



# 中鋁國際工程股份有限公司

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



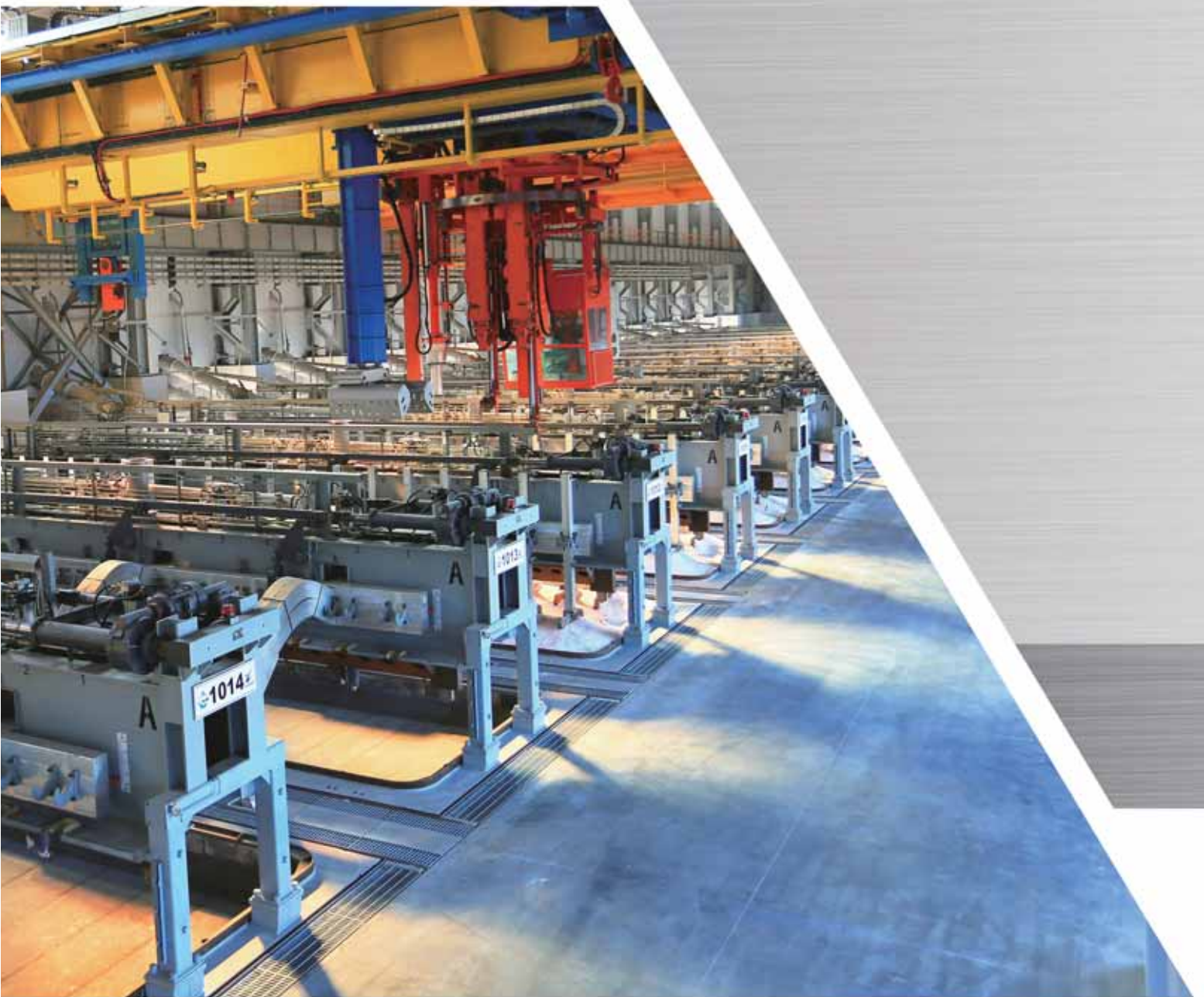
ANNUAL REPORT 2017



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# CHAIRMAN'S STATEMENT



## CHAIRMAN'S STATEMENT

### Dear Shareholders,

In 2017, Chalieco witnessed extraordinary progress in its development. In light of the complicated factors such as escalating raw material costs in nonferrous industry, highly-competitive external market and adjustment of relevant policies, we have always maintained high morale and rode out every challenge arising from the intense market competition, taking a giant step forward for the Company's development. For the year ended 31 December 2017, the revenue of the Group amounted to RMB36.1 billion, representing a year-on-year increase of 33.7%; the operating profit for the year amounted to RMB1.4 billion, representing a year-on-year increase of 30.4%; earnings per share of the Company were RMB0.23; net cash inflow from operating activities of the Group was RMB1.6 billion, representing an increase in inflow of RMB2.9 billion over last year, hitting a record high since the listing of the Company.

The year 2018 not only marks the 40th anniversary of China's reform and opening-up, but also symbolizes a crucial year to build a moderately prosperous society in all respects. We will continue to optimize our market layout, enhance our core strengths and expand our overseas footprint. We shall give full effect to the new objectives and implement new measures, writing another chapter of Chalieco's reform and development!

*Chairman*  
**HE Zhihui**

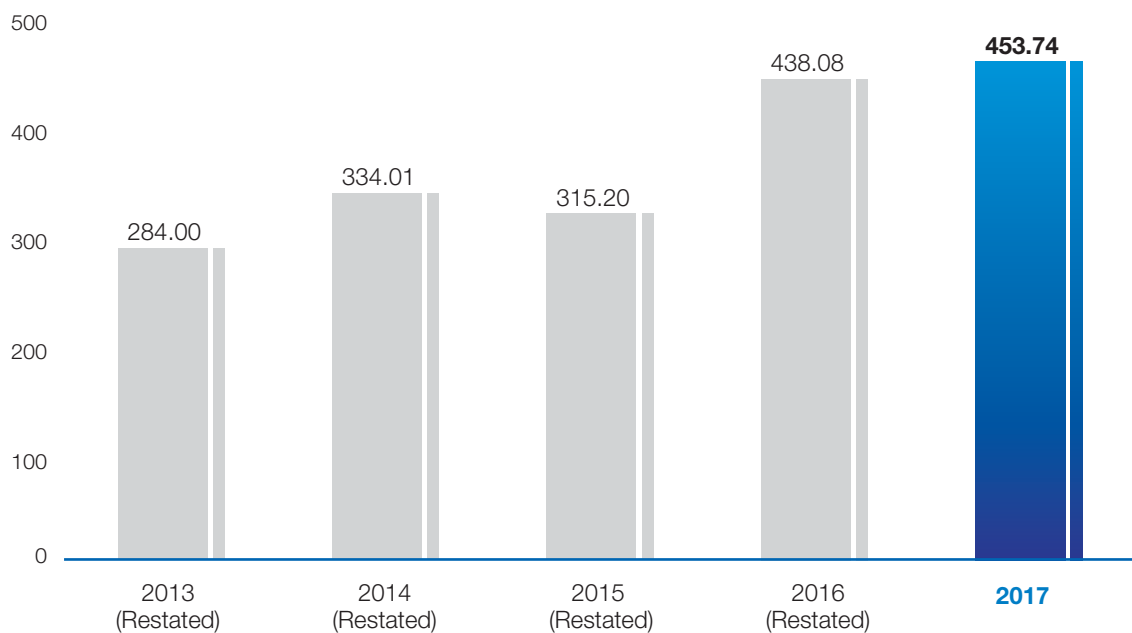
**HE Zhihui**  
*Chairman*



## FINANCIAL INFORMATION SUMMARY

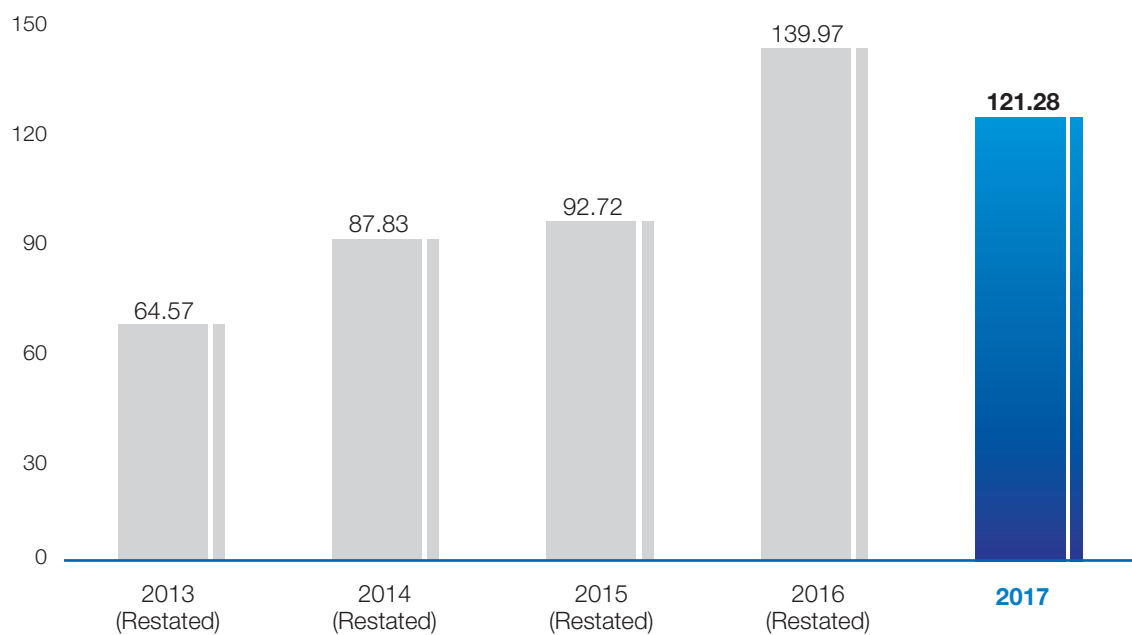
### TOTAL ASSETS

(RMB hundred million)



### TOTAL EQUITY

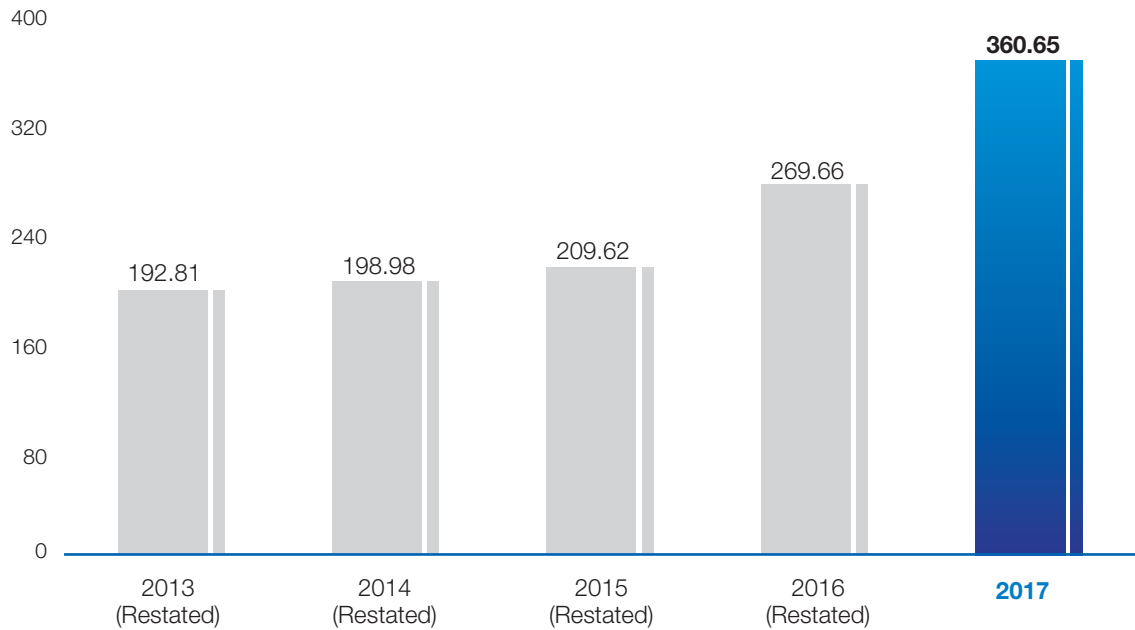
(RMB hundred million)



## FINANCIAL INFORMATION SUMMARY

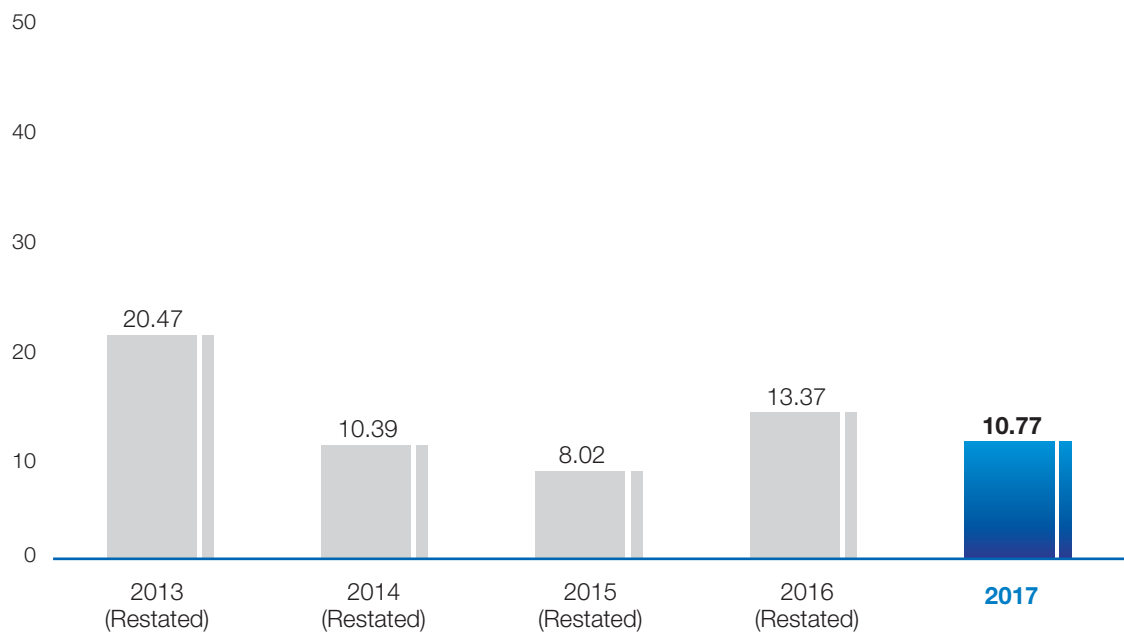
### REVENUE

(RMB hundred million)



### PROFIT BEFORE TAXATION

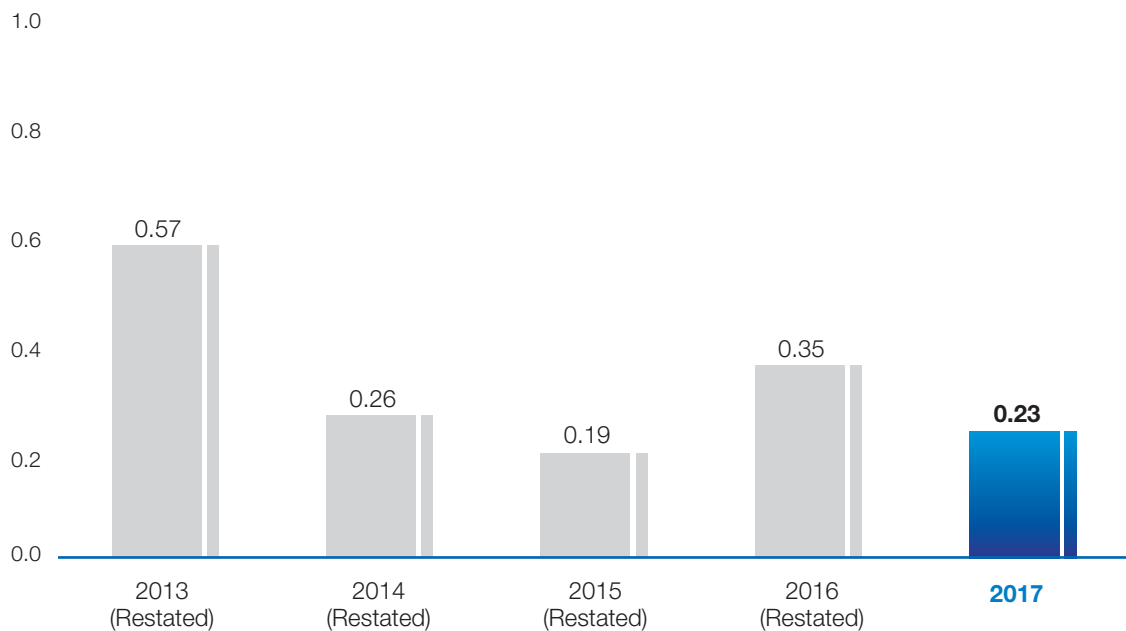
(RMB hundred million)



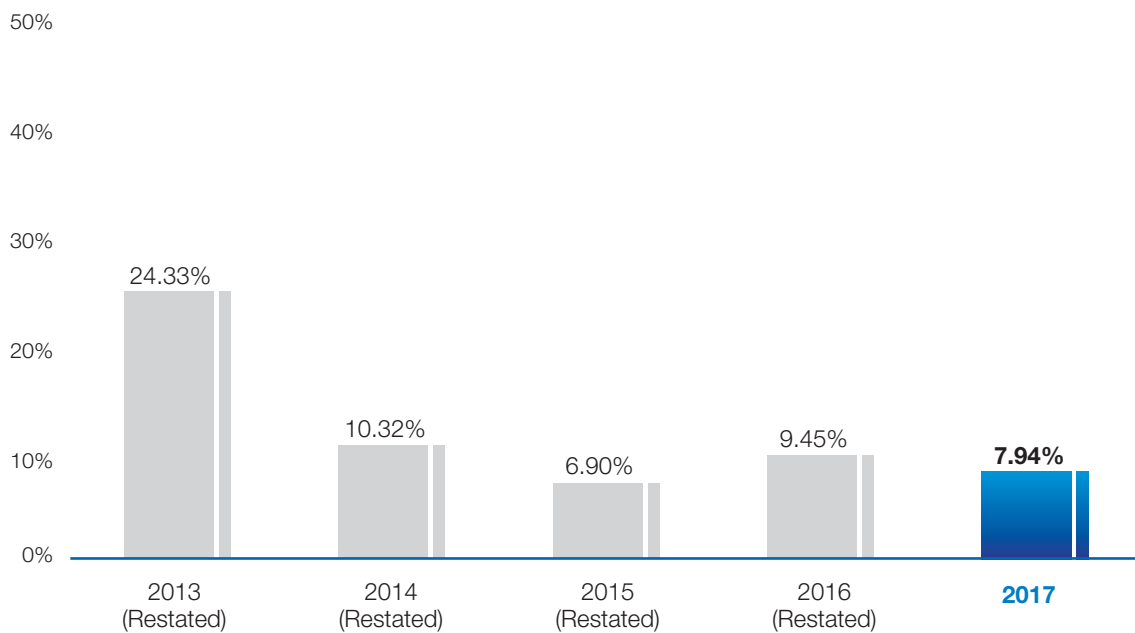
## FINANCIAL INFORMATION SUMMARY

### EARNING PER SHARE

(RMB)



### RETURN ON NET ASSETS



## CORPORATE PROFILE

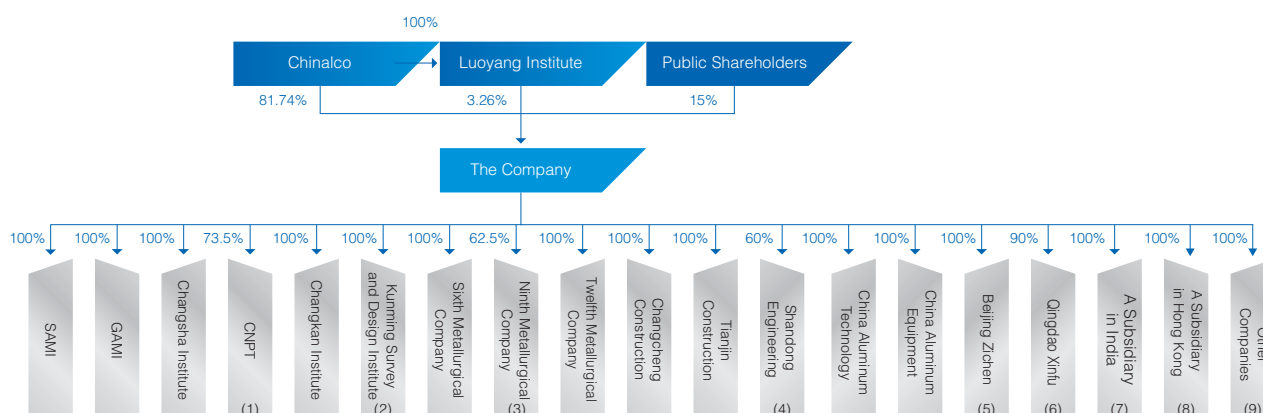
### THE ISSUANCE AND LISTING OF THE SHARES

The Company is a subsidiary of Chinalco and listed on the Main Board of the Hong Kong Stock Exchange (Stock Code: 2068) on 6 July 2012 with an offering price of HK\$3.93 per share. As of 31 December 2017, the total number of Shares in issuance of the Group is 2,663,160,000 Shares, which is comprised of 399,476,000 H Shares, representing 15% of the issued share capital, and 2,263,684,000 Domestic Shares.

### 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. Our businesses mainly include engineering design and consultancy, engineering and construction contracting, equipment manufacturing and trading.

### CORPORATE STRUCTURE



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 Centre 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 Chalico Hong Kong Corporation Limited (中鋁國際香港有限公司)
- (9) represents Duyun Tongda, Wenzhou Tonggang, Wenzhou Tongrun, etc.



# MANAGEMENT DISCUSSION AND ANALYSIS



# MANAGEMENT DISCUSSION AND ANALYSIS

## 1. BUSINESS OVERVIEW AND SEGMENT BUSINESS

### Industry Overview in 2017

In 2017, China's economy has been in a reasonable growth rate with stable and good momentum. The annual growth of gross domestic product (GDP) was 6.9%. Throughout the year, the fixed assets investment in China was RMB63 trillion, representing an increase of 7.2% as compared to last year, whereas the growth rate had a slight fall as compared to last year. The investment in tertiary industries amounted to RMB37 trillion, representing an increase of 9.5% as compared to last year, among which, the investment in infrastructure amounted to RMB14 trillion, representing an increase of 19.0% as compared to last year, remained a relatively high growth rate. In 2017, the investment in real estate development in China amounted to RMB10.9 trillion, representing an increase of 7.0% as compared to last year; the area of new housing projects was 1,786.54 million sq.m., representing an increase of 7.0% as compared to last year, among which, the area of new residential projects increased by 10.5% as compared to last year.

Construction companies in China continued to make great effort on transformation and upgrade. They actively implemented the "Going global" strategy with overseas results on the rise. New management and business model for PPP projects was vigorously explored. Driven by innovation, the entities strengthened their core competitiveness and improved the quality and level of corporate development.

Guided by green development, the nonferrous metals enterprises focused on reducing excess capacity. With the progress of the five key tasks of "Three cuts, One drop, One improve" ("三去一降一补"), the quality and efficiency of economic growth were improved which in turn lifted the profitability of the enterprise. In 2017, the production volume of ten kinds of nonferrous metals in China amounted to 53.78 million tonnages, representing an increase of 3% as compared to last year. The growth rate increased 0.5 percentage point as compared to last year, indicating the improvement in efficiency of the nonferrous industry had been improved.

## MANAGEMENT DISCUSSION AND ANALYSIS

### Business Operation Overview for 2017

#### (I) Optimum financing and improvement on net cash flow in operating activities

- 1. Successfully passed the review of Issuance Review Committee for A shares.** The Company successfully passed the review by the Issuance Review Committee of the China Securities Regulatory Commission (“CSRC”) on 26 December 2017.
- 2. Successfully issued renewable bonds.** The Company seized the opportunity of bond market and successfully issued the renewable corporate bonds in March 2017, raising RMB500 million. In the meantime, the Company continued to commence financing business with major banks with innovative financing methods to reduce finance cost.
- 3. Significant improvement on net cash flow in operating activities.** Through strengthening the management of cash flow in operating activities, the Company enhanced its efforts on collection of account receivables and the precise management towards the progress of payment, and reduced capital occupation, achieving a turnaround of net cash flow in operating activities during the year, and the net inflow has reached the highest historical level of RMB1.64 billion since listing.

## MANAGEMENT DISCUSSION AND ANALYSIS

### (II) Implementation of transformation projects symbolized initial accomplishment of structural adjustment

1. **Fruitful business transformation.** The Company attached great importance on the market development of the business of “investment, finance and construction”, such as local government subsidized housing and PPP projects on municipal transportation infrastructure, achieving great breakthrough on business transformation. The Company entered into several highway construction contracts with Yunnan Communications Investment & Construction Group Co., Ltd. (雲南省交通投資建設集團有限公司) and Yunnan Construction and Investment Holding Group Co., Ltd. (雲南省建設投資控股集團有限公司). The Company won the bid for the Baoshan City Shantytowns Redevelopment Project, the Liupanshui Fundamental Education Project, Guizhou Pan County Redevelopment Project, Henan Ru Porcelain Town Project and the Anhui Xiao County Redevelopment Project have been completed successively, with which our performance and experience were enriched, paving the way for our expansion into the civil market.
2. **Centralized optimization market layout.** The Company set up four management teams in key areas of Xiongan Area, Southwest Area, Inner Mongolia Area and Yangtze River Delta Area. The Company marched into incremental market and secured 80% of additional business in the carbon market, while achieving a breakthrough on municipal environmental protection projects by undertaking the construction of centralized wastewater treatment for wine enterprises in Chishui river areas (赤水河流域白酒企業廢水集中治理工程). Changkan Institute vigorously tapped into the geologic environmental treatment and preservation fields with a year-on-year increase of 40% of contracted contracts. The Company won the bids for a number of influential projects, including Hanzhong Aerospace Smart Industry Park (漢中航空智慧產業園).
3. **Progress in overseas market expansion.** The Company intensely followed up key projects in countries and regions which have abundant resources and energy, and actively developed the electrolytic aluminum inventory market in India and Indonesia by using electrolytic energy saving technology. In India, the Company signed the design contract for Lanjigarh alumina plant which has an annual output of one million tonnages. Besides, the Company signed a design and supply contract for calcined petroleum coke (石油焦煅燒設計及供貨合同) with Rain Carbon Inc., the world's largest supplier of calcined coke.



## MANAGEMENT DISCUSSION AND ANALYSIS

### (III) The completion of all-aluminum overpass in Beijing symbolized aluminum for industrial use put into full play

- 1. Integrated green city concept.** The Company promoted green city products with all-aluminum overpass as key driver. It has built eight all-aluminum overpasses in Beijing, Gansu, Hohhot, Fuzhou, etc., and is following up 41 aluminum overpasses with intent. Among which, the all-aluminum pedestrian overpasses at Beijing Dongdan and Chongwenmen are currently the largest single span aluminum overpasses in China, and the fulfillment of the duration and quality of the works were fully recognized by the proprietor, forging good brand and performance for the Company to tap into the market in Beijing and across the country.
- 2. Integrated green building concept.** The Company developed several batches of green building products, including aluminum dwelling, aluminum template, aluminum enclosure and aluminum climber, in order to serve our principle business, engineering. The self-developed steel – aluminum attaching lift scaffold has passed the verification of the industry competent departments and is able to put into production and for sale.
- 3. Integrated lightweight vehicle concept.** The aluminum alloy trailer project of the Company, which has an annual output of 3,000 units, has entered into the stage of equipment commissioning and trial production. All-aluminum trailer could reduce the whole weight of the vehicle effectively, and are environmental-friendly in compliance with the national low-carbon economic policy. As such, the market has great potential.



## MANAGEMENT DISCUSSION AND ANALYSIS

### (IV) Implementation of benchmarking projects symbolized continuous improvement of engineering management level

1. **Fulfilment of key projects is controllable.** Pulang copper mine project (普朗銅礦項目) was put into operation successfully while Zunyi electrolytic aluminum project (遵義電解鋁項目) was brought into service earlier. The power supply for Guilv project (貴鋁項目) and Hualei project (華磊項目) were completed successfully. Southeast copper project (東南銅項目) was overall carried out as planned. Zhongrun project (中潤項目) realized power transmission in supply area.
2. **Brand building starts to take effect.** The Company gradually created a good environment for “Building Chalieco brand, winning gold-medal benchmarking projects”. Hualei project and Southeast copper project undertaken by the Company won praises at the “2017 National On-site Exhibition of Nonferrous Metals Industry (2017年全國有色金屬工業創精品工程現場觀摩會)”, building a good imagine for the Company and promoting the project management level of the Company.

### Contracts

The aggregated value of contracts newly signed in 2017 amounted to RMB52.17 billion, representing a decrease of 6.1% as compared with the corresponding period over last year. The contracts backlog of the Group as at 31 December 2017 amounted to RMB71.16 billion, representing a decrease of 10.2% over the end of 2016.

### Credit Ratings

Standard & Poor’s continued to assign the Company an issuer rating of “BB+” and a standalone credit profile of “B+” with stable outlook.

### Conditions of Scientific Research

#### Technological Innovation Platform

As at 31 December 2017, the Group had three engineering technical research centers and enterprise technology centers reaching the national level and three postdoctoral science research workstations reaching the national level. In addition, the application materials of two national enterprise technology centers of Sixth Metallurgical Company and Ninth Metallurgical Company have submitted to National Development and Reform Commission for validation. The Group also had 13 technology centers reaching the provincial level, one engineering laboratory reaching the provincial level and one postdoctoral innovation and practice base reaching the provincial level, and played the main role in the edition and participation of the preparation of more than 120 national and industrial standards or regulations.

#### Science and Technology Talents

As of 31 December 2017, the Company had two national survey and design masters in engineering field and 42 provincial survey and design masters in nonferrous metals industry in total. The Company had a total of 30 doctors, 1,067 masters and 1,979 high-level technical. In addition, a total of 18 employees of the Company had been granted government subsidy by the State Council.

## MANAGEMENT DISCUSSION AND ANALYSIS

### Application for Patents and Authorization

In 2017, the Group had 286 domestic patents applications, 246 domestic authorized patents and 9 international authorized patents. Applications for 23 patents of provincial industrial methods were granted.

As at 31 December 2017, the Group has totally applied for 6,626 domestic patents and 4,909 were granted, while 144 for international patents were applied and 129 were granted.

### Awards Attained

9 awards were granted to the Company the ministry-level scientific and technological prizes by the industry association, among which, three First Prizes, three Second Prizes and three Third Prizes were awarded. The Company was also granted a Prize of Excellence for the 19th China Patent Award. Three construction industrial methods were awarded as ministry-level industrial methods.

### Progress of Major Scientific Research Projects and Results

A batch of material research and development projects were progressing well and the technological results were remarkable. “Development and Application of Large Energy-efficient Anode Baking Furnaces and System Control Technology (大型高效節能陽極焙燒爐及系統控制技術開發與應用)” changed the layout of traditional baking furnaces, developing the monomer baking furnace with largest the production capacities in the world, and its energy consumption level and product quality are excellent; “Aluminum Electrolysis MES Based on Precise Perception and Intelligent Decision” project formed the intelligent decision technology for aluminum electrolysis on-line monitoring and production management with independent intellectual property in China, and successfully realized industrialization; “Innovation Research and Industrial Application of Oxygen Pressure Leaching of Sulfide Ore on Severe Cold Area at High Altitudes and Comprehensive Recovery 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)” achieved large-scale industrialized production of advanced technology of oxygen pressure leaching of Sulfide Ore in severe cold region at high altitudes, solved the problem of efficient and comprehensive utilization of complex zinc resources in the western area; “Establishment of Intelligent Service Platform for Spare Parts (備品備件智能服務平台建設)” established the first domestic industrial integrated service platform for nonferrous metals processing industry with the strict combination of technology service and e-commerce platform; “Utilization Theory of Red Mud and Other Multi-solid Waste and Its Application in Pavement Base Materials (赤泥等多固廢協同利用理論及其在路面基層材料中的應用)” proposed a green and efficient way of comprehensive utilization of industrial solid waste, such as red mud. This will make an important substantive contribution to the implementation of the strategy of rejuvenating rural areas and achieving beautiful China.

### Investment in R&D of Science and Technology

For the year 2017, the Group continued its strong investment in research and development of science technology. The expenditure on research and development of science and technology amounted to RMB754.9 million, representing 2.1% of the total revenue of the year.

## MANAGEMENT DISCUSSION AND ANALYSIS

### II. OPERATING RESULTS ANALYSIS AND DISCUSSION

#### Overview

Revenue continued to grow in 2017. Revenue amounted to RMB36,065.3 million, representing an increase of 33.7% or RMB9,099.0 million from RMB26,966.3 million in 2016. Operating profit for the year amounted to RMB1,418.1 million, representing an increase of 30.4% or RMB330.6 million from RMB1,087.5 million in 2016. Profit for the year amounted to RMB849.7 million, representing a decrease of 22.7% or RMB250.1 million from RMB1,099.8 million in 2016. Profit attributable to equity owners of the Company decreased by RMB327.8 million from RMB944.7 million in 2016 to RMB616.9 million, representing a decrease of 34.7%.

#### Operating revenue

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

Revenue in 2017 was RMB36,065.3 million, representing an increase of 33.7% or RMB9,099.0 million from RMB26,966.3 million in 2016. In 2017, due to recovery of the nonferrous metals industry and the improved investment sentiment of economy in the mainland China, a considerable amount of construction order entered the construction peak period, resulting in the significant growth of the revenue from construction. Besides, along with the orderly development in trading sectors, the overall revenue greatly improved as compared to that in 2016.

	2017		2016		% of Change
	(RMB'000)	(% of total income before inter-segment elimination)	(RMB'000) (restated)	(% of total income before inter-segment elimination)	
Segment revenue					
Engineering design and consultancy	1,861,718	5.1	1,693,387	6.2	9.9
Engineering and construction contracting	23,908,777	65.5	16,673,947	61.0	43.4
Equipment manufacturing	1,541,157	4.2	1,025,507	3.7	50.3
Trading	9,203,833	25.2	7,961,134	29.1	15.6
<b>Subtotal</b>	<b>36,515,485</b>	<b>100.0</b>	27,353,975	100.0	33.5
Inter-segment elimination	(450,139)		(387,688)		
<b>Total revenue</b>	<b>36,065,346</b>		26,966,287		33.7



## MANAGEMENT DISCUSSION AND ANALYSIS

### Cost of sales

In 2017, cost of sales of the Group amounted to RMB32,707.3 million, representing an increase of 35.8% as compared to that of RMB24,078.3 million for 2016, mainly because of the increase of cost of sales corresponding to the increase of revenue.

### Selling and marketing expenses, and tax and surcharges

In 2017, the selling and marketing expenses, and tax and surcharges of the Group amounted to RMB229.5 million, representing a decrease of 11.3% as compared to that of RMB258.6 million for 2016. The decrease was due to the fact that the tax reform of “replacing business tax with value-added tax (营改增)” was fully implemented across the mainland China with effect from May 2016. As such, the value-added tax was deducted from revenue rather than presented as an expense, resulting in a decrease in tax and surcharges as compared to last year. Another reason was the decrease in transportation costs in the procurement process.

### Administrative expenses

In 2017, the administrative expenses of the Group amounted to RMB1,832.7 million, representing an increase of 20.3% as compared to that of RMB1,524.0 million in 2016, primarily due to the increase in the investments in scientific research by the Group and the increase in the expenditure on research and development.

### Other income and other gains or losses – net

In 2017, the other income and other gains or losses – net amounted to RMB122.3 million, representing an increase in the gain of RMB140.2 million from the net loss of RMB17.9 million in 2016, mainly due to the increase in exchange gains resulted from the appreciation of Renminbi.

### Finance expense – net

In 2017, the net finance expenses of the Group amounted to RMB375.6 million, representing an increase of 98.5% as compared to that of RMB189.2 million in 2016, mainly due to the rising interest rate of financial market and the increase in financial expenditure resulting from the enlarged scale of interest-bearing liabilities of the Group.

### Operating profit

In 2017, the operating profit of the Group amounted to RMB1,418.1 million, representing an increase of 30.4% as compared to that of RMB1,087.5 million in 2016, mainly due to the increase in profit brought from the growth in scale of revenue.

### Profit before tax

In 2017, profit before tax of the Group amounted to RMB1,077.3 million, representing a decrease of 19.4% as compared to that of RMB1,337.0 million in 2016, which was mainly due to the fact that the gain on bargain purchase of RMB269.7 million from the acquisition of Ninth Metallurgical Construction through business combination and the gain on the disposal and partial disposal of an associate of RMB258.3 million were generated last year, while there was no such material transaction during this year.

## MANAGEMENT DISCUSSION AND ANALYSIS

### Income tax

The Group recorded income tax expense of RMB227.6 million in 2017, representing a decrease of 4.0% from RMB237.2 million in 2016. The effective tax rate increased to 21.1% in 2017 from 17.7% in 2016, primarily owing to the non-taxable gain on bargain purchase from business combination of RMB269.7 million. Excluding this effect, the income tax rate of the Group remained broadly unchanged.

### Profit for the year

In 2017, the Group's profit for the year was RMB849.7 million, representing a decrease of 22.7% from profit for the year of RMB1,099.8 million in 2016. Profit attributable to equity owners of the Company was RMB616.9 million, representing a decrease of 34.7% from RMB944.7 million in 2016.

### Restatement and adjustment

In preparing of the consolidated financial statements for 2017, the management has restated the following issues:

(1) Accounting policy change

In preparing the consolidated financial statements for the year ended 31 December 2017, management has identified the accounting policy changes in the impairment recognised for trade and other receivables and accounts receivable due from the customer's contract in the previously issued consolidated financial statements.

During the year, the Group has reassessed and revised its policy on impairment losses recognised for trade and other receivables. Before the policy revision, the Group recognised impairment losses for trade and other receivables only if there is objective evidence of impairment as a result of one or more events that occurred after the initial recognition of the asset (a 'loss event') and that loss event (or events) has an impact on the estimated future cash flows of the financial asset or group of financial assets that can be reliably estimated.

After the revision, the Group measured the loss allowance for the trade and other receivables and the contract work-in-progress based on the amounts equal to the lifetime expected credit losses except other receivables for which credit risk has not increased significantly since initial recognition. Expected credit losses are measured in a way that reflects:

- (a) an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes;

## MANAGEMENT DISCUSSION AND ANALYSIS

- (b) the time value of money; and
- (c) reasonable and supportable information that is available without undue additional cost or effort at the reporting date about past events, current conditions and forecasts of future economic conditions.

The revised accounting policy complies with IAS 39 “Financial Instruments: Recognition and Measurement” and IFRS 9 “Financial Instruments”. The change in accounting policy is not an early adoption of IFRS 9 “Financial Instruments”.

As required by IAS 8 “Accounting Policies, Changes in Accounting Estimate and Errors”, this revised accounting policy has been made retrospectively and its specific impact is presented in the Note 4(c) of the consolidated financial statements in this report.

### (2) Business combinations under common control

In November 2017, the Company completed its acquisition of the 60% equity interest of Chalco Shandong Engineering Technology Co., Ltd. (“Shandong Engineering”) from Aluminum Corporation of China Limited (“Chalco”) at a consideration of approximately RMB360 million and of the 100% equity interest of Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry (“Kunming Survey and Design Institute”) from Yunnan Copper Industry (Group) Co., Ltd. (“Yunnan Copper”) at a consideration of approximately RMB301 million.

