chalieco Hong Kong Corporation Limited (Consolidated)	
	2018	2017	**2018**	2017	**2018**	2017	**2018**	2017
	RMB'000	RMB'000	**RMB'000**	RMB'000	**RMB'000**	RMB'000	**RMB'000**	RMB'000
Current								
Assets	**7,308,500**	6,540,344	**1,258,217**	1,173,158	**1,366,584**	1,176,241	**2,678,187**	2,471,795
Liabilities	**(6,455,154)**	(6,261,978)	**(1,811,900)**	(1,765,581)	**(1,119,255)**	(945,774)	**(226,063)**	(81,307)
Total net current assets/ (liabilities)	**853,346**	278,366	**(553,683)**	(592,423)	**247,329**	230,467	**2,452,124**	2,390,488
Non-current								
Assets	**650,786**	619,842	**775,318**	910,255	**132,819**	108,050	**7**	13
Liabilities	**(567,986)**	(220,329)	**(28,529)**	(36,564)	**(1,367)**	(5,489)	**(2,460,745)**	(2,338,108)
Total net non-current assets/ (liabilities)	**82,800**	399,513	**746,789**	873,691	**131,452**	102,561	**(2,460,738)**	(2,338,095)
Net assets/(liabilities)	**936,146**	677,879	**193,106**	281,268	**378,781**	333,028	**(8,614)**	52,393

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

20. SUBSIDIARIES AND INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD (CONTINUED)

(a) Material non-controlling interests (continued)

Summarised statements of comprehensive income

	Ninth Metallurgical Construction Co., Ltd. (Consolidated)		China Nonferrous Metals Processing Technology Co., Ltd. (Consolidated)		Chalco Shandong Engineering Technology Co., Ltd. (Consolidated)		Chalieco Hong Kong Corporation Limited (Consolidated)	
	2018 RMB'000	2017 RMB'000	**2018 RMB'000**	2017 RMB'000	**2018 RMB'000**	2017 RMB'000	**2018 RMB'000**	2017 RMB'000
Revenue	**5,187,454**	5,313,364	**551,045**	576,019	**1,212,590**	1,264,828	**354,241**	285,822
Profit/(loss) before income tax	**204,710**	196,052	**(81,429)**	50,556	**60,189**	38,793	**(24,260)**	16,282
Income tax (expense)/income	**(35,995)**	(47,635)	**17,217**	(11,357)	**(9,850)**	(11,789)	**(5,604)**	(4,839)
Post-tax profit/(loss) from continuing operations	**168,715**	148,417	**(64,212)**	39,199	**50,339**	27,004	**(29,864)**	11,443
Other comprehensive income/(loss)	**(527)**	200	**2,332**	4,153	**–**	–	**(29,815)**	33,836
Total comprehensive income/(loss)	**168,188**	148,617	**(61,880)**	43,352	**50,339**	27,004	**(59,679)**	45,279
Total comprehensive income/(loss) allocated to non-controlling interests	**63,071**	55,731	**(16,398)**	11,488	**20,136**	10,802	**685**	688
Dividend paid to non-controlling interests	**–**	–	**–**	–	**–**	–	**(131)**	(166)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

20. SUBSIDIARIES AND INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD (CONTINUED)

(a) Material non-controlling interests (continued)

Summarised cash flows

	Ninth Metallurgical Construction Co., Ltd. (Consolidated)		China Nonferrous Metals Processing Technology Co., Ltd. (Consolidated)		Chalco Shandong Engineering Technology Co., Ltd. (Consolidated)		Chalieco Hong Kong Corporation Limited (Consolidated)	
	2018 RMB'000	2017 RMB'000	**2018 RMB'000**	2017 RMB'000	**2018 RMB'000**	2017 RMB'000	**2018 RMB'000**	2017 RMB'000
Cash flows from operating activities								
Cash generated from/(used in) operating activities	**540,592**	513,479	**159,320**	283,676	**43,944**	143,609	**(65,346)**	238,078
Interest paid	**(82,623)**	(78,976)	**(78,442)**	(67,306)	**(8,137)**	(8,726)	**–**	(159,001)
Income tax paid	**(147,532)**	(160,441)	**(29,470)**	(13,905)	**(21,049)**	(52,885)	**(8,592)**	(4,999)
Net cash generated from/(used in) operating activities	**310,437**	274,062	**51,408**	202,465	**14,758**	81,998	**(73,938)**	74,078
Net cash generated from/(used in) investing activities	**71,386**	(144,410)	**87,771**	(436,660)	**(18,138)**	(1,639)	**125,212**	(65,226)
Net cash generated from/(used in) financing activities	**(650,998)**	(249,652)	**(88,442)**	228,376	**(44,137)**	(48,726)	**(130,765)**	(2,219,885)
Net increase/(decrease) in cash and cash equivalents	**(269,175)**	(120,000)	**50,737**	(5,819)	**(47,517)**	31,633	**(79,491)**	(2,211,033)
Cash and cash equivalents at beginning of year	**905,279**	1,039,043	**54,723**	60,625	**134,689**	103,056	**488,613**	2,743,164
Exchange losses on cash and cash equivalents	**4,373**	(13,763)	**(50)**	(83)	**–**	–	**3,722**	(43,518)
Cash and cash equivalents at end of year	**640,477**	905,280	**105,410**	54,723	**87,172**	134,689	**412,844**	488,613

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

20. SUBSIDIARIES AND INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD (CONTINUED)

(b) Investments accounted for using the equity method

The amounts recognised in the consolidated balance sheet are as follows:

	As at 31 December	
	2018	2017
	RMB'000	RMB'000
Associates	**383,026**	161,752
Joint ventures	**97,497**	87,346
At 31 December	**480,523**	249,098

The amounts recognised in the consolidated statement of comprehensive income are as follows:

	For the year ended 31 December	
	2018	2017
	RMB'000	RMB'000
Associates	**(1,167)**	(5,428)
Joint ventures	**5,151**	31,652
	3,984	26,224

Investments in associates

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
At 1 January	**161,752**	166,792
Addition	**236,515**	53,760
Share of losses	**(1,167)**	(5,428)
Disposal	**(9,078)**	(45,000)
Provision for impairment of investment in an associate	**(4,901)**	(8,372)
Others	**(95)**	–
At 31 December	**383,026**	161,752

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

20. SUBSIDIARIES AND INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD (CONTINUED)

(b) Investments accounted for using the equity method (continued)

Investments in associates (continued)

Set out below are the associates of the Group as at 31 December 2018, which is, in the opinion of the Directors, are material to the Group. The associates listed below have share capital solely of ordinary shares, which are held indirectly by the Group; the country of the incorporation or registration is also their principle place of business.

Nature of investments in associates that are material to the Group as at 31 December 2018:

Name of entity	Place/date of incorporation	Registered and fully paid capital	Effective interest held Indirectly held		Nature of relationship	Measurement method
		RMB'000	2018	2017		
Jiangsu Nonferrous Metal Rabily Industrial Co., Ltd. ("Jiang Rabily", 江蘇中色銳畢利實業有限公司)	The PRC/ 8 November 2007	83,330	30%	30%	Note 1	Equity
Guizhou Tongye Construction and Development Co., Ltd. ("Guizhou Tongye", 貴州通冶建設發展有限公司)	The PRC/ 7 July 2013	Registered capital: 100,000 Paid capital: 30,000	45%	45%	Note 2	Equity
Luoyang Hua Zhong Aluminium Co., Ltd. ("Luoyang Hua Zhong", 洛陽華中鋁業有限公司)	The PRC/ 23 December 2009	Registered capital: 288,000 Paid capital: 182,360	9.8%	9.8%	Note 3	Equity
Xinchengtong Investment Management (Tianjin) Co., Ltd ("Xinchengtong", 鑫誠通投資管理(天津)有限公司)	The PRC/ 3 April 2013	50,000	40%	40%	Note 4	Equity
Chalco-Steering Intelligent Technology Co., Ltd. ("Chalco-Steering", 中鋁視拓智能科技有限公司)	The PRC/ 5 June 2017	Registered capital: 120,000 Paid capital: 18,000	15%	15%	Note 5	Equity
Taikang Haowen Construction Co., Ltd. ("Taikang Haowen", 太康浩文建設有限公司)	The PRC/ August 2017	Registered capital: 20,000 Paid capital: 20,000	47.5%	–	Note 6	Equity

Note 1: Jiangsu Rabily is a strategic partnership in manufacturing of aluminum alloy material.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

20. SUBSIDIARIES AND INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD (CONTINUED)

(b) Investments accounted for using the equity method (continued)

Investments in associates (continued)

Note 2: Guizhou Tongye is a strategic partnership in providing service to construction contract.

In November 2015, China Nonferrous Metals Industry's Twelfth Metallurgical Construction Co., Ltd. (中色十二冶金建設有限公司) lost control of Guizhou Tongye, but still has significant influence on it. Hence, it is accounted for using equity method.

Note 3: In December 2015, the Group acquired 15% stake in Luoyang Hua Zhong by taking free donation from Henan Yilong Technology Industry Co., Ltd. The Group has significant influence on Luoyang Hua Zhong Aluminum Co., Ltd. due to one of five directors is appointed by the Group and hence it is accounted for using equity method.

Note 4: In April 2013, The Group acquired 40% stake in Xinchengtong by capital injection. The Group has significant influence over the investee as one of the three directors is appointed by the Group and hence it is accounted for using equity method.

Note 5: In June 2017, the Group acquired 15% in Chalco-Steering. The Group has significant influence on Chalco-Steering as one of the five directors is appointed by the Group and hence it is accounted for using equity method.

Note 6: In September 2018, the Group acquired 47.5% in Taikang Haowen. The Group has significant influence on Taikang Haowen and hence it is accounted for using equity method.

There are no contingent liabilities relating to the Group's interest in associates. All of the above entities are private entity.

Summarised financial information for associates

Set out below are the summarised financial information for Jiangsu Rabily, Guizhou Tongye, Luoyang Huazhong, Xinchengtong, Chalco-Steering, Taikang Haowen and other associates which are accounted for using the equity method.

Summarised balance sheets

	Jiangsu Rabliy		Guizhou Tongye		Luoyang Huazhong		Xinchentong		Chalco-Steering		Taikang Haowen		Other associates		Total	
	2018 RMB'000	2017 RMB'000	2018 RMB'000	2017 RMB'000	2018 RMB'000	2017 RMB'000	2018 RMB'000	2017 RMB'000	2018 RMB'000	2017 RMB'000	2018 RMB'000	2017 RMB'000	2018 RMB'000	2017 RMB'000	2018 RMB'000	2017 RMB'000
Current																
Total current assets	114,672	114,078	1,208,104	1,194,852	163,438	121,600	45,679	45,788	81,692	51,897	102,510	21,614	1,551,350	337,808	3,267,445	1,887,637
Total current liabilities	(96,915)	(96,804)	(69,332)	(52,976)	(57,180)	–	–	–	(13,164)	(429)	(442)	(107)	(247,980)	(288,920)	(485,013)	(439,236)
Non-current																
Total non-current assets	38,877	43,338	704	1,391	749,722	734,966	–	–	3,904	2,378	65,639	36,201	816,065	214,383	1,674,911	1,032,657
Total non-current liabilities	–	–	(1,114,099)	(1,114,099)	(570,316)	(570,341)	–	–	–	–	–	–	(1,684,416)	(94,476)	(3,368,831)	(1,778,916)
Net assets	56,634	60,612	25,377	29,168	285,664	286,225	45,679	45,788	72,432	53,846	167,707	57,708	435,019	168,795	1,088,512	702,142

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

20. SUBSIDIARIES AND INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD (CONTINUED)

(b) Investments accounted for using the equity method (continued)

Investments in associates (continued)

Summarised statements of comprehensive income

	Jiangsu Rabliy		Guizhou Tongye		Luoyang Huazhong		Xinchentong		Chalco-Steering		Taikang Haowen		Other associates		Total	
	2018 RMB'000	2017 RMB'000	**2018 RMB'000**	2017 RMB'000	**2018 RMB'000**	2017 RMB'000	**2018 RMB'000**	2017 RMB'000	**2018 RMB'000**	2017 RMB'000	**2018 RMB'000**	2017 RMB'000	**2018 RMB'000**	2017 RMB'000	**2018 RMB'000**	2017 RMB'000
Revenue	**199,045**	81,803	**88,186**	77,517	**-**	1,112	**-**	-	**24,098**	82	**-**	-	**150,841**	428,321	**462,170**	588,835
Post-tax profit/(loss) from continuing operations	**(3,978)**	(10,079)	**(3,791)**	(4,301)	**(561)**	(1,214)	**(109)**	(133)	**9,586**	(6,002)	**(32,071)**	(262)	**98,205**	2,601	**67,281**	(19,390)
Total comprehensive income/(expenses)	**(3,978)**	(10,079)	**(3,791)**	(4,301)	**(561)**	(1,214)	**(109)**	(133)	**9,586**	(6,002)	**(32,071)**	(262)	**38,787**	2,601	**7,863**	(19,390)

Reconciliation of summarised financial information

	Jiangsu Rabliy		Guizhou Tongye		Luoyang Huazhong		Xinchentong		Chalco-Steering		Taikang Haowen		Other associates		Total	
	2018 RMB'000	2017 RMB'000	**2018 RMB'000**	2017 RMB'000	**2018 RMB'000**	2017 RMB'000	**2018 RMB'000**	2017 RMB'000	**2018 RMB'000**	2017 RMB'000	**2018 RMB'000**	2017 RMB'000	**2018 RMB'000**	2017 RMB'000	**2018 RMB'000**	2017 RMB'000
Opening net assets	**60,612**	70,691	**29,168**	33,469	**286,225**	287,439	**45,788**	45,921	**53,846**	50,848	**57,708**	–	**168,795**	47,526	**702,142**	535,894
Capital injection	**–**	–	**–**	–	**–**	–	**–**	–	**9,000**	9,000	**142,070**	57,970	**236,515**	118,668	**387,585**	185,638
Profit/(loss) for the year	**(3,978)**	(10,079)	**(3,791)**	(4,301)	**(561)**	(1,214)	**(109)**	(133)	**9,586**	(6,002)	**(32,071)**	(262)	**38,787**	2,601	**7,863**	(19,390)
Capital withdrawal	**–**	–	**–**	–	**–**	–	**–**	–	**–**	–	**–**	–	**(9,078)**	–	**(9,078)**	–
Closing net assets	**56,634**	60,612	**25,377**	29,168	**285,664**	286,225	**45,679**	45,788	**72,432**	53,846	**167,707**	57,708	**435,019**	168,795	**1,088,512**	702,142
Interest in associates	**16,990**	18,184	**11,420**	13,125	**27,966**	28,073	**18,268**	18,312	**10,865**	8,077	**79,661**	–	**217,856**	75,981	**383,026**	161,752
Goodwill	**–**	–	**–**	–	**–**	–	**–**	–	**–**	–	**–**	–	**–**	–	**–**	–
Carrying value	**16,990**	18,184	**11,420**	13,125	**27,966**	28,073	**18,268**	18,312	**10,865**	8,077	**79,661**	–	**217,856**	75,981	**383,026**	161,752

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

20. SUBSIDIARIES AND INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD (CONTINUED)

(b) Investments accounted for using the equity method (continued)

Investments in joint ventures

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
At 1 January	**87,346**	46,039
Capital injection	**5,000**	30,000
Share of profits	**5,151**	31,652
Disposal	**–**	(316)
Reclassification to other payables	**–**	(20,029)
At 31 December	**97,497**	87,346

Set out below are the joint ventures of the Group as at 31 December 2018, which is, in the opinion of the Directors, are material to the Group. The joint ventures listed below have share capital solely of ordinary shares, which are held indirectly by the Group; the country of the incorporation or registration is also their principal place of business.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

20. SUBSIDIARIES AND INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD (CONTINUED)

(b) Investments accounted for using the equity method (continued)

Investments in joint ventures (continued)

Name of entity	Place/date of incorporation	Registered and fully paid capital	Effective interest held Indirectly held		Nature of relationship	Measurement method
		RMB'000	2018	2017		
Shanghai Fengtong Equity Investment Fund Partnership (Limited Partner) (上海豐通股權投資基金合夥企業（有限合夥）)	The PRC/ 16 July 2012	100,000	40%	40%	Note 1	Equity
Zhong Ji Sunward Technology Co., Ltd. (中際山河科技有限責任公司)	The PRC/ 15 April 2015	Registered capital: 80,000 Paid capital: 46,905	49%	49%	Note 2	Equity
Chalieco South Aluminum (Fujian) Aluminum Structure Technology Development Co., Ltd. (中鋁南鋁（福建）鋁結構技術開發有限公司)	The PRC/ 18 November 2016	Registered capital: 50,000 Paid capital: 30,000	50%	50%	Note 3	Equity

Note 1: Shanghai Fengtong Equity Investment Fund Partnership (Limited Partner) (上海豐通股權投資基金合夥企業（有限合夥）) (hereafter "Shanghai Fengtong Fund") was a limited partnership established by Shanghai Ample Harvest Equity Investments Management Company Limited (上海豐實股權投資管理有限公司) (hereafter "Harvest Equity") as a general partner in 2013. During the year of 2014, the Company signed a series of supplemental contracts with other relevant parties and obtained jointly control over Shanghai Fengtong Fund because that the decision about the main activities of the partnership required the unanimous consent of the Company and the other parties.

Shanghai Fengtong Fund invested its fund through bond offering in real estate project, which are recommended either by the Company or by Harvest Equity.

The parent company of Harvest Equity, Harvest Capital Management Company Limited (嘉實資本管理有限公司) (hereinafter "Harvest Capital") lent RMB2,000 million to Shanghai Fengtong Fund and will withdraw within 3 years. In 2016, Shanghai Fengtong Fund has made repayments aggregated to RMB950,000,000. In 2017, Shanghai Fengtong Fund has made full repayments of the remaining balance.

The Group is considering the withdrawal from Shanghai Fengtong Fund whereas the relevant work is in progress.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

20. SUBSIDIARIES AND INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD (CONTINUED)

(b) Investments accounted for using the equity method (continued)

Investments in joint ventures (continued)

Note 2: In February 2015, the Group and Sunward Intelligent Equipment Co., Ltd. established Zhongji Sunward Technology Co., Ltd. ("Zhongji Sunward Technology", 中際山河科技有限責任公司), the Group contributed with intangible assets as investment. The Group is entitled to 49% of equity shares of Zhongji Sunward Technology. According to the Articles of Association, no shareholder can make decisions on major business activities of the company without the unanimous consent of all shareholders. Therefore, the Group treated this investment using the equity method.

Note 3: In November 2016, the Group and Fujian South Aluminum Engineering Corporation Limited (福建省南鋁工程股份有限公司), established China Aluminum South Aluminum (Fujian) Aluminum Structure Technology Co., Ltd. "China Aluminum South Aluminum (Fujian)" (中鋁南鋁(福建)鋁結構技術開發有限公司), the Group contributed with money as investment. The Group is entitled to 50% of equity shares. According to the Articles of Association, no shareholder can make decisions on major business activities of the company without the unanimous consent of all shareholders. Therefore, the Group treated this investment using the equity method.

Summarised financial information for joint ventures

Set out below are the summarised financial information for Shanghai Fengtong Fund, Zhongji Sunward Technology, Chalieco Aluminum South Aluminum (Fujian) and other joint ventures which are accounted for using equity method.

Summarised balance sheets

	Shanghai Fengtong Fund (Consolidated)		Zhongji Sunward Technology		Chalieco Aluminum South Aluminum (Fujian)		Other joint ventures		Total	
	2018	2017	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017
	RMB'000	RMB'000	**RMB'000**	RMB'000	**RMB'000**	RMB'000	**RMB'000**	RMB'000	**RMB'000**	RMB'000
Current										
Total current assets	**70,565**	72,091	**130,657**	115,072	**105,919**	91,675	**1,386**	551	**308,527**	279,389
Total current liabilities	**(10,441)**	(13,047)	**(83,804)**	(68,625)	**(4,001)**	(605)	**(501)**	–	**(98,747)**	(82,277)
Non-current										
Total non-current assets	**2**	4	**22,353**	20,502	**7,790**	7,703	**69**	54	**30,214**	28,263
Total non-current liabilities	**–**	–	**–**	–	**–**	–	**–**	–	**–**	–
Net assets	**60,126**	59,048	**69,206**	66,949	**109,708**	98,773	**954**	605	**239,994**	225,375

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

20. SUBSIDIARIES AND INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD (CONTINUED)

(b) Investments accounted for using the equity method (continued)

Summarised statements of comprehensive income

	Shanghai Fengtong Fund (Consolidated)		Zhongji Sunward Technology		Chalieco Aluminum South Aluminum (Fujian)		Other joint ventures		Total	
	2018 RMB'000	2017 RMB'000	2018 RMB'000	2017 RMB'000	2018 RMB'000	2017 RMB'000	2018 RMB'000	2017 RMB'000	2018 RMB'000	2017 RMB'000
Revenue	–	44,750	47,740	39,570	78,614	71,210	–	–	126,354	155,530
(Loss)/profit before tax	1,078	19,076	2,257	4,227	7,058	5,031	727	(26)	11,120	28,308
(Loss)/profit after tax	1,078	19,076	2,257	4,227	5,935	3,774	349	(26)	9,619	27,051

Note:

(i) According to relevant tax law and regulations of the PRC, as Limited Partnership, Shanghai Fengtong Fund was not subject to corporate income tax. When receiving dividend from the Limited Partnership, the partner need to pay the individual income tax or corporate income tax depending on the legal forms of the partner.

Reconciliation of summarised financial information

	Shanghai Fengtong Fund (Consolidated)		Zhongji Sunward Technology		Chalieco Aluminum South Aluminum (Fujian)		Other joint ventures		Total	
	2018 RMB'000	2017 RMB'000	2018 RMB'000	2017 RMB'000	2018 RMB'000	2017 RMB'000	2018 RMB'000	2017 RMB'000	2018 RMB'000	2017 RMB'000
Opening net assets	59,048	39,972	66,949	62,722	98,773	34,999	605	631	225,375	138,324
Capital injection	–	–	–	–	5,000	60,000	–	–	5,000	60,000
Profit/(loss) for the year	1,078	19,076	2,257	4,227	5,935	3,774	349	(26)	9,619	27,051
Closing net assets	60,126	59,048	69,206	66,949	109,708	98,773	954	605	239,994	225,375
Non-controlling interests	1,000	–	–	–	–	–	–	–	–	1,000
Interest in joint venture	9,125	8,047	33,517	32,412	54,855	46,887	–	–	97,497	87,346
Carrying value	9,125	8,047	33,517	32,412	54,855	46,887	–	–	97,497	87,346

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

21. FINANCIAL ASSETS/LIABILITIES AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME/PROFIT OR LOSS/AVAILABLE-FOR-SALE FINANCIAL ASSETS

Financial assets at fair value through other comprehensive income/profit or loss/available-for-sale financial assets include the following:

	31 December 2018 RMB'000	1 January 2018 RMB'000	31 December 2017 RMB'000
Financial assets at fair value through other comprehensive income (without recycling)			
– Listed securities: Equity securities – PRC	158,907	198,538	–
– Unlisted securities: Equity securities – PRC	48,748	122,610	–
	207,655	321,148	–
Financial assets at fair value through profit or loss			
– Short-term investments (i)	156,482	530,592	–
– Derivate instruments: Forward currency contract	188	–	–
	156,670	530,592	–
Available-for-sale financial assets (ii)			
– Listed securities: Equity securities – PRC	–	–	198,538
– Unlisted securities: Equity securities – PRC	–	–	120,383
– Short-term investments (i)	–	–	530,592
	–	–	849,513
	364,325	851,740	849,513
Less: Current portion	(156,670)	(530,592)	(530,592)
Long-term portion	207,655	321,148	318,921
Financial liabilities at fair value through profit or loss			
– Derivative instruments: Future contract	22	–	–

Notes:

(i) The short-term investments represent commercial bank products, with an annual investment return of 1.2% – 4.9% (2017: 1.5% – 4.1%) for the year ended 31 December 2018 per annum, and will be mature within one year.

(ii) Available-for-sale financial assets of RMB849,513,000 were reclassified to financial assets measured at FVTPL of RMB530,592,000 and financial assets measured at FVTOCI (non-recycling) of RMB321,148,000 (with remeasurement adjustment of RMB2,227,000) upon the initial application of HKFRTS 9 at 1 January 2018 (Note 2.2(a)(1)).

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

21. FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME/PROFIT OR LOSS/AVAILABLE-FOR-SALE FINANCIAL ASSETS (CONTINUED)

	At 31 December	
	2018	2017
	RMB'000	RMB'000
At beginning of the year	**–**	–
As previously reported	**849,513**	251,799
Adoption of IFRs 9 (Note 2.2(a)(i))	**2,227**	–
As restated	**851,740**	251,799
Additions of available-for-sale financial assets	**–**	101,410
Additions of financial assets at FVTOCI (without recycling)	**6,000**	–
Additions of short-term investments	**3,865,734**	530,592
Settlement on expiration of short-term investments	**(4,239,844)**	(18,000)
Settlement on expiration of financial assets at FVTOCI (without recycling)	**(73,580)**	–
Fair value gain on financial assets at FVTPL	**188**	–
Fair value losses on available-for-sale financial assets	**–**	(16,288)
Fair value losses on financial assets at FVTOCI (without recycling)	**(45,913)**	–
At end of the year	**364,325**	849,513

The carrying amounts of the Group's financial assets at FVTOCI, FVTPL and available-for-sale financial assets are denominated in the following currencies:

	At 31 December	
	2018	2017
	RMB'000	RMB'000
RMB	**313,343**	849,513
USD	**50,982**	–
	364,325	849,513

The carrying amount of the Group's financial liabilities at FVTPL is denominated in RMB.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

22. TRADE AND NOTES RECEIVABLES

	At 31 December	
	2018	2017
	RMB'000	RMB'000
Trade receivables	**17,080,359**	16,091,744
Less: Provision for credit losses	**(1,563,739)**	(1,287,809)
Trade receivables – net (i)	**15,516,620**	14,803,935
Notes receivable (iii)	**524,227**	767,837
Trade and notes receivables – net	**16,040,847**	15,571,772
Less: Non-current portion (ii)	**(218,573)**	(1,991,852)
Current trade and notes receivables	**15,822,274**	13,579,920

Notes:

(i) Upon adoption of IFRS 15 (see Note 2.2(a)(2)), Trade receivables of RMB2,702,946,000 was reclassified to contract assets as at 1 January 2018 (Note 24(a)(ii)).

(ii) The main non-current portion in prior year mainly comprised of the following:

The Group entered into a Cooperation Framework Agreement on social welfare housing project of Lucheng District, Wenzhou ("Framework Agreement") with the local government on 15 August 2012. For the purpose of fulfilling the Framework Agreement requirements, the Group established the Wenzhou Tongrun Construction Co. Ltd. (溫州通潤建設有限公司) as a project execution legal entity on 21 December 2012. After both parties signed the formal contract, the Group was in charge of the Build-Transfer construction project and the construction contract receivables should be confirmed every year according to the construction completion schedule. As of 31 December 2017, the non-current trade receivables recognised amounted to RMB44.51 million.

The Group entered into a Cooperation Framework Agreement with the Wenzhou Seaside New Village Construction Investment Co. Ltd. (溫州市海濱新農村建設投資有限公司) on the renovation project of Phase 1 of New Jiaochengzhong Village, Seaside Street, Longwan District, Wenzhou in 2013. After both parties signed the formal contract with total investment amount of RMB600 million, the Group was in charge of the Build-Transfer construction project. The construction contract receivables should be confirmed according to the construction completion schedule each year. As of 31 December 2017, the non-current trade receivables recognised amounted to RMB133.95 million.

On 10 October 2013, the Group entered into a Build-Transfer construction contract with Guangxi Guangtong Real Estate Development Company (廣西廣通房地產開發有限公司) to construct a residential district in Nanning, the PRC. According to the contract terms, the first instalment of repurchase will take place in 90 days once the project reaches a percentage of completion of 60% or the receivables reaches RMB1.2 billion; then the proprietor is required to pay the repurchase fund every three months; at least 85% of the project funds should be paid upon the completion of the project; the final payment will be made in twelve months after the completion and inspection for acceptance of the project. The receivables bear floating rate at benchmark one to three years lending rate announced by the People's Bank of China. As of 31 December 2017, the non-current trade receivables recognised amounted to RMB1,015.64 million.

The Group entered into a Public-Private-Partnership Cooperation Framework Agreement with Guizhou Hongcai Investment Group Co., Ltd. (貴州宏財投資集團有限公司) and Panxian Pan Zhou Guzheng Development and Management Co., Ltd. (盤縣盤州古城開發管理有限公司, "Pan Zhou Guzheng") on the transformation and upgrading project of Shantytown of Chengguan Town, Pan County. For the purpose of fulfilling the Framework Agreement requirements, Pan Zhou Guzheng and the Group established Panxian Grand Project Management Co., Ltd. (盤州市浩宏項目管理有限公司) as a project execution legal entity on 20 October 2015. After all parties signed the formal contract with total investment amount of RMB3,500 million, the Group was in charge of the construction project and the construction contract receivables should be confirmed every year according to the construction completion schedule. As of 31 December 2017, the non-current trade receivables recognised amounted to RMB500.05 million.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

22. TRADE AND NOTES RECEIVABLES (CONTINUED)

Notes: (continued)

(iii) Notes receivable of the Group comprised of bank's acceptance bills and commercial acceptance bills. They are usually collected within six months from the date of issue.

(iv) As of 31 December 2018, the Group secured certain notes receivables with carrying amount of approximately RMB20 million (2017: Nil) for notes payable.

(v) As of 31 December 2018, the Group secured certain trade receivables with carrying amount of approximately RMB474 million (2017: RMB1,076 million) for borrowings amounting to approximately RMB279.5 million (2017: RMB793 million) (Note 33).

(vi) The carrying amounts of the current trade and notes receivables approximate their fair value. As to the non-current portion, when discounting the future cash flow using the effective market rate, the fair value has no significant difference with the carrying amount.

Ageing analysis of trade receivables is as follows:

	At 31 December	
	2018	2017
	RMB'000	RMB'000
Within 1 year	**10,897,406**	8,813,164
Between 1 and 2 years	**2,334,163**	3,605,825
Between 2 and 3 years	**1,952,632**	2,201,621
Between 3 and 4 years	**1,122,463**	868,851
Between 4 and 5 years	**321,910**	248,875
Over 5 years	**451,785**	353,408
Trade receivables – gross	**17,080,359**	16,091,744
Less: Provision for credit losses	**(1,563,739)**	(1,287,809)
Trade receivables – net	**15,516,620**	14,803,935

The contracts governing provision of the Group's construction service would not include specific credit terms. For the settlement of trade receivables from provision of construction 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. Trade receivables from sales of goods are with credit terms of 30 to 90 days in accordance with sales contracts.

The Group requires collaterals from the proprietors of the Build-Transfer contracts to minimise the credit risk involved in these contracts where the Group would normally undertake the financing of the project.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

22. TRADE AND NOTES RECEIVABLES (CONTINUED)

As at 31 December 2018, the Group had no trade receivables that were past due but not impaired (2017: nil).

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

	At 31 December	
	2018	2017
	RMB'000	RMB'000
RMB	**16,803,925**	16,277,366
USD	**779,939**	105,325
Others	**20,722**	476,890
	17,604,586	16,859,581

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

23. PREPAYMENTS AND OTHER RECEIVABLES

	At 31 December	
	2018	2017
	RMB'000	RMB'000
Prepayments		
Prepayments to suppliers	**1,153,068**	1,043,418
Prepayment for investment (i)	**–**	195,600
Prepayment for business combination under common control (ii)	**8,000**	–
Prepayments for acquisition of property, plant and equipment	**38,895**	6,000
	1,199,963	1,245,018
Other receivables		
Financing provided to proprietors (iii)	**2,564,320**	2,781,867
Financing provided to a supplier (iv)	**184,873**	184,873
Amounts due from related parties (v)	**158,498**	125,432
Proceeds from disposal of a subsidiary in prior period	**32,200**	32,200
Refund of investment (i)	**95,600**	–
Staff advances (vi)	**19,802**	64,175
Deposits paid (vi)	**875,748**	660,075
Payments on behalf (vi)	**393,165**	329,159
Deductible value-added tax	**596,945**	558,777
Others	**52,556**	119,628
	4,973,707	4,856,186
Total prepayments and other receivables	**6,173,670**	6,101,204
Less: Provision for credit losses	**(700,983)**	(510,488)
Prepayments and other receivables – net	**5,472,687**	5,590,716
Less: Non-current portion (vii)	**(1,476,000)**	(1,566,419)
Current portion	**3,996,687**	4,024,297

Notes:

(i) The Group participated in a Public-Private-Partnership project for the construction of public infrastructure in Hanzhong Aerospace Smart New Town and prepaid RMB195,600,000 to Hanzhong Aerospace Smart New Town Investment Group Co., Ltd. (漢中航空智慧新城投資集團有限公司, "Smart New Town Company") in December 2017 as the first investment fund. However, due to the change of the national policy on PPP project, the project became a general project which does not exist a special purpose vehicle company, the investment agreement was eventually terminated. In 2018, the Group had received a refund of RMB100,000,000 from Smart New Town Company and the remaining balance of RMB95,600,000 had been reallocated to other receivables.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

23. PREPAYMENTS AND OTHER RECEIVABLES (CONTINUED)

Notes: (Continued)

(ii) On 26 October 2018, the Group entered into a Transfer Agreement with Chinalco Henan Aluminum Fabrication Co., Ltd. (中鋁河南銘業有限公司) to acquire 100% equity interest in Luoyang Kaiying Technology Co. Ltd. (洛陽開盈科技有限公司) at a consideration of approximately RMB205,813,000. During the year, the Group paid deposit of RMB8,000,000 (Note 42(d)). As of 31 December 2018, the acquisition was not completed.