Before and after the acquisitions, the Group, Chalco and Yunnan Copper are controlled by Chinalco, and the control is not temporary. Thus, the acquisition of Shandong Engineering and Kunming Survey and Design Institute are considered to be business combinations under common control. The principles of merger accounting have been applied, under which the consolidated financial statements have been prepared as if Shandong Engineering and Kunming Survey and Design Institute had been subsidiaries of the Company since the date when Shandong Engineering and Kunming Survey and Design Institute first came under the control of the Chinalco.

The Company’s consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for the years ended 31 December 2016 and 2017 include the respective results, changes in equity and cash flows of Shandong Engineering and Kunming Survey and Design Institute as if they had been 60% and 100% owned subsidiaries of the Company since 1 January 2016. The Company’s consolidated statements of financial position at 1 January 2016 and 31 December 2016 have been prepared to include the respective carrying values of assets and liabilities of Shandong Engineering and Kunming Survey and Design Institute as if they had been 60% and 100% owned subsidiaries of the Company as of those days. For the specific impact, please refer to Note 4(c) of the consolidated financial statements in this report.

## MANAGEMENT DISCUSSION AND ANALYSIS

### Segment operating results

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

	2017		2016		Change	
	Gross Profit (RMB'000)	Segment results (RMB'000)	Gross Profit (RMB'000) (restated)	Segment results (RMB'000) (restated)	Gross Profit (RMB'000)	Segment results (RMB'000)
Engineering design and consultancy	601,913	64,133	423,489	9,823	178,424	54,310
Engineering and construction contracting	2,468,608	1,202,611	2,140,656	994,053	327,952	208,558
Equipment manufacturing	156,858	80,060	101,008	(36,489)	55,850	116,549
Trading	139,502	79,472	227,087	111,988	(87,585)	(32,516)
<b>Subtotal</b>	<b>3,366,881</b>	<b>1,426,276</b>	2,892,240	1,079,375	474,641	346,901
Inter-segment elimination	(8,876)	(8,139)	(4,258)	8,127	(4,618)	(16,266)
<b>Total</b>	<b>3,358,005</b>	<b>1,418,137</b>	2,887,982	1,087,502	470,023	330,635

### Engineering design and consultancy

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

	2017		2016		% of Change
	(RMB'000)	% of segment revenue	(RMB'000) (restated)	% of segment revenue	
Segment revenue	1,861,718	100.0	1,693,387	100.0	9.9
Cost of sales	(1,259,805)	(67.7)	(1,269,898)	(75.0)	(0.8)
Gross profit	601,913	32.3	423,489	25.0	42.1
Selling and marketing expenses, and tax and surcharges	(63,513)	(3.4)	(61,666)	(3.6)	3.0
Administrative expenses	(507,448)	(27.3)	(355,958)	(21.0)	42.6
Other income and other gains or losses – net	33,181	1.8	3,958	0.2	738.3
Segment results	64,133	3.4	9,823	0.6	552.9

## MANAGEMENT DISCUSSION AND ANALYSIS

*Segment revenue.* Revenue from the engineering design and consultancy business before inter-segment elimination in 2017 amounted to RMB1,861.7 million, representing an increase of 9.9% compared with RMB1,693.4 million in 2016, primarily due to the rapid improvement in the nonferrous metals industry and relatively large increase in the revenue scale owing to the substantial growth in the amount of orders on hand.

*Cost of sales.* Cost of sales of the engineering design and consultancy business in 2017 amounted to RMB1,259.8 million, representing a slight change with a decrease of 0.8% compared with RMB1,269.9 million in 2016.

*Gross profit.* Gross profit of the engineering design and consultancy business in 2017 amounted to RMB601.9 million, representing an increase of 42.1% compared with RMB423.5 million in 2016, primarily due to the rapid growth in revenue scale of survey and design during the year, relatively stable costs regarding salary and depreciation, and the substantial increase in the gross profit.

*Selling and marketing expenses, and tax and surcharges.* In 2017, the selling and marketing expenses, and tax and surcharges of engineering design and consultancy business were RMB63.5 million, representing an increase of 3.0% from RMB61.7 million in 2016, primarily due to an increase in the remuneration of salespersons.

*Administrative expenses.* Administrative expenses of engineering design and consultancy business in 2017 amounted to RMB507.4 million, representing an increase of 42.6% from RMB356.0 million in 2016, primarily due to the substantial increase in technology research and development expenditure.

*Other income and other gains or losses – net.* In 2017, the other income and other gains or losses – net of the engineering design and consultancy business were RMB33.2 million, representing an increase of RMB29.2 million as compared to RMB4.0 million in 2016. The main reason was that the government subsidies received increased this year and certain outstanding amount payables were transferred to gains.

*Segment results.* Due to the abovementioned reasons, segment results for the year from engineering design and consultancy business were RMB64.1 million, representing an increase of 552.9% from RMB9.8 million in 2016, which contributed 4.5% to the operating results of the Group.

## MANAGEMENT DISCUSSION AND ANALYSIS

### Engineering and construction contracting

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

	2017		2016		% of change
	(RMB'000)	% of segment revenue	(RMB'000) (restated)	% of segment revenue	
Segment revenue	23,908,777	100.0	16,673,947	100.0	43.4
Cost of sales	(21,440,169)	(89.7)	(14,533,291)	(87.2)	47.5
Gross profit	2,468,608	10.3	2,140,656	12.8	15.3
Selling and marketing expenses, and tax and surcharges	(106,953)	(0.4)	(111,987)	(0.7)	(4.5)
Administrative expenses	(1,193,006)	(5.0)	(1,008,074)	(6.0)	18.3
Other income and other gains or losses – net	33,962	0.1	(26,542)	(0.2)	N/A
Segment results	1,202,611	5.0	994,053	6.0	21.0

*Segment revenue.* Revenue of engineering and construction contracting business before inter-segment elimination in 2017 was RMB23,908.8 million, representing an increase of 43.4% from RMB16,673.9 million in 2016, which was primarily due to the increase in new orders for construction projects this year, all of which entered the consumption peak period under the investment boom in the mainland's economy.

*Cost of sales.* In 2017, cost of sales of engineering and construction contracting business was RMB21,440.2 million, representing an increase of 47.5% from RMB14,533.3 million in 2016, primarily due to the increase in cost expense corresponding to the revenue increase.

*Gross profit.* In 2017, gross profit of engineering and construction contracting business was RMB2,468.6 million, representing an increase of 15.3% from RMB2,140.7 million in 2016. The gross profit margin was 10.3%, representing a decrease of 2.5 percentage points from 12.8% in 2016, primarily due to the increase in project costs and decrease in gross profit margin resulting from the increase in the price of bulk raw materials.

*Administrative expenses.* In 2017, administrative expenses of engineering and construction contracting business were RMB1,193.0 million, representing an increase of 18.3% from RMB1,008.1 million in 2016, primarily due to the increase in the allowance for credit losses from the increase in trade receivables.

*Other income and other gains or losses – net.* In 2017, the other income and other gains or losses – net of the engineering and construction contracting business were RMB34.0 million, representing an increase in gain of RMB60.5 million compared with a net loss of RMB26.5 million in 2016, primarily due to the increase in exchange gains resulting from the appreciation of Renminbi.

*Segment results.* Due to the abovementioned reasons, segment results of our engineering and construction contracting business were RMB1,202.6 million, representing an increase of 21.0% from RMB994.1 million in 2016, which contributed 84.3% to the operating results of the Group.

## MANAGEMENT DISCUSSION AND ANALYSIS

### Equipment Manufacturing

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

	2017		2016		% of change
	(RMB'000)	% of segment revenue	(RMB'000) (restated)	% of segment revenue	
Segment revenue	<b>1,541,157</b>	<b>100.0</b>	1,025,507	100.0	50.3
Cost of sales	<b>(1,384,299)</b>	<b>(89.8)</b>	(924,499)	(90.2)	49.7
Gross profit	<b>156,858</b>	<b>10.2</b>	101,008	9.8	55.3
Selling and marketing expenses, and tax and surcharges	<b>(28,186)</b>	<b>(1.8)</b>	(23,789)	(2.3)	18.5
Administrative expenses	<b>(84,222)</b>	<b>(5.5)</b>	(117,102)	(11.4)	(28.1)
Other income and other gains or losses – net	<b>35,610</b>	<b>2.3</b>	3,394	0.3	949.2
Segment results	<b>80,060</b>	<b>5.2</b>	(36,489)	(3.6)	N/A

*Segment revenue.* In 2017, revenue of the equipment manufacturing business before inter-segment elimination was RMB1,541.2 million, representing an increase of 50.3% from RMB1,025.5 million in 2016, primarily due to the recovery of price for the nonferrous metals and the increase in investments, leading to the substantial increase in the orders of the equipment manufacturing business.

*Cost of sales.* In 2017, cost of sales of our equipment manufacturing business was RMB1,384.3 million, representing an increase of 49.7% from RMB924.5 million in 2016, primarily due to the increase of cost expenses corresponding to the increase of revenue.

*Gross profit.* In 2017, gross profit of our equipment manufacturing business was RMB156.9 million, representing an increase of 55.3% from RMB101.0 million in 2016. The gross profit margin increased from 9.8% in 2016 to 10.2%, primarily due to the increase in the margin profit generated by the growth in revenue.

*Selling and marketing expenses, and tax and surcharges.* In 2017, the selling and marketing expenses, and tax and surcharges of equipment manufacturing business were RMB28.2 million, representing an increase of 18.5% from RMB23.8 million in 2016, primarily due to the increase in tax resulted from the growth of revenue and increase in expenses such as labour costs and transportation cost.

*Administrative expenses.* In 2017, the administrative expenses of equipment manufacturing business were RMB84.2 million, representing a decrease of 28.1% from RMB117.1 million in 2016, primarily due to the decrease in the provision for impairment.

## MANAGEMENT DISCUSSION AND ANALYSIS

*Other income and other gains or losses – net.* In 2017, the other income and other gains or losses – net of the equipment manufacturing business was RMB35.6 million, representing an increase of RMB32.2 million as compared to that of RMB3.4 million in 2016, mainly due to the gain received from the disposal of land during the year and certain outstanding amount payables were written back.

*Segment results.* Due to the abovementioned reasons, the segment results of our equipment manufacturing business for the year was RMB80.1 million, while the segment loss was RMB36.5 million in 2016. The equipment manufacturing business contributed 5.6% of the Group's operating results for the year.

### Trading

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

	2017		2016		% of change
	(RMB'000)	% of segment revenue	(RMB'000) (restated)	% of segment revenue	
Segment revenue	<b>9,203,833</b>	<b>100.0</b>	7,961,134	100.0	15.6
Cost of sales	<b>(9,064,331)</b>	<b>(98.5)</b>	(7,734,047)	(97.1)	17.2
Gross profit	<b>139,502</b>	<b>1.5</b>	227,087	2.9	(38.6)
Selling and marketing expenses, and tax and surcharges	<b>(30,809)</b>	<b>(0.3)</b>	(61,126)	(0.8)	(49.6)
Administrative expenses	<b>(48,777)</b>	<b>(0.5)</b>	(47,132)	(0.6)	3.5
Other income and other gains or losses – net	<b>19,556</b>	<b>0.2</b>	(6,841)	(0.1)	N/A
Segment results	<b>79,472</b>	<b>0.9</b>	111,988	1.4	(29.0)

*Segment revenue.* In 2017, revenue of trading segment before inter-segment elimination was RMB9,203.8 million, representing an increase of 15.6% from RMB7,961.1 million in 2016, primarily due to increasing maturity of the trading segment and the improvement in the capability of market expansion.

*Cost of sales.* In 2017, cost of sales of trading segment was RMB9,064.3 million, representing an increase of 17.2% from RMB7,734.0 million in 2016, primarily due to the increase of procurement cost corresponding to the increase of revenue.

*Gross profit.* In 2017, gross profit of trading segment was RMB139.5 million, representing a decrease of 38.6% from RMB227.1 million in 2016. The gross profit margin decreased from 2.9% in 2016 to 1.5%, primarily due to the fact that in order to orderly develop trading business, the Group further adjusted the direction of trading business, to select a business with more controllable risks focusing on principal services resulting in a lower gross profit margin level.



## MANAGEMENT DISCUSSION AND ANALYSIS

*Selling and marketing expenses, and tax and surcharges.* In 2017, selling and marketing expenses, and tax and surcharges of trading segment were RMB30.8 million, representing a decrease of 49.6% from RMB61.1 million in 2016, primarily due to the decrease in the transportation cost.

*Administrative expenses.* In 2017, administrative expenses of trading segment were RMB48.8 million, representing an increase of RMB1.7 million from RMB47.1 million in 2016, mainly due to the increase in the provision for bad debts of the trade receivables.

*Other income and other gains or losses – net.* In 2017, other income and other gains or losses – net of the trading business were RMB19.6 million, representing an increase of RMB26.4 million in gains as compared to the net loss of RMB6.8 million in 2016, mainly due to the increase in exchange gain brought by the appreciation of Renminbi during the year and the recognised revenue generated from the liquidated damages.

*Segment results.* Due to the abovementioned reasons, segment results for the year of trading business were RMB79.5 million, representing a decrease of 29.0% from RMB112.0 million in 2016, contributing 5.6% to the operating results of the Group.

### Conditions of Assets and Liabilities

As at the end of 2017, the total assets of the Group were RMB45,373.8 million, and the total liabilities were RMB33,246.2 million.

Composition of assets:

As at 31 December 2017, in the composition of assets, due to the characteristics of our business, trade and note receivables were the largest item which amounted to RMB15,571.8 million, representing 34.3% of the total assets; the amount due from customers for contract work was RMB8,322.2 million, representing 18.3% of the total assets; cash and cash equivalents amounted to RMB6,279.9 million, representing 13.8% of the total assets.

Composition of liabilities:

As at 31 December 2017, in the composition of liabilities, trade and other payables were the largest item which amounted to RMB18,706.0 million, representing 56.3% of the total liabilities, followed by the long-term and short-term borrowings of a balance of RMB12,606.7 million as at the end of 2017, representing 37.9% of the total liabilities.

## MANAGEMENT DISCUSSION AND ANALYSIS

### III. FINANCIAL REVIEW

#### Liquidity and Capital Resources

As of 31 December 2017, the Group had cash and cash equivalents of RMB6,279.9 million, representing a decrease of RMB1,621.9 million from the cash and cash equivalents of RMB7,901.8 million as at 31 December 2016, primarily due to: (i) net cash inflow in operating activities was RMB1,640.1 million, representing an increase in inflow of RMB2,922.8 million from net cash outflow of RMB1,282.7 million in last year; (ii) net cash outflow in investment activities was RMB412.7 million, representing an increase in outflow of RMB123.2 million from net cash outflow of RMB289.5 million in last year; (iii) net cash outflow in financing activities of RMB2,740.3 million, representing an increase in outflow of RMB7,234.7 million from net cash inflow of RMB4,494.4 million in last year; and (iv) the exchange loss of RMB109.1 million arising from assets denominated in foreign currencies due to the appreciation of Renminbi.

As of 31 December 2017, current assets amounted to RMB36,996.2 million, representing an increase of 3.8% from the RMB35,635.4 million as of 31 December 2016, primarily due to the increase in inventories and amounts from customers for contract work.

	At 31 December 2017 (RMB' million)	At 31 December 2016 (RMB' million) (restated)	Percentage of growth over last year	Year-on-year increase (RMB' million)
Inventories	<b>3,033.8</b>	1,465.0	107.1%	1,568.8
Amounts due from customers for contract work	<b>8,322.2</b>	6,113.4	36.1%	2,208.8

As of 31 December 2017, the current liabilities amounted to RMB29,480.3 million, representing an increase of 10.8% from RMB26,612.1 million as of 31 December 2016, primarily due to the increase of trade and other payables. As of 31 December 2017, trade and other payables amounted to RMB18,700.4 million, representing an increase of 19.6% from RMB15,631.2 million as of 31 December 2016. The reason for the growth was mainly due to the increase in working capital consumed resulting from the growth in revenue.

As of 31 December 2017, the net current assets were RMB7,515.9 million, representing a decrease of 16.7% from the net current assets of RMB9,023.3 million as of 31 December 2016, mainly due to the reduction in the current asset scale resulting from the redemption of senior perpetual capital securities of USD300 million during the year.

As of 31 December 2017, the current ratio was 1.25, representing a decrease of 0.09 compared to the current ratio of 1.34 as of 31 December 2016. The Company continued to maintain sufficient capability of repayment.

## MANAGEMENT DISCUSSION AND ANALYSIS

### Borrowings

As of 31 December 2017, the Group had outstanding borrowings of RMB12,606.7 million (including ultra short-term financing of RMB1,532.5 million, short-term bank borrowings of RMB8,281.5 million, long-term corporate bonds of RMB921.7 million, and long-term bank borrowings of RMB1,871.0 million), representing an increase of RMB714.9 million from RMB11,891.8 million as of 31 December 2016. As at the end of 2017, net interest-bearing liabilities (interest-bearing liabilities less cash and cash equivalents) amounted to RMB6,326.8 million.

### Gearing Ratio

The Group monitors its capital structure on the basis of gearing ratio. As of 31 December 2017 and 31 December 2016, the Group's gearing ratios were 72.8% and 67.6%, respectively. The gearing structure is maintained within the reasonable range determined by the Company.

### Capital Expenditure

The Group had capital expenditure of RMB755.6 million in 2017, representing a decrease of 7.9% from RMB820.5 million in 2016. 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, RMB220.5 million was for the engineering design and consultancy segment; RMB386.5 million was for the engineering and construction contracting segment; RMB75.2 million was for the equipment manufacturing segment; and RMB73.4 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 2017, the Group pledged land use rights and fixed assets to secure the short-term borrowing and long-term borrowing amounting to RMB301.8 million and RMB319.5 million, respectively. In addition, the Group also conducted certain factoring and borrowing business.

## MANAGEMENT DISCUSSION AND ANALYSIS

### Financial Guarantee

As of 31 December 2017, the Group's subsidiary No. 9 Metallurgical Construction provided joint liability guarantees in respect of the following loans:

- provided the joint liability guarantee for the loan of RMB65,000,000 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
- provided the joint liability guarantee for the loan of RMB160,000,000 borrowed by Xianyang Emerging Textile Industrial Park Electricity Supply Company Limited (咸陽市新興紡織工業園供電服務有限公司) from China Huarong Asset Management Co., Ltd. (中國華融資產管理股份有限公司), which is due for repayment on 29 July 2018.

As of 31 December 2017, 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 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.

The Directors reviewed all of the relevant contracts and information, and assessed that the fair values 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.

### Contingent Liabilities

As of 31 December 2017, the Group did not have any material contingent liabilities.

### Major Acquisitions and Disposals

- (a) In November 2017, the Company completed its acquisitions of 60% equity interest of Chalco Shandong Engineering Technology Co., Ltd. (中鋁山東工程技術有限公司) ("Shandong Engineering") from Aluminum Corporation of China Limited (中國鋁業股份有限公司) ("Chalco") at a consideration of approximately RMB360 million, and of 100% equity interest of 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有限公司) ("Kunming Survey and Design Institute") from Yunnan Copper Industry (Group) Co., Ltd. (雲南銅業(集團)有限公司) ("Yunnan Copper") at a consideration of approximately RMB301 million.

## MANAGEMENT DISCUSSION AND ANALYSIS

Before and after the acquisitions, the Group, Chalco and Yunnan Copper are all controlled by Chinalco, and the control is not temporary. Thus, the acquisitions of Shandong Engineering and Kunming Survey and Design Institute are considered to be business combinations under common control. The principles of merger accounting have been applied, under which the consolidated financial statements have been prepared as if Shandong Engineering and Kunming Survey and Design Institute had been subsidiaries of the Company since the date when Shandong Engineering and Kunming Survey and Design Institute first came under the control of Chinalco.

- (b) In December 2017, the Group received a gain of RMB8.4 million from disposal of 58% equity interest in its subsidiary Shenyang Gina Advanced Materials Co., Ltd. (瀋陽金納新材料股份有限公司) in the Shanghai Assets and Equity Exchange (上海產權交易所), at a consideration of RMB46.0 million. Due to such disposal, the Group no longer holds any interest in Shenyang Gina Advanced Materials Co., Ltd.

Save for the above-mentioned issues, during 2017, the Company's subsidiaries, associates and joint ventures did not have major acquisitions and disposals.

## IV. RISK FACTORS

The 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 monitored 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 construction and technical standards to be applied to 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 despite the buffers we have built into our bids for 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 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 meet the established milestone dates of the specific contract. 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 2017. However, we conduct part of our engineering and construction contracting business overseas, and may make significant equity and other investments in overseas projects. Our foreign currency denominated assets and liabilities 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 welcome 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 large increase in Renminbi appreciating 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 risks relating to the market price fluctuation of certain raw material and other products, for example, steel, cement, aluminum, wood, sand, explosives, waterproofing material and additives 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, manufacturer' production capacity, market condition and costs of materials in different times; Especially for the influences of our main raw materials in need for operation, such as steel, cement and aluminum, from 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 contract 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.

### Others

As we plan to focus on certain overseas markets selectively and strategically develop overseas business, we expect to continue to generate substantial income and profit from international projects and other overseas business in the foreseeable future. Therefore, we are exposed to various risks relating to business expansion in overseas countries and regions, including but not limited to political risks, economical, financial and market instability and credit risks, risks relating to appointing foreign agents in operating overseas business, the periodicity and demand of international engineering design and construction, competition, preferential measures or commercial bribe of other international and domestic companies, tax increase or unfavorable tax policies, foreign exchange control and fluctuation.

## MANAGEMENT DISCUSSION AND ANALYSIS

### V. BUSINESS PROSPECTS IN 2018

#### Industry Outlook in 2018

In 2018, supply-side structural reform remains as one of the key priorities to promote economic development. China nonferrous metals industry will see the sustainable trend of economic recovery and progressive sound development despite the fluctuation. When resolving excess production capacity, quality, efficiency and impetus will be enhanced with green development realized. Regarding the urban construction, new town construction and urban construction have triggered of a new tide of construction after the 19th National Congress, which provides the Company with a chance to begin the process of transformation. Meanwhile, as the Company has just started to dabble in the PPP business area, it can see the opportunities for development arising from the national gradual standardization of PPP business and introduction of new regulations on implementing PPP projects. The Company will ride on the trends, actively liaise with reputable and vigorous local governments, and thus enjoy the benefit from the construction of highway, pipe rack, sponge city and environmental friendly facilities.

#### Business Outlook of the Company in 2018

##### (I) Adhering to market-oriented principle and increasing the marketing efforts

- 1. Strengthening the formulation of marketing system.** We will enhance the equipment and quality of marketing personnel and the overall marketing capacity of the Company. We will also establish a database of tender price and technical experts. With the establishment of resource-sharing system, the Company can fully capitalize the collective advantages and enhance its overall tender pricing level.
- 2. Implementing the marketing strategy of differentiation.** We will go onto a development path which is differentiated from the one followed by state-owned enterprises of large-scale construction at the same time. Based on the strict controls imposed on the professional nonferrous industry, we will put great efforts in expanding the industrial and civil fields of our business in regions where Chinalco maintains a leading position. Differentiation will also be realized among members of the Company.
- 3. Striving to obtain new qualification.** The Company will obtain comprehensive Grade A qualifications for design as soon as possible and plan to apply for extra-grade qualifications for construction. It will enrich and upgrade its qualifications and capabilities to gain market access for transformation and upgrading.



## MANAGEMENT DISCUSSION AND ANALYSIS

### (II) Devoting to brand strategies and strengthening project management

- 1. Strengthening supply chain management.** We will perfect the tender process, strengthen access control and establish a management system of retaining the excellence and eliminating the inferiors. We will also implement dynamic optimization of the supply chain resources bank and constantly enhance the supply chain quality.
- 2. Addressing 3 major difficult issues.** We will grasp the opportunities provided as a result of addressing “safety, quality and environmental protection”, the 3 major difficult issues of the Company, so as to further strengthen QHSE system management. We will also adhere to the strategy of “implementing key tasks, augmenting inadequacies and shoring up weaknesses” and enhance quality of design and project planning, with an emphasis on process management.
- 3. Implementing branding plans of the Company.** We will carry out benchmarking projects construction and strengthen the communication and connection between industry competent departments and associations, which helps develop the Company’s branding projects in the key development regions and areas.

### (III) Persisting in technological innovation and enhancing the core capabilities

- 1. Seeking for project solutions.** We will keep a close eye on the changes in the national policy. With a market-demand-orientated approach and developing world-class technology as the goal, we will undertake certain tasks in relation to equipment process, environmental protection and energy conservation as well as intelligent control in the nonferrous metals field, foremost among which are the development of treatment technologies of “three wastes”, smart factory technology for nonferrous metals, big data platform for nonferrous metals industry, comprehensive pipe rack and the sponge city as well as the fabricated construction.



## MANAGEMENT DISCUSSION AND ANALYSIS

- 2. Enhancing external cooperation.** We will extensively cooperate with local and foreign universities, scientific research institutes and relevant enterprises, create an internationalized, open and flexible innovation platform, form enterprise alliance, attract talents, shorten the technology R&D cycle and improve the input-output ratio of technology R&D.
- 3. Increasing investment in resources.** We will consider innovation work as the core of the overall development, strive to foster an innovation culture and effectively increasing the investment in various resources, including capital investment in R&D projects. We will also establish and implement the incentive system for technology research and development personnel, increase the intensity of training creative talents and provide them with sufficient material security and moral encouragement.

### (IV) Upholding vision of “big overseas market” and expanding international business

- 1. Increasing investment in overseas development.** The Company will provide manpower and capital resources to fully support regions and countries which have abundant resources and energy, speed up market penetration, actively follow-up projects and effectively expand the scale of the business. By adopting the strategy of “point-to-an-area”, the Company will apply the success experience gained in one area as references to other areas when promoting the rapid development of its international business, which will in turn contribute to each other’s successes.
- 2. Promoting big linkage for overseas business.** Based on the model of “company + member companies”, we will further integrate the overseas market resources, equipment and technology advantages of the Company to build synergy and join forces to create a foreign brandname of “Chalieco”.
- 3. Maximizing effectiveness of overseas business.** Taking the transformation of nonferrous capacity as our goal, we will proactively tap the international EPC contracting market, actively participate in the State’s foreign aid projects and join forces with finance, credit and guarantee and investment fund in financing projects for mutual benefits.



## MANAGEMENT DISCUSSION AND ANALYSIS

### (V) Expanding application of aluminum in industry for nurturing new profit growth point

- 1. Focusing on competitive products.** In 2018, the Company will emphasis on the development of outdoor aluminum facilities, represented by all-aluminum overpass, based on the green city concept; emphasis on the development of all-aluminum villas (dwelling), aluminum templates, aluminum climber and aluminum enclosures based on the green building concept; actively promote all-aluminum trailer based on the lightweight vehicle concept, and coordinate with all-aluminum parts supply to expand the lightweight commercial vehicle industry in size and in strength, so as to make material contribution to energy saving and consumption reduction being advocated by the State.
- 2. Integrating social resources.** Directed by the market in the future, the Company will integrate social resources, and rapidly improve the R&D ability and mass-production capability of aluminum products by integrating the light-asset supply chain. It will build the aluminum supply and production base with cooperative enterprises to achieve complementary advantages.
- 3. Realizing efficiency growth.** We will speed up the industrialization of existing products, namely aluminum overpass, aluminum dwelling and aluminum trailer, etc., as soon as possible, and will intensify the efforts for technology transformation to maximize profitability. In the meantime, by putting the advantages of the Company's existing R&D, design, construction and equipment manufacturing full industry chain into full play, we will conduct research and development for new products and related production equipment, lead the market demand of aluminum for industrial use, facilitate the upgrade of aluminum application products, improve the added value of the products in order to realize the rapid growth in the efficiency of aluminum for industrial use.



## CORPORATE MILESTONES IN 2017

- January** The newly-increased G208 National Road Reconstruction Project Department in Song County of Sixth Metallurgical of Luoyang Company(六冶洛陽公司) was awarded the 2016 “Ankang Cup” Competition Winner Project Department of the Henan’s Housing and Urban-Rural Construction System by the Henan Provincial Department of Housing and Urban-Rural Development and the Provincial Construction Trade Union Working Committee.
- February** Ninth Metallurgical Company obtained the certificates of high and new tech enterprises. It is not only an affirmation of the strength and achievements of the company’s technology innovation, but also an indication of the initial success of the company’s transformation and upgrading. It is conducive to the promotion of technological innovation capabilities of enterprises, the enhancement of market competitiveness, and the acceleration of project development.
- 23 February** Sixth Metallurgical Company obtained the certificates of high and new tech enterprises, which has created a new platform for technological innovation, technological competitiveness as well as transformation and upgrading of enterprises.
- 10 March** The “Standards for Light-Metal Smelting Installation Engineering and Quality Acceptance “ (輕金屬冶煉安裝工程施工及品質驗收系列標準) compiled by Twelfth Metallurgical Company won First Class Prize at the 2016 Technology Progress Award organised by China Nonferrous Metals Industry Association.
- 22 March** Chalieco held its 2016 annual results conference in Hong Kong. Zong Xiaoping, the Company’s president and deputy secretary of the party committee, Zhang Jian (chief financial officer), Zhai Feng (assistant to the president), gave a detailed introduction to the company’s profile, operating situation and financial performance in 2016, and market situation and business outlook in 2017 to more than 50 investors and analysts attending the conference.
- 13 June** At the 2017 South & Southeast Asian Investment & Trade Fair for commodity, Chalieco entered into the framework agreement with Yunnan Highway Investment Co., Ltd. (雲南省公路投資有限公司) in relation to the construction of 5 domestic and foreign highways, including expressway of Yongsheng-Ninglang, Binchuan-Nanjian, Dali-Yangbi-Yunlong, Nanjian-Jingdong, Boten of Laos to Houayxay. Zong Xiaoping (the Company’s party committee deputy secretary and president) and Zhang Congming (deputy party secretary and general manager of Yunnan Highway Investment Co., Ltd.) signed the agreement on behalf of both parties.

## CORPORATE MILESTONES IN 2017

- 13 June** At the opening ceremony of the first Carbon Reduction Festival held by Aluminum Corporation of China (中國鋁業集團有限公司) (“Chinalco” (中鋁公司, currently 中鋁集團)), two Company’s cases, “Enhancing the Governance of Listed Companies and Realizing Win-win Benefits for Related Parties” and “Upholding a Green Strategy and Exploiting the Aluminum Market for Engineering”, were selected as “Top 10 Outstanding Cases of Social Responsibility Practice in 2016 of Chinalco.” At the same time, SAMI and Sixth Metallurgical Company’s cases, “Birth of the Largest Alumina Energy-saving Roaster” and “Leveraging the Aluminum Model for Better Carbon Reduction”, were selected as the “Top 10 Cases of Carbon Reduction Cases in Chinalco”.
- 19 July** The Company successfully issued RMB1.5 billion ultra-short-term financing bonds through China Everbright Bank. The current bond issuance has exceeded 4 times for subscription in the market, with a issuance rate of 4.7%.
- 19 July** “The Project Species System of Chalico Zhongzhou Aluminum Corporation Limited Metallurgical Grade Aluminum Oxide Process Optimization and Energy Conservation & Emissions Reduction” contracted by Changcheng Construction, won the “2015-2016 China Nonferrous Metals Industry (ministerial level) Quality Engineering” awarded by the China Nonferrous Metals Industry Association.
- August** The results of the evaluation of the “Double Top 200 Award of the China Construction Industry 2016”, selected and released by the China Construction Industry Association, were officially announced. Chalico was ranked No. 37 in the “Top 200 Competitors in China Construction Industry 2016”, while Ninth Metallurgical Company was ranked sixth in the “Top 200 Potentials in China Construction Industry 2016”.
- “The Top 250 Global Contractors” and “The Top 250 International Contractors” were selected by the “Engineering News Record (ENR)” of the United States in 2016. “The Top 250 Global Contractors” is based on the total global revenue of the general contracting companies, and focuses on the overall strength of the general contractor. Chalico was short-listed, ranking No. 121 on the list and No. 31 among domestic companies on the list. The ranking of “The Top 250 International Contractors” is based on the total overseas engineering business income of the general contracting companies outside of their countries, emphasizing the international business development capabilities of the general contracting companies. Chalico ranked No. 245 on the list and No. 65 among domestic companies on the list.

## CORPORATE MILESTONES IN 2017

- 25 September** The light alloy material project of Guangxi Hualei New Material Co., Ltd. (廣西華磊新材料有限公司), designed and generally contracted by GAMI was successfully put into production in Pingguo County of Baise City.
- 10 November** China Construction Enterprise Management Association formally announced the award of the National Quality Project from 2016 to 2017. The Mian County Urban Comprehensive Hospital project contracted by Ninth Metallurgical Company won the “National Quality Project Awards”, which is another national award won by Ninth Metallurgical Company in recent years.
- 5 December** Encouraging Innovation & Entrepreneurship Encashment Award Conference of Guanshanhu District in 2016, GAMI won RMB5.2 million awarded by Guanshanhu District Committee of Guiyang City of the Communist Party of China and People’s Government of Guanshanhu District for outstanding performance in the aspects of the innovation platform, intellectual property rights and innovative project construction.
- 8 December–10 December** The 2017 International Innovation & Entrepreneurship Expo was held in Beijing National Convention Center. The Aluminum Alloy Structured Pedestrian Overpass developed by Chalieco won the “Annual Double Innovation Demonstration Award” and “Staff Double Innovation Model Award”. SAMI’s “ultra-low energy consumption HZG series mixing technology” won the “Annual Double Innovation Demonstration Award” and “Staff Double Innovation Model Award”.
- 28 December** The aluminum alloy flyovers of Dongdan and Chongwenmen in Chang’an Street in Beijing, built by Chalieco, were successfully hoisted. Dongdan aluminum alloy flyover was proved by experts to be the largest span of China with the length of 58.16 meters. The two bridges adopt a simple beam-slab of aluminum alloy and truss arch structure, with more than 8,000 components such as main bridges, stairways, and connecting plates. All of them were produced and assembled on site by Sixth Metallurgical Company in Zhengzhou.

## DIRECTORS' REPORT

### PRINCIPLE BUSINESS

The Group is principally engaged in engineering design and consultancy, engineering and construction contracting and 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 2017 is set out respectively as follows:

a.	Fair review of the Group's business	Management Discussion and Analysis	Pages 9 to 28
b.	Description of the principal risks and uncertainties the Group is facing	Management Discussion and Analysis	Pages 28 to 30
c.	Particulars of important events affecting the Group that have occurred since the year ended 31 December 2017	Note 45 to the financial statements	Page 297
d.	Indication of likely future development of the Group's business	Management Discussion and Analysis	Pages 31 to 34
e.	Analysis using financial key performance indicators	Financial Summary, Financial Highlights and Management Discussion and Analysis	Pages 4 to 28

### 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. The Group advocated the corporate culture of "lifelong study and healthy life" and commenced study-oriented organization construction and actively launched various recreational and sports activities. The Group holds one off-job English training courses, one on-job English training courses and one English competition every year, which not only helped cultivating the interest of our employees to learn and to use English, but also fostered talents for the implementation of "Going Out" strategy. Along with table tennis rooms and badminton courts as well as the fitness center, Tai-Chi and yoga practice are available for our employees. Also, we organized team-walking activities and calligraphy, painting and photography competitions in order to enrich employees' life at their spare time, strengthen their body as well as ignite their team spirit and sense of collective glory so as to create a bright, comfortable, sincere and friendly corporate environment. In addition, the Group paid visits to and greeted retired staff on New Year's Day and during Chinese New Year and helped staff and their families who suffer from difficulties in life due to illness.

## DIRECTORS' REPORT

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 and 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 corporates. The Group successively entered into strategic cooperation agreements with local governments and enterprises including Baotou City of Inner Mongolia, Yuxi City of Yunnan Province, China Yunnan Metallurgical Group Co., Ltd., Yunnan Communications Investment & Construction Group Co., Ltd., Yunnan Construction and Investment Holding Group Co., Ltd., Overseas Chinese Town Holdings Company and Guangxi Tourism Development Group Co., Ltd. for attempt of PPP models on areas such as nonferrous metallurgy, livelihood improvement and construction of infrastructures.
5. The Group's donation. The Group made monetary and non-monetary charitable donations in aggregate of approximately RMB380,000.

## ENVIRONMENTAL POLICIES AND PERFORMANCE OF THE COMPANY

During the year, the Group strived to enhance its environmental performance with strengthened environmental awareness and proactively responded to environmental issues. The Group made efforts in its business operations by adopting various kinds of energy saving and waste reduction measures to reduce the consumption of natural resources with the use of environmental-friendly products and certified materials.

The headquarters of the Company has set up an environmental management system, by which the promotion of environmental duties could be implemented through annual training and system operation. In the meantime, certified assessment has been conducted by third party certification authorities every year and certification will be issued to assessed systems.



## **DIRECTORS' REPORT**

Each of the design unit has adopted new technologies and new techniques, and eliminated old, obsolete and high energy consuming technologies and techniques at design stage. Each of the design unit also has grasped corresponding and new standards and new systems, proactively promoted of R&D work of new technologies, strengthened the control of design stage from source and made efforts in environmental works.

Each of the construction unit, project department/project company has set benchmarking project, to improve management and control of the environmental issues including dust, noise and solid wastage during the construction process. They have adopted a series of measures, including classifying and storing garbage at the construction site, recycling and reusing recoverable materials, centrally stacking unrecoverable construction garbage and cleaning up and shipping to landfill by the subcontracting units for disposal; installing sprinkler devices at on-site gates, hardening main roads, planting trees along the roads to greening, covering other exposed parts with dustproof nets and using fog guns or sprinklers to reduce dust during construction. They also strengthened the management of the safe and civilized construction at the construction site, strived to achieve complete sealing management and ensured that the road in the site area was completely hardened, the waste residue was fully covered, the cleaning of the sprinkling sweeping was completely cleaned, the materials were completely sealed and transported, and the vehicles were completely cleaned.

## **MATERIAL EVENTS SUBSEQUENT TO THE END OF THE FINANCIAL YEAR**

Nil.

## **ISSUE OF SHARES**

During the year, the Company did not issue any class of shares.

## **ISSUE OF DEBENTURES**

During the year, the debt equity issued by the Group included the renewable corporate bonds amounting to RMB497.5 million.

## **RESULTS**

The audited results of the Company and its subsidiaries for the year ended 31 December 2017 are set out in the consolidated statement of comprehensive income on pages 134 to 135. The financial positions of the Company and its subsidiaries as at 31 December 2017 are set out in the consolidated balance sheet on pages 136 to 137. The consolidated cash flows of the Company and its subsidiaries for the year ended 31 December 2017 are set out in the consolidated statement of cash flows on pages 140 to 141. 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 10 to 28 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 2017 and 31 December 2016, the Group's gearing ratios were 72.8% and 67.6%, respectively. The gearing structure is maintained within the reasonable range determined by the Company.

### SHARE CAPITAL

The total amount of share capital of the Company as of 31 December 2017 was RMB2,663,160,000, divided into 2,663,160,000 Shares 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 or 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%, while the applicable VAT rate for the modern service industry, 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. 39) jointly released by the 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% (for construction contracts) or 6% (for maintenance service contracts).

## 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.

## DIRECTORS' REPORT

### EVENTS AFTER THE BALANCE SHEET DATE

There was no other significant subsequent event after 31 December 2017.

### DISTRIBUTION OF PROFITS AND PROPOSED DIVIDENDS

The Board did not recommend the payment of a final dividend for the year ended 31 December 2017.

Pursuant to the resolutions of the first extraordinary general meeting of 2015, the first domestic share class meeting of 2015 and the first H share class meeting of 2015 of the Company dated 5 August 2015, the Company intended to apply for the initial public offering and listing of shares in the PRC. The application for such initial public offering and listing of shares was considered and approved by the Issuance Review Committee of CSRC on 26 December 2017. As at the date of this annual report, the formal written approval from CSRC is still pending. According to Article 17 of Measures on the Administration of Securities Issuance and Underwriting (《證券發行與承銷管理辦法》) (Zheng Jian Hui Ling No. 95), which provides that, "If listed companies with a plan for issuance of securities have any profit distribution proposal or conversion of capital reserve into share capital proposal which has not yet been submitted to shareholders' general meeting for voting, or when such proposal has been approved by the shareholders' general meeting but has not been implemented yet, the issuance of securities should be proceeded after such proposal has been implemented. Before relevant plan is implemented, the lead underwriter shall not underwrite the securities issued by the listed company". In order to continue the progress of the public offering of shares, the Company intended not to proceed with any profit distribution in cash nor appropriation from capital reserves to share capital for the year 2017. The undistributed profits for the year 2017 will be accumulated to the next year in order to fulfill the Company's requirement for general working capital and profit distribution demand in the future.

### 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 2017.

### USE OF PROCEEDS FROM FUND RAISING

The total amount of fund raised from the Listing 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.

## **DIRECTORS' REPORT**

### **MAJOR CUSTOMERS AND SUPPLIERS**

#### **MAJOR CUSTOMERS**

For the year ended 31 December 2017, the sales to the top five customers of the Group represented 29.3% of the turnover income of the Group during the year.

#### **MAJOR SUPPLIERS**

For the year ended 31 December 2017, the total purchases from the top five suppliers of the Group represented 16.0% 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 the subsidiaries as at 31 December 2017 are set out in Note 33 to the consolidated financial statements.

### **CHARITABLE DONATIONS**

During the year ended 31 December 2017, the Group made monetary and non-monetary charitable donations in aggregate of RMB380,000.

### **EQUITY-LINKED AGREEMENTS**

During the year ended 31 December 2017, 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 2017 are set out in the table below.

Name	Office in the Company	Appointment date
<b>Directors</b>		
HE Zhihui <sup>(1)</sup>	Chairman and executive Director	23 May 2017
WANG Jun <sup>(1)</sup>	Non-executive Director	23 May 2017
LI Yihua <sup>(1)</sup>	Non-executive Director	23 May 2017
ZONG Xiaoping <sup>(1)</sup>	Executive Director	23 May 2017
WU Zhigang <sup>(1)</sup>	Executive Director	23 May 2017
ZHANG Jian <sup>(1)</sup>	Executive Director	23 May 2017
SUN Chuanyao <sup>(1)</sup>	Independent non-executive Director	23 May 2017
CHEUNG Hung Kwong <sup>(1)</sup>	Independent non-executive Director	23 May 2017
FU Jun <sup>(1)</sup>	Independent non-executive Director	23 May 2017
<b>Supervisors</b>		
HE Bincong <sup>(2)</sup>	Chairman of Supervisory Board and employee representative of Supervisory Board	20 March 2017
DONG Hai <sup>(3)</sup>	Former supervisor	23 May 2014
OU Xiaowu <sup>(4)</sup>	Supervisor	23 May 2017
LI Wei <sup>(4)</sup>	Supervisor	23 May 2017
<b>Senior Management</b>		
ZONG Xiaoping <sup>(5)</sup>	President	23 May 2017
WU Zhigang <sup>(5)</sup>	Vice President	23 May 2017
CHANG Yaomin <sup>(5)</sup>	Vice President	23 May 2017
MA Ning <sup>(6)</sup>	Former Vice President	23 May 2014
ZHANG Jian <sup>(5)</sup>	Chief Financial Officer	23 May 2017
ZHAI Feng <sup>(5)</sup>	Assistant to President and Secretary to the Board	23 May 2017

Notes:

- (1) On 23 May 2017, Mr. HE Zhihui, Mr. ZONG Xiaoping, Mr. WU Zhigang and Mr. ZHANG Jian were re-elected and appointed as the executive Directors; Mr. WANG Jun and Mr. LI Yihua were re-elected and appointed as the non-executive Directors; and Mr. SUN Chuanyao, Mr. CHEUNG Hung Kwong and Mr. FU Jun were re-elected and appointed as the independent non-executive Directors at the 2016 annual general meeting of the Company. Mr. SUN Chuanyao resigned as the independent non-executive Director due to other work commitments and Mr. GUI Weihua was appointed in place of Mr. SUN Chuanyao as the independent non-executive Director on 27 February 2018.
- (2) On 20 March 2017, Mr. HE Bincong was appointed as the staff representative Supervisor at the 2017 first staff meeting.
- (3) Mr. DONG Hai resigned from the Supervisor due to expiration of his office tenure.
- (4) On 23 May 2017, Mr. OU Xiaowu and Mr. LI Wei were re-elected and appointed as the Supervisors at the 2016 annual general meeting of the Company.
- (5) On 23 May 2017, Mr. ZONG Xiaoping was re-elected and appointed as the president of the Company at the first meeting of the third session of the Board; Mr. WU Zhigang and Mr. CHANG Yaomin were re-elected and appointed as the vice president of the Company; Mr. ZHANG Jian was re-elected and appointed as the chief financial officer of the Company; ZHAI Feng was re-elected and appointed as the secretary to the Board.
- (6) Mr. MA Ning ceased to be the vice president of the Company due to his work changes as at 7 November 2017.

## **DIRECTORS' REPORT**

The Company 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 is independent from the Company.

### **DIRECTORS' AND SUPERVISORS' SERVICE CONTRACT**

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 terminate to the date of the election of the next 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 and 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 2017, 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	Directors of the finance department and assets operating department, deputy chief accountant of Chinalco
Li Yihua	Non-executive Director	Director of law department of Chinalco

### 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.

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

As at 31 December 2017, 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 on Conducting for Securities Transactions by Directors of Listed Issuers, 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.



## DIRECTORS' REPORT

### 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 2017 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

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. Please refer to "Arrangement of Pre-emptive Rights and Share Options" for particulars. Save as the above share appreciation rights scheme, the Company did not implement equity incentive in any other forms to Directors, Supervisors and senior management.

## DIRECTORS' REPORT

### SUBSTANTIAL SHAREHOLDERS' INTERESTS IN SHARES

As at 31 December 2017, so far as the Directors of the Company are aware, the following persons (other than Directors and senior management of the Company) had an interest or short position in the Company's shares or underlying shares which would fall to be disclosed to the Company under the provisions of Divisions 2 and 3 of Part XV of the SFO:

Name of Shareholder	Class of shares (Shares)	Capacity	Number of Shares/ underlying shares held	Percentage of shareholding in relevant class of shares (%) (Note 1)	Percentage of shareholding in total Share capital (%)
Aluminum Corporation of China	Domestic Shares	Beneficial owner/ Interest of controlled corporation	2,263,684,000 (Long position) (Note 2)	100%	85%
The Seventh Metallurgical Construction Corp. Ltd	H Shares	Beneficial owner	69,096,000 (Long position)	17.30%	2.59%
CNMC Trade Company Limited	H Shares	Beneficial owner	59,225,000 (Long position)	14.83%	2.22%
Leading Gain Investments Limited	H Shares	Nominee of other person (other than passive trustee)	29,612,000 (Long position)	7.41%	1.11%
China XD Group	H Shares	Beneficial owner	29,612,000 (Long position)	7.41%	1.11%
Yunnan Tin (Hong Kong) Yuan Xin Company Limited	H Shares	Beneficial owner	29,612,000 (Long position)	7.41%	1.11%
Global Cyberlinks Limitd	H Shares	Beneficial owner	20,579,000 (Long position)	5.15%	0.77%

#### Notes:

- The percentage is calculated based on the number of Shares in the relevant class/total number of Shares in issue of the Company as at 31 December 2017.
- Chinalco is beneficially interested in 2,176,758,534 Domestic Shares, representing approximately 81.74% of the total share capital of the Company. Luoyang Institute is a wholly-owned subsidiary of Chinalco and is interested in 86,925,466 Domestic Shares, representing approximately 3.26% of the total share capital of the Company. Chinalco is therefore also deemed to be interested in the Domestic 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 2017.

### 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 2017 are set out in Note 44 to the financial statements.

Certain transactions in the aforementioned related party 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. Formation of Joint Venture Chalco Shituo

The Company, Chalco, Hunan Shituo Technology Development Company Limited (湖南視拓科技發展有限公司) (“Hunan Shituo”) and Bortala Mongol Autonomous Prefecture Fenglong Network Technology Partnership (博爾塔拉蒙古自治州豐隆網絡科技合夥企業) (“Fenglong Network”) entered into a joint venture agreement in Beijing in relation to the formation of Chalco Shituo Intelligence

## DIRECTORS' REPORT

Technology Company Limited (中鋁視拓智能科技有限公司) (“Chalco Shituo”), on 8 September 2017. The registered capital of Chalco Shituo was RMB120 million. With respect to the registered capital of Chalco Shituo, the Company contributed RMB18 million in cash, representing 15% of the registered capital of Chalco Shituo; Chalco contributed RMB42 million in cash, representing 35% of the registered capital of Chalco Shituo; Hunan Shituo contributed RMB42 million in cash, representing 35% of the registered capital of Chalco Shituo; and Fenglong Network contributed RMB18 million in cash, representing 15% of the registered capital of Chalco Shituo. The board of directors of Chalco Shituo consisted of five directors, including two appointed by Chalco, two by Hunan Shituo and one by the Company. The chairman of the board of directors was the candidate nominated by Chalco. The term of office of the chairman and each director shall be three years, which shall be renewable upon re-election.

Chinalco (中鋁公司, currently 中鋁集團) is a controlling shareholder of the Company. Chinalco (中鋁公司, currently 中鋁集團) and its subsidiaries are the connected person of the Company pursuant to the Listing Rules. Chinalco (中鋁公司, currently 中鋁集團) directly or indirectly holds approximately 34.77% of the total issued share capital of Chalco, and is a controlling shareholder of Chalco, and thus Chalco is also a connected person of the Company.

Please refer to the announcement of the Company dated 8 September 2017 for details.

### 2. Formation of Joint Venture Chalco Tendering

The Company, Chinalco (中鋁公司, currently 中鋁集團) and Chalco entered into a joint venture agreement in relation to the formation of Chalco Tendering Company Limited (中鋁招標有限公司) (“Chalco Tendering”) on 8 September 2017. The registered capital of Chalco Tendering was RMB50 million. With respect to the registered capital of Chalco Tendering, Chinalco contributed RMB27.50 million in cash, representing 55% of the registered capital of Chalco Tendering; Chalco contributed RMB10 million in cash, representing 20% of the registered capital of Chalco Tendering; and the Company contributed RMB12.50 million in cash, representing 25% of the registered capital of Chalco Tendering. The board of directors of Chalco Tendering consisted of five directors, including two appointed by Chinalco (中鋁公司, currently 中鋁集團), one by the Company and one by Chalco. There will be one employee director to be elected at the employee representatives' meeting. The chairman of the board of directors was the director nominated by Chinalco. The term of office of the chairman and each director shall be three years, which shall be renewable upon re-election.

Chinalco (中鋁公司, currently 中鋁集團) is a controlling shareholder of the Company. Chinalco (中鋁公司, currently 中鋁集團) and its subsidiaries are the connected person of the Company pursuant to the Listing Rules. Chinalco (中鋁公司, currently 中鋁集團) directly or indirectly holds approximately 34.77% of the total issued share capital of Chalco, and is a controlling shareholder of Chalco, and thus Chalco is also a connected person of the Company.

Please refer to the announcement of the Company dated 8 September 2017 for details.

## DIRECTORS' REPORT

### 3. Acquisition of 60% equity interests in Shandong Engineering

The Company and Chalco have entered into Shandong Engineering Acquisition Agreement on 31 October 2017. The Company acquired 60% equity interests in Shandong Engineering at the consideration of RMB360 million in cash.

Chinalco (中鋁公司, currently 中鋁集團) is a controlling shareholder of the Company, Chinalco (中鋁公司, currently 中鋁集團) and its subsidiaries are the connected persons of the Company pursuant to the Listing Rules. Chinalco directly or indirectly holds approximately 34.77% of the total issued share capital of Chalco, and is a controlling shareholder of Chalco, and thus Chalco is also a connected person of the Company.

Please refer to the announcement of the Company dated 31 October 2017 for details.

### 4. Acquisition of 100% equity interests in Kunming Survey and Design Institute

The Company, Yunnan Copper Industry (Group) Co., Ltd. ("Yunnan Copper") and Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry ("Kunming Survey and Design Institute") have entered into Kunming Survey and Design Institute Acquisition Agreement on 31 October 2017. The Company acquired 100% equity interests in Kunming Survey and Design Institute at the consideration of RMB301 million in cash.

Chinalco (中鋁公司, currently 中鋁集團) is a controlling shareholder of the Company. Chinalco (中鋁公司, currently 中鋁集團) and its subsidiaries are the connected persons of the Company pursuant to the Listing Rules. Chinalco (中鋁公司, currently 中鋁集團) directly or indirectly holds approximately 58% equity interests in Yunnan Copper, and is a controlling shareholder of Yunnan Copper, and thus Yunnan Copper is also a connected person of the Company.

Please refer to the announcement of the Company dated 31 October 2017 for details.

#### (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.

## DIRECTORS' REPORT

The annual caps and actual transaction amount of such continuing connected transactions for 2017 are set out in the following table:

Events of connected transactions	Connected persons	Annual cap for 2017 (RMB' million)	Actual transaction amount for 2017 (RMB' million)
1. Provision of engineering services by the Group	Chinalco (中鋁公司, currently 中鋁集團)	11,000	8,336
2. Provision of commodities by the Group	Chinalco (中鋁公司, currently 中鋁集團)	600	441
3. Provision of general services to the Group	Chinalco (中鋁公司, currently 中鋁集團)	160	156
4. Provision of commodities to the Group	Chinalco (中鋁公司, currently 中鋁集團)	1,800	1,031
5. Provision of financial services-deposit services to the Group	Chinalco Finance	2,800	2,790
6. Provision of factoring facility services to the Group	China Aluminum Business	1,100	522

### 1. PROVISION OF ENGINEERING SERVICES BY THE GROUP

The Company entered into an engineering service general agreement with Chinalco (中鋁公司, currently 中鋁集團) 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 Chinalco 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.

Chinalco (中鋁公司, currently 中鋁集團) is the controlling shareholder of the Company. Pursuant to the Listing Rules, Chinalco (中鋁公司, currently 中鋁集團) and its subsidiaries are the connected persons of the Company. During the reporting period, the annual cap of this continuing connected transaction for 2017 was RMB11,000 million and the actual transaction amount was RMB8,336 million.

For details, please refer to the Company's announcement dated 20 March 2017.

## DIRECTORS' REPORT

### 2. PROVISION OF COMMODITIES BY THE GROUP

The Company entered into a general sale and purchase agreement of commodities with Chinalco (中鋁公司, currently 中鋁集團) on 20 March 2017, pursuant to which, the Group could provide products of the Group to Chinalco (中鋁公司, currently 中鋁集團) 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 (中鋁公司, currently 中鋁集團).

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 (中鋁公司, currently 中鋁集團) is the controlling shareholder of the Company. Pursuant to the Listing Rules, Chinalco (中鋁公司, currently 中鋁集團) and its subsidiaries are the connected persons of the Company. During the reporting period, the annual cap of this continuing connected transaction for 2017 was RMB600 million and the actual transaction amount was RMB441 million.

For details, please refer to the Company's announcement dated 20 March 2017.

### 3. PROVISION OF GENERAL SERVICES TO THE GROUP

The Company entered into a general agreement of general services with Chinalco (中鋁公司, currently 中鋁集團) on 20 March 2017, pursuant to which, Chinalco (中鋁公司, currently 中鋁集團) 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 and labour services related to labour and 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.

Chinalco (中鋁公司, currently 中鋁集團) is the controlling shareholder of the Company. Pursuant to the Listing Rules, Chinalco (中鋁公司, currently 中鋁集團) and its subsidiaries are the connected persons of the Company. During the reporting period, the annual cap of this continuing connected transaction for 2017 was RMB160 million and the actual transaction amount was RMB156 million.

For details, please refer to the Company's announcement dated 20 March 2017.

## DIRECTORS' REPORT

### 4. PROVISION OF COMMODITIES TO THE GROUP

The Company entered into a general sale and purchase agreement of commodities with Chinalco (中鋁公司, currently 中鋁集團) on 20 March 2017, pursuant to which, the Group could purchase certain commodities from Chinalco (中鋁公司, currently 中鋁集團) and/or its associates which shall be used in our engineering and construction contracting business. These commodities mainly include materials such as nonferrous products, plant 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 (中鋁公司, currently 中鋁集團) is the controlling shareholder of the Company. Pursuant to the Listing Rules, Chinalco (中鋁公司, currently 中鋁集團) and its subsidiaries are the connected persons of the Company. During the reporting period, the annual cap of this continuing connected transaction for 2017 was RMB1,800 million and the actual transaction amount was RMB1,031 million.

For details, please refer to the Company's announcement dated 20 March 2017.

### 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;
- The interest rates 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 Chinalco and its group companies for deposits with the same type during the same period;



## DIRECTORS' REPORT

- Provides 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 Regulatory Commission for such type of services, and shall be not 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. The Company has entered into the general agreement of general services, general sale and purchase agreement of commodities and engineering service general agreement on 22 August 2014. Each of those general agreements sets out standardized regulatory principles, guidelines, terms and conditions, pursuant to which the relevant suppliers will provide the products and services proposed to be supplied in the agreements to the relevant receivers. The general terms of the general agreements are as follow:
  - General requirement: the quality of products and services provided to the Group should be in accordance with our requirements; the price of the products and services provided should be fair and reasonable; the terms and conditions of products and services provided (including but not limited to prices) should be formulated based on normal commercial terms;
  - Pricing: if a bid formula is provided, the bidding price should be stated; if a bid formula is not provided, the determination should be made based on the specific category and condition of products and services provided; and
  - Term: the term of each general agreement could be extended or renewed, provided that the relevant parties agree on the relevant extension or renewal, and such extension or renewal complies with the requirements of relevant laws, regulations and/or the Listing Rules (as the case may be).

Chinalco (中鋁公司, currently 中鋁集團) is the controlling shareholder of the Company, and Chinalco Finance is the wholly-owned subsidiary of Chinalco (中鋁公司, currently 中鋁集團). 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.

## DIRECTORS' REPORT

During the reporting period, the cap of daily deposit balance of the deposit services under this continuing connected transaction for 2017 was RMB2,800 million and the actual maximum daily deposit balance was RMB2,790 million.

For details, please refer to the Company's announcement dated 8 August 2016.

### 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 will transfer 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 2017 no longer satisfied the actual business needs and revised the original annual cap for 2017 from RMB250 million to RMB1,100 million on 26 October 2017.

The Factoring Cooperation Framework Agreement has a term commencing on 21 August 2017 and ending on 31 December 2019.

Chinalco (中鋁公司, currently 中鋁集團) is the controlling shareholder of the Company. Pursuant to the Listing Rules, Chinalco (中鋁公司, currently 中鋁集團) 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 (中鋁公司, currently 中鋁集團), and thus the connected persons of the Company. During the reporting period, the annual cap of this continuing connected transaction for 2017 was RMB1,100 million and the actual transaction amount was RMB522 million.

For details, please refer to the Company's announcements dated 21 August 2017 and 26 October 2017.

The independent non-executive Directors had reviewed the 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

## DIRECTORS' REPORT

- (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.

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 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 causes 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 causes 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 causes 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 causes 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 had also confirmed that the Company has complied with the disclosure requirements of Chapter 14A of the Listing Rules.

## COMPLIANCE WITH NON-COMPETITION AGREEMENT

The Company entered into a non-competition agreement with Chinalco (中鋁公司, currently 中鋁集團) on 2 June 2012, pursuant to which, Chinalco (中鋁公司, currently 中鋁集團) 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.

## DIRECTORS' REPORT

During the year, the independent non-executive Directors have reviewed the implementation of the non-competition agreement and confirmed that Chinalco (中鋁公司, currently 中鋁集團) has been in full compliance with the agreement and there was no breach by Chinalco (中鋁公司, currently 中鋁集團).

### 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.

On 10 October 2013, the “Resolution in respect of the Implementation of H Share Appreciation Rights Scheme and Initial Grant thereunder by China Aluminum International Engineering Corporation Limited” was considered and approved at the extraordinary general meeting of the Company, providing medium to long term incentive to certain Directors, senior management of the Company and management officers and key employees who have played a vital role in the development of the Company so as to facilitate the continuous growth of the Group.

As of 18 October 2017, particulars of H Share appreciation rights granted to the Directors and senior management of the Company are as follows:

Name	Position	Number of Shares granted ('0000 Shares)	The proportion of the amount granted to the total number of H Shares of the Company in issue	The proportion of the amount granted to the total number of Shares of the Company in issue
HE Zhihui	Executive Director, Chairman	68.3649	0.1711%	0.0257%
WU Zhigang	Vice President	29.2992	0.0733%	0.0110%
CHANG Yaomin	Vice President	29.2992	0.0733%	0.0110%
MA Ning	Vice President	49.2457	0.1233%	0.0185%
Total		230.0193	0.8582%	0.0864%

Note:

- In accordance to the share appreciation rights scheme, the stock appreciation rights would lapse from 18 October 2017. The non-effective stock appreciation rights would not be exercised since 18 October 2017.

## DIRECTORS' REPORT

### 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.

### 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. During the year ended 31 December 2017, the Company has complied with all code provisions 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 65 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 bring 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 approval.

### ARTICLES OF ASSOCIATION

The Articles of Association was considered and approved on the annual general meeting in 2016 held on 23 May 2017 and the overall requirements for the work of Party Building were included into the Articles of Association.

## DIRECTORS' REPORT

### PUBLIC FLOAT

Based on information publicly available to the Company and so far as the Directors are aware, no less than 15% of the issued Shares was held by the public as at the Latest Practicable Date prior to the publication of this annual report, which was in compliance with the requirements under the Listing Rules and the requirements from document of exemption of public float obtained at the time of its Listing.

### MATERIAL LEGAL PROCEEDINGS

As of 31 December 2017, the Group was not involved in any material legal proceedings or arbitrations. So far as the Directors are aware, no such litigation or claims of significance are pending or threatened against the Group.

### COMPLIANCE WITH THE MAJOR LAWS AND REGULATIONS

The Company has conformed to the laws and regulations such as the Company Law of the People's Republic of China and has constantly fulfill its corporate responsibilities in accordance with the standards under regulations and industry rules, striving to achieve a higher level of corporate governance. During the reporting period, there was no event of non-compliance with major laws and regulations of the Company.

### AUDIT COMMITTEE

The audit committee of the Company has reviewed the Group's 2017 annual results and the combined financial statements for the year ended 31 December 2017 prepared in accordance with the IFRSs.

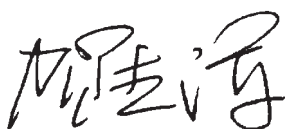
### AUDITOR

PKF Hong Kong Limited was appointed as the auditor to audit the financial statements for the year ended 31 December 2017 prepared in accordance with the IFRSs. PKF Hong Kong Limited has audited the accompanying financial statements which are prepared in accordance with IFRSs.

### 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 4 to 6 of this annual report.

By order of the Board



**HE Zhihui**

*Chairman*

**China Aluminum International Engineering Corporation Limited**

Beijing, 12 March 2018

## 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 2017, 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, and had carefully exercised its supervision over the behavior on execution of the Company's duties of our Directors and the senior management of the Company. The major duties of the Supervisory Board during the reporting period are as follows:

### 1. CANDIDATES OF THE SUPERVISORY BOARD

The term of the second session of the Supervisory Board of the Company expired on 23 May 2017, in accordance with the relevant requirements of the Company Law of People's Republic of China and the Articles, the 13th meeting of the second session of Supervisory Board was convened on 17 March 2017, at which the resolution on candidates of the Supervisory Board was considered and approved: the election of Mr. HE Bincong as the staff representative supervisor of the third session of the Supervisory Board at the first staff meeting convened in 2017 was agreed, and election of Mr. LI Wei and Mr. OU Xiaowu as shareholder representative Supervisors, which was recommended by the Group as the promoter and the shareholder of the Company, in terms of the candidates of the third session of Supervisory Board was agreed. The first meeting of the third session of Supervisory Board was convened on 23 May 2017, at which the resolution on candidates of the chairman of the third session of Supervisory Board of China Aluminum International Engineering Corporation Limited was considered and approved.

### 2. MEETINGS CONVENED BY THE SUPERVISORY BOARD

During the reporting period, the Supervisory Board held four meetings, studied and considered twelve issues. Among them, the second session of Supervisory Board held one meeting, studied and considered seven issues; the third session of Supervisory Board held three meetings, studied and considered five issues.

In 2017, the Supervisory Board held four meetings, particulars of which are as follows:

The 13th meeting of the second session of Supervisory Board was convened on 17 March 2017, at which the resolutions on the Announcement of 2016 Annual Results and the Annual Report of the Company (《公司2016年度業績公告和年度報告》), the Report on 2016 Final Accounts of the Company (《公司2016年度財務決算報告》), 2017 Financial Budget Report of the Company(《公司2017年度財務預算報告》), 2016 Profit Appropriation and Dividend Distribution Plan of the Company (《公司2016年度利潤分配以及股息派發方案》), the Supervisory Board's Work Report of the Company for 2016 (《公司2016年監事會工作報告》) and the Supervisors' Emoluments of the Company in 2017 (《公司2017年度監事薪酬》) and the candidates on the Supervisory Board were considered and approved.

## SUPERVISORY BOARD'S REPORT

The first meeting of the third session of Supervisory Board was convened on 23 May 2017, at which the resolution on candidates of the chairman of the third session of the Supervisory Board was considered and approved.

The second meeting of the third session of the Supervisory Board was convened on 30 August 2017, at which the resolutions on the 2017 Interim Report and the Announcement of Interim Results of the Company (《公司2017年中期報告及中期業績公告》), the Change in Accounting Policies, the Financial Reports for the year of 2014, 2015 and 2016 and the period for the six months ended 30 June 2017 were considered and approved.

The third meeting of the third session of the Supervisory Board was convened on 31 October 2017, at which the resolution on the 2017 Quarterly Report for the Third Quarter of the Company (《公司2017年第三季度財務報告》) was considered and approved.

### 3. 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 2017 financial report and relevant information 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.

**HE Bincong**

*Chairman of the Supervisory Board*

Beijing, 12 March 2018

# CORPORATE GOVERNANCE REPORT

The Board of Directors hereby presents to the Shareholders the corporate governance report for the year ended 31 December 2017.

## 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 2017, 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 117 to 122 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 operation and development of the Group. All Directors are 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 independent non-executive Directors 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

The composition of the current Board is set out as follows:

Name	Position in the Company	Date of Appointment
<b>Director</b>		
HE Zhihui	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 <sup>(1)</sup>	Independent non-executive Director	23 May 2017
GUI Weihua <sup>(1)</sup>	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 other business commitments Mr. SUN Chuanyao resigned from the post of independent non-executive Director. 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 amendment 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 2017, the Board held eight 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 Zihui	Chairman and executive Director	8	0	100%
WANG Jun	Non-executive Director	6	2	100%
LI Yihua	Non-executive Director	8	0	100%
ZONG Xiaoping <sup>(1)</sup>	Executive Director	4	1	100%
WU Zhigang <sup>(1)</sup>	Executive Director	5	0	100%
ZHANG Jian	Executive Director	8	0	100%
SUN Chuanyao	Independent non-executive Director	8	0	100%
CHEUNG Hung Kwong	Independent non-executive Director	7	1	100%
FU Jun	Independent non-executive Director	7	1	100%

Note:

1. Mr. ZONG Xiaoping and Mr. WU Zhigang served as executive Directors of the Company from 23 May 2017.

### 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

The posts of the chairman and the president (i.e. chief executive officer under the relevant provisions of Listing Rules) of the Company are segregated and performed by different individuals to ensure their respective independence, accountability and the balance of power and authority. Mr. HE Zhihui acts as the chairman and Mr. ZONG Xiaoping as the president. The Articles of Association defines the division of duties between the chairman and the president.

### 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 academic qualifications, work experience, 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 Directors 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 relevant remuneration policies set by the Company. 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 2017, 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 remained informed and necessary. The details of training for all Directors are as follows:

Name	Position	Training time	Training content
HE Zhihui	Chairman, executive Director	7 hours	including compliance of listed company and corporate governance
WANG Jun	Non-executive Director	25 hours	including compliance of listed company and corporate governance
LI Yihua	Non-executive Director	7 hours	including compliance of listed company and corporate governance
ZONG Xiaoping <sup>(1)</sup>	Executive Director	5 hours	including compliance of listed company and corporate governance
WU Zhigang <sup>(1)</sup>	Executive Director	5 hours	including compliance of listed company and corporate governance
ZHANG Jian	Executive Director	7 hours	including compliance of listed company and corporate governance
SUN Chuanyao	Independent non-executive Director	7 hours	including compliance of listed company and corporate governance
CHEUNG Hung Kwong	Independent non-executive Director	7 hours	including compliance of listed company and corporate governance
FU Jun	Independent non-executive Director	7 hours	including compliance of listed company and corporate governance

Note:

1. Mr. ZONG Xiaoping and Mr. WU Zhigang served as the executive Directors of the Company from 23 May 2017.

### 1.8 Training for Company Secretary

Mr. WANG Jun and Mr. ZHAI Feng, the joint company secretaries of the Company, received relevant training in 2017, 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 four committees under the Board, namely the Audit Committee, Remuneration Committee, Nomination Committee and Risk Management 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 firm, 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 raised by the Company in respect of the misconduct made by the employees 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.

## CORPORATE GOVERNANCE REPORT

During the reporting period, the Audit Committee convened five meetings in total, which has reviewed and considered 13 resolutions. Among them: the Audit Committee of the second session of the Board convened two meetings in total, which has reviewed and considered 6 resolutions; the Audit Committee of the third session of the Board convened three meetings in total, which has reviewed and considered 7 resolutions.

In 2017, the Audit Committee convened five meetings in total, particulars of which are as follows:

The 15th meeting of the Audit Committee of the second session of the Board was held on 16 March 2017, at which the resolution on the Announcement of 2016 Annual Results and the Annual Report of the Company (《公司2016年度業績公告和年度報告》), the Report on 2016 Final Accounts of the Company (《公司2016年度財務決算報告》), the resolution on 2017 Financial Budget Report of the Company (《公司2017年度財務預算報告》), the resolution on 2016 Profit Appropriation and Dividend Distribution Plan of the Company (《公司2016年度利潤分配及股息派發方案》) and the resolution on 2016 Internal Control Evaluation Report of the Company (《公司2016年內部控制評價報告》) were considered.

The 16th meeting of the Audit Committee of the second session of the Board was held on 31 March 2017, at which the resolution on the Audit Expenses to Renew the International Auditor and the Domestic Auditor (《公司續聘國際核數師和國內審計師審計費用》) was considered.

The 1st meeting of the Audit Committee of the third session of the Board was held on 28 August 2017, at which the resolution on the 2017 Interim Report and the Announcement of 2017 Interim Results (《公司2017年中期報告及中期業績公告》), the resolution on Change of the Corporate Accounting Policy (《公司會計政策變更》), the resolution on the Financial Reports for the year of 2014, 2015 and 2016 and the period for the six months Ended 30 June 2017 (《2014、2015及2016年度及截至2017年6月30日止六個月期間財務報告》) and the resolution on the Report on 2017 Interim Internal Control of the Company (《公司2017年中期內部控制情況報告》) were considered.

The 2nd meeting of the Audit Committee of the third session of the Board was held on 30 October 2017, at which the resolution on the Financial Report for the Third Quarter of 2017 of the Company (《公司2017年第三季度財務報告》) was considered.

The 3rd meeting of the Audit Committee of the third session of the Board was held on 20 November 2017, at which the resolution on the Increase of the Audit Expenses on the 2017 Annual Report of the Company (《增加公司2017年報審計費用》) and the resolution on the Review Expenses on the Financial Report for the Third Quarter of 2017 of the Company (《公司2017年度第三季度財務報告審閱費用》) were considered.



## CORPORATE GOVERNANCE REPORT

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. SUN Chuanyao (independent non-executive Director), Mr. WANG Jun (independent non-executive Director) and Mr. FU Jun (independent non-executive Director). Mr. SUN Chuanyao<sup>(1)</sup> serves as the chairman.

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

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.

Note:

<sup>1</sup> Mr. SUN Chuanyao has resigned as a member and the chairman of the Remuneration Committee due to other business commitments. The position was taken over on 27 February 2018 by Mr. GUI Weihua.

## CORPORATE GOVERNANCE REPORT

During the reporting period, the Remuneration Committee of the second session of the Board convened one meeting, which has reviewed and considered three resolutions. The 3rd meeting of the Remuneration Committee of the second session of the Board was held on 16 March 2017 in China Aluminum International. The meeting has passed three resolutions, namely the Resolution to Consider the Remuneration of the Directors of the Company for 2017 (《關於審議公司2017年度董事薪酬的議案》), the Resolution to Consider the Remuneration of the Senior Management of the Company for 2017 (《關於審議公司2017年度高級管理人員薪酬的議案》) and the Resolution to Consider the Leadership Performance Remuneration Pre-payment Allocation for 2016 (《關於審議公司2016年領導人員業績薪酬預兌現分配方案》).

The attendance of the meeting is as follows:

Name	Position	Number of Meetings Attended/Held	Attendance
SUN Chuanyao	Chairman of the Remuneration Committee	1/1	100%
WANG Jun	Member of the Remuneration Committee	1/1	100%
FU Jun	Member of the Remuneration Committee	1/1	100%

### 2.3 Nomination Committee

The Nomination Committee consists of three Directors, namely: Mr. HE Zhihui, Mr. SUN Chuanyao<sup>(1)</sup> (independent non-executive Director) and Mr. FU Jun (independent non-executive Director). Mr. HE Zhihui serves as the chairman.

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 develop the selection criteria and the 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.

Note:

<sup>1</sup> Mr. SUN Chuanyao has resigned as a member and the chairman of the Remuneration Committee due to other business commitments. The position was taken over on 27 February 2018 by Mr. GUI Weihua.

## CORPORATE GOVERNANCE REPORT

In accordance with the requirement 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 approval and implementation. Detailed procedures are as follows: the Committee shall communicate with the relevant departments of the Company to examine the 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 second session of the Board convened one meeting, which has reviewed and considered one resolution. The 6th meeting of the Nomination Committee of the second session of the Board was held on 23 May 2017. Three members of the Nomination Committee attended the meeting and met the relevant provisions of the Articles of Association. The meeting reviewed and considered and passed the resolution on Nominating Mr. Zong Xiaoping as the Candidate of the President of the Company (《關於提名宗小平先生擔任公司總裁候選人的議案》).

The attendance of the meeting is as follows:

Name	Position	Number of Meetings Attended/Held	Attendance
HE Zihui	Chairman of the Nomination Committee	1/1	100%
SUN Chuanyao	Member of the Nomination Committee	1/1	100%
FU Jun	Member of the Nomination Committee	1/1	100%

## CORPORATE GOVERNANCE REPORT

### 2.4 Risk Management Committee

The Risk Management Committee consists of three Directors, namely: Mr. HE Zhihui, Mr. LI Yihua and Mr. FU Jun (independent non-executive Director). Mr. HE Zhihui serves as the 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 second session of the Board convened one meeting and has reviewed and considered two resolutions, details of which are as follows:

The 4th meeting of the Risk Management Committee of the second session of the Board was held on 17 March 2017, at which the resolutions on the Compliance with the OFAC Undertakings in 2016 and the Overall Risk Management of the Company for 2017 were reviewed.

The attendance of the meetings is as follows:

Name	Position	Number of Meetings Attended/Held	Attendance
HE Zhihui	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%

### 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/her 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.

## CORPORATE GOVERNANCE REPORT

### 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 2017.

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.

### 5. Compliance with the Code for Securities Transactions

The Company has adopted the Model Code for Securities Transactions by Directors of Listed Issuers (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.

## CORPORATE GOVERNANCE REPORT

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 systems 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 measures. 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 assessment report, risk assessment report and compliance report for the year, reviews the resources, employees' qualifications and experience 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 2017, 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 2017 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 Chalco (《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

## CORPORATE GOVERNANCE REPORT

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.

In terms of the disclosure of inside information, the Company has established standardized control procedures to collect, organize, validate, 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 2017, 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 submit to the Board any available data which is required to be submitted smoothly. 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 mobilisation 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

## CORPORATE GOVERNANCE REPORT

control systems of the Group by the Audit Committee and internal control department, the Board was of the view that, in 2017 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 2017, 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 coordinated 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 Chinalco the risk management statement.

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 Chinalco, 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 2017, 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 2017, the Board and the Audit Committee have heard and discussed the 2017 internal control assessment report of the Company while the Board and the Risk Management Committee have heard and discussed the 2017 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.



## CORPORATE GOVERNANCE REPORT

### 7. Auditors and their remuneration

PKF Hong Kong Limited and Wuyige Certified Public Accountants LLP were appointed as the international auditor and the domestic auditor of the Company in 2016, respectively, for the year ended 31 December 2017.

During the year, the total remuneration for audit and non-audit services provided by PKF Hong Kong Limited and Daxin Certified Public Accountants (Special General Partnership) was RMB6.8 million, including audit service fee of RMB4.0 million and non-audit service fees, in which fee charged for review of interim financial report was RMB1.4 million, the fee for listing of A Share was RMB0.5 million, fee charged for issuing the supplementary circular in relation to the Company's acquisition of Kunming Survey and Design Institute and Shandong Engineering was RMB0.2 million and fee charged for provision of specialised audit work for the Company's acquisition of Kunming Survey and Design Institute and Shandong Engineering was RMB0.7 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 132 to 133 of this annual report.

### 8. Shareholders' meeting

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

On 23 May 2017, the annual general meeting of 2016, the first Domestic Share class meeting of 2017 and the first H Share class meeting of 2017 were held by the Company, at which 31 resolutions, including the Directors' Work Report for 2016, the Supervisors' Work Report for 2016, the Report on Final Accounts for 2016 and the Financial Budget Report for 2017, were reviewed and passed.

The first extraordinary general meeting of 2017 was held by the Company on 20 November 2017, at which 4 resolutions, including resolution on general mandate to issue the onshore and offshore debt financing instruments by the Company were considered and approved.

The auditors attended the above four general meetings.

### 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.

## CORPORATE GOVERNANCE REPORT

### 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. 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 so 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](http://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 with 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.

## CORPORATE GOVERNANCE REPORT

### 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. During the year ended 31 December 2017, the Company has complied with all code provisions as 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 pages 65 to 82 of this annual report.

### 11. Investor Relations

#### 11.1 Investor Relations Activities

##### **Announcement of Results and Results Roadshows**

On 22 March 2017, the management of the Company held the 2016 annual results conference in Hong Kong to introduce the Company's 2016 annual operating situation and financial performance. Dozens of analysts from leading investment banks in the world attended the conference.

##### **Investors' Routine Visits**

In 2017, 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 50 announcements on the website of the Stock Exchange.