(iii) The financing provided to proprietors mainly comprised of the following:

On 26 January 2014, the Group entered into a construction contract with Luoyang Zhongmai Ruiyang Home Co., Ltd. (洛陽中邁瑞陽置業有限公司, "Zhongmai Ruiyang"). In accordance with the contract terms, the Group is required to provide financing amounting to RMB800 million at an interest rate of 12% per annum. On 28 May 2014 and 15 December 2015, the Group provided RMB300 million and RMB60 million to Zhongmai Ruiyang. On 19 January 2017, the Group entered into a cooperation agreement with Luoyang government. In accordance with the agreement, the Group is required to provide the remaining financing amounting to RMB440 million. After providing the financing, the Luoyang government would repurchase 80% equity interests of Zhongmai Ruiyang held by Beijing Fengtong Hengda Investment Company Limited with a consideration of RMB600 million through a company, Luoyang Xin Yun Tong Industrial Co. Ltd. (洛陽鑫贇通實業有限公司) while the remaining 20% equity interests would be transferred to the Group. As of 31 December 2018, RMB800 million was provided. The principal and the relevant interest receivables aggregating to approximately RMB838 million was guaranteed by the Luoyang government.

On 1 April 2014, the Group entered into a construction contract and loan agreement with Jiangxi Beiguo Real Estate Development Company Limited (江西北國房地產開發有限公司, "Beiguo Real Estate") to undertake a land development project. In accordance with the contract terms, the Group is required to provide financing amounting to RMB150 million to Beiguo Real Estate at an interest rate of 15% per annum. As of 31 December 2018, RMB150 million was provided and the relevant interest receivable was RMB26 million. The land development project has been terminated. According to the notification issued by Donghu District People's Government of Nanchang City (南昌市東胡區人民政府, "Donghu Government") dated 6 January 2017, the Group and Beiguo Real Estate were requested to start the settlement procedures upon the termination of the construction contract. On 3 August 2018, the Group filed a lawsuit with Jiangai Provincial Higher People's Court to recover the amount due from Beigno Real Estate. According to the civil judgment dated 4 January 2019, Donghu Government required to recover RMB149 million to the Group. The Donghu Government promised to repay the amount in 2020.

On 14 April 2014, the Group entered into a construction contract with Huainan Zhongsheng Home Co., Ltd. (淮南中聖置業有限公司, "Zhongsheng Home") to provide project management service. In accordance with the contract terms, the Group is required to provide financing amounting to RMB450 million to Zhongsheng Home at an interest rate per annum of 15% by adding an extra interest of amounting to RMB17 million. As at 31 December 2018, RMB450 million was provided. The principal and the relevant interest receivables aggregating to approximately RMB654 million was secured by 100% of the equity interests of Zhongsheng Home.

On 13 January 2015, Ninth Metallurgical Construction Co., Ltd., a subsidiary in which 62.5% equity interests was acquired by the Group on 30 June 2016, entered into a loan agreement with Xianyang Xinxing Investment Holding Group Co., Ltd. (咸陽市新興投資控股集團有限公司, "Xinxing Investment") to provide financing amounting to RMB300 million at an interest rate of 8% per annum to Xinxing Investment for the construction of Xianyang Emerging Textile Industrial Park in Xianyang, the PRC. Financing of RMB280 million was provided in 2015 and repaid in 2017. Supplementary agreements were entered into on 6 May 2016 and 5 September 2016 and an additional financing of RMB420 million at an interest rate of 7.8% per annum was provided. The receivables will be due within 5 years after the financing is provided. As at 31 December 2018, RMB420 million was provided. The principal and the relevant interest receivables aggregating to approximately RMB447 million were secured by certain land use rights in Xianyang Emerging Textile Industrial Park.

On 19 January 2016, the Group entered into a construction contract with Guizhou Huada Real Estate Development Co., Ltd. (貴州省華大房地產開發有限公司, "Huada Real Estate") to undertake a land development project. In accordance with the contract terms, the Group is required to provide financing amounting to RMB220 million to Huada Real Estate, of which RMB150 million at an interest rate of 18% per annum and the remaining RMB70 million at an interest rate of 15% per annum. In addition, the Group is required to make payment on behalf of Huada Real Estate for construction cost at an interest rate of 15% per annum. As at 31 December 2018, RMB220 million was provided. The principal, the relevant interest receivables and other payment on behalf aggregating to approximately RMB321 million was secured by 100% of the equity interest of Huada Real Estate.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

23. PREPAYMENTS AND OTHER RECEIVABLES (CONTINUED)

Notes: (Continued)

(iv) On 7 January 2014, the Group entered into a purchase contract with Xinjiang Jiarun Resources Holdings Co. Ltd. (新疆嘉潤資源控股有限公司, "Xinjiang Jiarun"). In accordance with the contract terms, the Group is required to provide financing amounting to RMB300 million at benchmark one to three years lending rate x 1.15 x 1.17 (value-added tax rate) announced by the People's Bank of China. On 4 January 2016, the Group entered into a supplementary contract with Xinjiang Jiarun, the principal of the financing was agreed to reduce to RMB200 million. As at 31 December 2018, the outstanding principal and the relevant interest receivable aggregating to approximately RMB185 million was secured by machinery held by Xinjiang Jiarun at fair value of approximately RMB421 million as at 31 October 2013 and irrevocably guaranteed by Qingdao Antaixin Group Co. Ltd. (青島安泰信集團有限公司) with maximum amount of RMB400 million.

(v) The amounts due from related parties are unsecured, interest free and repayable on demand. The amounts include the outstanding consideration for disposal of a subsidiary of RMB95,771,000 (Note 42(a)).

(vi) Certain reclassification of the comparative figures have been made to confirm with the current year presentation.

(vii) The remaining non-current prepayments and other receivables mainly relate to prepayments for acquisition of property, plant and equipment, financing providing to the proprietors and the quality assurance.

The carrying amounts of the current prepayments and other receivables approximate their fair value. As to the non-current portion, when discounted the future cash flow using the effective market rate, the fair value has no significant difference with the carrying amount.

Ageing analysis of other receivables is as follows:

	At 31 December	
	2018	2017
	RMB'000	RMB'000
Within 1 year	**2,879,194**	1,943,894
Between 1 and 2 years	**370,275**	1,525,806
Between 2 and 3 years	**597,126**	477,562
Between 3 and 4 years	**425,671**	813,722
Between 4 and 5 years	**620,054**	26,149
Over 5 years	**81,387**	69,053
Other receivables – gross	**4,973,707**	4,856,186
Less: Provision for credit losses	**(700,983)**	(510,488)
Other receivables – net	**4,272,724**	4,345,698

As at 31 December 2018, the Group had no other receivables that were past due but not impaired (2017: nil).

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

23. PREPAYMENTS AND OTHER RECEIVABLES (CONTINUED)

The carrying amounts of the Group's other receivables are denominated in the following currencies:

	At 31 December	
	2018	2017
	RMB'000	RMB'000
RMB	**4,971,661**	4,854,347
Others	**2,046**	1,839
	4,973,707	4,856,186

24. CONTRACT ASSETS AND CONTRACT LIABILITIES AND AMOUNTS DUE FROM/TO CUSTOMERS FOR CONTRACT WORK

(a) Contract assets

The Group has recognised the following contract assets:

	31 December 2018 RMB'000	**1 January 2018 RMB'000** (Note)	31 December 2017 RMB'000
Contract assets arising from performance under:			
Construction and manufacturing contracts	**12,380,965**	**11,249,002**	–
Less: Allowances for ECLs	**(136,459)**	**(100,026)**	–
	12,244,506	**11,148,976**	–

Notes:

(i) The Group has initially applied IFRS 15 using the cumulative effect method and adjusted the opening balance at 1 January 2018.

(ii) Upon the adoption of IFRS 15, Amounts due from customers for contract work of RMB8,322,206,000, Trade receivables of RMB2,702,946,000 and Intangibles of RMB123,824,000 were reclassified to Contract assets (Note 2.2(a)(2)).

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

24. CONTRACT ASSETS AND CONTRACT LIABILITIES AND AMOUNTS DUE FROM/TO CUSTOMERS FOR CONTRACT WORK (CONTINUED)

(a) Contract assets (Continued)

The Group's construction contracts include payment schedules which require progress payments over the period of the project. These payment schedules prevent the build-up of significant contract assets. The contractual retention period provided in construction contracts is usually one to three years after completion of the project. The Group typically agrees 3 to 10% of the contract price as retention fund. This amount is included in contract assets until the end of the retention period as the Group's entitlement to this final payment is conditional on the Group's work satisfactorily passing inspection.

The amount of contract assets that is expected to be recovered after more than one year is RMB992,285,000 (2017: RMB1,694,151,000).

Movements of contract assets during the year are as follows:

Contract assets	2018 RMB'000
Balance at 1 January	11,148,976
Increase as a result of recognising revenue during the year	20,541,842
Increase as a result of recognising output value-added tax during the year	1,290,157
Decrease as a result of reclassification to accounts receivable during the year	(20,700,036)
Decrease as a result of increase of provision for credit losses	(36,433)
Balance at 31 December	12,244,506

(b) Contract liabilities

The Group has recognised the following contract liabilities:

	31 December 2018 RMB'000	1 January 2018 RMB'000 (Note)	31 December 2017 RMB'000
Contract liabilities arising from:			
Construction contracts	2,410,496	1,662,966	–
Service, manufacturing and trading contracts	297,101	284,808	–
	2,707,597	1,947,774	–

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

24. CONTRACT ASSETS AND CONTRACT LIABILITIES AND AMOUNTS DUE FROM/TO CUSTOMERS FOR CONTRACT WORK (CONTINUED)

(b) Contract liabilities (Continued)

Notes:

(i) The Group has initially applied IFRS 15 using the cumulative effect method and adjusted the opening balance at 1 January 2018.

(ii) Upon the adoption of IFRS 15, Amounts due to customers for contract work of RMB677,018,000 and Other payables of RMB1,270,756,000 were reclassified to Contract liabilities (Note 2.2(a)(2)).

The following table shows how much of the revenue recognised in the current period relates to the contract liabilities carried forward and how much relates to performance obligations that were satisfied in a previous year:

	2018 RMB'000
Revenue recognised during the year that was included in the contract liabilities at the beginning of the period	
Construction contracts	913,573
Service, manufacturing and trading contracts	238,038
	1,151,611

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

24. CONTRACT ASSETS AND CONTRACT LIABILITIES AND AMOUNTS DUE FROM/TO CUSTOMERS FOR CONTRACT WORK (CONTINUED)

(b) Contract liabilities (Continued)

When the Group receives a deposit before the commencement of the construction or provision of service or equipment or other products, 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 or when the control of goods has passed to customers.

The Group usually requires a 10 to 30% deposit in connection with the engineering design and consultancy services. The remaining amounts will be received in installments based on the amount of design work that the Group has completed or at the time of the delivery of report.

The Group also requires certain deposits in connection with the manufacturing and trading orders. The remaining amount will be received after the delivery and acceptance of equipment and other products. The Group usually provides a credit term between 30 to 90 days for sales of equipment and other products.

Movements of contract liabilities during the year are as follows:

Contract liabilities	2018 RMB'000
Balance at 1 January	1,947,774
Decrease as a result of recognising revenue during the year that was included in contract liabilities at the beginning of the period	(1,151,611)
Increase as a result of reclassification to accounts receivable during the year	78,179
Increase as a result of deposits received	1,834,493
Decrease as a result of deposal of a subsidiary – Note 42(a)	(1,238)
Balance at 31 December	2,707,597

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

24. CONTRACT ASSETS AND CONTRACT LIABILITIES AND AMOUNTS DUE FROM/TO CUSTOMERS FOR CONTRACT WORK (CONTINUED)

(c) Amounts due from/(to) customers for contract work

	At 31 December	
	2018	2017
	RMB'000	RMB'000
Contract cost incurred plus recognised profit less recognised losses	–	95,952,797
Less: Progress billings	–	(88,307,609)
Contract work-in-progress	–	7,645,188
Representing:		
Amounts due from customers for contract work	–	8,422,232
Less: Provision	–	(100,026)
Net amounts due from customers for contract work – Note	–	8,322,206
Amounts due to customers for contract work – Note	–	(677,018)
	–	7,645,188

Note: Upon adoption of IFRS15 (See Note 2.2(a)(2)), they were reclassified to contract assets (Note 24(a)(ii)) and contract liabilities (Note 24(b)(ii)).

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

25. INVENTORIES

	At 31 December	
	2018	2017
	RMB'000	RMB'000
Raw materials	**286,353**	319,316
Work-in-progress	**1,292,908**	1,176,250
Finished goods	**991,137**	814,447
Turnover materials and spare parts	**151,953**	141,402
Properties under development	**710,504**	582,388
	3,432,855	3,033,803

The movements of provision for impairment of inventories are as follows:

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
At beginning of the year	**150,948**	124,896
Additions	**7,458**	27,940
Written off	**(5,886)**	(1,888)
Reversal	**(13,310)**	–
At end of the year	**139,210**	150,948

The cost of inventories recognised as expense and included in "Cost of sales" amounted to RMB15,352 million and RMB20,165 million for the years ended 31 December 2018 and 2017, respectively.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

26. RESTRICTED CASH

	At 31 December	
	2018	2017
	RMB'000	RMB'000
Restricted cash		
RMB	**955,431**	1,160,609
USD	**23,426**	39,256
	978,857	1,199,865

Restricted cash mainly represents bank deposits secured for borrowings and notes payable.

The weighted average effective interest rates per annum on restricted cash, with maturities ranging from one to twelve months, was approximately 0.35% to 1.50% as at 31 December 2018 and 2017.

The maximum exposure to credit risk approximates the carrying amounts of the Group's restricted cash at the respective balance sheet dates.

27. TIME DEPOSITS

	At 31 December	
	2018	2017
	RMB'000	RMB'000
Time deposits with initial term of over three months		
RMB	**–**	10,107
Others	**–**	749
	–	10,856

The effective interest rates per annum on time deposits, with maturities ranging from six months to two years, approximately 2.10% to 6.75% as at 31 December 2017.

The maximum exposure to credit risk approximates the carrying amounts of the Group's time deposits at the respective balance sheet dates.

The time deposits placed with Chinalco Finance Company Limited was RMBnil and RMB10 million as at 31 December 2018 and 2017, respectively.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

28. CASH AND CASH EQUIVALENTS

	At 31 December	
	2018	2017
	RMB'000	RMB'000
Cash at bank and on hand	**3,035,282**	4,241,691
Balances placed with Chalieco Finance Company Limited (i)	**2,794,842**	2,038,203
	5,830,124	6,279,894

	At 31 December	
	2018	2017
	RMB'000	RMB'000
Denominated in:		
RMB	**4,772,926**	4,918,102
HKD	**113**	95
USD	**1,044,922**	1,205,051
Others	**12,163**	156,646
	5,830,124	6,279,894

Note:

(i) Balances placed with Chinalco Finance Company Limited bear interest at prevailing market rates.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

29. SHARE CAPITAL

	Number of shares in issue				Total
	A Shares	H Shares	Unlisted shares	Total	RMB'000
At 1 January 2017, 31 December 2017 and 1 January 2018	–	399,476,000	2,263,684,000	2,663,160,000	2,663,160
Addition (Note)	295,906,667	–	–	295,906,667	295,907
Reallocation	2,263,684,000	–	(2,263,684,000)	–	–
At 31 December 2018	**2,559,590,667**	**399,476,000**	**–**	**2,959,066,667**	**2,959,067**

Note: On 31 August 2018, the Company issued 295,906,667 RMB-denominated A-shares with the issue price of RMB3.45 per share. After deducting the underwriting and sponsorship fees amounting to RMB20,417,000 and other distribution fees amounting to RMB20,878,000, net proceeds were recognised as share capital amounting to RMB295,907,000 and the share premium amounting to RMB683,676,000 included in Capital Reserve accordingly.

As at 31 December 2018, all issued shares were registered and fully paid. Both A shares and H shares rank pari passu with each other.

30. RESERVES

The amounts of the Group's reserve and movements therein are presented in the consolidated statement of changes in equity.