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Chalieco issued its first Environmental, Social and Governance (ESG) report in 2016. This is our second ESG report. It has been approved by the Board 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 subordinate enterprises in the fields of responsible governance, R & D, innovation, safety, environmental protection and engineering quality for the period of January 1st, 2017 to December 31st, 2017. The report follows the provisions on "comply or explain" and "recommended disclosures" of the *Environmental, Social and Governance Reporting Guide* of the Stock Exchange of Hong Kong Limited. 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

The Company takes seriously its responsibility for legal compliance. The Company reviews 100% of our economic contracts, rules, regulations and major decisions from a legal perspective. We also analyse, evaluate, and pre-warn for legal risks. The Company's essential decisions, important personnel appointments and dismissals, major project arrangements, as well as decisions on large funds operation must comply with the national laws and regulations, CPC rules and regulations and the Company's relevant provisions, in order to ensure legal compliance in both the contents and procedures of decision-making.

In 2017, the Company drafted the *Chalieco Optimisation Plan for Legal Affairs Management* to improve its legal management system. In order to enforce the execution of the plan, the legal personnel of Chalieco and its subsidiaries have established an interactive working system to improve efficiency. Chalieco organised legal personnel from its subsidiaries to attend centralised training to accelerate building of legal institutions and personnel.

The Company further deepens the daily management of legal affairs by contract review and self-inspection as well as by reviewing rules and regulations. In 2017, the Company carried out self-inspections on contract management, corrected irregularities during the process of reviewing contracts and signing procedures, and developed 18 contract templates. The Company established rules and regulations for the Company's headquarters and Beijing subsidiaries, including plans for their formulation, rectification and replacement.

### 1.2 Risk Management

Risk management is the fundamental guarantee of the fulfilment of an enterprise's development strategy. The Company strictly implements the *Detailed Rules for the Implementation of the Overall Risk Management of Chalieco*. Sticking 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.

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

The Company established three interactive and comprehensive lines of defence for risk management at different levels. Chalico 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.

▼ **Table: Three Lines of Defence for Risk Management in Chalico**

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	Audit Department and Discipline Inspection 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 effects of the Company's internal risk management system, and report to the Board.

### 1.3 Anti-Corruption and Integrity

The Company attaches great importance to establishing anti-corruption safeguards. We have developed a series of supervision procedures and documents, including *Measures on Internal Auditing*, *The Responsibility System for Combating Corruption and Building Clean Governance* and *Measures for the Prevention of Corruption in Leaders*, all of which laid foundations for the establishment of a complete internal control system and provide a solid guarantee of the Company's governance and long-term development. During the reporting period, the Group had no corruption case.

The Company actively looks to strengthen its anti-corruption measures and management processes. In the past 3 years, the Company has been developing specific management methodologies in the field of engineering construction according to the requirements of the "Six Prohibitions". In 2017, the Company organised 5 teams to inspect the project management of 13 key engineering project divisions and 10 subsidiary enterprises. Problems were identified and rectified, and relevant responsible persons were punished, all of which indicates our determination to guarantee compliant engineering construction. In addition, taking the opportunity of inspection by Chinalco – its parent group, the Company not only made serious changes and conducted a comprehensive review of the comments and suggestions proposed by the inspection team, but also carried out a specialized inspection for decreasing account receivable and inventory.

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

The Company strengthens the anti-corruption culture by a series of publicity and education activities on integrity supervision and integrity self-discipline. In 2017, the Company organised for 7 members of the senior leadership team and 56 employees ranked senior business manager or higher to sign letters committing them to “combatting corruption to build a clean company and party”. Chalieco also signed commitment letters with suppliers to establish a zero-tolerance system for corruption. The Company also reminded and educated the senior managers of all departments to further strengthen the deterrent effect.

### **Case: Innovatively Carrying out the Anti-corruption Public Education Month**

In June 2017, the Company carried out a one-month public education campaign themed “Strict Discipline, Improving Work Style, and Promoting Efficiency”. The discipline inspection committee of the Company targeted key opinion leaders including all Party members and leading cadres, and educated them on the penalties for corruption and policies to combat corruption, applying the lessons and spirit of the Sixth Plenary Session of the 18th CPC Central Committee. Anti-corruption measures were also promoted in small classes using examples from history and by reviewing the Party oath.

### **1.4 Social Responsibility Management**

The Company integrates the concept of social responsibility into the enterprise’s strategy and operational decision-making. It developed a pilot scheme for deepening the Company’s social responsibility and improved its procedures and structures for social responsibility management. In 2017, the Company conducted several learning events with the theme of strengthening social responsibility management, and organised specialized training on social responsibility to ensure the delivery and implementation of social responsibility. In 2017, the Company won the award “The Listed Company with the Best Investor Relations Management” at the China Securities Golden Bauhinia Award Ceremony.

#### **Stakeholder Communication**

Chalieco pays great attention to communication with stakeholders, promoting the Company’s corporate social responsibility concepts through various channels, vigorously turning concepts into actions, understanding stakeholders’ needs, and performing correspondent measures to meet stakeholders’ reasonable expectations and demands.

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Stakeholders	Expectations and Requirements	Communication and Response
Government and Regulatory Authorities	<ul style="list-style-type: none"> <li>Implementing national policies, laws and regulations</li> <li>Promoting local economic development</li> <li>Promoting the development of the industry</li> </ul>	<ul style="list-style-type: none"> <li>Reporting materials</li> <li>Offering advice and suggestions</li> <li>Special reports</li> <li>Negotiation and cooperation</li> </ul>
Shareholders	<ul style="list-style-type: none"> <li>Revenue and returns</li> <li>Compliant operations</li> <li>Safe production</li> </ul>	<ul style="list-style-type: none"> <li>Company announcements</li> <li>Special reports</li> <li>Field visits</li> </ul>
Customers and Partners	<ul style="list-style-type: none"> <li>Fulfilling contracts within the law</li> <li>Integrity in operations</li> <li>High quality products and services</li> </ul>	<ul style="list-style-type: none"> <li>Business communication</li> <li>Customer feedback</li> <li>Exchange and discussion meetings</li> </ul>
Environment	<ul style="list-style-type: none"> <li>Compliant emissions</li> <li>Energy conservation and emission reduction</li> <li>Ecology protection</li> </ul>	<ul style="list-style-type: none"> <li>Work reports</li> <li>Report submission</li> <li>Visits and investigations</li> </ul>
Employees	<ul style="list-style-type: none"> <li>Protecting employee rights</li> <li>Occupational health</li> <li>Compensation and benefits</li> <li>Career development</li> </ul>	<ul style="list-style-type: none"> <li>Employees' congress</li> <li>Collective negotiations</li> <li>Democratic communications platform</li> </ul>
Community and the Public	<ul style="list-style-type: none"> <li>Improving the environment of communities</li> <li>Participation in public service</li> <li>Openness and transparency</li> </ul>	<ul style="list-style-type: none"> <li>Company website</li> <li>Company announcements</li> <li>Interviews and communication</li> </ul>

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

### Materiality Analysis

In order to understand the ESG expectations and demands of stakeholders, we have identified material issues for sustainable development by conducting a materiality analysis. With reference to the *Environmental, Social and Governance Reporting Guide* and the *Sustainability Reporting Guidelines (G4.0)*, we established a standardised 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, the Company has identified material issues as the basis of the Company's sustainable management objectives.



#### Analysis of Topics for Environmental, Social and Governance

##### Topic Sources

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

##### Screening Standard

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

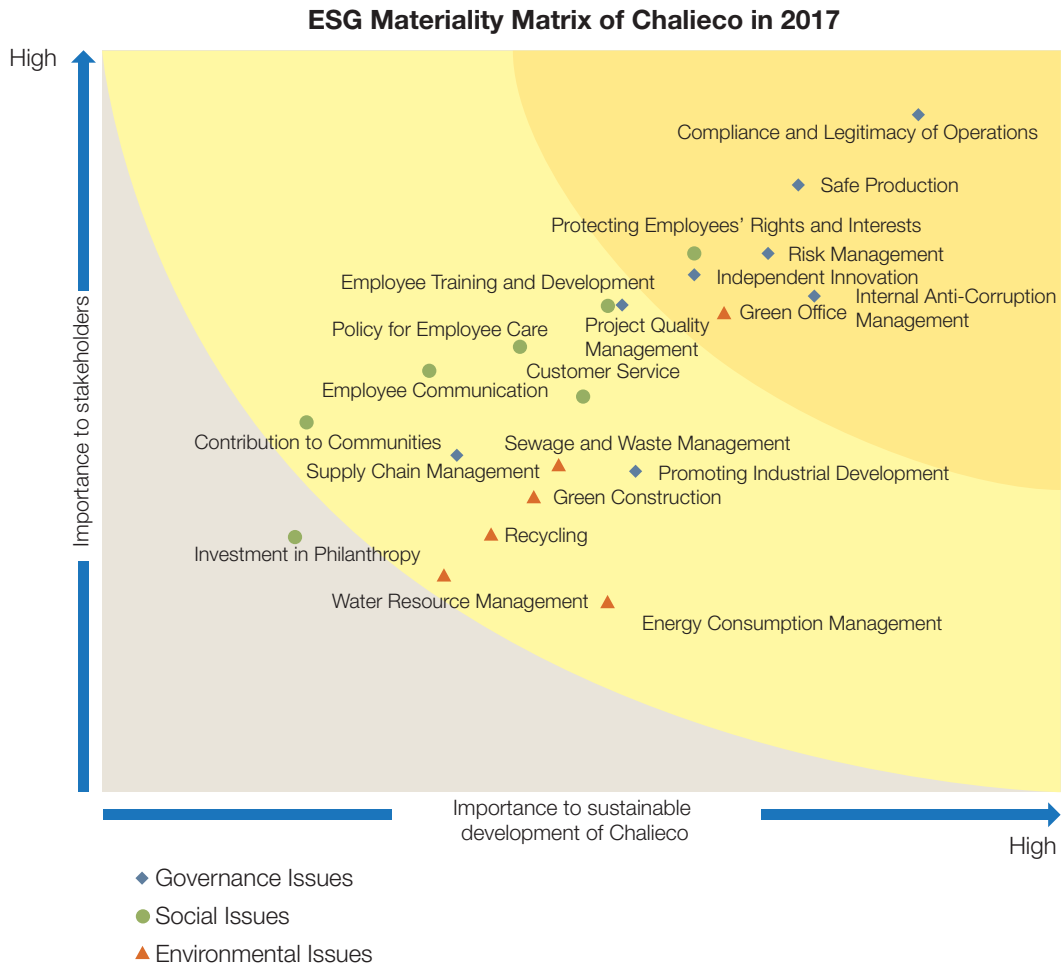
##### Results of Materiality Analysis

In 2017, we conducted an anonymous online survey online to choose and prioritise ESG issues. We invited government, regulatory departments, customers, partners, suppliers, communities, the public, employees and other internal and external stakeholders to complete the survey, to assess the importance of 21 ESG issues in the areas of corporate governance and development, environment, labour and community, and the value chain. Following an internal review process a materiality matrix was finalised. This Report discloses the Company's ESG management and performance data in line with material issues.



## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

The result of the ESG materiality analysis of Chalieceo in 2017 is as follows:



## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

### 2. STRENGTHENING THE LEADING POSITION BASED ON INNOVATION

The Group is an industry leader based on its research and development of science and technology. It focuses on the protection of intellectual property rights, makes breakthroughs constantly on promoting technical innovation and always maintains stability and a high success rate for patent applications and other protections. In addition, the Group also seeks cooperation with external R&D resources to promote collective industrial progress.

#### 2.1 Building a Solid Foundation for Scientific Research

The Group always regards innovation as the key to drive enterprise development and to promote strategic transformation. Therefore, management of scientific innovation work and the incentive mechanisms are particularly important. In 2017, the Group invested RMB754.9 million in science and technology research and innovation.

The Company has standardized its scientific research and its management processes and formulated the document *Scientific Research Management Provisions of Chalieco*. In order to create an atmosphere good for scientific innovation, the Company encourages employees to make large quantities of good achievements so as to enhance the core competitiveness of the Company. Scientific and reasonable performance evaluation and incentive mechanisms have been formulated based on the *Interim Measures of Chalieco for Technology Innovation Award*, *the Interim Measures of Chalieco for Special Work Performance Reward for Engineering Aluminium* and other systems in order to sufficiently mobilize the creativity of scientists and engineers and to enhance their enthusiasm. In addition, the Company and its subordinate research institutes will use 3-5% of their revenue as scientific research and development expenditure, which has built a solid foundation for the sustainable development of the Company's scientific research.

During the reporting period, 11 scientific research achievements of the Group, including the "Online Mining Intelligence System", have been appraised and confirmed by the Industrial Association and other related departments. Of these, three achievements have been respectively awarded as the first, second and third prizes in a provincial or ministerial level competition awarded by the Nonferrous Metal Association. The patent for "electrified welding method and equipment for aluminium electrolytic cell under series full current" won the 19th Session of China Outstanding Patent Award.

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

### 2.2 Protecting Intellectual Property

To protect scientific research achievements, the Company has formulated the *Patent Management Measures of Chalico* to standardise patent work, popularise knowledge on intellectual property rights and arouse the enthusiasm of employees for invention. In this way, the policy and goals of “serve the nation, open to the world” can be better implemented.

The Group has established an intellectual property management strategy and system and has included patent management into daily work processes. In the management mode of “full-time personnel + information platform”, stable and efficient patent application, reserving and maintenance work can be ensured. The Group has built the competition information platform in the technical market which has been launched for operation and used in the Group. This platform contains embedded scientific and technological information, market trends, special retrieval and other functional modules. It can provide convenience and technical support for the Group to promptly track and search for information on intellectual property.

In 2017, the Group also maintained a leading position in the industry as regards intellectual property. During the year, we were awarded 246 domestic patents and 9 international patents. We applied for ministerial recognition of 23 new process and engineering methods. As of the end of the reporting period, the Group has been granted 4,909 domestic patents and 129 international patents. Shenyang Institute, Guiyang Institute and other subsidiaries of Chalico have been recognised as national intellectual property demonstration units, provincial and municipal intellectual property outstanding enterprises and other honours.

### 2.3 Promoting Technical Innovation

Adhering to being oriented to market demands, the Group has been striving to accelerate the pace of technological innovation, improve the efficiency of the industry and promote the development of science and technology. In 2017, the Group achieved breakthrough progress in technological and technical innovation and information technology, such as a new method for the production of aluminium oxide from low grade bauxite, and preparing pavement base materials using red mud and other solid wastes.

#### Technological Innovation

In 2017, the Group conducted innovative R&D work based on Pan’s sintering method for the production of aluminium oxide from low grade bauxite. After verifying and optimising the preliminary results three times in the laboratory, the standard solution of alumina was improved from 87% to 93%. In 3+2 pilot-scale tests, the full-process simulation of alumina production by the sintering process and the full-process simulation of multiple process together with the Bayer’s process has been completed. Through improving the formula, material preparation with low reduction ratio has been realized. Therefore, the multiple process combining with Bayer’s process became possible. With a rough estimation, the comprehensive cost for the production of alumina by Pan’s sintering method with low grade (less than 4) bauxite at the Al-Si ratio is close to the ordinary Bayer method. More importantly, red mud can be completely disposed of to achieve zero discharges.

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

### Innovation of Environmental Protection Technology

Bearing in mind the concept of green development, the Group is focused on the bottleneck of environmental protection technology in the industry, has devoted itself to the long-term development of environmental protection technology and has achieved some impressive results. In terms of water saving, in order to solve the technical problem of the efficient purification of bauxite tailing sewage, the Group has developed an advanced treatment and recycling technology for this waste. The method, which effectively removes suspended particles and organic matter from the tailing sewage enables the treated waste to be used in the production process. In energy saving, the Group conducted research and development based on “The First Alumina 4# Baking Furnace Flue Gas Waste Heat Utilisation Project of Chalco Shanxi Branch” and achieved success in heating using the waste heat of flue gas from the alumina baking furnace, thus solving the difficulty of the recovery and utilisation of waste heat of low-temperature flue gas below 200 °C .

In 2017, the Group teamed up with University of Science and Technology Beijing to work on the research and development project “collaborative preparation of pavement base material technology using red mud and other types of solid waste”. The results of this project have been successfully authenticated in a scientific research achievements assessment organised by China Building Materials Federation. This technology makes full use of the complimentary characteristics of different kinds of solid wastes. It is a green, environmental friendly and efficient channel for the comprehensive utilisation of red mud and other industrial solid wastes and has considerable application potential in road construction, eliminating the potential environmental danger of red mud and other waste products.

### Innovation of Informatisation Application

The Group vigorously promotes the application of the BIM technology. The BIM technology can be used to achieve 3D demonstration of the processes of a construction project. In particular, it can demonstrate new technologies for energy saving in buildings using BIM modelling. This technology shows customers the whole process of engineering construction, and helps them to understand key construction processes, key technologies, and cost controls. So far, more than 50% of the Group’s large projects have adopted the BIM technology for collaborative design. Relevant training, revision of 3D design standards, and the improvement of rules and systems are performed in synchronized way. In 2017, the Ruzhou Financial Building Engineering Project Department of the Group won the Best BIM Construction Application Award at the third session of the Scientific Innovation Cup, awarded by the China Architectural Information Model Science and Technology Innovation Alliance.

The Group has taken the lead in the non-ferrous metal processing field by creating a big data technical service centre. An intelligent service platform for spare parts of non-ferrous metal processing equipment developed by China Nonferrous Metals Processing Technology has been formally put into operation. The Group is currently integrating and building a big data sharing platform for mining enterprises, which can provide remote diagnosis and other professional services. At the same time, a data remote diagnosis and service centre serving electrolytic aluminium enterprises is also in preparation. After the building of this platform, professional support and technical guarantees can be provided enabling cost reduction and efficiency improvements for electrolytic aluminium enterprises.

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

### 2.4 Promoting Industrial Development

The Group always keeps in touch with the Non Ferrous Metals Industry Association, China National Association for Non-Ferrous Metals Industries Construction, the China Construction Industry Association and other industry organisations. Chalico actively participates in symposiums for directors of national scientific research and design institutes, and conferences held by the China Intellectual Property Research Association, the aluminium branch of the Non-Ferrous Metals Industry Association and the Design Branch of the Non-Ferrous Metal Construction Association. The Group has also joined the Pollutant Discharge Permission Technical Alliance and the Environmental Protection Stewardship Technical Alliance.

Through cooperation with external research and development resources, the Group has constantly promoted cooperation between the industry, universities and research institutes. In 2017, the Group completed the project “alumina production from low grade bauxite” working with the Beijing Weiranxin Company and Chang An University, a carbon roasting desulphurisation project with GE and various projects in cooperation with Kunming University of Science and Technology, Central South University, the Guangzhou Institute of the Chinese Academy of Science, Beijing University of Science and Technology and other research institutes.

In 2017, the Group led and participated in the compilation of 45 national standards and industrial standards, including the national standards, *Aluminium Alloy Structure Technology Standard*, the *National Building Standards Design Atlas for Pressing Metal Plate Construction*, and the industry standards, *Electric Welding Standards for Aluminium Cell*, *Design Standards for Alumina Plant Ventilation and Flue Gas Purification*. Such standards are applied in ten fields, including light metal smelting, heavy metal smelting, environmental protection and others.

## 3. GUIDED BY SAFETY AND BUILDING GREEN DEVELOPMENT

As a leading comprehensive engineering company in the industry, the Group positively respond to requirements of the 13th Five-Year Plan on reinforcing work safety and protecting the eco-environment. Chalico has firmly held to the idea of safe development and green development, and always sticks to the fundamental principles of safety first and comprehensive control. It spares no effort to achieve the objectives of zero incidents, zero injuries, zero pollution and zero losses, to provide strong support for the sustainable development of the Company from the perspectives of safety and environmental protection.

The Group strictly complies with the *Environmental Protection Law of PRC*, the *Work Safety Law of PRC* and other national laws and regulations and relevant industrial codes. Based on related standards, the Group has established and improved its quality, environment and occupational health and safety management system (QHSE), developed a *Manual of QHSE Management System*, and issued documents such as the *Environmental Factor Identification and Evaluation Control Procedures*, *Hazard Identification, Risk Evaluation and Risk Control Procedures* and others. These measures have made the company well equipped to identify environmental factors and manage environmental and safety risks. In this way, the overall environmental and safety management level of the Group has been improved.

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

### 3.1 Implementing Safety Management

To standardise safety management at project sites and contain work safety accidents, the Group has constantly improved safety management mechanisms and taken measures to address work safety issues. In 2017, there were no work-related injuries or fatalities in the Group.

#### **Safety Management**

The Company requires that all subsidiaries must establish completely independent safety management organisations, configure adequate safety management staff, maintain a post of safety and environmental protection chief engineer and establish a team of experts for safety and environmental protection. All subsidiaries should comprehensively implement the grass-root safety staff appointment system. It is required that the safety management staff of the secondary units and project departments of various enterprises should be directly appointed by the EHS Department of various enterprises. The one being appointed must be trained on work site safety management knowledge organised by the EHS Department of various enterprises before working, pass the exam and obtain a safety management training certificate. The EHS departments of various subsidiaries should perform business guidance, work supervision, annual examinations and qualification examinations of safety management staff so as to promote efficient safety performance. In 2017, subsidiaries of the Company appointed a total of 506 safety management personnel.

The safety performance of employees is linked to their salary. Employees are required to sign the “List of Two Responsibilities for One Post in Safety Work”. Employee’s safety responsibilities, safety ideas and quantified safety performance will be specified in this list. The check-up system of “work performance based on the list, responsibility investigation based on the list and responsibility exemption based on the list” should be comprehensively implemented. In 2017, Group staff signed a total of 10,745 copies of the responsibility list. We invited an independent third-party organisation to conduct safety inspections and the results are included in the annual safety performance assessments of the various subsidiaries. In addition, any employee reporting a safety danger will be rewarded.

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

### Safety Guarantee Measures

The Group has formulated the policy document *Eight-Prohibition Regulations for the Commencement of Construction Projects*. According to the regulations, construction is prohibited if full-time safety management staff are not well configured, if production safety responsibilities are not formulated, if the safety protection plan is not approved, if the special safety fund allocation fails to meet standards, or if the safety risk deposit has not been paid. The Group has also compiled the *Atlas of Safety Protection Standard on Construction Sites* to unify, regulate and standardise safety protection signs used on construction sites. According to the regulation, it is required that hazard warning signs, civilized construction signs, safety warning mirrors, safety publicity bulletin boards and colour flags are installed according to requirements. Protection measures must be taken for rebar processing sheds and woodworking sheds.

To ensure employee safety, the Group has formulated and is implementing the *KPIs, Plans and Control Procedure of EHS*. The policy specifies the objectives of occupational health and safety and responsibilities of each department. The Group carries out occupational health and safety training programs, provides qualified PPEs to those employees exposed to long-term occupational hazards, regularly organises health examinations and has established a ledger for physical examinations. These measures sufficiently ensure the health and safety of employees and effectively prevent occupational diseases and injuries.

#### Case: Organizing Work Safety Inspections

In 2017, the Company organised work safety inspection, aiming to rectify the safety problems of its subsidiaries, secondary units, project units, workshops and teams. If problems could not be immediately rectified, a list of problems had to be made according to the “five-confirmation” principles (i.e. to confirm the person responsible for rectification, the rectification measures, the date of completion, the person for rectification, and the person for the acceptance of rectification). At the end of the reporting period, no major hidden safety hazard or problem had been detected.

### Emergency Management and Drilling

The Group has established sound emergency response mechanisms and set up a team for emergency and crisis management. It has formulated an *Emergency Response Plan* and a *Fire Safety Emergency Plan*. For holidays and other sensitive periods, staff will be rostered for duty in case of emergency. The Group also regularly organises emergency drills to efficiently improve the emergency response capabilities of employees. For overseas projects, we have formulated the document *Overseas Emergency Disposal Plan of Chalieco* and has established a leadership team with responsibility for overseas emergency management. Emergencies are divided into three levels based on their nature and extent, response measures are specified for each level.

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

The Group requires that all subsidiaries regularly carry out fire drilling activities and thoroughly check and maintain all fire-fighting facilities and equipment. In 2017, the Group carried out 303 safety drills in total for a duration of 8,848 man-hours.



▲► Figure: Fire Drill by the Head Office of the Group

### Supervising the Safety of Contractors

According to the regulations of Chinalco, subsidiaries should check and evaluate their contractors' qualifications, systems, performance and ability, sign safety agreements, evaluate the contractor's safety ability, set up a safety baseline, train the contractor on safety issues, make technical disclosures on safety, strengthen construction supervision of contractors and implement safety evaluations. Contractors with poor safety performance, poor on-site management ability and lower grades of qualification will be eliminated. Based on the "Seven-Steps" and "Five-Musts" regulations, the Company strictly regulates contractors' construction procedures and ensures that the construction plans MUST be compiled before construction; the construction plan MUST be approved or demonstrated based on the regulations; safety technical disclosures MUST be performed before construction; the construction plan MUST be observed during construction and that a process after completion MUST be accepted as qualified before entering the next process. To ensure that only relevant persons and qualified workers can enter construction sites, the entrance access system must be installed for construction projects over RMB50 million.

### 3.2 Improving Safety Awareness

In the implementation process for safety management, employee's safety awareness and the enhancement of their related skills are critical. The Group effectively supervises employees to standardise safety operation and establish safety risk awareness through training, publicity and education.



## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

The Group pays attention to safety education and training and adopts the model of combining external training, internal training and innovative on the job training. Employees who are new, transferred to other positions or restored to a position after leaving for an extended period will be trained and must obtain certificates before working. Anyone in charge of employees doing specialised or hazardous work will be trained to review and maintain special qualifications. The Company sufficiently implement full-staff safety certificate training, grass-root safety staff appointment training and annual review work. For high-risk posts, the “master instructing apprentice” system will be adopted to ensure a 100% safety training rate. In addition, all subsidiaries also actively carry out special training on safety culture, safety and environmental execution, safety production standardisation, safety risk ranking and control, contractor safety management and others. In 2017, the total hours for staff safety training in the Group was 519,778 and the coverage rate of safety training was 100%.

The Group carries out safety education in order to create the atmosphere of a safety culture. Based on daily management systems, the Group requires of all subsidiaries that information on safety accidents ranking “ordinary” and above should be sent to all secondary units, workshop teams and the project departments to share case studies within 10 working days. In 2017, the Group also organised for representatives from 10 member units to participate in a work safety knowledge contest on a series of safety, environmental protection and other special actions of the Company in order to communicate to subsidiaries and contestants the Group’s safety ideas. In addition, several subsidiaries also built safety experience halls at project sites to educate construction workers on safety in pleasant and experience-based way.

### Case: Establishing a Safety Experience Hall for Innovative Safety Education

In 2017, Sixth Metallurgical Company, Ninth Metallurgical Company and Tianjin Construction established safety experience halls, where educational activities addressing such issues as steel rope use, electricity use, safety helmets, safety belts, holes and fall risks were installed. Sixth Metallurgical Company and Ninth Metallurgical Company also established VR equipment to this end.



▲ Figure: Safety Helmet Collision Experience

◀ Figure: VR Safety Experience

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

### 3.3 Green Construction

The Group requires all subsidiaries to choose construction sites reasonably, and to take energy saving and water saving measures at construction sites to effectively control building waste, noise pollution, dust pollution, water pollution and other environmental problems. The Company rationally chooses construction sites rationally and protects the surrounding environment. In 2017, the Group had no environmental pollution accidents.

#### **Solid Waste Disposal**

Construction waste mainly includes dregs, waste rocks and other materials. The Group has established unified management regulations on the discharge and disposal of waste, which must be strictly complied with by all subsidiaries.

For general solid wastes, we give priority to recycling. For example, Shandong Engineering recycles foundry waste sand and waste steel scrap in production, which will be crushed first and then classified by magnetic powder equipment. The iron is supplied to the steel plant, with the remainder used for rural road construction. For hazardous waste, such as waste paint, asbestos and materials used for anti-corrosion and thermal insulation, they will be subject to classified storage and proper reservation. Appropriate measures are taken to prevent environmental pollution caused by leakage, loss, flying dust or from any other cause. Hazardous waste is regularly sent to a qualified third party for further disposal. Other non-hazardous but unrecoverable waste is sent to the environmental sanitation department or the entrusted unit for centralised shipment to a waste yard for disposal. Additionally, if there is a solid waste disposal subcontractor, the Company also supervises and checks the subcontractor's solid waste management and disposal work.

#### **Noise Prevention**

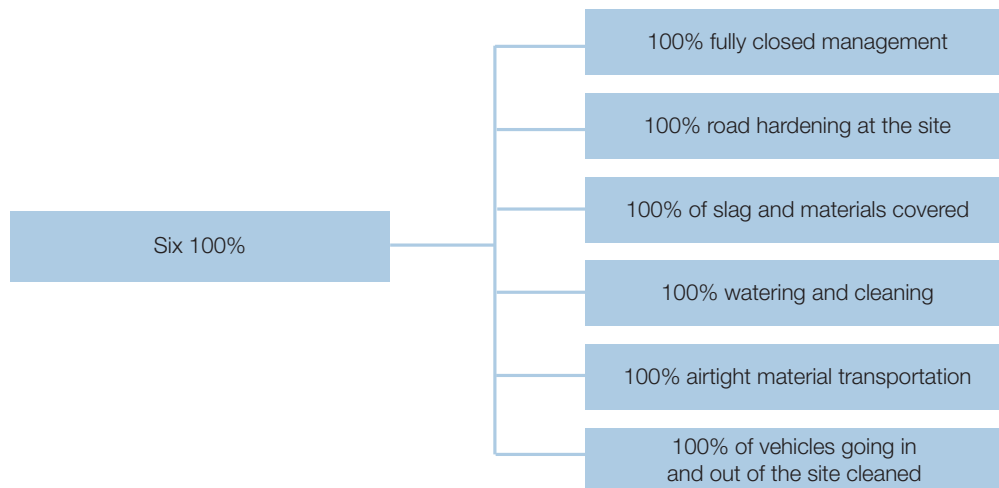
The Group follows the *Environmental Noise Pollution Prevention and Control Law of PRC* and other related national laws and regulations, taking various measures to effectively control noise during construction so as to minimise the impact on surrounding communities and construction workers.

We strictly manage construction time and avoid construction work at night as far as possible. For example, the Changsha Institute explicitly stipulates that high-noise equipment should not be used from 10:00 pm to 6:00 am. If equipment producing high-noise is used for construction during this period for some special reason, approval formalities must be completed with the local environmental authority in advance and announcement must be made to surrounding residents.

According to the requirements of the Group, construction fences must be set up at sites for full-closed management. For very noisy equipment, such as air compressors, rebar cutters and others, isolation measures must be taken. In addition, noise reduction equipment must also be installed. For example, a noise reduction screen is used by Ninth Metallurgical Company for its rebar processing shed and the woodwork shed. Machines should be checked regularly and maintained in order to reduce the noise generated by running machines with defects and or that are over-used. The Group emphasises the use of safety protection equipment and stipulates that all employees entering the site must use appropriate hearing protection devices based on site noise hazard signs.

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

### Dust Reduction



▲ **Figure: The “Six-100%” Objectives**

The Company requires comprehensive control of dust pollution at construction sites and developed the objective of “Six-100%”. According to “Six-100%” objective, construction sites should be full-closed. All roads at the site must be hardened. Slag and other materials likely to produce dust should be fully covered. Materials should be shipped in airtight way. Roads should be watered and swept regularly. Vehicles moving in and out of the site should be cleaned regularly. All subsidiaries should take appropriate dust reduction measures according to the actual situation of the project. For example, Twelfth Metallurgical Company sets up spray gun machine at construction sites and installs spraying equipment on both sides of the road. All exposed soil at sites is covered by dense net. Personnel responsible for road watering and cleaning are designated every day. Drainage ditches are also built on both sides of roads. The vehicle washing pool is cleaned by special personnel. Changcheng Construction ensures airtight coverage of slag and materials likely to generate dust at construction sites and sets up dust-proof nets according to the standard with water spraying performed regularly. Meanwhile, Changcheng Construction plants grass in soil that is exposed for an extended period to effectively reduce dust pollution.

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

### Energy and Water Conversation

At construction sites, subsidiaries take actions to save energy mainly by installing solar street lamps and solar water heaters. One measure taken to save water resources was installing rainfall collection systems to enable secondary utilisation of water resources for purposes such as vegetation watering, toilet flushing and vehicle washing. Another measure taken relates to sewage discharging reduction and avoiding unnecessary waste. For example, Ninth Metallurgical Company sets up a sedimentation tank in its vehicle washing station. Water in the sedimentation tank is connected to the vehicle washing station for recycling.

### Sewage Treatment

All subsidiaries responded to the Group's call for the treatment of domestic sewage and production sewage to meet standards at the project site to avoid environmental pollution. Sixth Metallurgical Company discharges domestic sewage into municipal sewage pipes and applies sedimentation treatment to sewage after concrete mixing, reducing suspended solids and adjusting the PH value of sewage to ensure that sewage after treatment can be close to neutral before discharge. Waste acid solutions used for pipeline installation are stored centrally and are entrusted to a qualified sewage treatment station for further disposal.

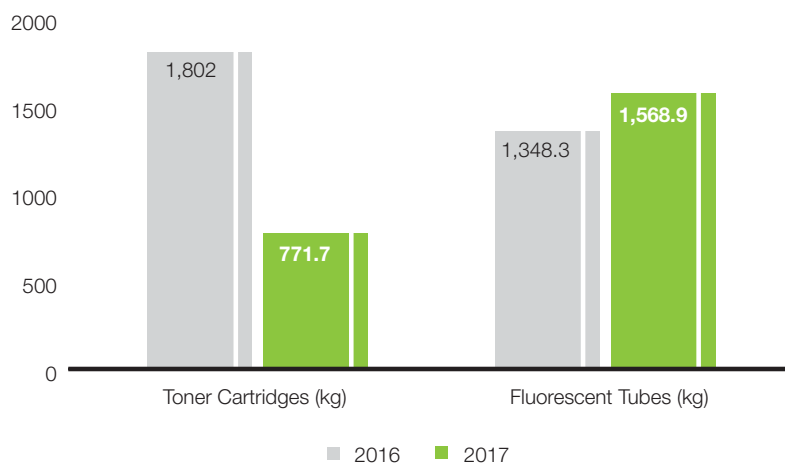
### 3.4 Green Office

The Group applies the idea of being green and protecting the environment to each detail of its office operations and is engaged in building an environmental friendly enterprise. Subsidiaries are encouraged by the Group to implement policies promoting environmentally friendly office facilities. Shenyang Institute (SAMI) replaced LED lamps in its office buildings in 2017, saving 90,000 kWh of power this year. Tianjin Construction installed water saving facilities and saved 5 tons of water this year. The Group pays attention to improve employee's low-carbon and environmental protection awareness and regularly carries out publicity activities on green topics such as clean air, green travel, water saving and protection, and waste reduction and classification. At the same time, the Company makes effort to guide employees to convert their resource conservation awareness into action, regularise power-using equipment, and the standard use of paper and water resources, and promote vehicle sharing for business travel. Tianjin Construction comprehensively promotes an information-based, network-based and paperless office, and encourages employees to use paper on both the front and the back for printing. As a result, 15% less paper was used than in 2016. Employees are directed to turn off computers, printing machines, air conditioning, lamps and other power-using equipment after work; special personnel are designated to check. About 100,000 kWh of electricity is saved by this measure every year.

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In 2017, the Group discharged wastewater 1,553,475.4 tons and hazardous waste 2,340.6 kg in total. Total generation of general solid waste were 349.7 tons, 111.1 tons of which were kitchen waste, reducing 49% than in 2016.

**The Hazardous Waste of Chalieco in 2016 and 2017**



**Table: The Resources Consumption of Chalieco in 2017**

	2017
Total Energy Consumption (tons of standard coal)	12,294.5
Total Energy Consumption per 10,000 Yuan Revenue (tons of standard coal)	0.00341
CO <sub>2</sub> Emission Equivalent (tons)	58,354.1
Emissions of CO <sub>2</sub> Equivalent per 10,000 Yuan Revenue (tons)	0.01616
Total Water Consumption (tons)	2,964,730.2
Total Power Consumption (kWh)	41,929,637.8
Nature Gas Consumption (m <sup>3</sup> )	2,017,826
Fuel Consumption (L)	3,596,903.7

### 3.5 Promoting Environmental Protection Technology

The Group vigorously promotes mature environmental protection technology. On one hand, we use technical advances to undertake green environmental protection projects and to engage in environmental management. On the other hand, we help our clients to improve their environmental protection technology to reduce energy consumption in production.

On environmental protection and pollution control, the Group actively pursues green goals, such as controlling and reducing water and air pollution, restoring soil, in dealing with solid waste and hazardous waste, and by utilising integrated recycling. Changsha Institute has established a Department of Environmental Protection and Investment and Financing Business to track and handle projects that require hazardous waste management, black and foul water treatment, industrial parks for environment protection, and similar.

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

In terms of innovation in environmental protection, the Group has developed technology including non-ferrous industry waste heat utilisation, acid production waste heat recycling, saturated steam waste heat power generation and other waste heat recycling. We also use energy-saving and compact full oil recycling, rolling oil regeneration and other material recycling technologies in melting furnace dust removal, sewage treatment and zero discharge, waste emulsion treatment, workshop environment management and other pollution reduction. In terms of improving energy utilisation rates, the Company vigorously promotes aluminium reduction cell “multi-parameter balance” control technology, which supports real-time monitoring and intelligent control of various indexes of the aluminium reduction cell so as to ensure minimum energy consumption with high efficiency. After adopting this technology, electric current efficiency is increased by about 2%; the virgin aluminium DC power consumption per ton is reduced by 200-300 kWh, aluminium fluoride consumption is reduced by about 2-4 kg per ton, as a result, emissions of fluoride and greenhouse gasses were significantly reduced.

At present, this technology has been applied by many large aluminium companies, such as Huaren, Hualei, Huaning, Yunnan Aluminum, Chongqing Qineng, Guangyuan Aostar, Qinghai Baihe, India Vedanta, and etc., and has brought considerable direct and indirect economic benefits.

### 4. RESPONSIBILITY FIRST AND PRACTICING CORE VALUE SYSTEM

We are always concerned with the needs of our stakeholders and seek to create quality benchmark projects that exceed the expectations of our customers. We establish sustainable industrial chains through building sustainable and responsible supply chains, and we will also perform our responsibilities in responding to national strategies and enhancing community well-being.

#### 4.1 Focusing on Project Quality

We insist on strengthening construction quality and treat it as a basic and long-term requirement. While creating sustainable engineering value for our customers, we constantly improve our engineering quality management level. The Company has established a sound quality management system, and promoted its application in the whole Group through developing a *QHSE Management System Manual* and other corporate documents. The quality management system defines the responsibilities and authorities of the relevant departments and personnel at all levels for quality management. It also stipulates the quality assurance measures of the whole process, which include the formulation of the project quality management plans in the preliminary design stage of a project, the quality control and inspection in construction, and the quality performance evaluation after the completion of project to fully ensure the suitability of the implementation process and conformity of the product.

Customer satisfaction is an important part of quality management. Throughout the project management process, we aim to increase customer satisfaction by identifying and understanding customers' current and future needs, and provide products that meet our customers' requirements. We communicate daily with customers by means of regular production meetings, review meetings and visits. After a project is completed we use project return visits and customer satisfaction questionnaires to understand the extent to which products respond to customer requirements and expectations. At the end of the year, customer surveys and feedback information will be aggregated and classified to form a “customer satisfaction analysis report” for the whole Group, which will be submitted to a management review meeting to analyse existing problems and formulate targeted improvements.

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

▼ **Table: Key Initiatives to Enhance Chaliece's Quality Management in 2017**

Engineering Quality Inspection	At the beginning of the year, the Group began conducting total engineering quality inspections and requested all subsidiaries to conduct comprehensive self-inspections and rectifications
Quality Caution Education Conference	In June, the Group organised a quality warning education conference for the whole enterprise, coordinating and solving all kinds of problems existing in each project construction, and pursuing responsibility and accountability for engineering quality problems. Thus, the concept of "quality is the life of the enterprise" was set up.
Quality Month Activities	<p>In September, a series of Quality Month activities were carried out in the whole Group:</p> <p>The subsidiaries carried out quality inspections and quality management training;</p> <p>To create a strong atmosphere of quality management by posting posters, slogans and other activities;</p> <p>The "knowledge contest of total quality management" was organized with a total of 3,836 employees involved.</p>
Benchmarking Project Visiting	At the beginning of the year, the establishment and promotion of benchmarking projects was begun to promote the formation of an atmosphere conducive to the stated goal of "creating the international brand of Chaliece and striving for the gold standard", and a Group-wide benchmarking project conference was held in December.
Third-Party Inspection	The Group invited third-party agencies to carry out quality risk assessment of the projects under construction in 10 sections of 10 subsidiaries and strengthen on-site quality management

In 2017, the Group received more than 50 outstanding engineering awards at the provincial and ministerial level and above. At the 2017 National Non-Ferrous Metals Industry Excellent Projects Visiting Conference, the Group introduced its quality management experience from the Hualei and Southeast Copper projects to more than 300 representatives of the national non-ferrous metal system, which won wide acclaim from the industry and set a good image for the Company's quality management.

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

### **Case: Mian County General Hospital Project Constructed by the Ninth Metallurgical Company Won the Quality Project Award**

Mian County Project Department insisted on a model approach in the construction process. They implemented the Company's standardisation manual and strengthened the application of informatisation. The project was awarded "Metallurgical Quality Project" certification by the China Metallurgical Construction Association and "National Quality Engineering" by the China Construction Enterprise Management Association

- **Planning First:** At the beginning of construction, they set clear project quality objectives, made quality control measures, and determined construction difficulties and focuses for quality control according to project characteristics.
- **Model Approach:** Before large-scale construction, each part of the project entity model was made so that construction workers and managers were clear about the construction standards, quality inspection and acceptance criteria of each project. Thus, good project quality was achieved.
- **Standardized Management:** Strengthen the standardised management of the process and strictly implement the three-inspection system.
- **Apply information technology:** Produce QR code of construction quality standards and quality acceptance standards, which was convenient for construction workers and quality inspectors to be able to check at any time; BIM modelling was used for 3D visualization technology to make engineering nodes and details clearer.

### **4.2 Optimising Supply Management**

Excellent suppliers are essential for project quality compliance. The Group followed the principle of "unified management, two levels responsibilities, dynamic assessment, survival of the fittest, and win-win cooperation" and strictly implemented a series of supplier management systems such as *Supplier Management Measures for Chalieco*, *Interim Measures for Credit Management of Customers and Suppliers* and *Procurement Control Procedures* to establish a comprehensive management system for suppliers which includes their admittance, evaluation and exit.

To admit a supplier, we do not only verify attestation materials including suppliers' business certification, qualifications and business reputation, but also organise on-site inspections as necessary. In addition, we take the supplier's quality, environment and QHSE management system and related qualification as prerequisites for admittance, those with energy-saving and environment-friendly products are given priority.

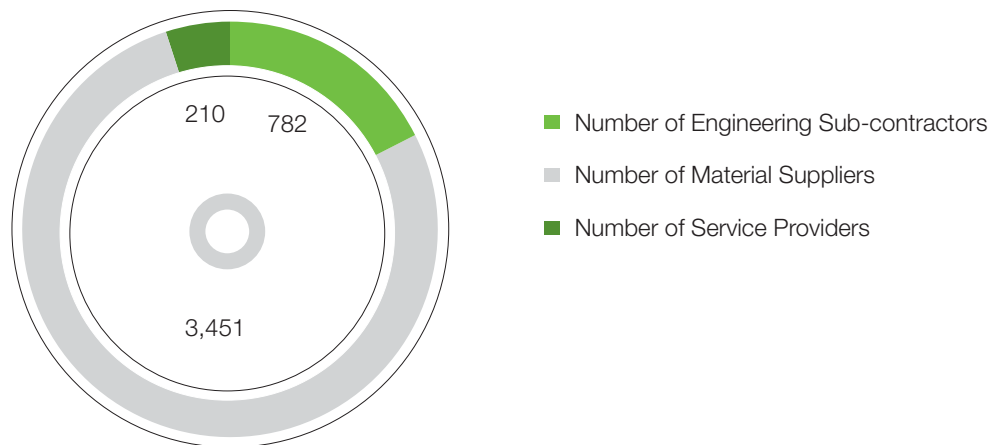


## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

We evaluate suppliers through regular monitoring, site visits, regular dynamic quantitative assessment, compliance reviews and other measures. To keep improving supplier resources the Group and its subsidiaries organize at least one regular supplier assessment every year, and set incentive measures according to the assessment results. A-level and B-level suppliers are given preferential policies such as order sharing, improved payment terms etc. In order to encourage suppliers to enhance their quality, a commendation meeting for qualified suppliers is held after the regular assessment, and outstanding suppliers are rewarded. For unqualified suppliers, such as those assessed as grade D, who do not cooperate in the site visits and who fail in compliance reviews, they will be removed from supplier list directly. In order to further strengthen the management and control of suppliers, the Company also implements a “black list” management mechanism.

In addition, the Group established an e-commerce platform to improve and systematise supplier management. In accordance with the Group’s comprehensive supplier management mechanism, we constantly optimise the supply chain resource pool in order to improve the quality of the supply chain.

### Number of Suppliers of Chalieco in 2017



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### 4.3 Following National Initiatives

The Group closely followed the national “Belt and Road” initiative to promote international capacity cooperation and enhance interconnection and interoperability and focused on the regional markets covered by the “Belt and Road” Initiative.

In 2017, the Group established representative offices in Turkey and South Africa to vigorously expand into overseas markets. It increased its number of outstanding staff and further participated in the development and construction of “Belt and Road”. In terms of infrastructure construction, during the reporting period, a MOU for the expressway from Moding to Huishai in Laos was formally signed. The Company successively signed the contracts of expressways construction with Yunnan Communications Investment & Construction Group Co. Ltd and Yunnan Construction and Investment Holding Group Co. Ltd. The Company uses electrolytic energy-saving technologies to further expand the electrolytic aluminium market in countries such as India and Indonesia. In India, the Company signed the contract of designing Lanjigarh Plant with the capability of annual 1 million tons of alumina, and the contract of designing and supplying calcined petroleum coke (CPC) with Rain Carbon Inc., the largest producers of Calcined Petroleum Coke in world. Taking high-end design consulting design and key equipment as test examples, the Shenyang Institute signed technology export and equipment supply contracts with the United Kingdom, Turkey, Indonesia and other countries. In addition, the Company enthusiastically cooperated with the Chinalco Group in overseas project investment and signed the Feasibility Consultation Contract of the Guinea Project with Chalco Hong Kong Co. Ltd.

### 4.4 Supporting Philanthropy

The Group encourages all subsidiaries to communicate with communities and to contribute to society in the form of donations, supporting education, volunteering, and disaster relief. The Company developed the policy *Administration Measures for Donations of Chalco* to standardise the Company’s processes for charitable donations.

In education support, Party members and cadres of the Company agreed a three-year support plan from 2016 to 2018 for 20 poor students in Haiyan County, Qinghai Province, and donate RMB30,000 each year to help poor students attend school. In 2017, the Venezuelan project team donated tables to local primary schools.

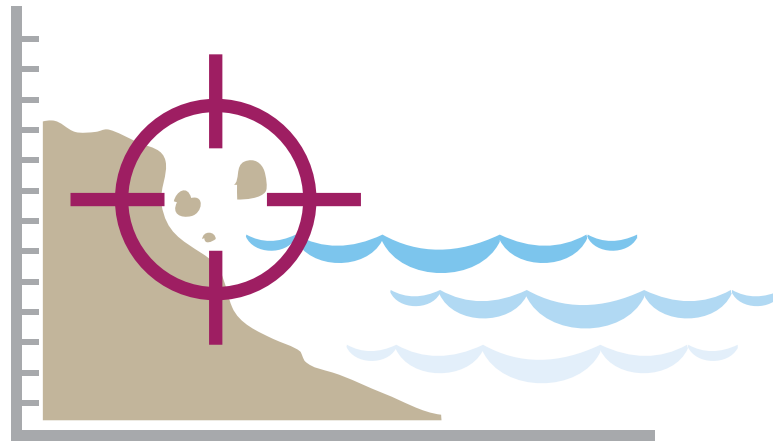
The Company and its subsidiaries pay attention to carrying on the fine tradition of volunteer service, taking inspiration from Lei Feng and organising regular voluntary service. The Group has formed a number of well-known volunteer service initiatives, such as the League Committee organised volunteer work in the Sijiqing Nursing Home for the elderly in Beijing’s Haidian District, the “Aid for Students” Party Day innovation activities in Shenyang, the “Volunteer Service Team” in Changsha and many others.

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

The Group contributed to disaster relief in various ways including making donations, providing manpower, and technical support. In 2017, faced with the rainstorm in Changsha, the Changsha Institute not only organised professional and technical personnel to support landslide rescue work, but also provided assistance to the Changsha Yuhua District Charity Association, donating RMB110,000 to the flood-stricken areas. The donation helped people in disaster-stricken areas rebuild their homes and businesses within a short time. The Kunming Institute provided technical services for post-disaster secondary geological disaster prevention for the Ludian earthquake-affected areas from 2015 to 2017.

### Case: Changkan Institute supported slope rescue monitoring in Jingxiang Community

In July 2017, heavy rains in Changsha caused flooding and many secondary hazards. Landslides on slopes and retaining walls between the Jingxiang Community and Ruijing Garden in Changsha City endangered community health centres and residential buildings in Jingxiang Community were damaged. The Changkan Institute responded quickly to the disaster. Professional and technical personnel were immediately organised to carry out rescue work. Dynamic monitoring of settlement and displacement of disaster feature points in the dangerous area by digital level and total station was conducted in real-time. The stability of slopes was closely monitored 24 hours a day to collect monitoring data for comparison, which provided a scientific, effective and accurate basis for rescues.



In addition, during the project construction, each subsidiary actively assisted in the work of the communities and proactively practiced the care and responsibility for the local community. During the project construction in Donghe District, Baotou City, the Ninth Metallurgical Company received a prize from residents of the district for its high-quality construction and standardised on-site management. The Company also gave tremendous assistance to other contingent and emergent projects and flood control and rescue work in the area. The local government sent a thank-you letter which highly praised the work of Ninth Metallurgical Company. The Shenyang Institute received a pennant from the Aluminium-Magnesium Community, Shandongmiao Street Office for “showing dedication to the community by offering concrete assistance and building a harmonious and dedicated atmosphere in the Aluminium-Magnesium Community”. The pennant expressed gratitude to the Shenyang Institute for its efforts to cooperate with the Aluminium-Magnesium Community to address residents’ housing problems and improve community living environment in recent years.

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

### 5. BEING PEOPLE-ORIENTED AND ESTABLISHING A HARMONIOUS WORKING ENVIRONMENT

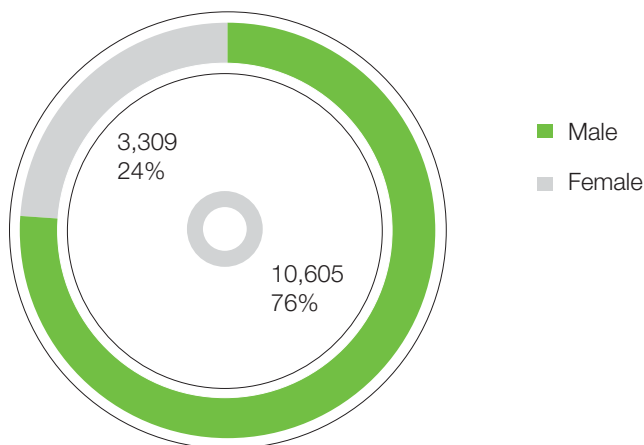
The driving force of an enterprise's progress comes from the employees' wisdom and endeavours. We uphold the people-oriented business philosophy and aim to create equal development opportunities for all employees. We encourage promotion and employee growth in the Company, seek to increase employees' material prosperity, enrich their spirits and share enterprise development results with everyone.

#### 5.1 Advocating Fair Employment

The Company has implemented undifferentiated recruitment standards and management methods for employees of different ages, genders, marital status and races in strict accordance with the *Labour Laws*, *the Labour Contract Law*, *the Law of the Protection of Rights and Interests of Women* and other relevant laws and regulations, and according to the principles of justice and equality. We forbid the employment of children and forced labour in any form. We ensure equal pay for equal work and provide guarantees for each employee's personal development.

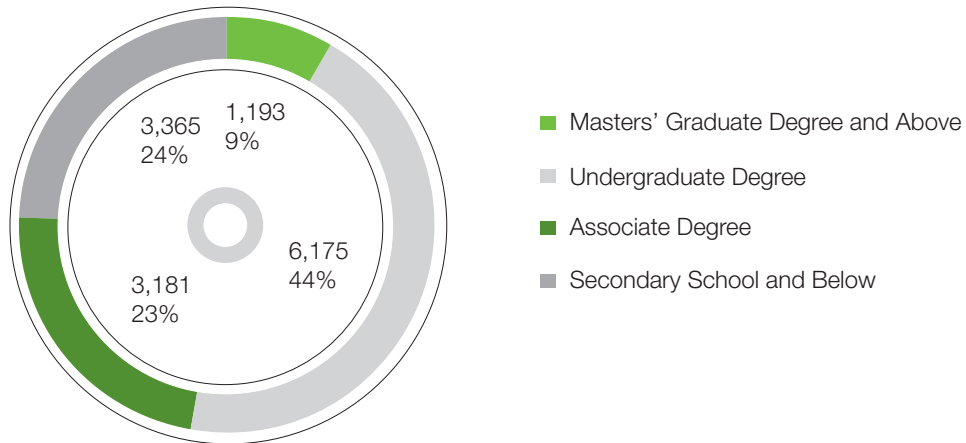
We release recruitment information to the public on professional recruitment platforms, the Company's official website, newspapers and television. Campus recruitment and on-site recruitment are also conducted. Candidates must pass a full set of standardized procedures including primary selection, written exam, interview, in-depth interview and background investigation before they are recruited, which ensures fair competition and high-quality employees. As of the end of 2017, the total number of employees of the Group was 13,914.

#### Number of Employees by Gender

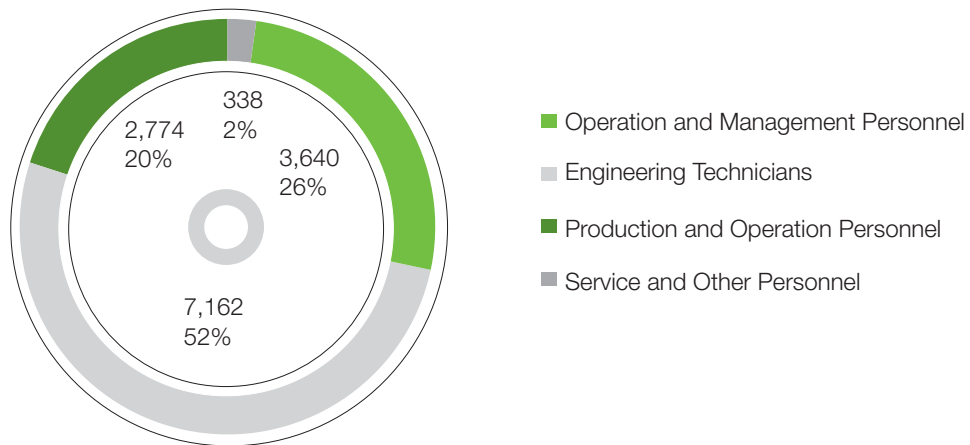


## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

### Number of Employees by Education



### Number of Employees by Professions



### 5.2 Supporting the Development of Employees

Employee growth and corporate development complement each other. The Company emphasis on employees' career development and vocational training, creates a good development atmosphere and supports employees to maximize their potential by optimizing systems and resources.

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Based on the *Measures on Staff Education and Training*, the Group has a well-developed training system to provide an open and free platform for employees' professional training. Training programs are conducted separately for managerial personnel and senior technical personnel, professional personnel and new employees. Internal training, external training and self-learning are combined. Following the principle of needs-based training and individualised instruction, the Company conducts surveys on employees' training needs, integrates internal and external high-quality teaching resources and constantly optimises training courses. In the training management system, the Company makes requirements for training hours and training content for employees of all types and at all levels. The completion of training programs and corresponding training performance will be recorded in employees' training profiles and their secondary personnel files as reference for their higher appraisal. In 2017, a total of 1,635 employees attended training programs for a total of 2,237 training hours.

Fair and transparent remuneration and appraisal mechanisms are an important measure to enhance employees' development motivation. We improved the Company's income distribution system and set up a competitive income system that truly reflects position, value, and performance differences. We set up a specialized reward fund to give special rewards to employees who make outstanding contributions. In 2017, we further optimised the incentive-based mechanism and salary evaluation system, developed 4 assessment and incentive measures, including project marketing, expanding aluminium use, decreasing account receivable and inventory, and strengthening project management, to effectively stimulating the vitality of production and operation.

### 5.3 Stimulating Employees' Vitality

Through benefit packages, recreational and sports activities as well as employee communication, we show our care for employees in tangible and intangible ways. Our goal is to create a sense of belonging and fulfilment, and to create a sunny, simple, honest, and friendly company culture.

The Company continues to improve on employees' compensation and benefits as well as in creating a warm working environment. We have built maternal and infant rooms, installed electric vehicle charging stations and provide all employees with free work meals, bathrooms, medical subsidies and commercial insurance. We visit and comfort employees on International Women's Day, Children's Day, Army Day and other holidays to show our appreciation of their hard work and contributions. For employees in difficulties, such as employees whose spouse or children suffer from serious diseases, the Company follows the provisions of the *Regulations on Management of the Trade Union's Funds*, handing out subsidies depending on the situation.

The Company organizes a variety of recreational and sports activities to enrich the spare time of employees. We regularly organise sports events including running, volleyball, shuttlecock and rope skipping as well as themed activities such as games, symposiums, labour competitions and lectures, in order to promote communication among employees and enhance team cohesion. We also provide training workshops in dancing, yoga and tai chi for female workers to increase their health awareness and habits.

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT



▲Figure: The Company organized fun sports

◀Figure: The Company organized rope skipping

The Company continuously strengthens communication with employees and takes seriously all of their suggestions and comments. To help employees better make suggestions, give feedback on problems and speak out about their difficulties, we carried out “heart-to-heart talk activities” several times for employees from different departments to communicate their feelings about their work and life. We also introduced monthly *Leadership Listening Days*. As part of this programme the Company Chairman, the Deputy Secretary of the Party Committee and other leaders communicate face-to-face with employees, listen to advice from employees, and try their best to solve the employees’ problems. In 2017, over 120 matters were resolved for employees.

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

### ESG INDEX

Indicator for disclosure	Chapter
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**Scope: Environment**

**A1: Emissions**

General Disclosure	3.3
Information on:	
(a) Policies; and	
(b) Compliance with relevant laws and regulations that have a significant impact on the issuer related to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.	
A1.1 The types of emissions and respective emissions data	3.3 3.4
A1.2 Greenhouse gas emissions in total (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	3.4
A1.3 Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	3.4
A1.4 Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	3.4
A1.5 Description of measures to mitigate emissions and results achieved	3.3 3.4
A1.6 Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved	3.3 3.4



## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Indicator for disclosure	Chapter
<b>A2: Use of Resources</b>	
General Disclosure	3.4
Policies on the efficient use of resources, including energy, water and other raw materials.	
A2.1 Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (in kWh) and intensity (e.g. per unit of production volume, per facility).	3.4
A2.2 Water consumption in total and intensity (e.g. per unit of production volume, per facility)	3.4
A2.3 Description of energy use efficiency initiatives and results achieved.	3.3 3.4
A2.4 Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved.	3.3 3.4
A2.5 Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	Not Applicable
<b>A3: The Environment and Natural Resources</b>	
General Disclosure	3.3
Policies on minimising the issuer's significant impact on the environment and natural resources.	
A3.1 Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	3.3

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Indicator for disclosure	Chapter
<b>Scope: Social</b>	
<b>B1: Employment</b>	
General Disclosure	5.1
Information on:	
(a) the policies; and	
(b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.	
B1.1 Total workforce by gender, employment type, age group and geographical region	5.1
B1.2 Employee turnover rate by gender, age group and geographical region	–
<b>B2: Health and Safety</b>	
General Disclosure	3.1
Information on:	
(a) Policies; and	
(b) Compliance with relevant laws and regulations that have a significant impact on the issuer related to providing a safe working environment and protecting employees from occupational hazards.	3.2

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Indicator for disclosure	Chapter
B2.1 Number and rate of work-related fatalities.	3.1
B2.2 Lost days due to work injury.	3.1
B2.3 Description of occupational health and safety measures adopted, how they have been implemented and monitored.	3.1
<b>B3: Development and Training</b>	
General Disclosure	5.2
Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	
B3.1 The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	–
B3.2 The average training hours completed per employee by gender and employee category.	–
<b>B4: Labour Standards</b>	
General Disclosure	5.1
Information on:	
(a) Policies; and	
(b) Compliance with relevant laws and regulations that have a significant impact on the issuer related to preventing child and forced labour.	
B4.1 Description of measures to review employment practices to avoid child and forced labour.	5.1
B4.2 Description of steps taken to eliminate such practices when discovered.	–

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Indicator for disclosure	Chapter
<b>B5: Supply Chain Management</b>	
General Disclosure	4.2
Policies on managing environmental and social risks of the supply chain.	
B5.1 Number of suppliers by geographical region	4.2
B5.2 Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored.	4.2
<b>B6: Product Responsibility</b>	
General Disclosure	4.1
Information on:	
(a) Policies; and	
(b) Compliance with relevant laws and regulations that have a significant impact on the issuer related to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	
B6.1 Percentage of total products sold or shipped subject to recalls for safety and health reasons.	Not Applicable
B6.2 Number of products and service related complaints received and how they were dealt with.	4.1
B6.3 Description of practices relating to observing and protecting intellectual property rights.	2.2
B6.4 Description of quality assurance processes and recall procedures.	4.1
B6.5 Description of consumer data protection and privacy policies, how they are implemented and monitored.	Not Applicable

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Indicator for disclosure	Chapter
<b>B7: Anti-corruption</b>	
General Disclosure	1.3
Information on:	
(a) Policies; and	
(b) Compliance with relevant laws and regulations that have a significant impact on the issuer related to bribery, extortion, fraud and money laundering.	
B7.1 Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	1.3
B7.2 Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.	1.3
<b>B8: Community Investment</b>	
General Disclosure	4.4
Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	
B8.1 Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	4.4
B8.2 Resources contributed (e.g. money or time) to the focus area.	4.4

## PROFILES OF DIRECTORS AND SENIOR MANAGEMENT

### DIRECTORS

#### Non-Executive Directors

**Mr. WANG Jun (王軍):** born in October 1970, worked at the finance department of North China University of Technology (北方工業大學) and the finance department of China Nonferrous Metals Industry Corporation (中國有色金屬工業總公司) from July 1994 to April 1998; served in various positions in Aluminum Group of China (中國鋁業集團公司) and Chinalco (中鋁集團), including the business manager of asset management office of the finance department, from April 1998 to March 2002; served in various positions in Chinalco (中鋁集團), including the general representative of the Peru office, from March 2002 to November 2010; served as 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) from November 2010 to April 2011; served as the chief financial officer, the executive Director and the secretary of Board of the Company from April 2011 to May 2015; has been the joint secretary to the Company since November 2011. He has been a director of China Aluminum Insurance Broker (Beijing) Co. Ltd (中鋁保險經紀(北京)股份有限公司) since August 2012; has been a director of capital operation department of Chinalco (中鋁集團) and the non-executive Director of the Company since May 2015. Mr. WANG Jun has been the deputy chief accountant and the director of the finance department of Chinalco (中鋁集團), the supervisor of Chalco (中國鋁業), and a director and the president of Aluminum Corporation of China Overseas Holdings Limited (中鋁海外控股有限公司) since November 2015. He has served as the director of Chinalco Finance (中鋁財務) and Chinalco Capital (中鋁資本) since December 2015; served as a director of Chinalco Asset Management Company (中鋁資產經營管理公司) from November 2015 to November 2017; served as the chairman of the supervisory board of China Rare Earth Holdings Limited (中國稀有稀土股份有限公司) since June 2016; served as an executive director and manager of Beijing Silver Aluminum Investment Co. Ltd. (北京銀鋁投資有限責任公司) since December 2016; served as 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) and 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)) since June 2017; served as a director of Chinalco Asset Management Company (中鋁資產經營管理有限公司) since November 2017. Mr. WANG Jun obtained his bachelor's degree in accounting from North China University of Technology (北方工業大學) in July 1994 and his master's degree in business administration from Tsinghua University (清華大學) in January 2004. Mr. WANG Jun was granted the title of senior accountant by Aluminum Corporation of China (中國鋁業集團有限公司), and has been accredited the SIFM qualification certificate, 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). In June 2017, Mr. WANG Jun obtained the qualification of Chartered Institute of Management Accountants (CIMA).

**Mr. LI Yihua (李宜華):** born in May 1978, worked in the legal affairs department in Yuntianhua Group Co., Ltd. (雲天化集團有限責任公司) from July 2001 to July 2003. He served as the project manager in Yunnan Huawen Hengye Investment Company (雲南華文恒業投資公司) from July 2003 to February 2004. He held various positions in Yunnan Sino-platinum Metals Co., Ltd. (雲南貴研鉑業股份有限公司), including the director of legal affairs department and deputy head of investment and development department, from February 2004 to December 2009; served as 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) from December 2009 to August 2011; served as

## PROFILES OF DIRECTORS AND SENIOR MANAGEMENT

the secretary for board of directors, and the director of the securities department in Yunnan Tin Co., Ltd. from August 2011 to November 2012; and served as the vice president of Yunnan Investment Holding Group Co., Ltd. (雲南投資控股集團有限責任公司) from November 2012 to May 2013. He has been the deputy director of the legal department of Aluminum Corporation of China (中國鋁業公司) from May 2013 to 2016; served as a director of China Aluminum International Trading Corporation Limited (中鋁國際貿易有限公司) since September 2015, and a non-executive Director of the Company since May 2016; served as the director of the legal affairs department in Chinalco (中鋁集團) since December 2016. Mr. LI Yihua obtained his bachelor's degree in international trade and law from Southwest University of Political Science and Law (西南政法大學) in July 2001, and a master's degree in business administration from Yunnan University (雲南大學) in July 2011. Mr. LI Yihua was employed as economist in 2005.

## PROFILES OF DIRECTORS AND SENIOR MANAGEMENT

### Executive Directors

**Mr. HE Zhihui (賀志輝):** born in October 1962, served in various positions in GAMI (貴陽院), including the dean, from August 1982 to April 2006. He acted as the executive Director and deputy general manager of the Company from December 2003 to March 2010. He acted as the executive Director of the Company since March 2010 and the president of the Company from March 2010 to October 2016; served as the chairman of the Board of the Company since March 2016, the chairman of the board of directors of CNPT (中色科技) from May 2013 to May 2016, the director of the joint board of directors of RTCI (中鋁—力拓技術合作中心) since December 2014; the party secretary to the Company since July 2015; the chairman of the labor union of the Company since August 2015 and the assistant to the general manager of Chinalco (中鋁集團) since June 2016. Mr. HE obtained his bachelor's degree in industrial automation from Central South Institute of Mining and Metallurgy (中南礦冶學院) (currently known as Central South University (中南大學)) in August 1982 and his master's degree from Huazhong Technology Institute (華中工學院) (currently known as Huazhong University of Science and Technology (華中科技大學)) in May 1987. Mr. HE is an excellent senior engineer granted by the State Bureau of Nonferrous Metals Industry, and received the special government allowance from the State Council in February 2013.

**Mr. ZONG Xiaoping (宗小平):** born in November 1968. From July 1991 to April 1995, he served as the responsible person for project technology and project 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). From April 1995 to January 2002, he served various positions such as the deputy director in chief engineer office, project manager and deputy general manager 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). From January 2002 to October 2002, he was the general manager 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). From November 2002 to October 2012, he was 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). From December 2012 to August 2015, he served as 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); he served as the chairman of board of directors and legal representative of China Construction Aluminum Advanced Material Co., Ltd. (中建鋁新材料有限公司); he has served as 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) since December 2015 and the president and the deputy party secretary to Chalieco (中鋁國際) since October 2016. Mr. ZONG Xiaoping obtained a bachelor's degree in construction materials and products and a master's degree in business administration from Shenyang Architecture and Civil Engineering Institute (瀋陽建築工程學院) and Sun Yat-sen University (中山大學) in July 1991 and September 2006, respectively. Mr. ZONG Xiaoping is a professor-level senior engineer.



## PROFILES OF DIRECTORS AND SENIOR MANAGEMENT

**Mr. WU Zhigang (吳志剛):** born in November 1960. From August 1981 to April 1999, he held various positions in Sixth Metallurgical Company, including the deputy manager of Machinery Engineering Company (機械化工工程公司) and the standing deputy general manager of Hainai Company (海南公司). From April 1999 to March 2011, he served various positions including general manager in Sixth Metallurgical Company. He served as an executive director and the general manager in Sixth Metallurgical Company from March 2011 to November 2017 and he has served as the vice president of the Company since August 2016. Mr. WU Zhigang studied in the Staff Technical School of Luoyang Institute (洛陽院職工專業技術學校) from February 1982 to January 1985 and obtained the tertiary academic qualification. Mr. WU Zhigang is a senior engineer.

**Mr. ZHANG Jian (張建):** born in March 1972, served various positions in different departments of China Great Wall Aluminum Corporation (中國長城鋁業公司), including the repair workshop in the equipment repair company and finance section and the cost section of the finance department from July 1996 to June 2002, during which he was temporarily seconded to the accounting office of Chinalco from May 2001 to April 2002. He served as the operation manager of the capital office of the finance department of Chalco (中國鋁業) from June 2002 to February 2004. He served as the vice manager and manager of the cost estimation section of the finance department of Henan Branch of Chalco (中國鋁業河南分公司) from June 2002 to February 2004 and served in various positions in the finance department of Chalco (中國鋁業), including the business manager of the general office, deputy manager of the accounting office and deputy manager of the budget analysis office, from February 2004 to September 2009. Also, he served as 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) from September 2009 to September 2010. He served various positions in the finance department of Chalco (中國鋁業), including the deputy manager of the accounting office (taking charge of the work) and the manager of the general management office, from September 2010 to April 2014. Mr. ZHANG Jian served as the chief financial officer of Chalco Hong Kong Limited (中國鋁業香港有限公司) from April 2014 to May 2015. He has been the chief financial officer and the chief legal adviser of the Company since May 2015 and the executive Director of the Company since June 2015. Mr. ZHANG Jian obtained his bachelor's degree in accounting from Northeastern University (東北大學) in 1996 and obtained his MBA degree from Missouri State University in the U.S. while at work in 2013. Mr. ZHANG Jian was granted the title of accountant by Aluminum Corporation of China (中國鋁業集團有限公司) in 2000.

## PROFILES OF DIRECTORS AND SENIOR MANAGEMENT

### Independent Non-Executive Directors

**Mr. GUI Weihua (桂衛華):** born in August 1950, was elected as the academician of the Chinese Academy of Engineering in 2013. He currently serves as 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). In 1975, he graduated from the automation department of Central-South Institute of Mining and Metallurgy (中南礦冶學院), specializing in electrical and automation for industrial enterprises. From 1975 to 1978, he worked in Danjiang Aluminum Factory (丹江鋁廠) as an electrical technician. From 1978 to 1981, he studied in the automation department of Central-South Institute of Mining and Metallurgy (中南礦冶學院) for a master's degree in industrial automation and has been teaching there since his graduation. From 1986 to 1988, he was a visiting scholar at the electrical engineering department of the University of Duisburg Essen in Germany. In 1988, he was promoted to associate professor and professor in 1990. From August 2011 to September 2017, he served as an independent director of HNAC Technology Co., Ltd. (華自科技股份有限公司). He has served as a director of Changsha Wuhua Technology Development Co., Ltd.(長沙伍華科技開發有限公司) since 2002. He has served as an independent non-executive Director of the Company since February 2018.

**Mr. CHEUNG Hung Kwong (張鴻光):** born in September 1967, served as a manager of the assurance and business advisory service department and corporate finance and recovery department of Pricewaterhouse Coopers from July 1994 to March 2003. He worked for Boto Company Limited, a private company, from March 2003 to December 2007 and was promoted to the chief financial officer during that period. Mr. CHEUNG worked for Kaisa Group Holdings Ltd. (佳兆業集團控股有限公司) (stock code: 1638.HK) from July 2008 to December 2014 and served as its chief financial officer, company secretary and joint authorized representative during that period. He has been an independent non-executive Director of the Company since December 2011. He served as the company secretary and chief financial officer of China Tangshang Holdings Limited (中國唐商控股有限公司) (formerly known as Culture Landmark Investment Limited (文化地標投資有限公司)) (stock code: 00674.HK) from January to March 2017. He has served as the company secretary, joint authorized representative and vice president of Harvest Property Holdings Limited.(豐耀地產控股有限公司).Mr. CHEUNG Hung Kwong has been a member of the American Institute of Certified Public Accountants since August 1996 and a chartered financial analyst qualified by the CFA Institute (formerly known as the Association for Investment Management and Research) in the U.S. since September 2000. Mr. CHEUNG Hung Kwong obtained his bachelor's degree with the second class honors from University of Hong Kong in 1990 and his master's degree with distinction from University of London in 1992.

## PROFILES OF DIRECTORS AND SENIOR MANAGEMENT

**Mr. FU Jun (伏軍):** born in January 1972, 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 Cairo Regional Centre for International Commercial Arbitration (開羅國際商事仲裁中心), an arbitrator of China International Economic and Trade Arbitration Commission (中國國際貿易仲裁委員會), 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 Committee (廣州仲裁委員會), 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). He has served as a teaching assistant, associate professor and professor in University of International Business and Economics (對外經濟貿易大學) since July 2004. Mr. FU Jun has been an independent non-executive director of China CCB Principal Asset Management Co., Ltd. (中國建信基金投資管理公司) since May 2012 and the independent non-executive Director of the Company since June 2015. Mr. FU Jun received a bachelor's degree from Hebei University of Science and Technology (河北科技大學) in 1994 and a master's and doctoral degree of law from Peking University (北京大學) in 2000 and 2004, respectively. He also 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) between 2013 and 2014.

## SUPERVISORS

**Mr. HE Bincong (賀斌聰):** born in February 1963, worked in the Beijing General Research Institute of Mining and Metallurgy (北京礦冶研究總院) from August 1984 to April 1991. He also served in various positions in China Nonferrous Metals Corporation (中國有色金屬工業總公司), including the supervisor at deputy director level of the supervision bureau, from April 1991 to October 1997. He served as 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) from October 1997 to October 1999, worked as the cadre at deputy director level of Chinalco from October 1999 to April 2001, and served as the deputy party secretary and secretary to discipline inspection commission of Shanxi Carbon Plant (山西碳素廠) from April 2001 to March 2004. From March 2004 to February 2010, he served in various positions in Chalco (中國鋁業), including the deputy general manager of the human resources department. Mr. HE Bincong served as the deputy general manager of China Aluminum Development Ltd. (中鋁置業發展有限公司) from February 2010 to April 2013. He has been the deputy party secretary, secretary to discipline inspection commission of the Company since April 2013 and has been the staff representative Supervisor and chairman of the Supervisory Board of the Company since May 2013. He has been the chairman of the labor union of the Company from June 2013 to August 2015. He has been the director of Zhuzhou Tianqiao Crane Co., Ltd. (株州天橋起重機股份有限公司) from April 2014 to October 2016. Mr. HE Bincong obtained his bachelor's degree in geology from Central South University (中南大學) in July 1984 and was granted the title of senior engineer by China Nonferrous Metals Corporation (中國有色金屬工業總公司).

## PROFILES OF DIRECTORS AND SENIOR MANAGEMENT

**Mr. LI Wei (李衛):** born in July 1970, served as the probation deputy division head of the 2nd Factory of Beijing Coal Corporation (北京市煤炭總公司) from July 1992 to October 1995. From October 1995 to June 2014, he worked as 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. From June 2014 to December 2016, he served as the deputy director of the department of discipline inspection and supervision (inspection office) of Aluminum Corporation of China, the regional officer (Southeast region) of discipline inspection and supervision. He has been the director of the department of discipline inspection and supervision (inspection office) and the deputy head of the department of discipline inspection of the party committee of Chinalco (中鋁集團) since December 2016. He has been a Supervisor of the Company since May 2017. Mr. LI Wei obtained a master's degree in law from University of International Business and Economics in July 2001.

**Mr. OU Xiaowu (歐小武):** born in January 1965, served in various positions in China Nonferrous Metals Industry Corporation (中國有色金屬工業總公司), including the director of 1st division of the audit department, from December 1992 to August 1998. Mr. OU served as 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) from August 1999 to September 2000. He held various positions in Chinalco, such as the director of the finance department (audit department) from October 2000 to February 2006. He served as a general manager of the finance department of Chalco (中國鋁業) from March 2006 to December 2009. He has served as the supervisor of Southwest Aluminum (Group) Co., Ltd. (西南鋁業(集團)有限責任公司) since March 2006. He has been the director of the audit department of Chinalco (中鋁集團) since December 2009. He has served as the supervisor of Chalco Energy Co., Ltd. (中鋁能源有限公司) since May 2011. He has been 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) since October 2012. He has served as the supervisor of Guangxi Huayin Aluminum Co., Ltd. (廣西華銀鋁業有限公司) since January 2013. He has served as the deputy chief auditor of Chinalco (中鋁集團) since March 2015. He served as 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) since August 2015. He served as the director and chief financial officer of China Copper Co. Ltd (中國銅業有限公司) from August 2015 to January 2017. He has been a Supervisor of the Company since June 2011. Mr. OU Xiaowu graduated from the planning and statistics department of Xiamen University (廈門大學) in July 1985. Mr. OU was granted the title of senior auditor by China Nonferrous Metals Industry Corporation (中國有色金屬工業總公司).

## 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. CHANG Yaomin (暢耀民):** born in January 1963, acted as a technician of Geotechnical Engineering Office in Shanxi Aluminim Plant (山西鋁廠) from July 1985 to November 1993; held various positions including manager in Jinlv Construction Company (晉鋁建設公司) from November 1993 to May 2006; served in various positions, including an executive director and general manager in Twelfth Metallurgical Company, from May 2006 to April 2016 and the vice president of the Company since August 2016. He completed part-time business administration courses in Xi’an Jiaotong University (西安交通大學) from September 1999 to December 2003 and obtained his MBA degree. Mr. CHANG Yaomin is a senior engineer with academic success.