Notes:

(i) Statutory surplus reserve

In accordance with the relevant laws and regulations of the PRC and the articles of association of the companies incorporated in the PRC, 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 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.

(ii) Special 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.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

30. RESERVES (CONTINUED)

(iii) Other equity instruments

On 23 July 2015, the Company registered in National Association of Financial Market Institutional Investors (中市協註[2015] MTN231), and issued a period of 3+N years perpetual bond of RMB200,000,000 (the "2015 perpetual medium-term notes"). The initial coupon rate of the 2015 perpetual medium-term notes is 5.15%, the initial spread (2.31%) = initial coupon rate (5.15%) – benchmark interest rate (2.84%); annual dividend is to be paid on 24 July each year. Since the fourth interest calculation year, the Company should reset coupon rate every three years. The formula of resetting coupon rate is as follows: current coupon rate = current benchmark interest rate + initial spread (2.31%) + 3%. The current benchmark interest rate is the arithmetic mean of Treasury Bond yield with 3 years maturity periods as shown in China Bond inter-bank fixed rate Treasury Bond yield curve which is announced by China Bond information website (中國債券信息網) 5 working days before the reset of coupon rate. The Company can choose to defer the interest payment with no restriction on times of deferral. If the Company declares profit distribution to shareholders or reduces registered capitals during the 12-month period ending on the day before the contractual scheduled distribution payment date, the Company should not defer the current period interests and all interests and fruits which have already been deferred according to relevant terms.

Because the Company can defer the principal payment of the 2015 perpetual medium term notes with no restriction, net amount arising from raising of such fund, deducting the amounts which are recorded as financial liabilities, are recognised as other equity instruments in the consolidated financial statements.

In 2018, the Company redeemed the 2015 perpetual medium-term notes at a consideration of RMB200,000,000.

On 2 September 2016, the Company's application for the public issuance of renewable corporate bonds to qualified investors in the PRC with an aggregate nominal value of not exceeding RMB4,000,000,000 was approved by China Securities Regulatory Commission. The issuance period is valid within 24 months form the date of approval.

On 17 October 2016, the Company issued the first tranche of renewable corporate bonds for the year 2016 of an issuance amount of RMB1,208,000,000, with a maturity period of 3+N years (the "2016 renewable corporate bonds"). The initial coupon rate of the 2016 renewable corporate bonds is 5.00%, the initial spread (2.60%) = initial coupon rate (5.00%) – benchmark interest rate (2.40%); annual dividend is to be paid on 13 October each year. Since the fourth interest calculation year, the Company should reset coupon rate every three years. The formula of resetting coupon rate is as follows: current coupon rate = current benchmark interest rate + initial spread (2.60%) + 3%. The current benchmark interest rate is the arithmetic mean of Treasury Bond yield with 3 years maturity periods as shown in China Bond inter-bank fixed rate Treasury Bond yield curve which is announced by China Bond information website (中國債券信息網) 10 working days before the reset of coupon rate. The Company can choose to defer the interest payment with no restriction on times of deferral. If the Company declares profit distribution to shareholders or reduces registered capitals during the 12-month period ending on the day before the contractual scheduled distribution payment date, the Company should not defer the current period interests and all interests and fruits which have already been deferred according to relevant terms.

Pursuant to the terms of the 2016 renewable corporate bonds, the Company can defer the principal payment of perpetual bonds with no restriction. The 2016 renewable corporate bonds do not meet the definition of financial liabilities according to IAS 32 Financial Instruments and the net amount arising from raising of this fund is recognised as other equity instruments in the consolidated financial statements.

On 15 March 2017, the Company issued the first tranche of renewable corporate bonds for the year 2017 of an issuance amount of RMB500,000,000 (the "2017 renewable corporate bonds") with a maturity period of 3+N years.

The initial coupon rate of the 2017 renewable corporate bonds is 6.00%, the initial spread (3.08%) = initial coupon rate (6.00%) – benchmark interest rate (2.92%); annual dividend is to be paid on 17 March each year. Since the fourth interest calculation year, the Company should reset coupon rate every three years. The formula of resetting coupon rate is as follows: current coupon rate = current benchmark interest rate + initial spread (3.08%) + 3%. The current benchmark interest rate is the arithmetic mean of Treasury Bond yield with 3 years maturity periods as shown in China Bond inter-bank fixed rate Treasury Bond yield curve which is announced by China Bond information website (中國債券信息網) 10 working days before the reset of coupon rate.

Pursuant to the terms of the 2017 renewable corporate bonds, the Company can choose to defer the interest payment with no restriction on times of deferral. If the Company declares profit distribution to shareholders or reduces registered capitals during the 12-month period ending on the day before the contractual scheduled distribution payment date, the Company should not defer the current period interests and all interests and fruits which have already been deferred according to relevant terms.

Since the Company can defer the principal payment of renewable corporate bonds with no restriction, the 2017 renewable corporate bonds does not meet the definition of financial liabilities according to IAS 32 Financial Instruments and the net amount arising from raising of this fund is recognised as other equity instruments in the consolidated financial statements.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

31. DEFERRED INCOME

Government grants mainly relate to purchase of property, plant and equipment conducted by the Group.

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
At beginning of the year	**44,007**	86,218
Additions	**2,657**	13,250
Charged to consolidated statement of comprehensive income	**(5,850)**	(42,506)
Disposal of a subsidiary (Note 42(c))	**–**	(12,955)
At end of the year	**40,814**	44,007

32. RETIREMENT AND OTHER SUPPLEMENTAL BENEFIT OBLIGATIONS

(a) State-managed retirement plan

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 20% to 22%, depending on the applicable local 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 15).

The total cost charged to consolidated statement of comprehensive income during the years ended 31 December 2018 and 2017 are as follows:

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
Contributions to state-managed retirement plans	**198,008**	170,229

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

32. RETIREMENT AND OTHER SUPPLEMENTAL BENEFIT OBLIGATIONS (CONTINUED)

(a) State-managed retirement plan (continued)

At each balance sheet date, the following amounts due in respect of the reporting period have not been paid to the state-managed retirement plans:

	At 31 December	
	2018	2017
	RMB'000	RMB'000
Amounts due to state-managed retirement plans included in trade and other payables	**4,304**	4,088

(b) Early retirement and supplemental benefit obligations

The Group has implemented a supplemental defined benefit retirement scheme to certain employees upon retirement and termination of services respectively 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 amount of early retirement and supplemental benefit obligations recognised in the consolidated balance sheet is determined as follows:

	At 31 December	
	2018	2017
	RMB'000	RMB'000
Current portion of defined benefits obligations	**105,210**	124,426
Non-current portion of defined benefits obligations	**713,871**	857,358
Present value of defined benefits obligations	**819,081**	981,784

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

32. RETIREMENT AND OTHER SUPPLEMENTAL BENEFIT OBLIGATIONS (CONTINUED)

(b) Early retirement and supplemental benefit obligations (continued)

The movements of the Group's early retirement and supplemental benefit obligations for each of the years ended 31 December 2018 and 2017 are as follows:

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
At beginning of the year	**981,784**	1,181,871
For the year		
– interest expense	**36,893**	33,942
– payment	**(121,759)**	(137,585)
– re-measurement gains	**46,350**	(108,337)
– past service cost (Note 15)	**(125,057)**	10,912
– current service cost (Note 15)	**870**	981
At end of the year	**819,081**	981,784

The above obligations were determined based on actuarial valuations performed by an independent qualified actuarial firm, Towers Watson Consulting Company Limited, using the projected unit credit actuarial cost method.

The material actuarial assumptions used in valuing these obligations are as follows:

(i) Discount rates adopted (per annum):

	At 31 December	
	2018	2017
Discount rate	**3.25%**	4.00%

(ii) Mortality: Average life expectancy of residents in the PRC;

(iii) Average medical expense increase rate: 8%;

(iv) Cost of living adjustment (COLA) for beneficiaries: 4.5%; and

(v) Medical costs paid to early retirees are assumed to continue until the death of the retirees.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

33. BORROWINGS

	At 31 December	
	2018	2017
	RMB'000	RMB'000
Bank borrowings		
– guaranteed by the Company to its subsidiaries	**2,512,567**	2,328,996
– secured by property, plant and equipment (i)	**110,000**	23,000
– secured by an investment property (ii)	**20,000**	–
– secured by trade receivables (iii)	**–**	289,465
– secured by restricted cash (iv)	**105,000**	–
– secured by land use rights held by third parties (v)	**–**	30,000
– unsecured	**7,576,977**	5,673,295
Borrowings from financial institutions		
– guaranteed by the Company to its subsidiaries	**93,600**	–
– secured by trade receivables (iii)	**36,000**	100,000
Short-term and long-term bonds		
– unsecured (vi)	**717,998**	2,454,183
Borrowings from fellow subsidiaries (vii) (Note 44(b))		
– secured by trade receivables (iii)	**243,500**	403,783
– unsecured	**1,208,000**	1,304,000
	12,623,642	12,606,722
Less: non-current portion	**(2,223,000)**	(2,792,675)
Current portion	**10,400,642**	9,814,047

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

33. BORROWINGS (CONTINUED)

Notes:

(i) As of 31 December 2018, the Group secured certain property, plant and equipment with carrying amount of approximately RMB85 million (2017: RMB46 million) for borrowings amounting to RMB110 million (2017: RMB23 million) (Note 16).

(ii) As of 31 December 2018, the Group secured an investment property with carrying amount of RMB19 million (2017: nil) for borrowings amounting to RMB20 million (2017: nill) (Note 18).

(iii) As of 31 December 2018, the Group secured certain trade receivables with carrying amounts of approximately RMB474 million (2017: RMB1,076 million) for borrowings amounting to approximately RMB279.5 million (2017: RMB793 million) (Note 22).

(iv) As of 31 December 2018, the Group secured certain bank deposits with carrying amounts of RMB60 million (2017: RMBnil) for borrowings amounting to RMB105 million (2017: RMBnil) (Note 26).

(v) As of 31 December 2018, Shanxi Jiuan Properties Co., Ltd. (陝西久安房地產有限公司, "Shanxi Jiuan"), the predecessor shareholder of Ninth Metallurgical Construction Co., Ltd. (九冶建設有限公司, "Ninth Metallurgical Construction"), secured land use rights for borrowings of the Group amounting to RMBnil million (2017: RMB30 million).

(vi) Short-term and long-term bonds

The Group issued long-term financing bond on 20 June 2016 with issuance amounts of RMB900 million with maturity periods of 2 to 3 years. The unit par value is RMB100 with an interest rate of 4.70% per annum. Pursuant to the relevant terms "Adjustment to Interest Rate of Corporate Bonds", the interest rate of 2016 long-term bonds was adjusted to 5.65% per annum. During the year, 199,980 units with amount RMB199,980,000 were re-sold to the Group.

Outstanding bonds as at 31 December 2018 and 2017 are summarised as follows:

	Face value (RMB'000)/ maturity	**Effective interest rate**	**31 December 2018 (RMB'000)**
2016 long-term bonds	**700,020/2019**	**5.65%**	**717,998**
			717,998

	Face value (RMB'000)/ maturity	Effective interest rate	31 December 2017 (RMB'000)
2017 short-term bonds	1,500,000/2018	4.70%	1,532,508
2016 long-term bonds	900,000/2019	4.70%	921,675
			2,454,183

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

33. BORROWINGS (CONTINUED)

Notes: (continued)

(vii) On 8 August 2016, the Group and Chinalco Finance Company Limited ("Chinalco Finance") entered into a financial service agreement, pursuant to which Chinalco Finance has agreed to provide the Group with deposit services, settlement services, credit services and miscellaneous financial services. The credit services are on normal commercial terms and do not require security or collaterals.

During the year ended 31 December 2018, the Group borrowed RMB4,356 million (2017: RMB2,340 million) from Chinalco Finance and repaid RMB4,452 million (2017: RMB1,251 million). As of 31 December 2018, RMB1,073 million (2017: RMB1,169 million) was borrowed from Chinalco Finance, of which RMB860 million and RMB213 million will be repaid in 2019 and 2020 respectively.

On 10 April 2017, the Group obtained borrowings from Luoyang Institute amounting to RMB40 million and RMB30 million respectively at an interest rate of 4.57% per annum. The principal and relevant interest were repaid on 9 April 2018.

On 28 December 2016 and 6 April 2017, the Group obtained borrowings from Guiyang Aluminium Magnesium Asset Management Co., Ltd. (貴陽鋁鎂資產管理有限公司) amounting to RMB10 million and RMB55 million respectively at an interest rate of 4.75% per annum. The principal and relevant interest were repaid on 24 December 2018 and 4 April 2018 respectively.

On 1 August 2018, 20 September 2018, 21 September 2018 and 5 November 2018, the Group obtained factoring borrowings from China Aluminum Business Factoring (Tianjiu) Co., Ltd. (中鋁商業保理（天津）有限公司) amounting to RMB3.5 million, RMB45 million, RMB95 million and RMB100 million at an interest rate of 4.99%, 4.7%, 4.7% and 6.7% respectively. The principal and relevant interest will be repaid on 1 August 2019, 28 February 2019, 21 September 2019 and 1 November 2019 respectively. In addition, during the year of 2018, the Group repaid factoring borrowings amounting to RMB441.8 million which comprised RMB403.8 million and RMB38 million borrowed from China Aluminum Business Factoring (Tianjin) Co., Ltd. in 2017 and 2018 respectively.

On 9 July 2018, the Group obtained borrowings from Chinalco Asset Management Co., Ltd. (中鋁資產經營管理公司) amounting to RMB135 million at an interest rate of 4.35% per annum. The principal and relevant interest will be repaid on 8 July 2019.

As at 31 December 2018 and 31 December 2017, the Group's borrowings were repayable as follows:

	Bank borrowings		Other borrowings	
	2018	2017	**2018**	2017
	RMB'000	RMB'000	**RMB'000**	RMB'000
Within 1 year	**8,314,544**	6,972,756	**2,086,098**	2,841,291
Between 1 and 2 years	**1,123,000**	692,000	**213,000**	4,000
Between 2 and 5 years	**887,000**	662,000	**–**	1,416,675
Beyond 5 years	**–**	18,000	**–**	–
	10,324,544	8,344,756	**2,299,098**	4,261,966

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

33. BORROWINGS (CONTINUED)

The carrying amounts of the Group's borrowings are denominated in the following currencies:

	At 31 December	
	2018	2017
	RMB'000	RMB'000
RMB	**12,525,498**	12,298,646
USD	**98,144**	308,076
	12,623,642	12,606,722

The carrying amounts of the current borrowings approximate their fair value. As to the non-current portion, the fair value of non-current borrowings of the Group are as follows:

	At 31 December 2018		At 31 December 2017	
	Carrying amount	**Fair value**	Carrying amount	Fair value
	RMB'000	**RMB'000**	RMB'000	RMB'000
Bank borrowings	**2,010,000**	**2,080,148**	1,372,000	1,397,804
Other borrowings	**213,000**	**215,343**	1,420,675	1,443,994
Total	**2,223,000**	**2,295,491**	2,792,675	2,841,798

The fair value of current borrowings equal their carrying amount, as the impact of discounting is not significant. The fair values are based on cash flows discounted using a rate based on the borrowing rate of 4.75% (2017: 4.75%) and are within level 2 of the fair value hierarchy.

The effective interest rates of borrowings and loans are 3.06% to 8.80% and 3.35% to 7.49% as at 31 December 2018 and 2017, respectively.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

33. BORROWINGS (CONTINUED)

The Group has the following undrawn borrowing facilities:

	At 31 December	
	2018	2017
	RMB'000	RMB'000
– Expiring within one year	**14,190,051**	14,829,967
– Expiring beyond one year	**578,056**	3,533,650
	14,768,107	18,363,617

The facilities expiring within one year are annual facilities subject to review at various dates during the respective years.

34. TRADE AND OTHER PAYABLES

	At 31 December	
	2018	2017
	RMB'000	RMB'000
Trade and notes payables		
Trade payables	**15,311,057**	13,195,628
Notes payable (i)	**752,426**	1,590,993
	16,063,483	14,786,621
Other payables		
Advances from customers (ii)	**–**	1,270,756
Staff welfare payable	**149,895**	153,922
Tax payable	**1,500,846**	960,044
Deposit payable	**730,897**	607,877
Temporary receipts	**126,781**	487,027
Amounts due to related parties (iii) – Note 44(b)	**147,872**	131,749
Others	**703,708**	308,041
	3,359,999	3,919,416
Total trade and other payables	**19,423,482**	18,706,037
Less: Non-current portion	**(5,606)**	(5,608)
Current portion	**19,417,876**	18,700,429

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

34. TRADE AND OTHER PAYABLES (CONTINUED)

Notes:

(i) As of 31 December 2018, the notes payable include part of the consideration of RMBnil (2017: RMB360 million) related to business combinations under common control. The remaining balance includes those arising from operating activities and in relation to discounting. The notes payable was secured by certain restricted bank deposits, trade and notes receivables and property, plant and equipment.