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

### SECRETARY TO THE BOARD

**Mr. ZHAI Feng (翟峰):** born in December 1976, worked as an audit of KPMG Huazhen (畢馬威華振會計師事務所) from July 1999 to September 2001. He served as the assistant manager of KPMG Huazhen (畢馬威華振會計師事務所) from November 2002 to May 2004. He served as the operation manager of the secretary to the Board (office of chief executive officer) of Chalco (中國鋁業) from May 2004 to July 2006. He served in various positions such as the operation manager of the capital operation department, senior operation manager and deputy manager of the capital operation division of Chalco (中國鋁業) from July 2006 to May 2011. He served as a director of the capital market division of the capital operation department of Chinalco from May 2011 to March 2015. He has been the secretary to the Board and a joint company secretary to the Company since March 2015 and the assistant to president of the Company since June 2015. He graduated from Renmin University of China (中國人民大學) in July 1999 with a bachelor’s degree in accounting, and then graduated from Royal Holloway, University of London in November 2002 with a master’s degree in business administration. Mr. ZHAI was qualified as an economist and has been accredited the Senior International Finance Manager (SIFM).

## HUMAN RESOURCES

### HUMAN RESOURCES OVERVIEW

As of 31 December 2017, the Group had a total of 13,914 employees, of which 10,605 are male and 3,309 are female, representing 76% and 24% of the total staff, respectively. In addition, the Group has off-post reserve labor force of 2,392.

Table I: The following table shows a breakdown of our employees by business function as of 31 December 2017:

No.	Category	Number of individuals	Percentage
1	Operation and management personnel	3,640	26%
2	Engineering technicians	7,162	52%
3	Production and operation personnel	2,774	20%
4	Service and other personnel	338	2%
<b>Total</b>		<b>13,914</b>	<b>100%</b>

Table II: The following table shows a breakdown of our employees by level of education as of 31 December 2017:

No.	Category	Number of individuals	Percentage
1	Graduate degree and above	1,193	9%
2	Undergraduate degree	6,175	44%
3	Associate degree	3,181	23%
4	Secondary school and below	3,365	24%
<b>Total</b>		<b>13,914</b>	<b>100%</b>

## **HUMAN RESOURCES**

### **INCENTIVES FOR EMPLOYEES**

The Group 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 Group in the years, 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 as well as various allowances and subsidies. The performance-based salary is determined based on the results of the Group 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



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 134 to 301, which comprise the consolidated balance sheet as at 31 December 2017, 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 2017, 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 2 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 the performance and status of the contracts through enquiries with the relevant project management;
- testing the contract status through the examination of external evidence, such as approved variations and customer correspondence;
- analysing the Group's estimates for total contract revenue and contract costs to complete, including taking into account the historical accuracy of such estimates;
- assessing the adequacy of provision for loss making contracts; and
- reviewing the outcome of the estimation made in prior period.

## INDEPENDENT AUDITOR'S REPORT

### IMPAIRMENT OF FINANCIAL ASSETS AT AMORTISED COST AND CONTRACT WORK-IN-PROGRESS

The Group's loss allowances for expected credit losses on financial assets measured at amortised cost and contract work-in-progress as disclosed in Notes 2, 4, 22 and 23 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 change, the revised accounting policy and disclosure;
- assessing the recoverability of a sample of outstanding balances by comparing management's views of recoverability of amounts outstanding to historical patterns of receipts, in conjunction with assessing cash received subsequent to year end for its effect in reducing amounts outstanding at year end;
- challenging management's view of credit risk and recoverability by selecting a sample of receivables and contract work-in-progress balances and:
  - noting the historical patterns for long outstanding balances;
  - assessing cash received subsequent to year end for its effect in reducing amounts outstanding at year end;
  - evaluating other evidence including customer, government and legal correspondences;
  - evaluating the plans for recovering the outstanding balances, such as realisation of the pledged assets and enforcement of guarantees;
  - determining whether indication of possible management bias exists;
  - questioning management's knowledge of future conditions that may impact the expected customer receipts; and
  - reviewing the outcome of the estimation made in prior period.

## INDEPENDENT AUDITOR'S REPORT

### SUPPLEMENTAL DEFINED BENEFIT RETIREMENT SCHEME

The Group's supplemental defined benefit retirement scheme as disclosed in Note 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.

### BUSINESS COMBINATION

The Group's acquisition of 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) as disclosed in Note 42 to the consolidated financial statements was determined to be a key audit matter because of the complexity in relevant financial reporting requirements for business combination, the significant estimation uncertainty resulted from the use of unobservable inputs and the significant judgement made in selecting the valuation methods in measuring the fair values of Qingdao Xinfu at the date of acquisition.

Our procedures included, amongst others:

- evaluating accounting policy and disclosures;
- reviewing management's assessment that the acquisition should be accounted for as a business combination;
- assessing management's assessment of the date of acquisition;

## INDEPENDENT AUDITOR'S REPORT

- challenging and evaluating the valuation method adopted, assumptions made and data used by the management's expert in valuing the identifiable assets acquired and the liabilities assumed in the business combination;
  - 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 exist; and
- evaluating the expert's competence and independence;
- testing the calculation of gain on bargain purchase from business combination; and
- inquiring the reasons which resulted in a gain on bargain purchase from business combination.

## 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 2017 ("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.

## 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.

## INDEPENDENT AUDITOR'S REPORT

### 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.

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.

## INDEPENDENT AUDITOR'S REPORT

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

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

We also provide the Audit Committee with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

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

### **PKF Hong Kong Limited**

*Certified Public Accountants*

Hong Kong

### **Wan Tak Shing**

Practising Certificate Number P04844

12 March 2018

## CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

	Note	Year ended 31 December	
		2017 RMB'000	2016 RMB'000 (restated)
<b>Revenue</b>	6	<b>36,065,346</b>	26,966,287
Cost of sales	7	<b>(32,707,341)</b>	(24,078,305)
<b>Gross profit</b>		<b>3,358,005</b>	2,887,982
Tax and surcharges	7	<b>(97,787)</b>	(134,271)
Selling and marketing expenses	7	<b>(131,674)</b>	(124,297)
Administrative expenses	7	<b>(1,832,716)</b>	(1,524,008)
Other income	8	<b>100,002</b>	111,317
Other gains/(losses) – net	9	<b>22,307</b>	(129,221)
<b>Operating profit</b>		<b>1,418,137</b>	1,087,502
Finance income	10	<b>266,547</b>	323,248
Finance expenses	10	<b>(642,161)</b>	(512,456)
Gain on disposal of an associate	20(b)	–	190,249
Gain on partial disposal of an associate	20(b)	–	68,079
Gain on disposal of a subsidiary	42(c)	<b>8,402</b>	–
Gain on bargain purchase from business combination	42	<b>134</b>	269,651
Share of profits/(losses) of investments accounted for using equity method	20(b)	<b>26,224</b>	(89,281)
<b>Profit before income tax</b>		<b>1,077,283</b>	1,336,992
Income tax expense	11	<b>(227,615)</b>	(237,157)
<b>Profit for the year</b>		<b>849,668</b>	1,099,835
<b>Other comprehensive income</b>			
<i>Items that may be reclassified to profit or loss</i>			
Fair value losses on available-for-sale financial assets, net of tax		<b>(13,845)</b>	(1,090)
Reclassification upon partial disposal of an associate, net of tax		–	(15,593)
Reclassification upon disposal of an associate, net of tax		–	(41,321)
Currency translation differences		<b>(79,361)</b>	81,413
<i>Item that will not be reclassified subsequently to profit or loss</i>			
Remeasurements of post-employment benefit obligations, net of tax		<b>83,703</b>	33,116
<b>Other comprehensive (loss)/income for the year, net of tax</b>		<b>(9,503)</b>	56,525
<b>Total comprehensive income for the year</b>		<b>840,165</b>	1,156,360

## CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

	Note	Year ended 31 December	
		2017 RMB'000	2016 RMB'000 (restated)
<b>Profit attributable to:</b>			
Equity owners of the Company		<b>616,879</b>	944,668
Non-controlling interests		<b>232,789</b>	155,167
		<b>849,668</b>	1,099,835
<b>Total comprehensive income attributable to:</b>			
Equity owners of the Company		<b>606,200</b>	1,001,083
Non-controlling interests		<b>233,965</b>	155,277
		<b>840,165</b>	1,156,360
		<b>RMB</b>	RMB (restated)
<b>Earnings per share for profit attributable to equity owners of the Company</b>			
– Basic	12	<b>0.23</b>	0.35
– Diluted	12	<b>0.23</b>	0.35

The notes on pages 142 to 301 form an integral part of these consolidated financial statements.



## CONSOLIDATED BALANCE SHEET

	Note	At 31 December		At 1 January
		2017	2016	2016
		RMB'000	RMB'000	RMB'000
			(restated)	(restated)
<b>Assets</b>				
<b>Non-current assets</b>				
Property, plant and equipment	16	2,484,652	2,648,815	2,220,757
Land use rights	17	727,022	814,693	797,150
Investment properties	18	219,627	225,165	77,994
Trade and notes receivables	22	1,991,852	1,637,048	1,751,803
Prepayments and other receivables	23	1,566,419	1,631,644	589,299
Intangible assets	19	207,985	130,484	144,477
Investments accounted for using the equity method	20(b)	249,098	212,831	299,539
Available-for-sale financial assets	21	318,921	233,799	24,136
Deferred income tax assets	35	608,469	610,648	497,466
Other non-current assets		3,528	27,912	12,015
<b>Total non-current assets</b>		<b>8,377,573</b>	8,173,039	6,414,636
<b>Current assets</b>				
Available-for-sale financial assets	21	530,592	18,000	159,200
Inventories	25	3,033,803	1,464,987	909,705
Trade and notes receivables	22	13,579,920	14,892,261	10,814,889
Prepayments and other receivables	23	4,024,297	4,185,073	3,330,786
Amounts due from customers for contract work	24	8,322,206	6,113,436	4,076,859
Current income tax prepayments		14,784	18,187	86,371
Restricted cash	26	1,199,865	1,023,154	742,910
Time deposits	27	10,856	18,426	28,929
Cash and cash equivalents	28	6,279,894	7,901,834	4,955,839
<b>Total current assets</b>		<b>36,996,217</b>	35,635,358	25,105,488
<b>Total assets</b>		<b>45,373,790</b>	43,808,397	31,520,124
<b>Equity</b>				
Share capital	29	2,663,160	2,663,160	2,663,160
Reserves	30	6,515,070	6,628,207	4,502,626
<b>Consolidated equity attributable to equity owners of the Company</b>		<b>9,178,230</b>	9,291,367	7,165,786
<b>Non-controlling interests</b>		<b>2,949,341</b>	4,705,975	2,106,089
<b>Total equity</b>		<b>12,127,571</b>	13,997,342	9,271,875

## CONSOLIDATED BALANCE SHEET

	Note	At 31 December		At 1 January
		2017	2016	2016
		RMB'000	RMB'000 (restated)	RMB'000 (restated)
<b>Liabilities</b>				
<b>Non-current liabilities</b>				
Deferred income	31	44,007	86,218	89,711
Long-term borrowings	33	2,792,675	1,980,232	1,210,935
Retirement and other supplemental benefit obligations	32	857,358	1,045,448	1,093,121
Deferred income tax liabilities	35	66,251	51,748	629
Trade and other payables	34	5,608	35,307	14,854
<b>Total non-current liabilities</b>		<b>3,765,899</b>	3,198,953	2,409,250
<b>Current liabilities</b>				
Trade and other payables	34	18,700,429	15,631,236	11,530,521
Dividends payable	36	30,000	55,441	55,347
Amounts due to customers for contract work	24	677,018	690,792	442,236
Short-term borrowings	33	9,814,047	9,911,597	7,518,420
Current income tax liabilities		134,400	186,613	148,995
Retirement and other supplemental benefit obligations	32	124,426	136,423	143,480
<b>Total current liabilities</b>		<b>29,480,320</b>	26,612,102	19,838,999
<b>Total liabilities</b>		<b>33,246,219</b>	29,811,055	22,248,249
<b>Total equity and liabilities</b>		<b>45,373,790</b>	43,808,397	31,520,124
<b>Net current assets</b>		<b>7,515,897</b>	9,023,256	5,266,489
<b>Total assets less current liabilities</b>		<b>15,893,470</b>	17,196,295	11,681,125

The notes on pages 142 to 301 form an integral part of these consolidated financial statements.

The consolidated financial statements were approved by the Board of Directors on 12 March 2018 and were signed on its behalf.

**He Zhihui**

Director

**Zhang Jian**

Director

## CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

(restated)	Attributable to equity holders of the Company											
	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	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
					RMB'000							
<b>At 1 January 2016</b>	2,663,160	1,033,452	110,617	-	42,775	77,088	23,918	190,129	3,024,647	7,165,786	2,106,089	9,271,875
Profit of the year	-	-	-	-	-	-	-	-	944,668	944,668	155,167	1,099,835
Other comprehensive income:												
Fair value loss of available-for-sale financial assets – gross	-	-	-	(1,282)	-	-	-	-	-	(1,282)	-	(1,282)
Fair value loss of available-for-sale financial assets – tax	-	-	-	192	-	-	-	-	-	192	-	192
Reclassification upon partial disposal of an associate, net of tax	-	(15,593)	-	-	-	-	-	-	-	(15,593)	-	(15,593)
Reclassification upon disposal of an associate, net of tax	-	(41,321)	-	-	-	-	-	-	-	(41,321)	-	(41,321)
Remeasurements of post-employment benefit obligations – gross	-	-	-	-	42,051	-	-	-	-	42,051	129	42,180
Remeasurements of post-employment benefit obligations – tax	-	-	-	-	(9,045)	-	-	-	-	(9,045)	(19)	(9,064)
Currency translation differences	-	-	-	-	-	81,413	-	-	-	81,413	-	81,413
<b>Total comprehensive income</b>	-	(56,914)	-	(1,090)	33,006	81,413	-	-	944,668	1,001,083	155,277	1,156,360
Dividends to equity owners	-	-	-	-	-	-	-	-	(159,790)	(159,790)	(1,383)	(161,173)
Net proceeds from offering of renewable corporate bonds	-	-	-	-	-	-	-	1,202,302	-	1,202,302	-	1,202,302
Net proceeds from offering of senior perpetual capital securities	-	-	-	-	-	-	-	-	-	-	2,391,466	2,391,466
Appropriation to other equity instruments	-	-	-	-	-	-	-	10,300	(10,300)	-	-	-
Dividend paid to holders of senior perpetual capital securities	-	-	-	-	-	-	-	-	-	-	(136,449)	(136,449)
Non-controlling interests arising on business combination	-	-	-	-	-	-	-	-	-	-	191,778	191,778
Capital contributions by non-controlling interests of the subsidiaries	-	-	-	-	-	-	-	-	-	-	1,602	1,602
Capital withdrawal by non-controlling interests of subsidiaries	-	-	-	-	-	-	-	-	-	-	(2,405)	(2,405)
Appropriation of special reserve	-	-	-	-	-	-	(8,652)	-	8,652	-	-	-
Appropriation to statutory surplus reserve	-	-	19,837	-	-	-	-	-	(19,837)	-	-	-
Reorganisation of a subsidiary acquired under common control	-	81,986	-	-	-	-	-	-	-	81,986	-	81,986
<b>At 31 December 2016</b>	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

The notes on pages 142 to 301 form an integral part of these consolidated financial statements.

## CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

	Attributable to equity owners of the Group											Total equity RMB'000
	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	
<b>At 1 January 2017</b>	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)
<b>Total comprehensive income</b>	-	-	-	(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)
<b>At 31 December 2017</b>	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 142 to 301 form an integral part of these consolidated financial statements.

## CONSOLIDATED STATEMENT OF CASH FLOWS

	Note	Year ended 31 December	
		2017 RMB'000	2016 RMB'000 (restated)
<b>Cash flows from operating activities</b>			
Cash generated from/(used in) operations	39(a)	<b>1,858,958</b>	(1,088,559)
Income tax paid		<b>(278,971)</b>	(237,356)
Interest received		<b>60,129</b>	43,175
<b>Net cash generated from/(used in) operating activities</b>		<b>1,640,116</b>	(1,282,740)
<b>Cash flows from investing activities</b>			
Purchase of property, plant and equipment		<b>(303,088)</b>	(143,821)
Purchase of intangible assets		<b>(2,404)</b>	(3,564)
Purchase of other non-current assets		<b>–</b>	(6,193)
Purchase of available-for-sale financial assets		<b>(5,050,992)</b>	(1,139,500)
Prepayment for investment	23(i)	<b>(195,600)</b>	–
Cash (outflows)/inflows arising from business combination	42	<b>(8,966)</b>	356,386
Proceeds from disposal of a subsidiary	42(c)	<b>13,325</b>	–
Payment for investments accounted for using the equity method		<b>(83,500)</b>	(22,042)
Interest received from available-for-sale financial assets and time deposits		<b>14,323</b>	6,717
Decrease/(increase) in time deposits		<b>27,570</b>	(9,497)
Proceeds from disposal of property, plant and equipment		<b>5,723</b>	5,553
Proceeds from disposal of intangible assets		<b>583</b>	–
Proceeds from disposal of land use rights		<b>51,217</b>	–
Proceeds from disposal of available-for-sale financial assets		<b>4,445,088</b>	1,276,700
Proceeds from disposal of investments accounted for using the equity method		<b>256</b>	77,959
Receipt of government grants		<b>13,250</b>	8,267
Financing provided to proprietors		<b>(538,632)</b>	(1,231,480)
Receiving payment of financing provided to proprietors		<b>1,169,145</b>	534,964
Dividends received from available-for-sale financial assets		<b>–</b>	8
Refund of futures margins		<b>30,000</b>	–
<b>Net cash used in investing activities</b>		<b>(412,702)</b>	(289,543)

## CONSOLIDATED STATEMENT OF CASH FLOWS

	Note	Year ended 31 December	
		2017 RMB'000	2016 RMB'000 (restated)
<b>Cash flows from financing activities</b>			
Capital contributions made by the non-controlling interests		27,400	1,602
Draw down of bank borrowings		8,488,837	5,741,483
Repayments of bank borrowings		(7,763,168)	(4,815,660)
Borrowings received from a financial institution		100,000	735,848
Repayments of borrowings received from a financial institution		(735,848)	–
Repayment of borrowing received from a related company		(498,150)	–
Borrowings received from related parties	33(vii)	2,868,783	2,075,000
Repayment of borrowings received from related parties	33(vii)	(1,421,000)	(3,017,000)
Net cash inflows arising from notes financing		134,930	611,613
Increase in restricted cash		–	(832,163)
Interests paid		(622,268)	(381,142)
Dividends paid to shareholders of the Company		(231,695)	(160,358)
Dividends paid to non-controlling interests		(1,703)	(983)
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	1,201,960
Net proceeds from issuance of senior perpetual capital securities	37	–	2,391,466
Issuance fee paid for senior perpetual capital securities		(6,422)	–
Redemption of senior perpetual capital securities		(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		(70,700)	(10,300)
Dividends paid to the holders of senior perpetual capital securities	37	(154,939)	(136,449)
Net proceeds from issuance of short-term bonds	33(vi)	3,992,133	2,494,000
Net proceeds from issuance of long-term bonds	33(vi)	–	895,500
Repayment of short-term bonds	33(vi)	(5,000,000)	(2,300,000)
Deposits paid for notes financing		(20,000)	–
<b>Net cash (used in)/generated from financing activities</b>		<b>(2,740,286)</b>	4,494,417
<b>Net (decrease)/increase in cash and cash equivalents</b>		<b>(1,512,872)</b>	2,922,134
<b>Cash and cash equivalents at beginning of year</b>		<b>7,901,834</b>	4,955,839
Exchange (losses)/gains on cash and cash equivalents		(109,068)	23,861
<b>Cash and cash equivalents at end of year</b>		<b>6,279,894</b>	7,901,834

The notes on pages 142 to 301 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 26 December 2017, 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).

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. 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.

#### 2.1 Basis 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 available-for-sale financial assets, which are carried at fair value, 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 IFRS 1 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 3 below.



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.1 Basis of preparation (continued)

##### 2.1.1 Changes in accounting standards and disclosures

- (a) Initial application of IFRSs

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

Amendments to IAS 7	Disclosure Initiative
Amendments to IAS 12	Recognition of Deferred Tax Assets for Unrealised Losses
Annual Improvements (2014-2016)	Amendments to IFRS 12

The initial application of these IFRSs does not necessitate material changes in the Group's accounting policies and retrospective adjustments of the comparatives presented in the consolidated financial statements.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.1 Basis of preparation (continued)

##### 2.1.1 Changes in accounting standards and disclosures (continued)

(b) IFRSs in issue but not yet effective

The following IFRSs in issue at 31 December 2017 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 2017:

IFRS 9 (2014)	Financial Instruments <sup>1</sup>
IFRS 15	Revenue from Contracts with Customers <sup>1</sup>
IFRS 16	Leases <sup>2</sup>
IFRS 17	Insurance Contracts <sup>3</sup>
IFRIC 22	Foreign Currency Transactions and Advance Consideration <sup>1</sup>
IFRIC 23	Uncertainty over Income Tax Treatments <sup>2</sup>
Amendments to IFRS 4	Applying IFRS 9, Financial Instruments with IFRS 4, Insurance Contracts <sup>1</sup>
Amendments to IAS 28 and IFRS 10	Sale or Contribution of Assets between an Investor and its Associate or Joint Venture <sup>4</sup>
Amendments to IAS 40	Transfers of Investment Property <sup>1</sup>
Amendments to IFRS 2	Classification and Measurement of Share-based Payment Transactions <sup>1</sup>
Amendment to IFRS 9	Prepayment Features with Negative Compensation <sup>2</sup>
Amendments to IFRSs	Annual Improvements to IFRS 2014-2016 Cycle <sup>1</sup>

<sup>1</sup> Effective for annual periods beginning on or after 1 January 2018

<sup>2</sup> Effective for annual periods beginning on or after 1 January 2019

<sup>3</sup> Effective for annual periods beginning on or after 1 January 2021

<sup>4</sup> Effective for annual periods beginning on or a date to be determined

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 the new standards which may have impact on the consolidated financial statements. Further details of the expected impacts of the relevant standards are discussed below. While the assessment has been substantially completed for IFRS 9 and IFRS 15, the actual impacts upon the initial adoption of the standards 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 standards are initially applied in the Group's interim financial report for the six months ended 30 June 2018. The Group may also change its accounting policy elections, including the transition options, until the standards are initially applied in that financial report.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.1 Basis of preparation (continued)

##### 2.1.1 Changes in accounting standards and disclosures (continued)

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

##### ***IFRS 9, Financial instruments***

IFRS 9 will replace the current standard on accounting for financial instruments, 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.

IFRS 9 is effective for annual periods beginning on or after 1 January 2018, with early adoption permitted. The Group currently plans to adopt IFRS 9 initially on 1 January 2018.

Expected impacts of the new requirements on the Group's financial statements are as follows:

##### *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.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.1 Basis of preparation (continued)

##### 2.1.1 Changes in accounting standards and disclosures (continued)

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

##### ***IFRS 9, Financial instruments (continued)***

##### *Classification and measurement (continued)*

The Group has assessed that its financial assets currently measured at amortised cost will continue with their classification and measurements upon the adoption of IFRS 9. The Group currently does not have any financial assets designated at FVTPL.

With respect to the Group's financial assets currently classified as "available-for-sale", these are investments in equity securities which the Group has the option to irrevocably designate as FVTOCI (without recycling) on transition to IFRS 9. The Group plans to elect this designation option for any of the investments held on 1 January 2018 and will recognise any fair value changes in respect of these investments in other comprehensive income as they arise. This will give rise to a change in accounting policy as currently certain available-for-sale investments are measured at cost. This change on policy will have no material impact on the Group's net assets and total comprehensive income. Upon the initial adoption of IFRS 9, fair value change and the impairment loss recognised in previous year related to the available-for-sale investments will be transferred to the reserve at 1 January 2018.

The classification and measurement requirements for financial liabilities under IFRS 9 are largely unchanged from IAS 39, except that IFRS 9 requires the fair value change of a financial liability designated at FVTPL that is attributable to changes of that financial liability's credit risk to be recognised in other comprehensive income (without reclassification to profit or loss). The Group currently does not have any financial liabilities designated at FVTPL and therefore this new requirement will not have any impact on the Group on adoption of IFRS 9.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.1 Basis of preparation (continued)

##### 2.1.1 Changes in accounting standards and disclosures (continued)

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

##### ***IFRS 9, Financial instruments (continued)***

###### *Impairment*

The new impairment model in IFRS 9 introduces the “expected credit loss” model. Under the expected credit loss model, an entity is required to recognise and measure either a 12-month expected credit loss or a lifetime expected credit loss, depending on the asset and the facts and circumstances. During the year, the Group has reassessed and revised its policy on impairment losses recognised for trade and other receivables and contract work-in-progress. After the revision, the Group measured the loss allowances for the trade and other receivables and the contract work-in-progress based on the amounts equal to the lifetime expected credit losses, except other receivables for which credit risk has not increased significantly since initial recognition. So far the Group has concluded that there would be no material impact for the application of the impairment under IFRS 9 following the revision of its accounting policy on impairment as detailed in Note 4(a).

###### *Hedge accounting*

IFRS 9 does not fundamentally change the requirements relating to measuring and recognising ineffectiveness under IAS 39. However, greater flexibility has been introduced to the types of transactions eligible for hedge accounting. The Group did not have any such hedging instruments as at 31 December 2017 and thus the Group’s consolidated financial statements will not be impacted.

##### ***IFRS 15, Revenue from contracts with customers***

IFRS 15 establishes a comprehensive framework for recognising revenue from contracts with customers. IFRS 15 will replace the existing revenue standards, IAS 18, *Revenue*, and IAS 11, *Construction Contracts*.

The Group expects that the adoption of IFRS 15 will not materially affect how the Group recognises revenue and cost of sales.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.1 Basis of preparation (continued)

##### 2.1.1 Changes in accounting standards and disclosures (continued)

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

##### ***IFRS 16, Leases***

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.

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 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 profit or loss over the period of the lease. However, based on an initial assessment, the Group expects that the adoption of IFRS 16 will not materially affect the Group’s consolidated financial statements.

IFRS 16 is effective for annual periods beginning on or after 1 January 2019. The Group is in the process of making an assessment of the potential impact on its consolidated financial statements. So far, the most significant impact identified is that the Group will recognise new assets and liabilities for its operating leases. In addition, the nature of expenses related to those leases will now change as IFRS 16 replaces the straightline operating lease expense with a depreciation charge for right-of-use assets and interest expense on lease liabilities.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.2 Subsidiaries

##### 2.2.1 Consolidation

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

(a) Business combinations

The Group applies the acquisition method to account for business combinations 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 accordance with IAS 39 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

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.2 Subsidiaries (continued)

##### 2.2.1 Consolidation (continued)

(a) 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 the consolidated statement of comprehensive income.

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.

(b) 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.

(c) 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

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.2 Subsidiaries (continued)

##### 2.2.2 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.

#### 2.3 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 the income statement, 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

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.3 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 the consolidated statement of comprehensive income.

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

Gain or losses on dilution of equity interest in associates are recognised in the consolidated statement of comprehensive income.

#### 2.4 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

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.5 Segment reporting

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

#### 2.6 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 the consolidated statement of comprehensive income, 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”.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.6 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.

#### 2.7 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 the statement of comprehensive income during the financial period in which they are incurred.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.7 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 2.11).

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.

#### 2.8 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 the statement of comprehensive income on a straight-line basis over the terms of the leases. Whenever there is impairment, the impairment is recognised in the consolidated statement of comprehensive income.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.9 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 the statement of comprehensive income 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.

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 the consolidated statement of comprehensive income on a straight-line basis over the term of the lease.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.10 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

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.10 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.

##### (d) 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.



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.10 Intangible assets (continued)

##### (d) Concession right and service concession arrangements (continued)

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 (note 19) as the Group receives a right to charge users of the public services.

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.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.10 Intangible assets (continued)

##### (d) Concession right and service concession arrangements (continued)

###### *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.

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.

###### *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 2.26.

#### 2.11 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

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.12 Financial assets

##### (a) Classification

The Group classifies its financial assets in the following categories: financial assets at fair value through profit or loss, loans and receivables and available-for-sale financial assets. The classification depends on the purpose for which the financial assets were acquired. Management determines the classification of its financial assets at initial recognition.

(i) Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss are financial assets held for trading. A financial asset is classified in this category if acquired principally for the purpose of selling in the short-term. Derivatives are also categorised as held for trading unless they are designated as hedges. Assets in this category are classified as current assets if expected to be settled within 12 months; otherwise, they are classified as non-current.

(ii) Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are included in current assets, except for the amounts that are settled or expected to be settled more than 12 months after the balance sheet date, which are classified as non-current assets. The Group's loans and receivables primarily include 'Trade and other receivables', 'Restricted cash', 'Time deposits' and 'Cash and cash equivalents' in the consolidated balance sheet. They are stated at amortised costs less loss allowances for expected credit losses.

(iii) Available-for-sale financial assets

Available-for-sale financial assets are non-derivatives financial assets that are either designated in this category or not classified in any of the other categories. They are included in non-current assets unless the investment matures or management intends to dispose of it within 12 months of the end of the reporting period.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.12 Financial assets (continued)

##### (b) Recognition and measurement

Regular purchases and sales of financial assets are recognised on trade-date – the date on which the Group commits to purchase or sell the asset. Investments are initially recognised at fair value plus transaction costs for all financial assets not carried at fair value through profit or loss. Financial assets carried at fair value through profit or loss are initially recognised at fair value, and transaction costs are expensed in the statement of comprehensive income. Financial assets are derecognised when the rights to receive cash flows from the investments have expired or have been transferred and the Group has transferred substantially all risks and rewards of ownership. Available-for-sale financial assets and financial assets at fair value through profit or loss are subsequently carried at fair value. Loans and receivables are subsequently carried at amortised cost using the effective interest method.

Gains or losses arising from changes in the fair value of the 'Financial assets at fair value through profit or loss' category are presented in the consolidated statement of comprehensive income within 'Other gains/(losses) – net' in the period in which they arise. Dividend income from financial assets at fair value through profit or loss is recognised in the consolidated statement of comprehensive income as part of other income when the Group's right to receive payments is established.

Changes in the fair value of monetary and non-monetary securities classified as available for sale are recognised in other comprehensive income.

When securities classified as available for sale are sold or impaired, the accumulated fair value adjustments recognised in equity are included in the consolidated statement of comprehensive income as 'gains and losses from investment securities'.

Interest on available-for-sale securities calculated using the effective interest method is recognised in consolidated statement of comprehensive income as part of other income. Dividends on available-for-sale equity instruments are recognised in the consolidated statement of comprehensive income as part of other income when the Group's right to receive payments is established.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.12 Financial assets (continued)

##### (c) Offsetting financial instruments

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

#### 2.13 Impairment of financial assets and contract work-in-progress

The Group recognises loss allowances for expected credit losses (“ECLs”) on:

- financial assets measured at amortised cost; and
- contract work-on-progress.

The Group measures loss allowances at an amount equal to lifetime ECLs, except for other receivables for which credit risk (i.e. the risk of default occurring over the expected life of the financial instrument) has not increased significantly since initial recognition.

Loss allowances for trade receivables and contract work-in-progress are always measured at an amount equal to lifetime ECLs.

When determining whether the credit risk of a financial asset has increased significantly since initial recognition and 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.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.13 Impairment of financial assets and contract work-in-progress (continued)

The Group assumes that the credit risk on a financial asset has increased significantly if it is more than 30 days past due.

The Group considers a financial asset to be in default when:

- 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
- the financial asset is more than 90 days past due.

The Group considers a debt security to have low credit risk when it has an internal or external credit rating of investment grade as per globally understood definition.

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

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

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

ECLs are an unbiased and 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).

ECLs are discounted at the effective interest rate of the financial asset.

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

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.13 Impairment of financial assets and contract work-in-progress (continued)

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

- significant financial difficulty of the borrower of issuer;
- a breach of contract such as a default or being more than 90 days past due;
- the restructuring of a loan or advance by the Group on terms that the Group would not consider otherwise;
- it is probable that the borrower will enter bankruptcy or other financial reorganisation; or
- the disappearance of an active market for a security because of financial difficulties.

Loss allowances for financial assets measured at amortised cost are deducted from the gross carrying amount of the assets.

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

For available-for-sale financial assets, the Group assesses at the end of each reporting period whether there is objective evidence that a financial asset or a group of financial assets is impaired.

For debt securities, if any such evidence exists the cumulative loss — measured as the difference between the acquisition cost and the current fair value, less any impairment loss on that financial asset previously recognised in profit or loss — is removed from equity and recognised in profit or loss. If, in a subsequent period, the fair value of a debt instrument classified as available for sale increases and the increase can be objectively related to an event occurring after the impairment loss was recognised in profit or loss, the impairment loss is reversed through the consolidated statement of comprehensive income.

For equity investments, a significant or prolonged decline in the fair value of the security below its cost is evidence that the assets are impaired. If any such evidence exists the cumulative loss — measured as the difference between the acquisition cost and the current fair value, less any impairment loss on that financial asset previously recognised in profit or loss — is removed from equity and recognised in profit or loss. Impairment losses recognised in the consolidated statement of comprehensive income on equity instruments are not reversed through the consolidated statement of comprehensive income.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.14 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.

#### 2.15 Trade and other receivables

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

Trade and other receivables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method, less loss allowances for ECLs.

#### 2.16 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.

#### 2.17 Share capital

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

#### 2.18 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.



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.18 Borrowings (continued)

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.

#### 2.19 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.

#### 2.20 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.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.20 Employee benefits (continued)

##### (a) Pension obligations (continued)

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.

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.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.20 Employee benefits (continued)

##### (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.

##### (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.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.21 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.

##### (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.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.21 Taxation (continued)

##### (b) Deferred income tax (continued)

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.

##### (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.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.21 Taxation (continued)

##### (d) Value-added taxation (“VAT”) (continued)

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% (for construction contracts) or 6% (for maintenance service contracts).

##### (e) Business tax

Prior to 1 May 2016, after deduction of the sub-contracting income, revenue resulting from providing construction services is subject to business tax at 3% of gross service income.

#### 2.22 Contingencies

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

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

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

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.23 Provisions

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

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

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

#### 2.24 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.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.25 Contract work

Contract costs are recognised as expense in the period in which they are incurred. When the outcome of a contract cannot be estimated reliably, contract revenue is recognised only to the extent of contract costs incurred that are likely to be recoverable. When the outcome of a contract can be estimated reliably and it is probable that the contract will be profitable, contract revenue is recognised over the period of the contract. When it is probable that total contract costs will exceed total contract revenue, the expected loss is recognised as an expense immediately.

The Group uses the “percentage of completion method” to determine the appropriate amount of profit to be recognised in a given period. The stage of completion is measured by reference to the contract costs incurred up to the balance sheet date as a percentage of total estimated costs for each contract. Costs incurred in the year/period in connection with the future activity of a contract are excluded from contract costs in determining the stage of completion. They are presented as inventories or prepayments, depending on their nature.

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.

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.

The Group recognises loss allowances for ECLs on contract work-in-progress.



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.26 Revenue recognition

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

The Group recognises revenue when the amount of revenue can be reliably measured, it is probable that future economic benefits will flow to the entity and specific criteria have been met for each of the Group's activities as described below. The Group bases its estimates on historical results, taking into consideration the type of customer, the type of transaction and the specifics of each arrangement.

##### (a) Revenue from construction and service contracts

When the outcome of a contract can be estimated reliably, revenue from construction and service contracts is recognised under the percentage of completion method and is measured mainly by reference to the contract costs incurred up to the balance sheet date as a percentage of total estimated costs for each contract. When the outcome of a contract cannot be estimated reliably, revenue is recognised only to the extent of contract costs incurred that it is probable will be recoverable and such contract costs is recognised as an expense in the period in which they are incurred.

Variation in contract work, claims and incentive payments are included in the contract revenue to the extent that it is probable that they will result in revenue and they are capable of being reliably measured.

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 statement of comprehensive income in the period in which the circumstances that give rise to the revision become known by management.

##### (b) Services rendered

Revenue for services rendered mainly includes technique development, design, consultation and supervision is recognised when services are rendered and when it is probable that the economic benefits associated with the transaction will flow to the entity.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.26 Revenue recognition (continued)

**(c) Sales of products**

Sales of products are recognised when significant risks and rewards of ownership of the goods are transferred to the customers, and the customer has accepted the products and collectability of the related receivables is reasonably assured.

**(d) Dividend income**

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

**(e) Interest income**

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

#### 2.27 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.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.27 Research and development (continued)

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.

#### 2.28 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.

#### 2.29 Financial guarantee contract

Financial guarantee contracts are contract that require the issuer to make specified payments to reimburse the holder for a loss it occurs because of a specified debtor fails to make payment when due in accordance with the original or modified terms of a debt instrument.

Financial guarantees are initially recognised in the financial statements at fair value on the date the guarantee was given. The fair value of a financial guarantee at the time of signature is zero because all guarantees are agreed on arm's length terms, and the value of the premium agreed corresponds to the value of the guarantee obligation. No receivable for the future premiums is recognised. Subsequent to initial recognition, the company's liabilities under such guarantees are measured at the higher of the initial amount, less amortisation of fees recognised in accordance with IAS 18, and the best estimate of the amount required to settle the guarantee. These estimates are determined based on experience of similar transactions and history of past losses, supplemented by management's judgement. The fee income earned is recognised on a straight-line basis over the life of the guarantee. Any increase in the liability relating to guarantees is reported in the consolidated statement of comprehensive income within other operating expenses.

Where guarantees in relation to loans or other payables of subsidiaries or associates are provided for no compensation, the fair values are accounted for as contributions and recognised as part of the cost of the investment in the financial statements of the Company.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### 2.29 Financial guarantee contract (continued)

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

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

### 3. CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENT

#### 3.1 Construction contracts

Revenue from individual contracts is recognised under the percentage of completion 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 and engineering 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.

#### 3.2 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

### 3. CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENT (CONTINUED)

#### 3.3 Impairment of financial assets measured at amortised cost and contract work-in-progress

The Group measures the loss allowances for ECLs on financial assets measured at amortised cost and contract work-in-progress. 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 an unbiased and 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 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.

#### 3.4 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

### 3. CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENT (CONTINUED)

#### 3.5 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 year/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.

#### 3.6 Jointly control

As described in the Note 20(b), the Company is required to take the responsibility of paying the outstanding balance of the principal and the relevant expected earnings once Shanghai Fengtong fails to make the payment of it to the senior limited partner in accordance with the terms of the relevant contracts; then the Company can exercise veto rights during the decision making process of Shanghai Fengtong Fund and the subsequent management of the invested entities and have the right to participate in the distribution of the residual earnings.

The Company follows IFRS 11, IFRS 12 and IAS 28 guidance on the accounting treatment and disclosure requirement in its consolidated financial statements. Whether the Company has control or jointly control over Shanghai Fengtong Fund during the year of 2014 needs significant judgement. In making this judgement, the Directors of the Company evaluate factors as following: the purpose and the design of Shanghai Fengtong Fund; the relevant activities of Shanghai Fengtong Fund; the right of the Company to direct the relevant activities of Shanghai Fengtong Fund; the exposures and variables returns of the Company; the ability of the Company to use its power over Shanghai Fengtong Fund to affect its returns. After assessed these criteria, the Directors of the Company determines that the Company have jointly control of Shanghai Fengtong Fund. The Directors of the Company will continuously reassess the control over Shanghai Fengtong Fund. Once the Company gains control over this investee, the Company will consolidate this Shanghai Fengtong Fund immediately.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 3. CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENT (CONTINUED)

#### 3.7 Revenue recognition at gross or net basis for trading operation

One of the main activities of the Group's trading operation is to purchase material or product from its suppliers and sell to its customers. As required by IAS 18 "Revenue" and EITF99-19, when determining whether the revenue of trading operation should be recognised at gross or net basis, the Group made assessment based on indicators of (a) who is primarily responsible for providing the goods; (b) who has inventory risk; (c) who bears credit risk; (d) who has latitude to establish prices; and (e) whether the amount the entity earns is predetermined, as well as 1) the related party relationships existed between the counter parties; 2) the financing arrangement or whether time value forms a significant component when determining the pricing of the arrangements. These factors affect the Group's judgement on the business substance. Based on the comprehensive assessment of all above factors, the Group can determine whether revenue and cost for the trading operation should be recognised at gross or net basis.