(ii) Upon adoption of IFRS15 (see Note 2.2 (a)(2)), it was reclassified to contract liabilities as at 1 January 2018 (Note 24(b)(ii)).

(iii) The amounts are interest free, unsecured and repayable on demand.

The carrying amounts of the Group's trade and other payables at 31 December 2018 and 31 December 2017 approximate their fair values.

Ageing analysis of trade payables is as follows:

	At 31 December	
	2018	2017
	RMB'000	RMB'000
Within 1 year	**11,428,271**	10,018,138
Between 1 and 2 years	**2,194,010**	1,623,014
Between 2 and 3 years	**706,626**	630,927
Over 3 years	**982,150**	923,549
	15,311,057	13,195,628

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

34. TRADE AND OTHER PAYABLES (CONTINUED)

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

	At 31 December	
	2018	2017
	RMB'000	RMB'000
RMB	**19,271,030**	18,492,739
USD	**128,350**	187,126
Others	**24,102**	26,172
	19,423,482	18,706,037

35. DEFERRED TAXATION

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

	At 31 December	
	2018	2017
	RMB'000	RMB'000
At the beginning of the year		
– as previously reported	**542,218**	558,900
– adoption of IFRS9 (Note 2.2(a)(1))	**(334)**	–
– as restated	**541,884**	558,900
Arising on business combination (Note 42(b))	**–**	(50)
Adjustment in respect of reorganisation of a subsidiary	**–**	–
Deregistration of subsidiaries	**–**	(95)
Disposal of a subsidiary (Note 42(a & c))	**(6,592)**	(2,762)
Charged to equity for fair-value change of FVTOCI/ available-for-sale financial assets	**6,887**	2,443
Credited to equity for remeasurements of post-employment benefit obligations	**6,714**	(18,764)
Credited to the consolidated statement of comprehensive income (Note 11)	**52,288**	2,546
At the end of the year	**601,181**	542,218

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

35. DEFERRED TAXATION (CONTINUED)

The movement in deferred income tax assets/(liabilities) during the years ended 31 December 2018 and 2017 without taking into consideration the offsetting of balances within the same tax jurisdiction is as follows:

Deferred income tax assets

	Tax losses RMB'000	Provision for retirement and other supplemental benefit obligations RMB'000	Provision for impairment of assets RMB'000	Change in fair value of investments RMB'000	Others RMB'000	Total RMB'000
At 1 January 2017	32,799	249,515	381,341	–	33,001	696,656
Arising on business combination (Note 42(b))	12,590	–	–	–	–	12,590
Deregistration of subsidiaries	–	–	(95)	–	–	(95)
Disposal of a subsidiary (Note 42(c))	(2,583)	–	(79)	–	(505)	(3,167)
(Charged)/credited to the profit or loss	(1,926)	(19,125)	44,917	–	(2,372)	21,494
Credited to equity for remeasurements of post-employment benefit obligations	–	(18,764)	–	–	–	(18,764)
At 31 December 2017	40,880	211,626	426,084	–	30,124	708,714
Disposal of a subsidiary (Note 42(a))	2,511	–	(9,103)	–	–	(6,592)
(Charged)/credited to the profit or loss	(3,623)	(59,017)	110,413	–	7,596	55,369
Credited to equity for remeasurements of post-employment benefit obligations	–	6,714	–	–	–	6,714
Credited to equity for fair-value change of financial assets at FVTOCI	–	–	–	1,222	–	1,222
At 31 December 2018	**39,768**	**159,323**	**527,394**	**1,222**	**37,720**	**765,427**

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

35. DEFERRED TAXATION (CONTINUED)

Deferred income tax liabilities

	Excess of carrying value of assets over tax bases arising from business combination RMB'000	Change in fair values of investments RMB'000	Unrealised earnings of long-term investments RMB'000	Others RMB'000	Total RMB'000
At 1 January 2017	85,855	(192)	30,795	21,298	137,756
Arising on business combination (Note 42(b))	12,640	–	–	–	12,640
Disposal of a subsidiary (Note 42(c))	(405)	–	–	–	(405)
(Credited)/charged to the profit or loss	(2,131)	30,795	(30,795)	21,079	18,948
Credited to equity for fair-value change of available-for-sale financial assets	–	(2,443)	–	–	(2,443)
At 31 December 2017	95,959	28,160	–	42,377	166,496
As 1 January 2018					
– as previously reported	95,959	28,160	–	42,377	166,496
– adoption of IFRS9 (Note 2.2(a)(1))	–	334	–	–	334
– as restarted	95,959	28,494	–	42,377	166,830
(Credited)/charged to the profit or loss	(7,226)	–	–	10,307	3,081
Credited to equity for fair-value change of financial assets at FVTOCI	–	(5,665)	–	–	(5,665)
At 31 December 2018	88,733	22,829	–	52,684	164,246

Deferred income tax assets are recognised for tax losses carried-forward to the extent that the realisation of the related income tax benefit through the future taxable profit is probable. In accordance with the relevant tax law applicable to those companies in their respective jurisdictions, tax losses may be carried forward against future taxable income. The Group did not recognise deferred income tax assets of RMB67.31 million and RMB42.67 million in respect of tax losses amounting to RMB448.78 million and RMB200.18 million as at 31 December 2018 and 2017, respectively, as management believes it is more likely than not that such tax losses would not be realised. The tax loss for which no deferred income tax assets recognised will expire before 2023 and 2022 respectively.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

36. DIVIDENDS PAYABLE

	At 31 December	
	2018	2017
	RMB'000	RMB'000
Dividends payable:		
Dividends payable to the holders of renewable corporate bonds	**30,000**	30,000
	30,000	30,000

37. SENIOR PERPETUAL CAPITAL SECURITIES

On 1 December 2016, Chalieco Hong Kong Corporation Limited (the "Issuer") issued the senior perpetual capital securities callable in and after 2020, with a total amount of USD350 million (the "2016 Senior Perpetual Securities"). The initial distribution rate of the 2016 Senior Perpetual Securities is 5.70% per annum semi-annually. The distribution rate will be reset each day falling every 3 calendar years after 15 January 2020; and the relevant reset distribution rate will be the sum of (a) the initial spread of 4.292%; (b) the treasure rate and (c) a margin of 4% per annum. The Group may, at its sole discretion, elect to defer any scheduled distribution on the 2016 Senior Perpetual Securities. According to the terms of the 2016 Senior Perpetual Securities, the Issuer has no right to defer distribution if the Company announced or distributed dividends during the 3-month period ending on the day before the contractual scheduled distribution payment date.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

37. SENIOR PERPETUAL CAPITAL SECURITIES (CONTINUED)

Pursuant to the terms of the 2016 Senior Perpetual Securities, the Group has no contractual obligation to repay their principals or to pay any distributions. The 2016 Senior Perpetual Securities do not meet the definition of financial liabilities according to the IAS 32 Financial Instruments, and are classified as non-controlling interests and subsequent distribution declared will be treated as profit distribution to equity owners.

The 2016 Senior Perpetual Securities with the principal amount of USD350 million are recorded as non-controlling interests.

During the year, profit attribution to the holders amounted to USD132 million (2017: USD134 million) and distribution of USD131 million (2017: USD84 million) was paid to them. As at 31 December 2018, the outstanding amount is RMB2,444 million (2017: RMB2,442 million) (Note 20 (a)).

38. COMMITMENTS

(a) Capital commitments

Capital commitments for the purchase of property, plant and equipment outstanding, and committed investment at each year end date not provided for in the consolidated financial statements are as follows:

	At 31 December	
	2018	2017
	RMB'000	RMB'000
Contracted but not provided for		
– Property, plant and equipment	**10,596**	54,144
– Investment (i)	**857,900**	816,775
	868,946	870,919

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

38. COMMITMENTS (CONTINUED)

(a) Capital commitments (continued)

Note:

(i) As at 9 October 2014, Chalieco Hong Kong Corporation Limited (中鋁國際香港有限公司) (hereinafter “Chalieco HK”), as a limited partner, and Shanghai Ample Harvest Equity Management Company Limited (上海豐實股權管理有限公司) (hereinafter “Harvest Equity”), as a general partner, signed a partnership agreement to set up a limited partnership, named Shanghai Chalieco Fengyuan Equity Investment Fund Partnership (Limited Partner) (上海中鋁豐源股權投資基金合夥企業(有限合夥), “Fengyuen”). According to the contract, Chalieco HK is required to subscribe USD200 million, representing 99.95% of the limited partnership subscription, which has been paid amounted to USD75 million as of 31 December 2018 and 2017.

(b) Operating leasing commitments

The Group leases various offices, warehouses and residential properties under non-cancellable operating lease agreements. The leases have varying terms, escalation clauses and renewal rights. The future aggregate minimum lease payments under non-cancellable operating leases are as follows:

	At 31 December	
	2018	2017
	RMB'000	RMB'000
Within 1 year	**5,640**	18,757
Between 1 year to 5 years	**5,319**	8,985
Above 5 years	**–**	5,857
Total	**10,959**	33,599

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

39. OTHER CASH FLOW INFORMATION

(a) Reconciliation of profit before income tax to cash generated from operations

	Year ended 31 December	
	2018 RMB'000	2017 RMB'000
Profit before income tax	**684,786**	1,077,283
Adjustments for:		
Provision for impairment of trade and other receivables and contract assets	**522,494**	235,252
(Reversal of)/provision for impairment of inventories	**(5,852)**	27,940
Provision for loss on construction contracts with customers	**–**	28,189
Provision for impairment of property, plant and equipment	**41,836**	–
Provision for impairment of intangible assets	**4,998**	–
Provision for impairment of investment in associates	**4,901**	8,372
Depreciation of property, plant and equipment	**189,256**	230,516
Depreciation of investment properties	**7,178**	7,147
Amortisation of land use rights	**20,640**	21,735
Amortisation of intangible assets	**28,392**	36,802
Amortisation of other non-current assets	**1,813**	6,217
Gains on disposal of property, plant and equipment, land use rights and intangible assets	**(1,645)**	(16,486)
Interest income	**(226,750)**	(266,547)
Interest expense	**691,222**	642,161
Net foreign exchange gains	**(10,619)**	(20,984)
Share of profits of investment accounted for using the equity method	**(3,984)**	(26,224)
Fair value gain on derivative assets at FVTPL	**(188)**	–
Fair value loss on derivative liabilities at FVTPL	**22**	–
Gain on disposal of a subsidiary	**(124,801)**	(8,402)
Gain on bargain purchase from business combination	**–**	(134)
Gains on disposal of available-for-sale financial assets	**–**	(7,383)
Return from short-term investments	**(8,168)**	(1,630)
Write-back of long outstanding payables	**(33,210)**	(29,841)
Government grants	**(5,850)**	(42,506)
Cash flows from operating activities before changes in working capital	**1,776,471**	1,901,477
Changes generated in working capital		
– Inventories	**(393,387)**	(726,030)
– Contract work-in-progress	**–**	(2,250,733)
– Trade and other receivables	**(3,557,831)**	1,272,242
– Contract assets	**(1,048,510)**	–
– Retirement and other supplemental benefit obligations	**(245,946)**	(125,692)
– Trade and other payables	**3,223,530**	1,984,405
– Contract liabilities	**761,061**	–
– Restricted cash	**201,008**	(196,711)
– Deferred income	**2,657**	–
Cash generated from operations	**719,053**	1,858,958

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

39. OTHER CASH FLOW INFORMATION (CONTINUED)

(b) Reconciliation of liabilities arising from financing activities

	Bank loans and other borrowings RMB'000 (Note 33)	Notes payable RMB'000 (Note 34)	Interest payable included in other payables RMB'000 (Note 34)	Dividends payable RMB'000 (Note 36)	Total RMB'000
At 1 January 2017	11,891,829	925,125	23,761	55,441	12,896,156
Changes from financing cash flows:					
Proceeds from new loans and borrowings	11,457,620	–	–	–	11,457,620
Repayment of loans and borrowings	(10,418,166)	–	–	–	(10,418,166)
Net cash inflows arising from notes financing	–	134,930	–		134,930
Interests paid	(158,773)	–	(463,495)	–	(622,268)
Dividends paid to shareholders of the Company	–	–	–	(231,695)	(231,695)
Dividends paid to non-controlling interests	–	–	–	(1,703)	(1,703)
Dividends paid to the equity owners of the subsidiaries before transferred to the Group pursuant to the Reorganisation before Listing	–	–	–	(53,080)	(53,080)
Dividends paid to the holders of renewable corporate bonds and perpetual medium-term notes	–	–	–	(70,700)	(70,700)
Net proceeds from issuance of short-term bonds	3,992,133	–	–	–	3,992,133
Repayment of short-term bonds	(5,000,000)	–	–	–	(5,000,000)
Total changes from financing cash flows	(127,186)	134,930	(463,495)	(357,178)	(812,929)
Exchange adjustments	(32,751)	–	–	–	(32,751)
Other changes:					
Arising from business combination (Note 42(a))	498,150	–	–	–	498,150
Notes payable for business combinations under common control (Note 34)	–	360,000	–	–	360,000
Dividends payable to equity owners	–	–	–	233,096	233,096
Dividends payable to the holders of renewable corporate bonds and perpetual medium-term notes	–	–	–	100,700	100,700
Interest expenses accrued (Note 10)	152,425	–	475,712	–	628,137
Issuance fee for bonds	7,867	–	–	–	7,867
Repayments to suppliers directly from banks (Note #)	216,388	–	–	–	216,388
Reclassification to other payables	–	–	–	(2,059)	(2,059)
Changes related to operating activities	–	170,938	–	–	170,938
Total other changes	874,830	530,938	475,712	331,737	2,213,217
At 31 December 2017	12,606,722	1,590,993	35,978	30,000	14,263,693

Note #: It also constitutes non-cash transaction.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

39. OTHER CASH FLOW INFORMATION (CONTINUED)

(b) Reconciliation of liabilities arising from financing activities (Continued)

	Bank loans and other borrowings RMB'000 (Note 33)	Notes payable RMB'000 (Note 34)	Interest payable included in other payables RMB'000 (Note 34)	Dividends payable RMB'000 (Note 36)	Total RMB'000
At 1 January 2018	12,606,722	1,590,993	35,978	30,000	14,263,693
Changes from financing cash flows:					
Proceeds from new loans and borrowings	14,709,610	–	–	–	14,709,610
Repayment of loans and borrowings	(13,229,375)	–	–	–	(13,229,375)
Net cash outflows arising from notes financing	–	(850,880)	–	–	(850,880)
Interests paid	(129,168)	–	(568,614)	–	(697,782)
Dividends paid to the holders of renewable corporate bonds and perpetual medium-term notes	–	–	–	(100,700)	(100,700)
Net proceeds from issuance of short-term bonds	998,667	–	–	–	998,667
Repayment of short-term bonds	(2,500,000)	–	–	–	(2,500,000)
Repayment of long-term bonds	(199,980)	–	–	–	(199,980)
Total changes from financing cash flows	(350,246)	(850,880)	(568,614)	(100,700)	(1,870,440)
Exchange adjustments	(3,038)	–	–	–	(3,038)
Other changes:					
Dividends payable to the holders of renewable corporate bonds and perpetual medium-term notes	–	–	–	100,700	100,700
Interest expenses accrued (Note 10)	92,962	–	567,614	–	660,576
Issuance fee for bonds	1,333	–	–	–	1,333
Reclassification to other payables	–	–	(17,507)	–	(17,507)
Reclassification from notes payable	294,520	(294,520)	–	–	–
Changes related to operating activities	(18,611)	306,833	–	–	288,222
Total other changes	370,204	12,313	550,107	100,700	1,033,324
At 31 December 2018	12,623,642	752,426	17,471	30,000	13,423,539

(c) Major non-cash transactions

Payment for investments accounted for using the equity method of RMB137,100,000 was offset with other receivables of RMB100,000,000 from Luodi Haochuang Development and Construction Co. Ltd. (婁底浩創開發建設有限公司) and financial assets at FVTOCI of RMB37,100,000. Proceeds from disposal of investments accounted for using the equity method of RMB3,850,000 was offset with current account with Suzhou Zhong Cai Yan Da Metal Technology Co., Ltd. (蘇州中色研達金屬技術有限公司). Additional consideration of RMB8,430,000 for business combination under common control was settled with current account with Yunnan Copper Industry (Group) Co., Ltd. (雲南銅業（集團）有限公司).

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

40. CONTINGENCIES

Unsolved lawsuits

The Group has been named in a number of lawsuits and other legal proceedings arising in the ordinary course of business. Provision has 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.