#### 3.8 Fair value of assets acquired and liabilities assumed upon acquisition

In connection with the acquisition of a subsidiary, the assets acquired and liabilities assumed were adjusted to their estimated fair values on the date of acquisition. The determination of the values of assets acquired and liabilities assumed involves management's judgements and assumptions. The values of assets acquired and liabilities assumed were based on valuation performed by an independent professional qualified valuer, the Group's management expert. Such valuations were based on certain assumptions, which were subject to uncertainty and might materially differ from the actual results. Any change in such judgements and assumptions would affect the fair value of assets acquired and liabilities assumed.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 4. IMPACT ON ACCOUNTING POLICY CHANGE AND BUSINESS COMBINATIONS UNDER COMMON CONTROL

#### (a) Accounting policy change

In preparing the consolidated financial statements for the year ended 31 December 2017, management has identified the following accounting policy changes in the presentation and disclosure in certain transactions and balances in previously issued consolidated financial statements.

During the year, the Group has reassessed and revised its policy on impairment losses recognised for trade and other receivables. Before the policy revision, the Group recognised impairment losses for trade and other receivables only if there is objective evidence of impairment as a result of one or more events that occurred after the initial recognition of the asset (a 'loss event') and that loss event (or events) has an impact on the estimated future cash flows of the financial asset or group of financial assets that can be reliably estimated.

After the revision, the Group measured the loss allowance for the trade and other receivables and the contract work-in-progress based on the amounts equal to the lifetime expected credit losses except other receivables for which credit risk has not increased significantly since initial recognition. Expected credit losses are measured in a way that reflects:

- (a) an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes;
- (b) the time value of money; and
- (c) 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.

The revised accounting policy complies with IAS 39 "Financial Instruments: Recognition and Measurement" and IFRS 9 "Financial Instruments". The change in accounting policy is not an early adoption of IFRS 9 "Financial Instruments".

As required by IAS 8 "Accounting Policies, Changes in Accounting Estimate and Errors", this revised accounting policy has been made retrospectively and its impact is presented in the Note 4(c) below.



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 4. IMPACT ON ACCOUNTING POLICY CHANGE AND BUSINESS COMBINATIONS UNDER COMMON CONTROL (CONTINUED)

#### (b) Business combinations under common control

In November 2017, the Group completed its acquisition of the 60% equity interest of Chalco Shandong Engineering Technology Co., Ltd. (“Shandong Engineering”) from Aluminum Corporation of China Limited (“Chalco”) at a consideration of approximately RMB360 million and of the 100% equity interest of Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry (“Kunming Survey and Design Institute”) from Yunnan Copper Industry (Group) Co., Ltd. (“Yunnan Copper”) at a consideration of approximately RMB301 million.

Before and after the acquisitions, the Company, Chalco and Yunnan Copper are controlled by Chinalco, and the control is not temporary. Thus, the acquisition of Shandong Engineering and Kunming Survey and Design Institute are considered to be business combinations under common control. The principles of merger accounting have been applied, under which the consolidated financial statements have been prepared as if Shandong Engineering and Kunming Survey and Design Institute had been subsidiaries of the Company since the date when Shandong Engineering and Kunming Survey and Design Institute first came under the control of the Chinalco.

The Company’s consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for the years ended 31 December 2016 and 2017 include the respective results, changes in equity and cash flows of Shandong Engineering and Kunming Survey and Design Institute as if they had been 60% and 100% owned subsidiaries of the Company since 1 January 2016. The Company’s consolidated statements of financial position at 1 January 2016 and 31 December 2016 have been prepared to include the respective carrying values of assets and liabilities of Shandong Engineering and Kunming Survey and Design Institute as if they had been 60% and 100% owned subsidiaries of the Company as of those days. Their impact is presented in Note 4(c) below.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 4. IMPACT ON ACCOUNTING POLICY CHANGE AND BUSINESS COMBINATIONS UNDER COMMON CONTROL (CONTINUED)

## (c) Impact on consolidated financial statements

Impact of the accounting policy change and business combinations under common control on the consolidated balance sheets as at 31 December 2016 and 1 January 2016:

	As at 31 December 2016			
	The Group previously reported RMB'000	Adjustment of accounting policy change RMB'000	Business combinations under common control RMB'000	Restated RMB'000
<b>Assets</b>				
<b>Non-current assets</b>				
Property, plant and equipment	2,440,728	–	208,087	2,648,815
Land use rights	788,902	–	25,791	814,693
Investment properties	179,774	–	45,391	225,165
Trade and notes receivables	1,637,814	(766)	–	1,637,048
Prepayments and other receivables	1,639,934	(8,290)	–	1,631,644
Intangible assets	128,364	–	2,120	130,484
Investments accounted for using the equity method	212,831	–	–	212,831
Available-for-sale financial assets	233,799	–	–	233,799
Deferred income tax assets	424,159	152,723	33,766	610,648
Other non-current assets	27,912	–	–	27,912
<b>Total non-current assets</b>	<b>7,714,217</b>	<b>143,667</b>	<b>315,155</b>	<b>8,173,039</b>
<b>Current assets</b>				
Available-for-sale financial assets	18,000	–	–	18,000
Inventories	1,339,558	–	125,429	1,464,987
Trade and notes receivables	14,419,026	(487,828)	961,063	14,892,261
Prepayments and other receivables	4,256,685	(178,176)	106,564	4,185,073
Amounts due from customers for contract work	6,164,121	(51,975)	1,290	6,113,436
Current income tax prepayments	18,187	–	–	18,187
Restricted cash	910,192	–	112,962	1,023,154
Time deposits	18,426	–	–	18,426
Cash and cash equivalents	7,714,218	–	187,616	7,901,834
<b>Total current assets</b>	<b>34,858,413</b>	<b>(717,979)</b>	<b>1,494,924</b>	<b>35,635,358</b>
<b>Total assets</b>	<b>42,572,630</b>	<b>(574,312)</b>	<b>1,810,079</b>	<b>43,808,397</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 4. IMPACT ON ACCOUNTING POLICY CHANGE AND BUSINESS COMBINATIONS UNDER COMMON CONTROL (CONTINUED)

## (c) Impact on consolidated financial statements (continued)

	As at 31 December 2016			
	The Group previously reported RMB'000	Adjustment of accounting policy change RMB'000	Business combinations under common control RMB'000	Restated RMB'000
<b>Equity</b>				
Share capital	2,663,160	–	–	2,663,160
Capital reserve	711,218	–	347,306	1,058,524
Statutory surplus reserve	157,366	(26,912)	–	130,454
Investment revaluation reserve	(1,090)	–	–	(1,090)
Remeasurements of post-employment benefit obligation	75,759	–	22	75,781
Currency translation differences	158,501	–	–	158,501
Special reserve	10,699	–	4,567	15,266
Other equity instruments	1,402,731	–	–	1,402,731
Retained earnings	4,228,684	(520,948)	80,304	3,788,040
Non-controlling interests	4,609,546	(26,452)	122,881	4,705,975
<b>Total equity</b>	<b>14,016,574</b>	<b>(574,312)</b>	<b>555,080</b>	<b>13,997,342</b>
<b>Liabilities</b>				
<b>Non-current liabilities</b>				
Deferred income	85,793	–	425	86,218
Long-term borrowings	1,980,232	–	–	1,980,232
Retirement and other supplemental benefit obligations	979,448	–	66,000	1,045,448
Deferred income tax liabilities	51,748	–	–	51,748
Trade and other payables	21,949	–	13,358	35,307
<b>Total non-current liabilities</b>	<b>3,119,170</b>	<b>–</b>	<b>79,783</b>	<b>3,198,953</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 4. IMPACT ON ACCOUNTING POLICY CHANGE AND BUSINESS COMBINATIONS UNDER COMMON CONTROL (CONTINUED)

#### (c) Impact on consolidated financial statements (continued)

	As at 31 December 2016			
	The Group previously reported RMB'000	Adjustment of accounting policy change RMB'000	Business combinations under common control RMB'000	Restated RMB'000
<b>Current liabilities</b>				
Trade and other payables	14,740,430	–	890,806	15,631,236
Dividends payable	55,441	–	–	55,441
Amounts due to customers for contract work	643,790	–	47,002	690,792
Short-term borrowings	9,684,897	–	226,700	9,911,597
Current income tax liabilities	183,965	–	2,648	186,613
Retirement and other supplemental benefit obligations	128,363	–	8,060	136,423
<b>Total current liabilities</b>	<b>25,436,886</b>	<b>–</b>	<b>1,175,216</b>	<b>26,612,102</b>
<b>Total liabilities</b>	<b>28,556,056</b>	<b>–</b>	<b>1,254,999</b>	<b>29,811,055</b>
<b>Total equity and liabilities</b>	<b>42,572,630</b>	<b>(574,312)</b>	<b>1,810,079</b>	<b>43,808,397</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 4. IMPACT ON ACCOUNTING POLICY CHANGE AND BUSINESS COMBINATIONS UNDER COMMON CONTROL (CONTINUED)

#### (c) Impact on consolidated financial statements (continued)

	As at 1 January 2016			
	The Group previously reported RMB'000	Adjustment of accounting policy change RMB'000	Business combinations under common control RMB'000	Restated RMB'000
<b>Assets</b>				
<b>Non-current assets</b>				
Property, plant and equipment	2,052,454	–	168,303	2,220,757
Land use rights	792,950	–	4,200	797,150
Investment properties	77,994	–	–	77,994
Trade and notes receivables	1,752,312	(510)	1	1,751,803
Prepayments and other receivables	592,047	(2,748)	–	589,299
Intangible assets	142,610	–	1,867	144,477
Investments accounted for using the equity method	299,539	–	–	299,539
Available-for-sale financial assets	9,973	–	14,163	24,136
Deferred income tax assets	381,250	104,578	11,638	497,466
Other non-current assets	12,015	–	–	12,015
<b>Total non-current assets</b>	<b>6,113,144</b>	<b>101,320</b>	<b>200,172</b>	<b>6,414,636</b>
<b>Current assets</b>				
Available-for-sale financial assets	149,200	–	10,000	159,200
Inventories	771,765	–	137,940	909,705
Trade and notes receivables	10,687,753	(340,943)	468,079	10,814,889
Prepayments and other receivables	3,330,491	(82,503)	82,798	3,330,786
Amounts due from customers for contract work	4,098,534	(32,339)	10,664	4,076,859
Current income tax prepayments	85,978	–	393	86,371
Restricted cash	723,510	–	19,400	742,910
Time deposits	28,929	–	–	28,929
Cash and cash equivalents	4,847,792	–	108,047	4,955,839
<b>Total current assets</b>	<b>24,723,952</b>	<b>(455,785)</b>	<b>837,321</b>	<b>25,105,488</b>
<b>Total assets</b>	<b>30,837,096</b>	<b>(354,465)</b>	<b>1,037,493</b>	<b>31,520,124</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 4. IMPACT ON ACCOUNTING POLICY CHANGE AND BUSINESS COMBINATIONS UNDER COMMON CONTROL (CONTINUED)

## (c) Impact on consolidated financial statements (continued)

	As at 1 January 2016			
	The Group previously reported RMB'000	Adjustment of accounting policy change RMB'000	Business combinations under common control RMB'000	Restated RMB'000
<b>Equity</b>				
Share capital	2,663,160	–	–	2,663,160
Capital reserve	768,132	–	265,320	1,033,452
Statutory surplus reserve	130,626	(20,009)	–	110,617
Remeasurements of post-employment benefit obligation	42,775	–	–	42,775
Currency translation differences	77,088	–	–	77,088
Special reserve	23,494	–	424	23,918
Other equity instruments	190,129	–	–	190,129
Retained earnings	3,268,316	(318,050)	74,381	3,024,647
Non-controlling interests	2,006,863	(16,406)	115,632	2,106,089
<b>Total equity</b>	<b>9,170,583</b>	<b>(354,465)</b>	<b>455,757</b>	<b>9,271,875</b>
<b>Liabilities</b>				
<b>Non-current liabilities</b>				
Deferred income	88,269	–	1,442	89,711
Long-term borrowings	1,210,935	–	–	1,210,935
Retirement and other supplemental benefit obligations	1,076,882	–	16,239	1,093,121
Deferred income tax liabilities	629	–	–	629
Trade and other payables	1,431	–	13,423	14,854
<b>Total non-current liabilities</b>	<b>2,378,146</b>	<b>–</b>	<b>31,104</b>	<b>2,409,250</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 4. IMPACT ON ACCOUNTING POLICY CHANGE AND BUSINESS COMBINATIONS UNDER COMMON CONTROL (CONTINUED)

## (c) Impact on consolidated financial statements (continued)

	As at 1 January 2016			
	The Group previously reported RMB'000	Adjustment of accounting policy change RMB'000	Business combinations under common control RMB'000	Restated RMB'000
<b>Current liabilities</b>				
Trade and other payables	11,070,114	–	460,407	11,530,521
Dividends payable	55,347	–	–	55,347
Amounts due to customers for contract work	420,286	–	21,950	442,236
Short-term borrowings	7,461,720	–	56,700	7,518,420
Current income tax liabilities	143,710	–	5,285	148,995
Retirement and other supplemental benefit obligations	137,190	–	6,290	143,480
<b>Total current liabilities</b>	<b>19,288,367</b>	<b>–</b>	<b>550,632</b>	<b>19,838,999</b>
<b>Total liabilities</b>	<b>21,666,513</b>	<b>–</b>	<b>581,736</b>	<b>22,248,249</b>
<b>Total equity and liabilities</b>	<b>30,837,096</b>	<b>(354,465)</b>	<b>1,037,493</b>	<b>31,520,124</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 4. IMPACT ON ACCOUNTING POLICY CHANGE AND BUSINESS COMBINATIONS UNDER COMMON CONTROL (CONTINUED)

## (c) Impact on consolidated financial statements (continued)

Impact of the accounting policy change and business combinations on the consolidated statement of comprehensive income for the year ended 31 December 2016:

	For the year ended 31 December 2016			
	The Group previously reported RMB'000	Adjustment of accounting policy change RMB'000	Business combinations under common control RMB'000	Restated RMB'000
<b>Revenue</b>	24,765,620	–	2,200,667	26,966,287
Cost of sales	(22,033,172)	–	(2,045,133)	(24,078,305)
<b>Gross profit</b>	2,732,448	–	155,534	2,887,982
Tax and surcharges	(113,358)	–	(20,913)	(134,271)
Selling and marketing expenses	(117,538)	–	(6,759)	(124,297)
Administrative expenses	(1,155,247)	(267,992)	(100,769)	(1,524,008)
Other income	109,364	–	1,953	111,317
Other losses – net	(128,420)	–	(801)	(129,221)
<b>Operating profit</b>	1,327,249	(267,992)	28,245	1,087,502
Finance income	322,076	–	1,172	323,248
Finance expenses	(506,296)	–	(6,160)	(512,456)
Gain on disposal of an associate	190,249	–	–	190,249
Gain on partial disposal of an associate	68,079	–	–	68,079
Gain on bargain purchase from business combination	269,651	–	–	269,651
Share of losses of investments accounted for using equity method	(89,281)	–	–	(89,281)
<b>Profit before income tax</b>	1,581,727	(267,992)	23,257	1,336,992
Income tax expense	(279,360)	48,145	(5,942)	(237,157)
<b>Profit for the year</b>	1,302,367	(219,847)	17,315	1,099,835



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 4. IMPACT ON ACCOUNTING POLICY CHANGE AND BUSINESS COMBINATIONS UNDER COMMON CONTROL (CONTINUED)

## (c) Impact on consolidated financial statements (continued)

	For the year ended 31 December 2016			
	The Group previously reported RMB'000	Adjustment of accounting policy change RMB'000	Business combinations under common control RMB'000	Restated RMB'000
<b>Other comprehensive income</b>				
<i>Items that may be reclassified to profit or loss</i>				
Fair value losses on available-for-sale financial assets, net of tax	(1,090)	–	–	(1,090)
Reclassification upon partial disposal of an associate, net of tax	(15,593)	–	–	(15,593)
Reclassification upon disposal of an associate, net of tax	(41,321)	–	–	(41,321)
Currency translation differences	81,413	–	–	81,413
<i>Item that will not be reclassified subsequently to profit or loss</i>				
Remeasurements of post-employment benefit obligations, net of tax	33,094	–	22	33,116
<b>Other comprehensive income for the year, net of tax</b>	56,503	–	22	56,525
<b>Total comprehensive income for the year</b>	1,358,870	(219,847)	17,337	1,156,360
<b>Profit attributable to:</b>				
Equity owners of the Company	1,144,403	(209,801)	10,066	944,668
Non-controlling interests	157,964	(10,046)	7,249	155,167
	1,302,367	(219,847)	17,315	1,099,835
<b>Total comprehensive income attributable to:</b>				
Equity owners of the Company	1,200,796	(209,801)	10,088	1,001,083
Non-controlling interests	158,074	(10,046)	7,249	155,277
	1,358,870	(219,847)	17,337	1,156,360
	RMB	RMB	RMB	RMB (restated)
<b>Earnings per share for profit attributable to equity owners of the Company</b>				
– Basic	0.43	(0.08)	–	0.35
– Diluted	0.43	(0.08)	–	0.35

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 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 operations outside the PRC where transactions are usually denominated in the United States Dollars ("USD") which are translated into RMB at the prevailing exchange rates on the dates of the transactions.

The Group is exposed to currency risk primarily through provision of engineering contracting services, which give rise to 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 2017 and 2016.

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.

## 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 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			
	2017		2016	
	USD RMB'000	Others RMB'000	USD RMB'000 (restated)	Others RMB'000 (restated)
Restricted cash, time deposit and cash and cash equivalents (Note 26, 27, 28)	1,244,307	157,490	3,502,221	26,372
Trade receivables (Note 22)	105,325	476,890	100,641	497,327
Other receivables (Note 23)	–	1,839	–	1,920
Borrowings (Note 33)	(308,076)	–	(1,791,210)	–
Trade and other payables (Note 34)	(187,126)	(26,172)	(568,122)	(31,369)
<b>Net exposure in RMB</b>	<b>854,430</b>	<b>610,047</b>	1,243,530	494,250

A 5% strengthening of RMB against the USD as at 31 December 2017 and 2016 would have increased/(decreased), the net profit by the amounts shown below:

	As at 31 December	
	2017 RMB'000	2016 RMB'000
Net profit change	(36,313)	(46,632)

A 5% weakening of RMB against USD as at 31 December 2017 and 2016 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.

## 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 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. As at 31 December 2017 and 2016, the notional principal amounts of the outstanding forward currency contract were RMBnil.

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 2017 and 2016.

###### (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 interest-bearing assets. As at 31 December 2017, the Group's borrowings of approximately RMB1,102 million (2016: RMB748 million) and trade receivables of approximately RMB1,016 million (2016: RMB683 million), were at floating rates. The interest rates and terms of repayment of the Group's borrowings are disclosed in Note 33.

###### (iii) Price risk

The Group is exposed to equity securities price risk because the Group's equity securities investments are classified as available-for-sale financial assets, which are required to be stated at their fair values.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 5. FINANCIAL RISK MANAGEMENT (CONTINUED)

#### 5.1 Financial risk factors (continued)

##### (a) Market risk (continued)

##### (iii) Price risk (continued)

The following table details the Group's sensitivity to a 5% increase and 5% decrease in equity securities price on the available-for-sale financial assets 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	
	2017	2016
Change in equity securities price	5%	5%

	For the year ended 31 December	
	2017	2016
	RMB'000	RMB'000
<b>Impact on equity</b>		
Increase/(decrease) in equity for the year		
– as a result of increase in equity securities price	8,438	9,130
– as a result of decrease in equity securities price	(8,438)	(9,130)

## 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 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 the Build-Transfer contracts or some of the EPC 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 are disclosed in Notes 22 and 23.

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).

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 5. FINANCIAL RISK MANAGEMENT (CONTINUED)

#### 5.1 Financial risk factors (continued)

##### (c) Liquidity risk

Prudent liquidity risk management implies maintaining sufficient cash and the availability of funding from an adequate amount of committed credit facilities. Due to the dynamic nature of the underlying 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.

	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
	<b>26,979,932</b>	<b>846,457</b>	<b>2,144,738</b>	<b>19,266</b>	<b>29,990,393</b>
Financial guarantees issued Maximum amount guaranteed	325,000	-	-	-	325,000

## 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
Restated					
At 31 December 2016					
Borrowings	10,182,322	515,232	1,560,197	31,454	12,289,205
Trade and other payables (excluding non-financial liabilities)	13,656,922	35,307	–	–	13,692,229
Dividends payable	55,441	–	–	–	55,441
	23,894,685	550,539	1,560,197	31,454	26,036,875
Financial guarantees issued					
Maximum amount guaranteed	2,355,000	–	–	–	2,355,000

#### 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.



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 5. FINANCIAL RISK MANAGEMENT (CONTINUED)

#### 5.2 Capital risk management (continued)

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	
	2017 RMB'000	2016 RMB'000 (restated)
Total borrowings and other liabilities	<b>32,019,777</b>	28,304,605
Less: Restricted cash, time deposits and cash and cash equivalents (Note 26, 27, 28)	<b>(7,490,615)</b>	(8,943,414)
Net debt	<b>24,529,162</b>	19,361,191
Total equity attributed to equity owners of the Company	<b>9,178,230</b>	9,291,367
Total capital	<b>33,707,392</b>	28,652,558
Gearing ratio	<b>73%</b>	68%

## 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 2017 and 2016.

	At 31 December	
	2017 RMB'000	2016 RMB'000
<b>Level 1</b>		
Available-for-sale financial assets		
Listed equity securities	<b>198,538</b>	214,826
<b>Level 3</b>		
Available-for-sale financial assets		
Unlisted equity securities	<b>120,383</b>	18,973
Short-term investments	<b>530,592</b>	18,000
	<b>849,513</b>	251,799

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 held by the Group is the quoted prices from an exchange. These instruments are included in level 1. Instruments included equity investment in Zhuzhou Tianqiao Crane Co., Ltd., which is classified as available-for-sale financial assets.

##### (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

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

The following table presents the changes in level 3 instruments for the year ended 31 December 2016:

	Available-for-sale financial assets	
	Unlisted equity securities RMB'000	Short-term investments RMB'000
At beginning of the year	9,973	149,200
Additions	4,000	1,135,500
Arising on business combination (Note 42(b))	5,000	–
Settlement on expiration	–	(1,266,700)
At end of the year	18,973	18,000

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 6. REVENUE AND SEGMENT INFORMATION

#### (a) Revenue

The Group's revenue is set out below:

	Year ended 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
Engineering design and consultancy	1,740,349	1,616,491
Engineering and construction contracting	23,906,705	16,482,127
Equipment manufacturing	1,246,623	947,248
Trading	9,171,669	7,920,421
	<b>36,065,346</b>	26,966,287

#### (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, available-for-sale financial assets, other non-current assets, inventories, amounts due from customers for contract work, 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.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 6. REVENUE AND SEGMENT INFORMATION (CONTINUED)

#### (b) Segment information (continued)

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.

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 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
<b>Segment revenue and results</b>						
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 a subsidiary	-	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
<b>Other segment items</b>						
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)						
- foreseeable losses on construction contracts	-	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)

(i) As at and for the year end 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
<b>Assets</b>						
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
<b>Total assets</b>						<b>45,373,790</b>
<b>Liabilities</b>						
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
<b>Total liabilities</b>						<b>33,246,219</b>
<b>Capital expenditure</b>	<b>220,499</b>	<b>386,518</b>	<b>75,234</b>	<b>73,396</b>	<b>-</b>	<b>755,647</b>

## 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 2016:

The segment results for the year ended 31 December 2016 are as follows:

(restated)	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
<b>Segment revenue and results</b>						
Segment revenue	1,693,387	16,673,947	1,025,507	7,961,134	(387,688)	26,966,287
Inter-segment revenue	(76,896)	(191,820)	(78,259)	(40,713)	387,688	-
Revenue	1,616,491	16,482,127	947,248	7,920,421	-	26,966,287
Segment result	9,823	994,053	(36,489)	111,988	8,127	1,087,502
Finance income	79,679	385,361	28,712	237,348	(407,852)	323,248
Finance expenses	(51,889)	(765,382)	(25,536)	(216,299)	546,650	(512,456)
Gain on disposal of an associate	-	190,249	-	-	-	190,249
Gain on partial disposal of an associate	-	68,079	-	-	-	68,079
Gain on bargain purchase from business combination	-	269,651	-	-	-	269,651
Share of profits/(losses) of investments accounted for using equity method	11,150	(100,423)	(8)	-	-	(89,281)
Income tax expense						(237,157)
Profit for the year						1,099,835
<b>Other segment items</b>						
Amortisation	34,833	20,931	3,354	-	-	59,118
Depreciation	64,172	107,409	31,565	49	-	203,195
Provision for/(reversal of)						
- foreseeable losses on construction contracts	1,784	30,464	2,713	-	-	34,961
- credit losses	65,871	297,406	19,846	31,899	-	415,022
- impairment of inventories	2,008	(865)	3,052	-	-	4,195
- available-for-sale financial assets	-	14,163	-	-	-	14,163



## 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 2016: (continued)

The segment assets and liabilities as at 31 December 2016 and capital expenditure for the year then ended are as follows:

(restated)	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
<b>Assets</b>						
Segment assets	5,193,625	32,800,661	3,557,598	7,127,073	(5,712,226)	42,966,731
Unallocated assets						
– Deferred income tax assets						610,648
– Current income tax prepayments						18,187
– Investments accounted for using equity method						212,831
<b>Total assets</b>						<u>43,808,397</u>
<b>Liabilities</b>						
Segment liabilities	3,159,485	21,778,148	2,832,971	6,710,947	(4,908,857)	29,572,694
Unallocated liabilities						
– Deferred income tax liabilities						51,748
– Current income tax liabilities						186,613
<b>Total liabilities</b>						<u>29,811,055</u>
<b>Capital expenditure</b>	73,194	674,218	72,984	146	–	<u>820,542</u>

## 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	
	2017 RMB'000	2016 RMB'000 (restated)
The PRC	34,611,002	26,097,053
Other countries	1,454,344	869,234
	<b>36,065,346</b>	26,966,287

#### Non-current assets, other than financial instruments and deferred tax assets

	At 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
The PRC	7,414,503	7,301,384
Other countries	35,680	27,208
	<b>7,450,183</b>	7,328,592

(iv) For the year ended 31 December 2017, revenue of approximately RMB1,772 million (2016: RMB635 million) and RMB1,902 million (2016: RMB444 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 2017 and 2016, 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	
	2017 RMB'000	2016 RMB'000 (restated)
Raw materials and consumables used	16,415,912	13,030,444
Purchased equipment	3,749,539	1,312,672
Subcontracting charges	9,953,636	7,550,287
Employee benefits	1,771,229	1,760,227
Depreciation and amortisation		
– property, plant and equipment	230,516	200,102
– investment properties	7,147	3,093
– land use rights	21,735	22,783
– intangible assets	36,802	35,189
Tax and other transaction taxes	104,299	152,260
Travelling expenses and freight charges	234,258	263,841
Office expenses	27,166	44,579
Operating lease rentals	111,150	65,190
Provision for impairment		
– trade and notes receivables	149,199	356,887
– prepayments and other receivables	131,826	158,639
– amounts due from customers for contract work	28,189	34,961
– inventories	27,940	6,720
Provision for impairment of investment in an associate	8,372	–
Provision for impairment of available-for-sale financial assets	–	14,163
Reversal of provision for impairment		
– trade and notes receivables	(42,659)	(80,322)
– prepayments and other receivables	(3,114)	(20,182)
– inventories	–	(2,525)
Research and development costs	505,261	218,635
Professional and technical consulting fees	137,464	183,555
Auditor's remuneration	6,751	7,180
Outsourcing charges	–	5,640
Bank charges	46,852	36,071
Business development and entertainment	59,692	31,780
Property management fees	53,251	38,916
Others	997,105	430,096
<b>Total cost of sales, tax and surcharges, selling and marketing expenses and administrative expenses</b>	<b>34,769,518</b>	<b>25,860,881</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 8. OTHER INCOME

	Year ended 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
Interest from short-term investments	1,630	4,570
Write-back of long outstanding payables (i)	29,841	23,755
Government grants (ii)	42,506	40,675
Others	26,025	42,317
	<b>100,002</b>	111,317

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 GAINS/(LOSSES) – NET

	Year ended 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
Net foreign exchange gains/(losses)	20,984	(95,400)
Gains on disposal of available-for-sale financial assets	7,383	–
Gains on disposal of property, plant and equipment, land use right and intangible assets	16,486	1,725
Others	(22,546)	(35,546)
	<b>22,307</b>	(129,221)

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 10. FINANCE EXPENSES – NET

	Year ended 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
Interest income on deposits with banks	57,866	82,984
Interest income on receivables with interests	187,434	220,196
Interest income on deposit in related parties (Note 44(a))	12,253	13,341
Interest income on loans to third parties	8,994	6,727
<b>Finance income</b>	<b>266,547</b>	323,248
Interest expense of retirement and other supplemental benefit obligations	28,072	36,927
Interest expense on bank and other borrowings	628,137	485,596
Less: capitalised interest expense	(14,048)	(10,067)
<b>Finance expenses</b>	<b>642,161</b>	512,456
<b>Net finance expenses recognised in the consolidated statement of comprehensive income</b>	<b>375,614</b>	189,208

## 11. INCOME TAX EXPENSE

	Year ended 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
<b>Current tax</b>		
PRC enterprise income tax for the year (i)	228,891	262,796
Overseas income tax for the year	1,270	153
	<b>230,161</b>	262,949
<b>Deferred tax</b>		
Obligations and reversal of temporary differences (Note 35)	(2,546)	(25,792)
<b>Income tax expense</b>	<b>227,615</b>	237,157

## 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 located in special regions of the PRC were granted tax concessions including preferential tax rates of 15%.

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.

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 2017.

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	
	2017 RMB'000	2016 RMB'000 (restated)
Profit before income tax	<b>1,077,283</b>	1,336,992
Taxation calculated at the tax rate of 15% (2016: 15%)	<b>161,592</b>	200,549
Income tax effects of:		
Tax rate differential of certain companies	<b>20,818</b>	45,567
Gain on bargain purchase from business combination	<b>(20)</b>	(40,448)
Gain on disposal of a subsidiary	<b>(1,260)</b>	–
Non-deductible expenses	<b>14,880</b>	7,694
Others	<b>31,605</b>	23,795
Income tax expense	<b>227,615</b>	237,157
Effective income tax rate	<b>21%</b>	18%

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 12. EARNINGS PER SHARE

#### (a) Basic

The basic earnings per share for each of the years ended 31 December 2017 and 2016 is calculated based on the profit attribute to equity owners of the Company and on the weighted average number of ordinary shares issued.

	Year ended 31 December	
	2017	2016 (restated)
Profit attributable to equity owners of the Company (RMB'000)	<b>616,879</b>	944,668
Weighted average number of ordinary shares in issue	<b>2,663,160,000</b>	2,663,160,000
Basic earnings per share (RMB)	<b>0.23</b>	0.35

#### (b) Diluted

As the Company had no dilutive ordinary shares for each of the years ended 31 December 2017 and 2016, dilutive earnings per share for the years ended 31 December 2017 and 2016 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 2017 and 2016.

	Year ended 31 December	
	2017	2016
	RMB'000	RMB'000
Final, proposed, of RMBnil per ordinary share (2016: RMB0.087)	-	231,695

2016 final dividend of RMB0.087 per ordinary share, totaling approximately RMB231.7 million was approved by the Company's shareholders in the Annual General Meeting on 23 May 2017.

Pursuant to the board meeting on 12 March 2018, the directors did not recommend the payment of any final dividend for the year ended 31 December 2017.

### 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	
	2017	2016
	RMB'000	RMB'000
Directors and supervisors		
– Salaries, housing allowances, other allowances and benefits-in-kind	2,458	1,781
– Contributions to pension plans	417	230
– Discretionary bonuses	1,833	639
	<b>4,708</b>	2,650



## 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 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
<b>Directors</b>				
– 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
<b>Supervisors</b>				
– Mr. Ou Xiaowu (歐小武) (i)	–	–	–	–
– Mr. He Bincong (賀斌聰)	360	81	375	816
– Mr. Li Hui (李衛) (i)	–	–	–	–
	<b>2,458</b>	<b>417</b>	<b>1,833</b>	<b>4,708</b>

## 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 2016

	Salaries, housing allowances, other allowances, and benefits- in-kind RMB'000	Contributions to pension plans RMB'000	Discretionary bonuses RMB'000	Total RMB'000
<b>Directors</b>				
– Mr. Zhang Chengzhong (張程忠) (i)	–	–	–	–
– Mr. He Zhihui (賀志輝)	461	88	339	888
– Mr. Wang Jun (王軍)	–	–	–	–
– Mr. Cheung Hung Kwong (張鴻光)	143	–	–	143
– Mr. Sun Chuanyao (孫傳堯)	143	–	–	143
– Mr. Zhang Jian (張建)	444	66	86	596
– Mr. Fu Jun (伏軍)	143	–	–	143
<b>Supervisors</b>				
– Mr. Ou Xiaowu (歐小武) (i)	–	–	–	–
– Mr. He Bincong (賀斌聰)	447	76	214	737
– Mr. Dong Hai (董海) (i)	–	–	–	–
	1,781	230	639	2,650

## 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 2017 and 2016 is minimal.

During the years ended 31 December 2017 and 2016, 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 2017 and 2016 are set forth below:

	Year ended 31 December	
	2017	2016
Director or supervisor	3	2
Non-director or supervisor	2	3
	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	
	2017 RMB'000	2016 RMB'000
Basic salaries, housing allowances, other allowances and benefits-in-kind	1,128	1,472
Contributions to pension plans	174	197
Discretionary bonuses	308	2,281
	<b>1,610</b>	3,950

The emoluments of the remaining highest paid individuals who are not director or supervisor are within the following bands:

	Year ended 31 December	
	2017	2016
Nil to HK\$1,000,000	2	–
HK\$1,000,001 to HK\$1,500,000	–	2
HK\$1,500,001 to HK\$2,000,000	–	1
	<b>2</b>	3

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 15. EMPLOYMENT BENEFITS

	Year ended 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
Salaries, wages and bonuses (iii)	<b>1,267,261</b>	1,126,943
Retirement benefits (i) and (iii)	<b>201,474</b>	176,982
Early retirement and supplemental pension benefit (Note 32)		
– interest cost	<b>28,072</b>	36,927
– past service cost	<b>10,912</b>	9,032
– current service cost	<b>981</b>	2,005
Housing fund (ii) and (iii)	<b>116,819</b>	107,140
Welfare, medical and other expenses (iii)	<b>366,681</b>	338,125
	<b>1,992,200</b>	1,797,154

## Notes:

## (i) Retirement benefits

The Group is required to make specific contributions to the state-managed retirement plan at a rate of 20% of the salaries of the PRC employees for the years ended 31 December 2017 and 2016. 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 10% to 20% 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) Confirm employee benefits of RMB193 million (2016: nil) are included in research and development cost of RMB505,261,000 (2016: RMB218,635,000) 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
<b>Year ended 31 December 2016</b> (restated)						
Opening net book amount	1,538,568	371,489	75,729	119,258	115,713	2,220,757
Transfers	46,378	1,890	–	–	(48,268)	–
Transfer from other non-current assets	10,814	–	–	–	–	10,814
Additions	30,789	26,072	11,861	27,404	186,038	282,164
Arising on business combination (Note 42(b))	170,587	42,900	43,130	6,664	35,875	299,156
Depreciation	(78,400)	(66,027)	(24,609)	(34,322)	–	(203,358)
Disposals/write-off	(29,529)	(4,259)	(4,877)	(3,064)	–	(41,729)
Transfer to investment properties (Note 18)	(4,276)	–	–	–	–	(4,276)
Adjustment in respect of reorganisation of a subsidiary	87,332	(2,080)	1,225	(1,190)	–	85,287
<b>Closing net book amount</b>	<b>1,772,263</b>	<b>369,985</b>	<b>102,459</b>	<b>114,750</b>	<b>289,358</b>	<b>2,648,815</b>
<b>At 31 December 2016</b> (restated)						
Cost	2,163,313	895,541	241,599	328,876	289,358	3,918,687
Accumulated depreciation	(390,818)	(524,871)	(139,140)	(214,126)	–	(1,268,955)
Impairment	(232)	(685)	–	–	–	(917)
<b>Net book amount</b>	<b>1,772,263</b>	<b>369,985</b>	<b>102,459</b>	<b>114,750</b>	<b>289,358</b>	<b>2,648,815</b>
<b>Year ended 31 December 2017</b>						
Opening net book amount	<b>1,772,263</b>	<b>369,985</b>	<b>102,459</b>	<b>114,750</b>	<b>289,358</b>	<b>2,648,815</b>
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(a))	–	–	–	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)
<b>Closing net book amount</b>	<b>1,771,511</b>	<b>305,488</b>	<b>91,271</b>	<b>118,179</b>	<b>198,203</b>	<b>2,484,652</b>
<b>At 31 December 2017</b>						
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)
<b>Net book amount</b>	<b>1,771,511</b>	<b>305,488</b>	<b>91,271</b>	<b>118,179</b>	<b>198,203</b>	<b>2,484,652</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 16. PROPERTY, PLANT AND EQUIPMENT (CONTINUED)

Depreciation expenses recognised are analysed as follows:

	Year ended 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
Cost of sales	<b>121,583</b>	130,263
Selling and marketing expenses	<b>5,526</b>	479
Administrative expenses	<b>103,407</b>	69,360
	<b>230,516</b>	200,102

As at 31 December 2017, the Group secured property, plant and equipment with carrying amount of approximately RMB46 million (2016: nil) for bank borrowings (Note 33).

Included above are certain buildings and transportation equipment with the respective carrying amounts of approximately RMB556 million and RMB5 million as of 31 December 2017, 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	
	2017 RMB'000	2016 RMB'000 (restated)
At beginning of year	<b>814,693</b>	797,150
Additions	<b>129</b>	489
Arising on business combination (Note 42)	–	103,475
Adjustment in respect of reorganisation of a subsidiary	–	21,591
Disposals	<b>(68,182)</b>	–
Transfer to investment properties (Note 18)	–	(85,229)
Transfer from property, plant and equipment (Note 16)	<b>2,117</b>	–
Amortisation	<b>(21,735)</b>	(22,783)
At end of the year	<b>727,022</b>	814,693

## 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 35 years to 62 years.

Included above are certain land use rights with carrying amount of approximately RMB65 million (2016: RMB40 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	
	2017 RMB'000	2016 RMB'000 (restated)
Cost of sales	508	411
Administrative expenses	21,227	22,372
	<b>21,735</b>	22,783



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 18. INVESTMENT PROPERTIES

	Year ended 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
At beginning of the year	225,165	77,994
Addition	15,582	–
Arising on business combination (Note 42(b))	–	15,368
Adjustment in respect of reorganisation of a subsidiary	–	45,391
Transfer from property, plant and equipment (Note 16)	1,711	4,276
Transfer from land use rights (Note 17)	–	85,229
Disposal of a subsidiary (Note 42(c))	(15,582)	–
Disposal	(102)	–
Depreciation	(7,147)	(3,093)
At end of the year	219,627	225,165
Fair value at end of the year	556,455	376,442

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 2017, the Group secured an investment property with carrying amount of RMBnil (2016: RMB20 million) for bank borrowings (Note 33).