41. FINANCIAL GUARANTEE

As at 31 December 2018, the Group's subsidiary, Ninth Metallurgical Construction issued the joint liability guarantee in respect of a bank loan of RMB95,000,000 (2017: RMB65,000,000) borrowed by Mianxian Urban Development Investments Limited (勉縣城市發展投資有限公司), which is due for repayment on 6 January 2023, and the remaining balance of the guarantee is RMB54,000,000 as at the end of the year.

As at 31 December 2018, the Group's subsidiary, Hanzhong Ninth Metallurgical Construction Co., Ltd. (漢中九冶建設有限公司) issued a joint liability guarantee in respect of a bank loan of RMB100,000,000 (2017: RMB100,000,000) borrowed by Mianxian Urban and Rural Infrastructure Construction Co., Ltd. (勉縣城鄉基礎設施建設有限公司), which is due for repayment on 19 October 2027, and the remaining balance of the guarantee is RMB81,800,000 as at the end of the year.

The Directors reviewed all of the relevant contracts and information, and assessed that the expected credit losses of the above financial guarantees were not material, as the repayments made by the above borrowers were on schedule and the risk of default is remote. As such, no provision was made for such financial guarantees.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

42. BUSINESS COMBINATION AND DISPOSAL OF A SUBSIDIARY

(a) On 20 December 2018, the Company and its 73.5% owned subsidiary, China Nonferrous Metals Processing Technology Co., Ltd., disposed of their 40.35% and 59.65% equity interests of Suzhou Engineering & Research Institute for Nonferrous Metal Research Co., Ltd. ("Suzhou Research Institute") to Chinalco Assets Operation and Management Co., Ltd ("Chinalco Assets") at the considerations of RMB78,994,000 and RMB116,777,000, respectively. Chinalco Assets is wholly owned and controlled by Chinalco. Accordingly, this disposal constitutes related party transaction (Note 44(a)). The Group ceased to have any interests in Suzhou Research Institute after the disposal.

The net assets and liabilities of Suzhou Research Institute at the date of disposal were as follows:

Analysis of assets and liabilities disposal of:

	RMB'000
Property, plant and equipment	61,144
Land use rights	17,785
Deferred income tax assets	6,592
Inventories	187
Trade and notes receivables	43,488
Prepayments and other receivables	3,076
Cash and cash equivalents	5,204
Trade and other payables	(13,347)
Contract liabilities	(1,238)
Tax payables	(455)
Borrowings	(53,474)
Net assets disposed of	68,962
Gain on disposal of a subsidiary:	
Consideration	195,771
Net assets disposed of	(68,962)
Non-controlling interests	(2,008)
Gain on disposal	124,801
Net cash inflow arising on disposal:	
Consideration	195,771
Cash and cash equivalents disposed of	(5,204)
	190,567

During the period from 1 January 2018 to 20 December 2018, Suzhou Research Institute contributed a loss of approximately RMB45,102,000 to the Group's profit. The Group has received RMB100,000,000 of consideration on the disposal of the subsidiary up to 31 December 2018. The remaining balance of RMB95,771,000 is included in other receivables (Note 23(v)).

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

42. BUSINESS COMBINATION AND DISPOSAL OF A SUBSIDIARY (CONTINUED)

(b) On 26 June 2017, the Group entered into an Equity Transfer Agreement with Beijing Fengtong Hengda Investment Company Limited (北京豐通恒達投資有限公司), a wholly-owned subsidiary of Shanghai Fengtong, to acquire 90% of equity interest in Qingdao Xinfu Gongchuang Asset Management Company Limited ("Qingdao Xinfu", 青島新富共創資產管理有限公司). The acquisition was completed on 26 June 2017.

The purchase consideration for the acquisition was in the form of cash of RMB9,000,000, which was fully settled during the year.

The fair values of the identifiable assets and liabilities of Qingdao Xinfu as at the date of acquisition were as follows:

	Fair value recognised on acquisition RMB'000
Property, plant and equipment	143
Inventories	873,875
Cash and cash equivalents	34
Prepayments and other receivables	4,190
Trade and other payables	(369,893)
Borrowings from a related company	(498,150)
Deferred income tax liabilities	(50)
Total identifiable net assets at fair value	10,149
Non-controlling interests	(1,015)
	9,134
Gain on bargain purchase from business combination	(134)
Satisfied by cash	9,000

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

42. BUSINESS COMBINATION AND DISPOSAL OF A SUBSIDIARY (CONTINUED)

(b) (Continued)

The above fair values were estimated by the Directors based on the valuation report (Zhonghe Ping Bao Zi (2017) (No. BJV 1075)) issued by an independent asset valuer, ZhongHe Appraisal Co., Ltd.

An analysis of the cash flows in respect of the acquisition of a subsidiary is as follows:

	RMB'000
Cash consideration	(9,000)
Cash and cash equivalents acquired	34
Net outflow of cash and cash equivalents included in cash flows from investing activities	(8,966)

Transaction cost of the acquisition is immaterial.

Since the acquisition, Qingdao Xinfu contributed RMBnil to the Group's revenue and a loss of approximately RMB9,424,000 to the consolidated profit for the year ended 31 December 2017.

Had the combination taken place at the beginning of the year, the revenue of the Group and the profit of the Group for the year would have been RMB36,065,346,000 and RMB838,750,000, respectively.

(c) On 26 December 2017, the Group disposed of 58% equity interests in Shenyang Gina Advanced Materials Co., Ltd. (瀋陽金納新材料股份有限公司) at a cash consideration of RMB46 million. As a result of such disposal, the Group ceased to have any interest in Shenyang Gina Advanced Materials Co., Ltd.

The net assets and liabilities of Shenyang Gina Advanced Materials Co., Ltd. at the date of disposal were as follows:

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

42. BUSINESS COMBINATION AND DISPOSAL OF A SUBSIDIARY (CONTINUED)

(c) (Continued)

Analysis of assets and liabilities disposal of:

	RMB'000
Property, plant and equipment	61,155
Intangible assets	13,590
Investment properties	15,582
Deferred income tax assets	2,762
Inventories	10,705
Trade and notes receivables	3,735
Prepayments and other receivables	13,955
Cash and cash equivalents	475
Deferred income	(12,955)
Trade and other payables	(22,640)
Short-term borrowings	(26,000)
Net assets disposed of	60,364
Gain on disposal of a subsidiary:	
Consideration	46,000
Net assets disposed of	(60,364)
Non-controlling interests	25,352
Reversal of goodwill	(2,586)
Gain on disposal	8,402
Net cash inflow arising on disposal:	
Consideration	46,000
Cash and cash equivalents disposed of	(475)
	45,525

During the period from 1 January 2017 to 26 December 2017, Shenyang Gina Advanced Materials Co., Ltd. contributed a loss of approximately RMB2,402,000 to the Group's profit.

The Group received the deposit of RMB13,800,000, the remaining balance of RMB32,200,000 was still not received and included in other receivables (Note 23) up to 31 December 2018.

(d) On 26 October 2018, China Nonferrous Metals Processing Technology Co. Ltd., a 73.5% owned subsidiary of the Group, entered into a transfer agreement regarding the acquisition of the 100% equity interest of Luoyang Kaiying Technology Co., Ltd. ("Kaiying Technology") from Chinalco Henan Aluminum Fabrication Co., Ltd. ("Chinalco Henan") at a consideration of approximately RMB205.8 million. During the year, the Group paid a deposit of RMB8,000,000 (Note 23(ii)).

The aquisition was subsequently completed in January 2019 and will be accounted for as a business combination under common control in view that before and after the acquisition, the Company and Chinalco Henan are controlled by Chinalco, and the control is not temporary.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES

As at 31 December 2018, the Company has direct and indirect interests in the following subsidiaries:

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2017	2018
		RMB'000						
China Aluminum International Technology Development Co., Ltd. (中鋁國際技術發展有限公司)	The PRC/ 15 August 2006/ Limited liability company	60,000	100%	–	–	Technical service/ The PRC	(i)	(i)
China Aluminum International Engineering & Equipment Co., Ltd. (中鋁國際工程設備有限公司)	The PRC/ 2 November 2010/ Limited liability company	200,000	100%	–	–	Engineering & equipment/ The PRC	(i)	(i)
Duyun Development Zone Tongda Construction Co., Ltd. (都勻開發區通達建設有限公司)	The PRC/ 27 January 2011/ Limited liability company	230,000	50%	50%	–	Construction/ The PRC	(i)	(i)
Shenyang Aluminum & Magnesium Engineering Research Institute Co., Ltd. (瀋陽鋁鎂設計研究院有限公司)	The PRC/ 17 January 1991/ Limited liability company	470,743	100%	–	–	Design & engineering/ The PRC	(i)	(i)
Shenyang Boyu Science and Technology Co., Ltd. (瀋陽博宇科技有限責任公司)	The PRC/ 19 May 2003/ Limited liability company	20,250	–	100%	–	Industrial manufacturing/ The PRC	(i)	(i)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2017	2018
		RMB'000						
Shenyang Aluminum & Magnesium Technology Co., Ltd. (瀋陽鋁鎂科技有限公司)	The PRC/ 14 December 2006/ Limited liability company	10,500	–	100%	–	Consulting & engineering/ The PRC	(i)	(i)
Shenyang Aluminum & Magnesium Engineering & Research Institute Construction Supervision Co., Ltd. (瀋陽鋁鎂設計研究院建設監理有限公司)	The PRC/ 4 March 1994/ Limited liability company	4,118	–	100%	–	Project supervision/ The PRC	(i)	(i)
Guiyang Aluminum and Magnesium Design Institute Co., Ltd. (貴陽鋁鎂設計研究院有限公司)	The PRC/ 16 July 1994/ Limited liability company	Registered capital: 753,208 Paid capital: 700,000	100%	–	–	Engineering & research/ The PRC	(i)	(i)
Sixth Metallurgical Construction Company of China Nonferrous Metals Industry Co., Ltd. (中國有色金屬工業第六冶金建設有限公司)	The PRC/ 1 March 1984/ Limited liability company	Registered capital: 2,500,000 Paid capital: 1,424,815	100%	–	–	Construction/ The PRC	(i)	(i)
China Nonferrous Metals Industry's Twelfth Metallurgical Construction Co., Ltd. (中色十二冶金建設有限公司)	The PRC/ 31 May 1989/ Limited liability company	533,419	100%	–	–	Construction/ The PRC	(i)	(i)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2017	2018
		RMB'000						
Aluminum International Shandong Construction Co., Ltd. (中鋁國際山東建設有限公司)	The PRC/ 13 October 2001/ Limited liability company	102,900	–	100%	–	Construction/ The PRC	(i)	(i)
China Nonferrous Metals Changsha Investigation and Design Research Institute Co., Ltd. (中國有色金屬長沙勘察設計研究院有限公司)	The PRC/ 17 October 1992/ Limited liability company	128,730	100%	–	–	Design & engineering/ The PRC	(i)	(i)
China Nonferrous Metals Processing Technology Co., Ltd. (中色科技股份有限公司)	The PRC/ 15 January 2002/ Limited liability company	115,150	73.5%	–	26.5%	Engineering & equipment/ The PRC	(i)	(i)
China Aluminum Great Wall Construction Co., Ltd. (中鋁長城建設有限公司)	The PRC/ 25 October 1979/ Limited liability company	268,536	100%	–	–	Construction/ The PRC	(i)	(i)
Chalieco (Tianjin) Construction Co., Ltd. (中鋁國際(天津)建設有限公司)	The PRC/ 25 December 2006/ Limited liability company	211,000	100%	–	–	Construction/ The PRC	(i)	(i)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2017	2018
		RMB'000						
Guiyang Aluminum and Magnesium Design Institute Co., Ltd. (貴陽鋁鎂設計研究院工程承包有限公司)	The PRC/ 19 November 1992/ Limited liability company	100,000	–	100%	–	Engineering & research/ The PRC	(i)	(i)
Guiyang Zhenxing Aluminum & Magnesium Technological Development Co., Ltd. (貴陽振興鋁鎂科技產業發展有限公司)	The PRC/ 30 April 1998/ Limited liability company	30,000	–	100%	–	Engineering & research/ The PRC	(i)	(i)
Guizhou Light Metal Innovation Research and Equipment Process Co., Ltd. (貴州創新輕金屬工藝裝備工程技術研究中心有限公司)	The PRC/ 30 April 2010/ Limited liability company	20,000	–	100%	–	Research & equipment/ The PRC	(i)	(i)
Guiyang Xinyu Construction Supervision Co., Ltd. (貴陽新宇建設監理有限公司)	The PRC/ 25 June 1994/ Limited liability company	13,420	–	100%	–	Project supervision/ The PRC	(i)	(i)
China Nonferrous Metals Industry's Sixth Metallurgical Luoyang Co., Ltd. (中國有色金屬工業六冶洛陽有限公司)	The PRC/ 1 March 1989/ Limited liability company	16,598	–	100%	–	Construction/ The PRC	(i)	(i)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2017	2018
		RMB'000						
Luoyang Jincheng Construction Supervision Co., Ltd. (洛陽金誠建設監理有限公司)	The PRC/ 5 March 2002/ Limited liability company	5,000	–	73.5%	26.5%	Project supervision/ The PRC	(i)	(i)
Suzhou Nonferrous Metal Materials Deyuan Environmental Protection Co., Ltd. (蘇州中色德源環保科技有限公司)	The PRC/ 16 August 2012/ Limited liability company	25,000	–	62.5%	37.5%	Engineering & research/ The PRC	(i)	(i)
China Nonferrous Metals Industry's 6th Metallurgical Luoyang Mechanical and Electrical Installation Co., Ltd. (中國有色金屬工業六冶洛陽機電安裝有限公司)	The PRC/ 16 August 1984/ Limited liability company	11,173	–	100%	–	Construction/ The PRC	(i)	(i)
Shenzhen Changkuan Investigation and Design Co., Ltd. (深圳市長勘勘察設計有限公司)	The PRC/ 20 June 2001/ Limited liability company	15,020	–	100%	–	Design & engineering/ The PRC	(i)	(i)
Changsha Nonferrous Metallurgical Design Institute Co., Ltd. (長沙有色冶金設計研究院有限公司)	The PRC/ 18 November 1991/ Limited liability company	708,838	100%	–	–	Design & engineering/ The PRC	(i)	(i)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2017	2018
		RMB'000						
Hunan Huachu Engineering Construction, Consultancy and Supervision Co., Ltd. (湖南華楚工程建設諮詢監理有限公司)	The PRC/ 29 March 1993/ Limited liability company	6,000	–	100%	–	Project supervision/ The PRC	(i)	(i)
Hunan Changye Construction Drawing Examination Co., Ltd. (湖南長冶建設工程施工圖審查有限公司)	The PRC/ 18 January 2005/ Limited liability company	3,300	–	100%	–	Construction drawing examination/ The PRC	(i)	(i)
Sixth Metallurgical (Zhengzhou) Technology Heavy Industry Co., Ltd. (六冶(鄭州)科技重工有限公司)	The PRC/ 2 November 2012/ Limited liability company	85,000	–	100%	–	Engineering & equipment/ The PRC	(i)	(i)
Suzhou Nonferrous Metals Materials Science and Technical Development Co., Ltd. (蘇州中色金屬材料科技有限公司)	The PRC/ 22 September 2011/ Limited liability company	40,000	–	100%	–	Engineering & equipment/ The PRC	(i)	(i)
Huachu High-Tech (Hunan) Co., Ltd. (華楚高新科技(湖南)有限公司)	The PRC/ 17 October 2011/ Limited liability company	35,000	–	100%	–	Sales of equipment/ The PRC	(i)	(i)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2017	2018
		RMB'000						
Beijing Huayu Aerospace Control High-Tech Co., Ltd. (北京華宇天控科技有限公司)	The PRC/ 26 October 2011/ Limited liability company	17,500	–	60%	40%	Engineering & research/ The PRC	(i)	(i)
Wenzhou Tonggang Construction Co., Ltd. (溫州通港建設有限公司)	The PRC/ 15 October 2012/ Limited liability company	30,000	93.33%	6.67%	–	Construction/ The PRC	(i)	(i)
Wenzhou Tongrun Construction Co., Ltd. (溫州通潤建設有限公司)	The PRC/ 21 December 2012/ Limited liability company	100,000	60%	40%	–	Construction/ The PRC	(i)	(i)
Chalieco Hong Kong Corporation Limited (中鋁國際香港有限公司)	Hong Kong/ 10 December 2013/ Limited liability company	USD10,000	100%	–	–	Investment/ Hong Kong	(i)	(i)
Guizhou Shunan Mechanical and Electrical Equipment Company Limited (貴州順安機電設備有限公司)	The PRC/ 21 November 2012/ Limited liability company	61,980	–	100%	–	Engineering & equipment/ The PRC	(i)	(i)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2017	2018
		RMB'000						
Shanghai Chalieco Equity Investment Partnership (Limited Partners) (上海中鋁豐源股權投資基金合夥企業(有限合夥))	The PRC/ 9 October 2014/ Limited liability company	459,306	–	99.95%	0.05%	Trading/ The PRC	(i)	(i)
China Aluminum International Engineering (India) Private Limited (中鋁國際工程(印度)私人有限責任公司)	India/ 22 November 2012/ Private limited company	USD1,000	99.99%	0.01%	–	Construction/ India	(i)	(i)
Panxian Grand Project Management Co., Ltd. (盤縣浩宏項目管理有限公司)	The PRC/ 20 October 2015/ Limited liability company	10,000	–	30%	70%	Land development, project development/ The PRC	(i)	(i)
Henan Sixth Metallurgical Trading Co., Ltd. (河南六冶貿易有限公司)	The PRC/ 24 March 2015/ Limited liability company	30,000	–	100%	–	Construction materials wholesale/ The PRC	(i)	(i)
Henan Haoxin Properties Company Limited (河南浩信置業有限公司)	The PRC/ 28 December 2014/ Limited liability company	10,000	–	70%	30%	Property development/ The PRC	(i)	(i)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2017	2018
		RMB'000						
China Aluminum International Logistics (Tianjin) Co., Ltd. (中鋁國際物流(天津)有限公司)	The PRC/ 10 April 2015/ Limited liability company	50,000	–	100%	–	Trading/ The PRC	(i)	(i)
Shaanxi Zhong Mian Investment Company Limited (陝西中勉投資有限公司)	The PRC/ 24 August 2016/ Limited liability company	100,000	–	62.5%	37.5%	Design & engineering/ The PRC	(i)	(i)
China Aluminum International Investment Management (Shanghai) Co., Ltd. (中鋁國際投資管理(上海)有限公司)	The PRC/ 14 May 2015/ Limited liability company	Registered capital: 1,255,210 Paid capital: 519,000	1.99%	98.01%	–	Trading/ The PRC	(i)	(i)
Changsha Tongxiang Construction Co., Ltd. (長沙通湘建設有限公司)	The PRC/ 11 November 2013/ Limited liability company	25,000	40%	60%	–	Construction/ The PRC	(i)	(i)
Kunming Technology Development Company Limited (昆明勘察院科技開發有限公司)	The PRC/ 3 September 1992/ Limited liability company	2,000	–	100%	–	Design & engineering/ The PRC	(i)	(i)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2017	2018
		RMB'000						
Chalco Wancheng Shandong Construction Co., Ltd. (中鋁萬成山東建設有限公司)	The PRC/ 12 April 1995/ Limited liability company	63,810	–	57.18%	42.82%	Design & engineering/ The PRC	(i)	(i)
Wenzhou Tonghui Construction Co., Ltd. (溫州通匯建設有限公司)	The PRC/ 18 October 2013/ Limited liability company	30,000	90%	10%	–	Construction/ The PRC	(i)	(i)
China Nonferrous Metals Industry's Twelfth Metallurgical Chongqing Energy Savings Technology Co., Ltd. (中色十二冶金重慶節能科技有限公司)	The PRC/ 25 June 2013/ Limited liability company	12,000	–	100%	–	Energy performance contracting/ The PRC	(i)	(i)
Shanxi Nonferrous Metal Twelfth Metallurgical Supplies Co., Ltd. (山西中色十二冶物貿有限公司)	The PRC/ 16 August 2013/ Limited liability company	15,000	–	100%	–	Trading/ The PRC	(i)	(i)
Guizhou Yundu Properties Company Limited (貴州匀都置業有限公司)	The PRC/ 7 January 2013/ Limited liability company	128,000	–	100%	–	Property management/ The PRC	(i)	(i)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2017	2018
		RMB'000						
Guangxi Tongrui Investment Construction Co.,Ltd. (廣西通銳投資建設有限公司)	The PRC/ 5 December 2013/ Limited liability company	400,000	100%	–	–	Property development/ The PRC	(i)	(i)
Beijing Zichen Investment & Development Co., Ltd. (北京紫宸投資發展有限公司)	The PRC/ 25 February 2014/ Limited liability company	Registered capital: 200,000 Paid capital: 28,000	100%	–	–	Property development/ The PRC	(i)	(i)
Hunan Tondgu Investment & Development Company Limited (湖南通都投資開發有限公司)	The PRC/ 21 January 2014/ Limited liability company	Registered capital: 30,000 Paid capital: 10,000	60%	40%	–	Investment/ The PRC	(i)	(i)
Xinchengtong (Tianjin) Construction Engineering Co., Ltd. (鑫誠通(天津)建築工程有限公司)	The PRC/ 30 May 2014/ Limited liability company	100	–	100%	–	Construction/ The PRC	(i)	(i)
China Aluminum International Shandong Chemical Co., Ltd. (中鋁國際山東化工有限公司)	The PRC/ 27 June 2014/ Limited liability company	50,000	–	100%	–	Sales of equipment/ The PRC	(i)	(i)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2017	2018
		RMB'000						
Ninth Metallurgical Construction Co., Ltd. (九冶建設有限公司)	The PRC/ 29 April 2006/ Limited liability company	320,000	62.5%	–	37.5%	Engineering and construction/ The PRC	(i)	(i)
Henan Ninth Metallurgical Construction Co., Ltd. (河南九冶建設有限公司)	The PRC/ 12 January 2004/ Limited liability company	50,000	–	62.5%	37.5%	Engineering and construction/ The PRC	(i)	(i)
Chalco Southwest Construction Investment Co. Ltd. (中鋁西南建設投資有限公司)	The PRC/ 4 June 2018/ Limited liability company	1,000,000	100%	–	–	Engineering and construction/ The PRC	(i)	(i)
Xinjiang Ninth Metallurgical Construction Ltd. (新疆九冶建設有限公司)	The PRC/ 26 April 2012/ Limited liability company	60,000	–	62.5%	37.5%	Engineering and construction/ The PRC	(i)	(i)
Hanzhong Ninth Metallurgical Construction Ltd. (漢中九冶建設有限公司)	The PRC/ 1 November 2006/ Limited liability company	120,000	–	62.5%	37.5%	Engineering and construction/ The PRC	(i)	(i)
Ninth Metallurgical Hanzhong Construction Design Institute Co., Ltd. (九冶漢中建築設計院有限公司)	The PRC/ 11 September 2009/ Limited liability company	500	–	62.5%	37.5%	Design and consultancy/ The PRC	(i)	(i)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2017	2018
		RMB'000						
Mianxian Ninth Metallurgical Construction Materials Detection Co., Ltd. (勉縣九冶建材檢測有限責任公司)	The PRC/ 19 April 2012/ Limited liability company	1,000	–	62.5%	37.5%	Quality inspection of construction projects/ The PRC	(i)	(i)
China Aluminum International Aluminum Technological Development Co., Ltd. (中鋁國際鋁材科技產業有限公司)	The PRC/ 1 September 2016/ Limited liability company	144,500	100%	–	–	Technology research, testing and development/ The PRC	(i)	(i)
Zhengzhou Ninth Metallurgical Three-Dimensions Chemical Industry and Mechanical Co., Ltd. (鄭州九冶三維化工機械有限公司)	The PRC/ 20 May 2004/ Limited liability company	100,000	–	77.5%	22.5%	Design, manufacturing, instalment and selling/ The PRC	(i)	(i)
Ankangshi Ninth Metallurgical Changjiali Concrete Co., Ltd. (安康市九冶暢佳力混凝土有限公司)	The PRC/ 12 January 2012/ Limited liability company	Registered capital: 30,000 Paid capital: 10,000	–	62.5%	37.5%	Manufacturing/ The PRC	(i)	(i)
Shanxi Longye Construction Services Co., Ltd. (山西龍冶建築勞務有限公司)	The PRC/ 11 July 2016/ Limited liability company	5,000	–	100%	–	Installation and construction/ The PRC	(i)	(i)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2017	2018
		RMB'000						
China Aluminum International 12MCC Construction Co., Ltd. (中鋁國際12MCC建設有限公司)	Korea/ Limited liability company	KRW625,000	–	80%	20%	Installation and construction/ The PRC	(i)	(i)
Shanghai China Aluminum International Supply Chain Management Co., Ltd. (上海中鋁國際供應鏈管理有限公司)	The PRC/ 9 August 2016/ Limited liability company	30,000	–	100%	–	Trading/ The PRC	(i)	(i)
Tianjin Xintong Properties Co., Ltd. (天津鑫通置業有限公司)	The PRC/ 23 November 2015/ Limited liability company	30,000	–	100%	–	Real estate development and selling/ The PRC	(i)	(i)
Changsha Huahengyuan Information Technology Co., Ltd. (長沙華恒園訊息科技有限責任公司)	The PRC/ 21 August 2003/ Limited liability company	2,000	–	100%	–	Development and construction/ The PRC	(i)	(i)
Tongchuan Hao Tong Construction Co., Ltd. (銅川浩通建設有限公司)	The PRC/ 15 December 2016/ Limited liability company	120,000	–	80%	20%	Development and construction/ The PRC	(i)	(i)
Huaian Tong Yun Construction Co., Ltd. (淮安通運建設有限公司)	The PRC/ 12 January 2017/ Limited liability company	Registered capital: 100,777 Paid capital: 14,988	–	100%	–	Engineering and construction/ The PRC	(i)	(i)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2017	2018
		RMB'000						
Shanxi Nonferrous Metal Twelfth Metallurgical Advanced Materials Co., Ltd. (山西中色十二冶新材料有限公司)	The PRC/ 31 March 2017/ Limited liability company	10,000	–	66%	34%	Design, manufacturing, instalment and selling/ The PRC	(i)	(i)
Qingdao Xinfu Gongchuang Asset Management Company Limited (青島市新富共創資產管理有限公司)	The PRC/ 17 November 2014/ Limited liability company	10,000	90%	–	10%	Construction and property management/ The PRC	(i)	(i)
Chalco Shandong Engineering Technology Co., Ltd. (中鋁山東工程技術有限公司)	The PRC/ 12 July 1995/ Limited liability company	274,607	60%	–	40%	Engineering and construction/ The PRC	(i)	(i)
Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry (中國有色金屬工業昆明勘察設計研究院有限公司)	The PRC/ 28 October 1992/ Limited liability company	108,500	100%	–	–	Design & engineering/ The PRC	(i)	(i)
Chalieco Malaysia Sdn. Bhd. (中鋁國際（馬來西亞）有限公司)	Malaysia/ 20 April 2015/ Limited liability company	MYR1,000	–	100%	–	Dormant/ Malaysia	(i)	(i)

Note:

(i) Wuyige Certified Public Accountants LLP (大信會計師事務所（特殊普通合夥）)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

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 transactions 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 2018 and 2017, and balances as at 31 December 2018 and 31 December 2017 arising from related party transactions.

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

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

44. SIGNIFICANT RELATED PARTY TRANSACTIONS AND BALANCES (CONTINUED)

(a) Significant related party transactions arising with Chinalco and its subsidiaries and jointly controlled entity

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
Revenue under construction contracts from:		
– Fellow subsidiaries	**5,263,979**	3,635,077
– Joint venture	**229,892**	–
– Associates of ultimate holding company	**–**	4,539,467
	5,493,871	8,174,544
Revenue under services contracts from:		
– Fellow subsidiaries	**268,516**	155,860
– Associates of ultimate holding company	**–**	5,540
	268,516	161,400
Revenue under manufacturing contracts from:		
– Fellow subsidiaries	**629,911**	421,213
– Joint venture	**22,674**	–
	652,585	421,213
Other revenue from:		
– Fellow subsidiaries	**5,585**	19,800
	6,420,557	8,776,957

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

44. SIGNIFICANT RELATED PARTY TRANSACTIONS AND BALANCES (CONTINUED)

(a) Significant related party transactions arising with Chinalco and its subsidiaries and jointly controlled entity (continued)

	Year ended 31 December	
	2018	2017
	RMB'000	RMB'000
Purchases of goods and services from:		
– Joint venture	**218,897**	–
– Associates of ultimate holding company	**–**	3,232
– Fellow subsidiaries	**374,249**	1,172,118
	593,146	1,175,350
Rental expenses paid to fellow subsidiaries	**4,221**	12,030
Borrowings from fellow subsidiaries	**4,772,500**	2,868,783
Interests received from:		
– An associate	**–**	203
– Fellow subsidiaries	**30,270**	12,050
	30,270	12,253
Interests paid to:		
– A subsidiary of a joint venture	**–**	151
– Fellow subsidiaries	**71,278**	28,936
	71,278	29,087
Consideration for disposal of a subsidiary to:		
– Fellow subsidiary (Note 42(a))	**195,771**	–

General contracting services includes services of project constructions and projects designs.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

44. SIGNIFICANT RELATED PARTY TRANSACTIONS AND BALANCES (CONTINUED)

(a) Significant related party transactions arising with Chinalco and its subsidiaries and jointly controlled entity (continued)

Apart from transactions with Chinalco and its fellow subsidiaries and jointly controlled entity of ultimate holding company, the Group has transactions with other state-owned enterprises include 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.

The Group places deposits with and receives loans mainly from state-owned financial institutions in the ordinary course of business. The deposit and loans are in accordance with terms as set out in the respective agreement, and the interest rates are set at prevailing market rates.

(b) Year end balances arising from Chinalco and its subsidiaries, associates and jointly controlled entity

	At 31 December	
	2018	2017
	RMB'000	RMB'000
Trade receivables		
– Associates	**69,096**	32,083
– Fellow subsidiaries	**3,566,233**	1,767,536
– Associates of ultimate holding company	**516**	582,121
– Joint ventures of ultimate holding company	**112,846**	–
	3,748,691	2,381,740

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

44. SIGNIFICANT RELATED PARTY TRANSACTIONS AND BALANCES (CONTINUED)

(b) Year end balances arising from Chinalco and its subsidiaries, associates and jointly controlled entity (continued)

	At 31 December	
	2018	2017
	RMB'000	RMB'000
Prepayments to suppliers		
– Joint ventures	**5,009**	4,996
– Associates	**–**	576
– Fellow subsidiaries	**15,671**	28,844
	20,680	34,416
Prepayment for business combination under common control		
– Fellow subsidiary	**8,000**	–
Other receivables		
– Joint ventures	**2,665**	1,812
– Associates	**185**	56,580
– Fellow subsidiaries	**155,493**	56,887
– Associates of ultimate holding company	**–**	10,153
– Joint ventures of ultimate holding company	**155**	–
	158,498	125,432
Amounts due to customers for contract work		
– Fellow subsidiaries	**–**	5,997
Trade payables		
– Joint venture	**29,914**	10,094
– Associates	**2,611**	3,206
– Fellow subsidiaries	**256,620**	215,766
– Associates of ultimate holding company	**–**	450
	289,145	229,516
Contract liabilities		
– Associates	**49,739**	–
– Fellow subsidiaries	**279,846**	–
– Joint ventures of ultimate holding company	**2,272**	–
	331,857	–

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

44. SIGNIFICANT RELATED PARTY TRANSACTIONS AND BALANCES (CONTINUED)

(b) Year end balances arising from Chinalco and its subsidiaries, associates and jointly controlled entity (continued)

	At 31 December	
	2018	2017
	RMB'000	RMB'000
Advance from customers		
– Fellow subsidiaries	**–**	43,885
– Associates of ultimate holding company	**–**	101,862
	–	145,747
Other payables (Note 34)		
– Joint ventures	**443**	423
– Associates	**1,073**	1,063
– Fellow subsidiaries	**146,356**	130,263
	147,872	131,749
Borrowings (Note 33)		
– Fellow subsidiaries	**1,451,500**	1,707,783

Notes:

(i) Trade receivables, prepayments and other receivables due from ultimate holding company, subsidiaries and associates of ultimate holding company are unsecured, interest free and repayable on demand.

(ii) Trade and other payables due to ultimate holding company, subsidiaries and associates of ultimate holding company are unsecured, interest free and have no fixed term of repayment.

(iii) All trade receivables and payables will be settled accordingly to the terms agreed with the parties involved.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

44. SIGNIFICANT RELATED PARTY TRANSACTIONS AND BALANCES (CONTINUED)

(c) Key management personnel remuneration

Key management includes directors (executive and non-executive), supervisors, president, vice presidents, secretary to the Board of Directors and Chief Financial Officer of the Company. The compensation paid or payable to key management from employee services is shown below:

	Year ended at 31 December	
	2018	2017
	RMB'000	RMB'000
Salaries and other allowances	**2,234**	3,921
Discretionary bonus	**2,115**	2,514
Retired benefits	**1,181**	660
	5,530	7,095

45. EVENTS AFTER THE BALANCE SHEET DATE

Other than those disclosed in Notes 13 and 42(d), there are no significant subsequent events took place subsequent to 31 December 2018.

46. ULTIMATE HOLDING COMPANY

The directors of the Company (the "Directors") regard Aluminum Corporation of China (中鋁集團, "Chinalco") 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.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

47. BALANCE SHEET AND RESERVE MOVEMENT OF THE COMPANY

Balance sheet of the Company

	As at 31 December	
	2018	2017
	RMB'000	RMB'000
Assets		
Non-current assets		
Property, plant and equipment	**83,428**	86,705
Intangible assets	**4,475**	5,103
Land use rights	**149,785**	155,919
Investments in subsidiaries	**4,255,375**	4,012,301
Investments accounted for using equity method	**59,833**	36,357
Available-for-sale financial assets	**–**	225,198
Financial assets at fair value through other comprehensive income	**177,087**	–
Trade and notes receivables	**29,087**	33,700
Prepayments and other receivables	**1,587,547**	1,621,047
Deferred income tax assets	**40,930**	20,941
Other non-current assets	**11**	573
Total non-current assets	**6,387,558**	6,197,844
Current assets		
Inventories	**206,542**	238,779
Trade and notes receivables	**2,168,682**	1,870,963
Prepayments and other receivables	**7,142,917**	7,382,941
Contract assets	**756,736**	–
Amounts due from customers from contract work	**–**	842,095
Current income tax prepayments	**5,906**	4,083
Cash and cash equivalents	**2,216,958**	2,072,774
Total current assets	**12,497,741**	12,411,635
Total assets	**18,885,299**	18,609,479
Equity		
Share capital	**2,959,067**	2,663,160
Reserve	**3,227,098**	2,670,861
Total equity	**6,186,165**	5,334,021

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

47. BALANCE SHEET AND RESERVE MOVEMENT OF THE COMPANY (CONTINUED)

Balance sheet of the Company (continued)

	As at 31 December	
	2018	2017
	RMB'000	RMB'000
Liabilities		
Non-current liabilities		
Retirement and other supplemental benefit obligations	**4,010**	5,014
Long-term borrowings	**1,737,000**	1,970,675
Total non-current liabilities	**1,741,010**	1,975,689
Current liabilities		
Short-term borrowings	**5,770,474**	6,347,192
Trade and other payables	**4,332,741**	4,895,890
Contract liabilities	**–**	23,887
Amounts due to customers for contract work	**821,966**	–
Retirement and other supplemental benefit obligations	**1,607**	2,800
Financial liabilities at fair value through profit and loss	**22**	–
Dividend payable	**30,000**	30,000
Income tax payable	**1,314**	–
Total current liabilities	**10,958,124**	11,299,769
Total liabilities	**12,699,134**	13,275,458
Total equity and liabilities	**18,885,299**	18,609,479
Net current assets	**1,539,617**	1,111,866
Total assets less current liabilities	**7,927,175**	7,309,710

The balance sheet of the Company was approved by the Board of Directors on 28 March 2019 and was signed on its behalf.

He Zhihui	**Zhang Jian**
Director	*Director*

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

47. BALANCE SHEET AND RESERVE MOVEMENT OF THE COMPANY (CONTINUED)

Reserve movement of the Company

	Capital reserve RMB'000	Statutory surplus reserve RMB'000 (i)	Investment revaluation reserve RMB'000	Remeasurements of post-employment benefit obligations RMB'000	Retained earnings RMB'000	Other equity instruments RMB'000	Total RMB'000
At 1 January 2017	800,503	130,454	(1,090)	11,261	8,445	1,402,731	2,352,304
Profit for the year	–	–	–	–	369,093	–	369,093
Fair value loss on available-for-sale financial assets – gross	–	–	(16,288)	–	–	–	(16,288)
Fair value loss on available-for-sale financial assets – tax	–	–	2,443	–	–	–	2,443
Remeasurements of post employment benefit obligations – net of tax	–	–	–	516	–	–	516
Dividends to equity owners	–	–	–	–	(231,695)	–	(231,695)
Dividends paid to the holders of renewable corporate bonds and perpetual medium-term notes	–	–	–	–	(100,700)	–	(100,700)
Net proceeds from offering of renewable corporate bonds	–	–	–	–	–	497,500	497,500
Appropriation to statutory surplus reserve	–	36,909	–	–	(36,909)	–	–
Business combinations under common control	(202,312)	–	–	–	–	–	(202,312)
At 31 December 2017	598,191	167,363	(14,935)	11,777	8,234	1,900,231	2,670,861

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

47. BALANCE SHEET AND RESERVE MOVEMENT OF THE COMPANY (CONTINUED)

Reserve movement of the Company (continued)

	Capital reserve RMB'000	Statutory surplus reserve RMB'000 (i)	Investment revaluation reserve RMB'000	Remeasurements of post-employment benefit obligations RMB'000	Retained earnings RMB'000	Other equity instruments RMB'000	Total RMB'000
At 1 January 2018	598,191	167,363	(14,935)	11,777	8,234	1,900,231	2,670,861
Profit for the year	–	–	–	–	215,510	–	215,510
Fair value loss on financial assets at fair value through OCI – gross	–	–	(39,631)	–	–	–	(39,631)
Fair value loss on financial assets at fair value through OCI – tax	–	–	5,945	–	–	–	5,945
Remeasurements of post employment benefit obligations – net of tax	–	–	–	(133)	–	–	(133)
Dividends paid to the holders of renewable corporate bonds and perpetual medium-term notes	–	–	–	–	(100,700)	–	(100,700)
Net proceeds from offering of new share	683,676	–	–	–	–	–	683,676
Redemption of 2015 perpetual medium-term notes	429	–	–	–	–	(200,429)	(200,000)
Additional consideration paid for business combination under common control	(8,430)	–	–	–	–	–	(8,430)
Appropriation to statutory surplus reserve	–	21,551	–	–	(21,551)	–	–
At 31 December 2018	1,273,866	188,914	(48,621)	11,644	101,493	1,699,802	3,227,098

Note:

(i) 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 statutory surplus reserve can be used to offset prior years' losses, if any, 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.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

48. COMPARATIVE FIGURES

The Group has initially applied HKFRS 15 and HKFRS 9 at 1 January 2018. Under the transition methods chosen, comparative information is not restated. Further details of the changes in accounting policies are disclosed in Note 2.2(a).

49. APPROVAL OF FINANCIAL STATEMENTS

These consolidated financial statements have been approved for issue by the Board of Directors on 28 March 2019.

GLOSSARY OF TERMS

"A Share(s)"	the ordinary Shares of the Company with a nominal value of RMB1.00 each which were issued in the PRC and subscribed in RMB and are listed on the SSE
"Articles of Association"	the articles of association of the Company, being adopted
"Associate(s)"	has the meaning ascribed thereto in the Listing Rules
"Audit Committee"	the audit committee of the Board
"Board" or "Board of Directors"	the board of Directors of the Company
"Chalco"	Aluminum Corporation of China Limited (中國鋁業股份有限公司), a joint stock limited liability company incorporated under the laws of the PRC and listed on New York Stock Exchange, SSE and the Stock Exchange (stock code: 2600) and a subsidiary of China Aluminum Group
"Changkan Institute"	China Nonferrous Metals Changsha Investigation and Design Research Institute Co., Ltd. (中國有色金屬長沙勘察設計研究院有限公司), a company incorporated in the PRC with limited liability and a wholly-owned subsidiary of our Company
"Changsha Institute"	Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy (長沙有色冶金設計研究院有限公司), a company incorporated in the PRC with limited liability and a wholly-owned subsidiary of our Company
"China Aluminum Equipment"	China Aluminum International Engineering Equipment Co., Ltd. (中鋁國際工程設備有限公司), a company incorporated in the PRC with limited liability and a wholly-owned subsidiary of our Company
"China Aluminum Technology"	China Aluminum International Technology Development Co., Ltd. (中鋁國際技術發展有限公司), a company incorporated in the PRC with limited liability and a wholly-owned subsidiary of our Company
"China Aluminum Group"	China Aluminum Group Limited (中國鋁業集團公司), a state-owned enterprise incorporated under the laws of the PRC and our controlling shareholder
"Chinalco"	Aluminum Corporation of China (中國鋁業公司), a state-owned enterprise incorporated under the laws of the PRC and our controlling shareholder which has been reformed and renamed as China Aluminum Group

GLOSSARY OF TERMS

"Chinalco Finance"	Chinalco Finance Company Limited
"CNPT"	China Nonferrous Metals Processing Technology Co., Ltd. (中色科技股份有限公司), a joint stock limited company incorporated in the PRC and a subsidiary owned as to 73.5% by our Company, and (where the context requires) its subsidiaries
"Companies Ordinance"	the Companies Ordinance (Chapter 32 of the Laws of Hong Kong), as amended, supplemented or otherwise modified from time to time
"Company" or "our Company", "Chalieco", "we", "us" or "our"	China Aluminum International Engineering Corporation Limited (中鋁國際工程股份有限公司), a joint stock limited company incorporated under the laws of the PRC on 30 June 2011, and except where the context otherwise requires in respect of the period before our Company became the holding company of our present subsidiaries, the present subsidiaries of our Company and the business carried on by such subsidiaries or (as the case may be) their respective predecessors
"connected person(s)"	has the meaning ascribed thereto in the Listing Rules
"connected transaction(s)"	has the meaning ascribed thereto in the Listing Rules
"controlling shareholder(s)"	has the meaning ascribed thereto in the Listing Rules
"Director(s)"	one (or all) of our directors
"Domestic Shares"	ordinary shares of our capital with a nominal value of RMB1.00 each, which are subscribed for and paid up in Renminbi
"Duyun Tongda"	Duyun Development Zone Tongda Construction Co., Ltd. (都匀開發區通達建設有限公司), a company incorporated in the PRC with limited liability, the equity interest of which is held by our Company (as to 50%), Sixth Metallurgical Company (as to 30%) and GAMI (as to 20%)
"GAMI"	Guiyang Aluminum & Magnesium Design Institute Co., Ltd. (貴陽鋁鎂設計研究院有限公司), a company incorporated in the PRC with limited liability and a wholly-owned subsidiary of our Company, and (where the context requires) its subsidiaries
"Global Offering"	the Hong Kong Public Offering and the International Offering
"Group"	the Company and its subsidiaries

GLOSSARY OF TERMS

"H Share(s)"	the overseas listed foreign invested Shares, with a nominal value of RMB1.00 each in the ordinary share capital of our Company, which are to be subscribed for and traded in HK dollars and for which an application has been made for the granting of Listing, and permission to deal, on the Stock Exchange
"HK$" or "Hong Kong dollars" or "HK dollars"	Hong Kong dollars, the lawful currency of Hong Kong
"IFRSs"	International Financial Reporting Standards issued by the International Accounting Standards Board
"International Accounting Standards"	the International Accounting Standards and its interpretation
"Latest Practicable Date"	9 April 2019, being the latest practicable date prior to the printing of this annual report for containing certain information in this annual report
"Listing"	listing of H Shares on the Stock Exchange
"Listing Rules"	the Rules Governing the Listing of Securities on the Stock Exchange
"Luoyang Institute"	Luoyang Engineering & Research Institute for Nonferrous Metals Processing (洛陽有色金屬加工設計研究院), an enterprise incorporated in the PRC owned by the whole people, one of our Promoters and Shareholders
"Main Board"	the stock market (excluding the option market) operated by the Stock Exchange which is independent from and operated in parallel with the GEM of the Stock Exchange
"Ministry of Finance"	the Ministry of Finance of the People's Republic of China
"Model Code"	the Model Code for Securities Transactions by Directors of Listed Issuers
"Ninth Metallurgical Company" or "Ninth Metallurgical Construction"	Ninth Metallurgical Construction Co., Ltd.
"Nomination Committee"	the Nomination Committee of the Board
"OFAC"	the U.S. Department of Treasury's Office of Foreign Assets Control
"PRC" or "China" or "People's Republic of China"	the People's Republic of China which excludes Hong Kong, Macau Special Administration Region of the PRC and Taiwan
"Promoter(s)"	our promoters, being Chinalco and Luoyang Institute

GLOSSARY OF TERMS

"Prospectus"	the prospectus issued on 22 June 2012 by the Company
"Province" or "province"	a province or, where the context requires, a provincial level autonomous region or municipality under the direct supervision of the central government of the PRC
"Remuneration Committee"	the remuneration committee of the Board
"Renminbi" or "RMB"	the lawful currency of the PRC
"Risk Management Committee"	the risk management committee of the Board
"SAMI"	Shenyang Aluminum & Magnesium Engineering & Research Institute Co., Ltd. (瀋陽鋁鎂設計研究院有限公司), a company incorporated in the PRC with limited liability and a wholly-owned subsidiary of our Company, and (when the context requires) its subsidiaries
"SFO"	the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong), as amended, supplemented or otherwise modified from time to time
"Shandong Construction"	Aluminum International Shandong Construction Co., Ltd. (中鋁國際山東建設有限公司)
"Shareholder(s)"	holder(s) of the Shares
"Shares"	shares in the share capital of the Company with a nominal value of RMB1.00 each, comprising the A Shares and the H Shares
"Sixth Metallurgical Company"	Sixth Metallurgical Construction Company of China Nonferrous Metals Industry (中國有色金屬工業第六冶金建設有限公司), a company incorporated in the PRC with limited liability and a wholly-owned subsidiary of our Company
"SSE"	The Shanghai Stock Exchange
"State Council"	the State Council of the People's Republic of China
"Stock Exchange"	The Stock Exchange of Hong Kong Limited
"Strategy Committee"	the strategy committee of the Board
"subsidiary" or "subsidiaries"	has the meaning ascribed thereto in Section 2 of the Companies Ordinance
"Supervisor(s)"	one (or all) of our supervisors

GLOSSARY OF TERMS

“Supervisory Board”	Supervisory Board of the Company
“Tianjin Construction”	Chalieco (Tianjin) Construction Co., Ltd.
“Twelfth Metallurgical Company”	China Nonferrous Metals Industry’s 12th Metallurgical Construction Co.,Ltd. (中色十二冶金建設有限公司), a company incorporated in the PRC with limited liability and a wholly-owned subsidiary of our Company
“United States” or “U.S.”	the United States of America, its territories, its possessions and all areas subject to its jurisdiction
“U.S. dollar(s)” or “US$”	United States dollar(s), the lawful currency of the United States
“Wenzhou Tonggang”	Wenzhou Tonggang Construction Co., Ltd.
“Wenzhou Tongrun”	Wenzhou Tongrun Construction Co., Ltd.

CORPORATE INFORMATION

LEGAL NAME OF THE COMPANY

中鋁國際工程股份有限公司

ENGLISH NAME OF THE COMPANY

China Aluminum International Engineering Corporation Limited

REGISTERED OFFICE

Building C, No.99, Xingshikou Road
Haidian District
Beijing
PRC

HEAD OFFICE IN THE PRC

Building C, No.99, Xingshikou Road
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PRC

PRINCIPAL PLACE OF BUSINESS IN HONG KONG

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Admiralty
Hong Kong

COMPANY SECRETARY

Mr. ZHAI Feng

AUDIT COMMITTEE

Mr. CHEUNG Hung Kwong (Chairman)
Mr. WANG Jun
Mr. FU Jun

REMUNERATION COMMITTEE

Mr. GUI Weihua (Chairman)
Mr. WANG Jun
Mr. FU Jun

NOMINATION COMMITTEE

Mr. GUI Weihua
Mr. FU Jun

CORPORATE INFORMATION

RISK MANAGEMENT COMMITTEE

Mr. LI Yihua
Mr. FU Jun

STRATEGY COMMITTEE

Mr. ZONG Xiaoping
Mr. GUI Weihua

AUDITOR

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26/F, Citicorp Centre
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Hong Kong

LEGAL ADVISORS

As to Hong Kong law

Clifford Chance
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Central
Hong Kong

As to PRC law

Jia Yuan Law Offices
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Fuxingmennei Avenue
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PRC

PRINCIPAL BANKERS

China Construction Bank Corporation

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Haidian District
Beijing
PRC

CORPORATE INFORMATION

Bank of China Limited

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No.27, Finance Street
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Beijing
PRC

Bank of Communication Co., Ltd.

Beijing Branch
1st Floor, Tongtai Building
No.33, Finance Street
Xicheng District
Beijing
PRC

China Minsheng Bank Corp., Ltd.

Beitaipingzhuang Sub-branch
No.2–5, Xinjiekouwai Avenue
Xicheng District
Beijing
PRC

H SHARE REGISTRAR

Computershare Hong Kong Investor Services Limited
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Hong Kong

STOCK CODE

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CHALIECO

中鋁國際工程股份有限公司

China Aluminum International Engineering Corporation Limited

This annual report is printed on environmental friendly paper