**(a) Amounts recognised in the consolidated statement of comprehensive income for investment properties:**

	Year ended 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
Rental income	25,324	24,622
Depreciation recorded as rental costs	7,147	3,093

## 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 2017.

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
<b>Year ended 31 December 2016</b> (restated)						
Opening net book amount	9,250	98,532	17,810	–	18,885	144,477
Additions	–	481	7,424	–	12,731	20,636
Transfers	–	11,263	–	–	(11,263)	–
Arising on business combination (Note 42(b))	–	–	591	–	–	591
Amortisation	–	(24,309)	(7,202)	–	(3,678)	(35,189)
Disposals	–	–	(31)	–	–	(31)
<b>Closing net book amount</b>	<b>9,250</b>	<b>85,967</b>	<b>18,592</b>	<b>–</b>	<b>16,675</b>	<b>130,484</b>
<b>At 31 December 2016</b> (restated)						
Cost	9,250	288,747	99,253	–	21,306	418,556
Accumulated amortisation	–	(202,780)	(80,661)	–	(4,631)	(288,072)
Net book amount	9,250	85,967	18,592	–	16,675	130,484
<b>Year ended 31 December 2017</b>						
Opening net book amount	<b>9,250</b>	<b>85,967</b>	<b>18,592</b>	<b>–</b>	<b>16,675</b>	<b>130,484</b>
Additions	–	<b>11,321</b>	<b>6,944</b>	<b>123,824</b>	<b>933</b>	<b>143,022</b>
Transfers	–	–	<b>650</b>	–	<b>(650)</b>	–
Amortisation	–	<b>(26,595)</b>	<b>(6,573)</b>	–	<b>(3,634)</b>	<b>(36,802)</b>
Disposals	–	<b>(3,235)</b>	<b>(19)</b>	–	<b>(2,625)</b>	<b>(5,879)</b>
Disposal of a subsidiary (Note 42(c))	<b>(2,586)</b>	<b>(13,590)</b>	–	–	–	<b>(16,176)</b>
Deregistration of subsidiaries	<b>(6,664)</b>	–	–	–	–	<b>(6,664)</b>
<b>Closing net book amount</b>	<b>–</b>	<b>53,868</b>	<b>19,594</b>	<b>123,824</b>	<b>10,699</b>	<b>207,985</b>
<b>At 31 December 2017</b>						
Cost	–	<b>263,117</b>	<b>106,918</b>	<b>123,824</b>	<b>18,394</b>	<b>512,253</b>
Accumulated amortisation	–	<b>(209,249)</b>	<b>(87,324)</b>	–	<b>(7,695)</b>	<b>(304,268)</b>
<b>Net book amount</b>	<b>–</b>	<b>53,868</b>	<b>19,594</b>	<b>123,824</b>	<b>10,699</b>	<b>207,985</b>

As at 31 December 2017 and 2016, there is no impairment of goodwill.

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 Shaanxi 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	
	2017 RMB'000	2016 RMB'000 (restated)
Cost of sales	7,406	6,362
Selling and marketing expense	–	142
Administrative expenses	29,396	28,685
	<b>36,802</b>	35,189

### 20. SUBSIDIARIES AND INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD

#### (a) Material non-controlling interests

The total non-controlling interest as at 31 December 2017 is RMB2,949 million of which RMB282 million is for Ninth Metallurgical Construction Co., Ltd. (九冶建設有限公司), RMB2,307 million (Note 37) is for Chalieceo Hong Kong Corporation Limited (中鋁國際香港有限公司), RMB75 million is for China Nonferrous Metals Processing Technology Co., Ltd. (中色科技股份有限公司) and RMB133 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 Chalico 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)		Chalico Hong Kong Corporation Limited (Consolidated)	
	2017	2016	2017	2016	2017	2016	2017	2016
	RMB'000	RMB'000 (restated)	RMB'000	RMB'000 (restated)	RMB'000	RMB'000	RMB'000	RMB'000
<b>Current</b>								
Assets	6,540,344	5,419,189	1,173,158	1,205,178	1,176,241	1,349,687	2,471,795	4,646,293
Liabilities	(6,261,978)	(5,124,938)	(1,765,581)	(1,465,003)	(945,774)	(1,152,249)	(81,307)	(88,036)
Total net current assets/ (liabilities)	278,366	294,251	(592,423)	(259,825)	230,467	197,438	2,390,488	4,558,257
<b>Non-current</b>								
Assets	621,963	674,498	910,255	566,389	108,050	115,978	13	11
Liabilities	(220,329)	(491,017)	(36,564)	(69,422)	(5,489)	(10,650)	(2,338,108)	(4,550,987)
Total net non-current assets/ (liabilities)	401,634	183,481	873,691	496,967	102,561	105,328	(2,338,095)	(4,550,976)
<b>Net assets</b>	680,000	477,732	281,268	237,142	333,028	302,766	52,393	7,281

## 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)		Chalico Hong Kong Corporation Limited (Consolidated)	
	2017	2016	2017	2016	2017	2016	2017	2016
	RMB'000	RMB'000 (restated)	RMB'000	RMB'000 (restated)	RMB'000	RMB'000	RMB'000	RMB'000
Revenue	5,313,364	3,035,408	576,019	342,932	1,264,828	1,662,131	285,822	190,547
Profit/(loss) before income tax	196,052	98,840	50,556	(44,391)	38,793	21,548	16,282	62,081
Income tax (expense)/income	(47,635)	(6,577)	(11,357)	8,257	(11,789)	(5,706)	(4,839)	(3,101)
Post-tax profit/(loss) from continuing operations	148,417	92,263	39,199	(36,134)	27,004	15,842	11,443	58,980
Other comprehensive income/(loss)	200	-	4,153	412	-	-	33,836	(39,797)
Total comprehensive income/(loss)	148,617	92,263	43,352	(35,722)	27,004	15,842	45,279	19,183
Total comprehensive income/(loss) allocated to non-controlling interests	55,731	34,599	11,488	(9,466)	10,802	6,337	688	471
Dividend paid to non-controlling interests	-	-	-	-	-	-	(166)	(58)

## 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)		Chalico Hong Kong Corporation Limited (Consolidated)	
	2017	2016	2017	2016	2017	2016	2017	2016
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
<b>Cash flows from operating activities</b>								
Cash generated from/(used in) operating activities	513,479	369,852	283,676	35,967	143,609	(31,039)	238,078	360,803
Interest paid	(78,976)	(70,364)	(67,306)	(61,556)	(8,726)	(5,579)	(159,001)	(137,383)
Income tax paid	(160,441)	(154,088)	(13,905)	(22,471)	(52,885)	(51,752)	(4,999)	(3,894)
Net cash generated from/ (used in) operating activities	274,062	145,400	202,465	(48,060)	81,998	(88,370)	74,078	219,526
Net cash generated from/ (used in) investing activities	(144,410)	113,849	(436,660)	67,472	(1,639)	(193)	(65,226)	(219,786)
Net cash generated from/ (used in) financing activities	(249,652)	403,408	228,376	(2,748)	(48,726)	164,527	(2,219,885)	2,321,113
<b>Net increase/(decrease) in cash and cash equivalents</b>	(120,000)	662,657	(5,819)	16,664	31,633	75,964	(2,211,033)	2,320,853
Cash and cash equivalents at beginning of year	1,039,043	376,386	60,625	43,961	103,056	27,092	2,743,164	430,403
Exchange losses on cash and cash equivalents	(13,763)	–	(83)	–	–	–	(43,518)	(8,092)
Cash and cash equivalents at end of year	905,280	1,039,043	54,723	60,625	134,689	103,056	488,613	2,743,164

## 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	
	2017 RMB'000	2016 RMB'000
Associates	161,752	166,792
Joint ventures	87,346	46,039
At 31 December	249,098	212,831

The amounts recognised in the consolidated statement of comprehensive income are as follows:

	For the year ended 31 December	
	2017 RMB'000	2016 RMB'000
Associates	(5,428)	(2,704)
Joint ventures	31,652	(86,577)
	26,224	(89,281)

## Investments in associates

	Year ended 31 December	
	2017 RMB'000	2016 RMB'000
At 1 January	166,792	202,952
Addition	53,760	50,401
Arising on business combination (Note 42(b))	–	11,996
Share of losses	(5,428)	(2,704)
Disposal	(45,000)	(92,653)
Dividends received from associates	–	(3,200)
Provision for impairment of investment in an associate	(8,372)	–
At 31 December	161,752	166,792



## 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 2017, 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 2017:

Name of entity	Place/date of incorporation	Registered and fully paid capital RMB'000	Effective interest held Indirectly held		Nature of relationship	Measurement method
			2017	2016		
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	33%	33%	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	15%	15%	Note 3	Equity
Hebi Diendi China Nonferrous Magnesium Co., Ltd. ("Hebi Diendi", 鶴壁地恩地中色鎂板有限公司)	The PRC/ 31 May 2016	180,000	N/A	25%	Note 4	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 5	Equity

Note 1: Jiangsu Rabily is a strategic partnership in manufacturing of aluminum alloy material.

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.

## 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 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 August 2016, the Group acquired 25% stake in Hebi Diendi by transferring machinery to Hebi Diendi. The Group has significant influence over the investee as one of five directors is appointed by the Group and hence it is accounted for using equity method. In June 2017, the Group disposed 25% stake in Hebi Diendi by transferring machinery back to the Group.

Note 5: 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 6: In prior year, the Group gradually reduced its shareholding in Zhuzhou Tianqiao Crane Co., Ltd. ("Zhuzhou Tianqiao Crane") while maintaining significant influence over the investee until 19 October 2016 on which a director of Zhuzhou Tianqiao Crane appointed by the Group tendered his resignation. Following his resignation on 19 October 2016, the Directors considered that the Group has lost its power to significant influence on the investee and thereafter ceased equity accounting for investment in Zhuzhou Tianqiao Crane and reclassified the remaining shareholding in Zhuzhou Tianqiao Crane to available-for-sale financial assets. In prior year, gain on partial disposal of an associate amounted to approximately RMB68,079,000 and gain on disposal of an associate upon reclassification amounted to approximately RMB190,249,000 were recognised to profit or loss.

There are no contingent liabilities relating to the Group's interest in associates. All of the above entities are private entity.

## 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 financial information for associates

Set out below are the summarised financial information for Jiangsu Rabily, Guizhou Tongye, Luoyang Huazhong, Hebi Diendi, Xinchengtong and other associates which are accounted for using the equity method.

## Summarised balance sheets

	Jiangsu Rabily		Guizhou Tongye		Luoyang Huazhong		Hebi Diendi		Xinchengtong		Other associates		Total	
	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
<b>Current</b>														
Total current assets	114,078	105,837	1,194,852	891,855	143,691	55,806	N/A	-	45,786	45,919	411,319	402,108	1,909,726	1,501,525
Total current liabilities	(96,804)	(82,942)	(52,976)	(56,080)	(35,996)	(50,116)	N/A	(2)	-	-	(289,456)	(299,218)	(475,232)	(488,358)
<b>Non-current</b>														
Total non-current assets	43,338	47,796	1,391	1,793	749,347	825,288	N/A	45,000	-	-	252,962	228,397	1,047,038	1,148,274
Total non-current liabilities	-	-	(1,114,099)	(804,099)	(570,341)	(543,063)	N/A	-	-	-	(94,476)	(277,911)	(1,778,916)	(1,625,073)
<b>Net assets</b>	<b>60,612</b>	<b>70,691</b>	<b>29,168</b>	<b>33,469</b>	<b>286,701</b>	<b>287,915</b>	<b>N/A</b>	<b>44,998</b>	<b>45,786</b>	<b>45,919</b>	<b>280,349</b>	<b>53,376</b>	<b>702,616</b>	<b>536,368</b>

## 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 Rabily		Guizhou Tongye		Luoyang Huazhong		Hebi Diendi		Xinchengtong		Other associates		Total	
	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Revenue	81,803	109,766	77,517	120,515	1,112	1,014	-	-	-	10,861	428,403	394,365	588,835	636,521
Post-tax (loss)/profit from continuing operations	(10,079)	(6,711)	(4,301)	(4,353)	(1,214)	(59)	2	(2)	(133)	(2,002)	(3,665)	5,425	(19,390)	(7,702)
Total comprehensive (loss)/income	(10,079)	(6,711)	(4,301)	(4,353)	(1,214)	(59)	2	(2)	(133)	(2,002)	(3,665)	5,425	(19,390)	(7,702)

## Reconciliation of summarised financial information

	Jiangsu Rabily		Guizhou Tongye		Luoyang Huazhong		Hebi Diendi		Xinchengtong		Other associates		Total	
	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Opening net assets	70,691	77,402	33,469	37,822	287,915	187,974	44,998	-	45,919	47,921	53,376	32,004	536,368	383,123
Capital injection	-	-	-	-	-	100,000	(45,000)	45,000	-	-	230,638	20,664	185,638	165,664
Profit/(loss) for the year	(10,079)	(6,711)	(4,301)	(4,353)	(1,214)	(59)	2	(2)	(133)	(2,002)	(3,665)	5,425	(19,390)	(7,702)
Dividends to equity owners	-	-	-	-	-	-	-	-	-	-	-	(4,717)	-	(4,717)
Closing net assets	60,612	70,691	29,168	33,469	286,701	287,915	-	44,998	45,786	45,919	280,349	53,376	702,616	536,368
Interest in associates	18,184	21,207	13,125	15,061	28,073	28,192	-	45,000	18,312	18,365	84,058	38,967	161,752	166,792
Goodwill	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carrying value	18,184	21,207	13,125	15,061	28,073	28,192	-	45,000	18,312	18,365	84,058	38,967	161,752	166,792

## 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	
	2017 RMB'000	2016 RMB'000
At 1 January	46,039	96,587
Capital injection	30,000	25,000
Share of profits/(losses)	31,652	(86,577)
Disposal	(316)	(9,000)
Reclassification to other payables (Note 34)	(20,029)	20,029
At 31 December	87,346	46,039

Set out below are the joint ventures of the Group as at 31 December 2017, 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 RMB'000	Effective interest held		Nature of relationship	Measurement method
			Indirectly held	2017 2016		
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 prior year, Shanghai Fengtong Fund has made repayments aggregated to RMB950,000,000. Subsequent to prior year's balance sheet date, Shanghai Fengtong Fund has made further repayments of RMB610,000,000. The due date of remaining outstanding principal of RMB440,000,000 has been extended to 30 April 2017. The Company and another third party contributed RMB40 million and RMB50 million, respectively, to Shanghai Fengtong Fund as limited partner. Up to 31 December 2017, Shanghai Fengtong Fund has made full repayments aggregated to RMB2,000 million to Harvest Capital.

During the three years' investment periods of Harvest Capital, the distribution order is as follows: Shanghai Fengtong Fund should firstly pay 8.3% interest to Harvest Capital before distributing 8.3% expected earnings to the limited partner; then after the withdrawing of Harvest Capital in the third year, the remaining distributable profit after the above distribution will be distributed between Harvest Equity and the Company, in the ratio of 50% and 50%, respectively, for debt investment of 30% and 70%, respectively, for investment in equity of other entities; if Shanghai Fengtong Fund is not able to payback the amount to be withdrawn by Harvest Capital as agreed above, the Company has the responsibility to pay the outstanding balance immediately, then the Company has the right to seek financial supporting from Harvest Equity.

## 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 1: (continued)

In prior year, the Group shared losses of this joint venture up to negative interest of RMB20 million as the Directors considered the financial guarantee constituted a binding agreement. The Directors considered the Group had no financial guarantee obligation since Harvest Capital has received all the outstanding principal. As at the balance sheet date, the negative interest in this joint venture of RMB20 million which is included in other payables has been reversed and the Group shared RMB8 million profit for this joint venture. Meanwhile, the Group was considering the withdrawal from Shanghai Fengtong Fund whereas the relevant work was in progress. The Group would recognise the balance of investment in this joint venture by the best estimate of assets acquired through withdrawal.

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, China 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		China Aluminum South Aluminum (Fujian)		Other joint ventures		Total	
	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
<b>Current</b>										
Total current assets	31,134	575,248	114,270	96,422	91,675	30,000	551	604	237,630	702,274
Total current liabilities	(919,099)	(1,083,124)	(71,231)	(60,242)	(5,604)	-	-	(31)	(995,934)	(1,143,397)
<b>Non-current</b>										
Total non-current assets	999,000	609,005	20,502	23,134	7,703	-	54	58	1,027,259	632,197
Total non-current liabilities	-	-	-	-	-	-	-	-	-	-
<b>Net assets</b>	<b>111,035</b>	<b>101,129</b>	<b>63,541</b>	<b>59,314</b>	<b>93,774</b>	<b>30,000</b>	<b>605</b>	<b>631</b>	<b>268,955</b>	<b>191,074</b>

## 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		China Aluminum South Aluminum (Fujian)		Other joint ventures		Total	
	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Revenue	38,726	22,868	39,570	36,522	71,210	-	-	-	149,506	59,390
Profit/(loss) before tax (i)	9,906	(76,839)	5,005	11,391	5,031	-	(26)	(1,369)	19,916	(66,817)

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		China Aluminum South Aluminum (Fujian)		Other joint ventures		Total	
	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Opening net assets	101,129	177,968	59,314	47,923	30,000	-	631	-	191,074	225,891
Capital injection	-	-	-	-	60,000	30,000	-	2,000	60,000	32,000
Profit/(loss) for the year	9,906	(76,839)	4,227	11,391	3,774	-	(26)	(1,369)	17,881	(66,817)
Closing net assets	111,035	101,129	63,541	59,314	93,774	30,000	605	631	268,955	191,074
Interest in joint venture (Capital injected by the Company and the equity pick up of the joint venture according to the distribution agreement)	8,047	-	32,412	30,723	46,887	15,000	-	316	87,346	46,039
Carrying value	8,047	-	32,412	30,723	46,887	15,000	-	316	87,346	46,039



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 21. AVAILABLE-FOR-SALE FINANCIAL ASSETS

	At 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
At beginning of the year	251,799	183,336
Additions of available-for-sale financial assets	101,410	4,000
Additions of short-term investments	530,592	1,135,500
Arising on business combination (Note 42(b))	-	5,000
Reclassification from associate (i)	-	216,108
Settlement on expiration of short-term investments	(18,000)	(1,276,700)
Fair value (losses)/gains on available-for-sale financial assets	(16,288)	(1,282)
Impairment of available-for-sale investments	-	(14,163)
At end of the year	849,513	251,799
Less: Current portion	(530,592)	(18,000)
Long-term portion of available-for-sale financial assets	318,921	233,799

Available-for-sale financial assets include the following:

	At 31 December	
	2017 RMB'000	2016 RMB'000
Listed securities:		
Equity securities – PRC	198,538	214,826
Unlisted securities:		
Equity securities – PRC	120,383	18,973
Short-term investments (ii)	530,592	18,000
	849,513	251,799
Market value of listed securities	198,538	214,826

Notes:

- (i) In prior year, the investment in Zhuzhou Tianqiao Crane was reclassified to available-for-sale financial assets following the Group lost its power to significant influence (Note 20(b)). As at 31 December 2017, the fair value of the Group's interest in Zhuzhou Tianqiao Crane, which is listed on the Shenzhen Stock Exchange, was approximately RMB199 million (2016: RMB215 million).
- (ii) The short-term investments shown in available-for-sale financial assets represent commercial bank products, with an annual investment return of 1.5% – 4.1% for the year ended 31 December 2017 per annum, and will be mature within one year. As at 31 December 2017, the carrying amount approximated the fair value. The fair values are based on cash flow discounted using the expected return based on management judgment and are within level 3 of the fair value hierarchy (see Note 5).

Available-for-sale financial assets are denominated in RMB.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 22. TRADE AND NOTES RECEIVABLES

	At 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
Trade receivables	16,091,744	16,919,429
Less: Provision for credit losses	(1,287,809)	(1,143,842)
Trade receivables – net	14,803,935	15,775,587
Notes receivable (ii)	767,837	753,722
Trade and notes receivables – net	15,571,772	16,529,309
Less: Non-current portion (i)	(1,991,852)	(1,637,048)
Current trade and notes receivables	13,579,920	14,892,261

## Notes:

- (i) The main non-current portion 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 (2016: RMB404.13 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 (2016: RMB388.33 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 (2016: RMB682.66 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 (2016: nil).

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 22. TRADE AND NOTES RECEIVABLES (CONTINUED)

Notes: (continued)

- (ii) 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.
- (iii) As of 31 December 2017, the Group secured certain trade and notes receivables with carrying amount of approximately RMB1,076 million (2016: RMB1,294 million) for borrowings amounting to approximately RMB793 million (2016: RMB1,261 million) (Note 33).
- (iv) 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	
	2017 RMB'000	2016 RMB'000 (restated)
Within 1 year	8,813,164	10,877,846
Between 1 and 2 years	3,605,825	3,674,028
Between 2 and 3 years	2,201,621	1,133,167
Between 3 and 4 years	868,851	575,537
Between 4 and 5 years	248,875	356,644
Over 5 years	353,408	302,207
Trade receivables – gross	16,091,744	16,919,429
Less: Provision for credit losses	(1,287,809)	(1,143,842)
Trade receivables – net	14,803,935	15,775,587

The contracts governing provision of the Group's service would not include specific credit terms. For the settlement of trade receivables from provision of services, the Group usually reaches an agreement on the term of each payment with the customer by taking into account of factors such as, among other things, the credit history of the customer, its liquidity position and the Group's working capital needs, which varies on a case-by-case basis that requires the judgment and experience of the management. 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.

During the year, the Group changed its policy on impairment as disclosed in Note 4(a) and made provision for credit losses on all outstanding trade receivables.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 22. TRADE AND NOTES RECEIVABLES (CONTINUED)

As at 31 December 2017, the Group had no trade receivables that were past due but not impaired (2016: nil as restated).

The movements of provision for credit losses of trade receivables are as follows:

	At 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
At the beginning of the year	<b>1,143,842</b>	877,124
Provisions	<b>149,199</b>	356,887
Receivables written off as uncollectible	<b>(20,984)</b>	(9,847)
Receivables written back	<b>58,411</b>	–
Reversal	<b>(42,659)</b>	(80,322)
At the end of the year	<b>1,287,809</b>	1,143,842

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

	At 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
RMB	<b>16,277,366</b>	17,075,183
USD	<b>105,325</b>	100,641
Others	<b>476,890</b>	497,327
	<b>16,859,581</b>	17,673,151

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 23. PREPAYMENTS AND OTHER RECEIVABLES

	At 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
<b>Prepayments</b>		
Prepayments to suppliers	1,043,418	917,952
Prepayment for investment (i)	195,600	–
Prepayments for acquisition of property, plant and equipment	6,000	–
	<b>1,245,018</b>	917,952
<b>Other receivables</b>		
Financing provided to proprietors (ii)	2,781,867	3,038,858
Financing provided to a supplier (iii)	184,873	184,873
Amounts due from related parties (iv)	125,432	312,846
Proceeds from disposal of a subsidiary (Note 42(c))	32,200	–
Retention fund	134,053	160,686
Receivables of export tax refund	–	17,858
Staff advances	72,060	102,033
Bid security	444,684	663,253
Deposits	79,563	172,982
Payments on behalf of third parties	290,749	233,144
Deductible value-added tax	558,777	152,484
Others	151,928	214,617
	<b>4,856,186</b>	5,253,634
<b>Total prepayments and other receivables</b>	<b>6,101,204</b>	6,171,586
Less: Provision for credit losses	(510,488)	(354,869)
	<b>5,590,716</b>	5,816,717
Less: Non-current portion (v)	(1,566,419)	(1,631,644)
	<b>4,024,297</b>	4,185,073

Notes:

- (i) On September 2017, the Group entered into a bid for investing in 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) for the construction of public infrastructure in Hanzhong Aerospace Smart New Town. After winning the bid on 25 October 2017, the Group was required to pay the amount of RMB195,600,000 as prepayment for the investment.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 23. PREPAYMENTS AND OTHER RECEIVABLES (CONTINUED)

Notes: (Continued)

- (ii) 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. (洛陽鑫贊通實業有限公司) while the remaining 20% equity interests would be transferred to the Group. As of 31 December 2017, RMB800 million was provided. The principal and the relevant interest receivables aggregating to approximately RMB864 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 2017, 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 government authority of East Lake District, Nanchang 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 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 2017, RMB450 million was provided. The principal and the relevant interest receivables aggregating to approximately RMB673 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 2017, RMB420 million was provided. The principal and the relevant interest receivables aggregating to approximately RMB465 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 2017, RMB221 million was provided. The principal and the relevant interest receivables aggregating to approximately RMB283 million was secured by 100% of the equity interest of Huada Real Estate.

- (iii) 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  $\times 1.15 \times 1.17$  (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 2017, 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.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 23. PREPAYMENTS AND OTHER RECEIVABLES (CONTINUED)

Notes: (Continued)

- (iv) The amounts due from related parties are unsecured, interest free and repayable on demand.
- (v) 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	
	2017 RMB'000	2016 RMB'000 (restated)
Within 1 year	<b>1,943,894</b>	3,291,118
Between 1 and 2 years	<b>1,525,806</b>	521,864
Between 2 and 3 years	<b>477,562</b>	1,300,579
Between 3 and 4 years	<b>813,722</b>	47,836
Between 4 and 5 years	<b>26,149</b>	17,743
Over 5 years	<b>69,053</b>	74,494
Other receivables – gross	<b>4,856,186</b>	5,253,634
Less: Provision for credit losses	<b>(510,488)</b>	(354,869)
Other receivables – net	<b>4,345,698</b>	4,898,765

During the year, the Group changed its policy on impairment as disclosed in Note 4(a) and made provision for credit losses on all outstanding other receivables.

As at 31 December 2017, the Group had no other receivables that were past due but not impaired (2016: nil as restated).

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 23. PREPAYMENTS AND OTHER RECEIVABLES (CONTINUED)

The movements of provision for credit losses of other receivables are as follows:

	At 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
At beginning of the year	354,869	216,393
Additions	131,826	158,640
Receivables written off as uncollectible	(92)	–
Receivables written back	26,999	18
Reversal	(3,114)	(20,182)
At end of the year	510,488	354,869

The carrying amounts of the Group's other receivables are denominated in the following currencies:

	At 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
RMB	4,854,347	5,251,714
Others	1,839	1,920
	4,856,186	5,253,634



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 24. AMOUNTS DUE FROM/(TO) CUSTOMERS FOR CONTRACT WORK

	At 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
Contract cost incurred plus recognised profit less recognised losses	<b>95,952,797</b>	77,170,693
Less: Progress billings	<b>(88,307,609)</b>	(71,748,049)
Contract work-in-progress	<b>7,645,188</b>	5,422,644
Representing:		
Amounts due from customers for contract work	<b>8,422,232</b>	6,185,273
Less: Provision	<b>(100,026)</b>	(71,837)
Net amounts due from customers for contract work	<b>8,322,206</b>	6,113,436
Amounts due to customers for contract work	<b>(677,018)</b>	(690,792)
	<b>7,645,188</b>	5,422,644
	Year ended 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
Contract revenue recognised as revenue	<b>23,906,705</b>	16,482,127

During the year, the Group changed its policy on impairment as disclosed in Note 4(a) and made provision for credit losses on all contract work-in-progress balances.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 25. INVENTORIES

	At 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
Raw materials	319,316	186,831
Work-in-progress	1,758,638	642,517
Finished goods	814,447	616,864
Turnover materials and spare parts	141,402	18,775
	<b>3,033,803</b>	1,464,987

The movements of provision for impairment of inventories are as follows:

	Year ended 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
At beginning of the year	124,896	123,322
Additions	27,940	6,720
Written off	(1,888)	(2,621)
Reversal	-	(2,525)
At end of the year	<b>150,948</b>	124,896

The cost of inventories recognised as expense and included in “Cost of sales” amounted to RMB20,165 million and RMB14,343 million as restated for the years ended 31 December 2017 and 2016, respectively.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 26. RESTRICTED CASH

	At 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
Restricted cash		
RMB	1,160,609	1,011,531
USD	39,256	11,623
	<b>1,199,865</b>	1,023,154

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 2017 and 2016.

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	
	2017 RMB'000	2016 RMB'000
Time deposits with initial term of over three months		
RMB	10,107	14,291
Others	749	4,135
	<b>10,856</b>	18,426

The effective interest rates per annum on time deposits, with maturities ranging from six months to two years and from six months to one year, approximately 2.10% to 6.75% and 2.10% to 7.00% as at 31 December 2017 and 2016, respectively.

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 place with Chinaloc Finance Company Limited was RMB10 million and RMB14 million as at 31 December 2017 and 2016, respectively.

At of 31 December 2017, the Group secured certain time deposits with carrying amounts of RMBnil (2016: RMB20 million) for borrowings amounting to RMBnil (2016: RMB19 million) (Note 33).

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 28. CASH AND CASH EQUIVALENTS

	At 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
Cash at bank and on hand	4,241,691	3,655,708
Balances placed with Chalieco Finance Company Limited (i)	2,038,203	1,705,295
Short-term bank deposits	–	2,540,831
	<b>6,279,894</b>	7,901,834

	At 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
Denominated in:		
RMB	4,918,102	4,388,999
HKD	95	136
USD	1,205,051	3,490,598
Others	156,646	22,101
	<b>6,279,894</b>	7,901,834

Note:

- (i) Balances placed with Chinalco Finance Company Limited bear interest at prevailing market rates.

## 29. SHARE CAPITAL

	At 31 December	
	2017	2016
Number of shares	2,663,160,000	2,663,160,000
Share capital (RMB'000)	2,663,160	2,663,160

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 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.

(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.

The Company declared profit distribution in respect of the year ended 31 December 2014 at the Annual General Meeting of shareholders in June 2015, and such dividends was paid in August 2015, the Company was then imposed to pay interests at the date of issuance of the 2015 perpetual medium-term notes. The Company had the obligation to make the first distribution of interest on 24 July 2016 for the 2015 perpetual medium-term notes. According to the IAS 32 Financial Instruments, this part of interests meet the definition of financial liabilities, and the present value of this part of the payment obligation was recognised as financial liabilities at its issuance date. 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.

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 from the date of approval.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 30. RESERVES (CONTINUED)

Notes: (continued)

(iii) Other equity instruments (continued)

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.

The Company declared profit distribution in respect of the year ended 31 December 2016 at the Annual General Meeting of shareholders on 23 May 2017 and such dividend was paid on 18 July 2017. Based on the terms of the 2015 perpetual medium-term notes and the 2016 renewable corporate bonds, the Company has no obligation to make the third distribution of interest on 23 July 2017 and the second distribution of interest on 13 October 2018 for the 2015 perpetual medium-term notes and 2016 renewable corporate bonds respectively.

Based on the terms of the 2017 renewable corporate bonds, the Company had the obligation to make the first distribution of interest on 19 March 2018 for the 2017 renewable corporate bonds. According to the IAS 32 Financial Instruments, this part of interests meet the definition of financial liabilities, and the present value of this part of the payment obligation was recognised as financial liabilities at the reporting date.

## 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	
	2017 RMB'000	2016 RMB'000 (restated)
At beginning of the year	86,218	89,711
Arising on business combination (Note 42(b))	–	250
Adjustment in respect of reorganisation of a subsidiary	–	(1,017)
Additions	13,250	8,267
Charged to consolidated statement of comprehensive income	(42,506)	(10,993)
Disposal of a subsidiary (Note 42(c))	(12,955)	–
At end of the year	44,007	86,218

### 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 2017 and 2016 are as follows:

	Year ended 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
Contributions to state-managed retirement plans	170,229	176,982

## 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	
	2017 RMB'000	2016 RMB'000 (restated)
Amounts due to state-managed retirement plans included in trade and other payables	<b>4,088</b>	6,770

**(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	
	2017 RMB'000	2016 RMB'000 (restated)
Current portion of defined benefits obligations	<b>124,426</b>	136,423
Non-current portion of defined benefits obligations	<b>857,358</b>	1,045,448
Present value of defined benefits obligations	<b>981,784</b>	1,181,871



## 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 2017 and 2016 are as follows:

	Year ended 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
At beginning of the year	<b>1,181,871</b>	1,236,601
For the year		
– arising on business combination (Note 42(b))	–	21,528
– adjustment in respect of reorganisation of a subsidiary	–	56,730
– interest expense	<b>33,942</b>	37,215
– payment	<b>(137,585)</b>	(138,772)
– re-measurement gains	<b>(108,337)</b>	(42,468)
– past service cost (Note 15)	<b>10,912</b>	9,032
– current service cost (Note 15)	<b>981</b>	2,005
At end of the year	<b>981,784</b>	1,181,871

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	
	2017	2016
Discount rate	<b>4.00%</b>	3.00%

- (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	
	2017 RMB'000	2016 RMB'000 (restated)
Bank borrowings		
– guaranteed by the Company to its subsidiaries	2,328,996	2,141,703
– secured by property, plant and equipment (i)	23,000	–
– secured by an investment property (ii)	–	20,000
– secured by trade and notes receivables (iii)	289,465	625,246
– secured by time deposits (iv)	–	19,110
– secured by land use rights held by third parties (v)	30,000	250,000
– unsecured	5,673,295	4,379,390
Borrowings from financial institutions		
– guaranteed by the Company to its subsidiaries	–	200,000
– secured by trade and notes receivables (iii)	100,000	535,848
Short-term and long-term bonds		
– unsecured (vi)	2,454,183	3,460,532
Borrowings from fellow subsidiaries (vii) (Note 44(b))		
– secured by trade and notes receivables (iii)	403,783	100,000
– unsecured	1,304,000	160,000
	12,606,722	11,891,829
Less: non-current portion	(2,792,675)	(1,980,232)
Current portion	9,814,047	9,911,597

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 33. BORROWINGS (CONTINUED)

Notes:

- (i) As of 31 December 2017, the Group secured certain property, plant and equipment with carrying amount of approximately RMB46 million (2016: nil) for borrowings amounting to RMB23 million (2016: nil) (Note 16).
- (ii) As of 31 December 2017, the Group secured an investment property with carrying amount of RMBnil (2016: RMB12 million) for borrowings amounting to RMBnil (2016: RMB20 million) (Note 18).
- (iii) As of 31 December 2017, the Group secured certain trade and notes receivables with carrying amounts of approximately RMB1,076 million (2016: RMB1,294 million) for borrowings amounting to approximately RMB793 million (2016: RMB1,261 million) (Note 22).
- (iv) As of 31 December 2017, the Group secured certain time deposits with carrying amounts of RMBnil (2016: RMB20 million) for borrowings amounting to RMBnil (2016: RMB19 million) (Note 27).
- (v) As of 31 December 2016, Nayong Yongkong Trading Co., Ltd. (納雍雍康貿易有限公司) and Nayong Development Investment Realty Co., Ltd. (納雍縣開發投資置業有限公司), business partners of the Group, secured land use rights for borrowings of the Group amounting to RMB220 million and such amount repaid in 2017.

As of 31 December 2017, Shaanxi Jiuan Properties Co., Ltd. (陝西久安房地產有限公司, "Shaanxi 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 RMB30 million (2016: RMB30 million).

- (vi) Short-term and long-term bonds

The Group issued the 2017-first tranche, 2017-second tranche and 2017-third tranche of ultra short-term financing notes and long-term financing bond on 14 March 2017, 23 June 2017, 18 July 2017 and 20 June 2016 with issuance amounts of RMB1,500 million, RMB1,000 million, RMB1,500 million, and RMB900 million with maturity periods of 180 days, 120 days, 270 days and 1,095 days, respectively. The unit par value is RMB100 with an interest rate of 4.60%, 5.39%, 4.70%, and 4.70% per annum, respectively.

Outstanding bonds as at 31 December 2017 and 2016 are summarised as follows:

	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
			<b>2,454,183</b>
	Face value (RMB'000)/ maturity	Effective interest rate	31 December 2016 (RMB'000)
2016 short-term bonds	1,000,000/2017	3.50%	1,016,041
2016 short-term bonds	1,000,000/2017	3.50%	1,020,028
2016 short-term bonds	500,000/2017	3.50%	504,910
2016 long-term bonds	900,000/2019	4.70%	919,553
			<b>3,460,532</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 33. BORROWINGS (CONTINUED)

Notes: (continued)

- (vii) On 24 August 2012, 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 lending services and miscellaneous financial services. The credit lending services are on normal commercial terms and do not require security or collaterals.

During the year ended 31 December 2017, the Group borrowed RMB2,340 million (2016: RMB1,870 million) from Chinalco Finance and repaid RMB1,251 million (2016: RMB2,870 million). As of 31 December 2017, RMB1,169 million (2016: RMB80 million) was borrowed from Chinalco Finance, of which RMB670 million and RMB499 million will be repaid in 2018 and 2020 respectively.

On 22 April 2016 and 26 April 2016, 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 21 April 2017 and 25 April 2017 respectively. In addition, during the year of 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 will be 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 relevant principal and interest will be repaid on 24 December 2018 and 4 April 2018 respectively.

On 24 March 2017, 26 July 2017, 26 December 2017, 27 December 2017, 29 December 2017 and 30 December 2017, the Group obtained factoring borrowings from China Aluminum Business Factoring (Tianjin) Co., Ltd (中鋁商業保理(天津)有限公司) amounting to RMB100 million, RMB30 million, RMB100 million, RMB95 million, RMB60 million and RMB18.8 million at an interest rate of 4%, 6.2%, 6.3%, 6.2%, 6.5% and 6.5% respectively. The principal and relevant interest will be repaid on 19 March 2018, 26 July 2018, 25 June 2018, 27 December 2018, 15 March 2018 and 15 March 2018 respectively. In addition, during the year of 2017, the Group repaid factoring borrowing amounting to RMB100 million which was borrowed from China Aluminum Business Factoring (Tianjin) Co., Ltd in 2016.

As at 31 December 2017 and 31 December 2016, the Group’s borrowings were repayable as follows:

	Bank borrowings		Other borrowings	
	2017 RMB'000	2016 RMB'000 (restated)	2017 RMB'000	2016 RMB'000 (restated)
Within 1 year	<b>6,972,756</b>	6,384,770	<b>2,841,291</b>	3,526,827
Between 1 and 2 years	<b>692,000</b>	415,679	<b>4,000</b>	10,000
Between 2 and 5 years	<b>662,000</b>	606,000	<b>1,416,675</b>	919,553
Beyond 5 years	<b>18,000</b>	29,000	<b>–</b>	–
	<b>8,344,756</b>	7,435,449	<b>4,261,966</b>	4,456,380

## 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	
	2017 RMB'000	2016 RMB'000 (restated)
RMB	<b>12,298,646</b>	10,100,619
USD	<b>308,076</b>	1,791,210
	<b>12,606,722</b>	11,891,829

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 2017		At 31 December 2016	
	Carrying amount RMB'000	Fair value RMB'000	Carrying amount RMB'000	Fair value RMB'000
Bank borrowings	<b>1,372,000</b>	<b>1,397,804</b>	1,050,679	1,072,366
Other borrowings	<b>1,420,675</b>	<b>1,443,994</b>	929,553	951,933
Total	<b>2,792,675</b>	<b>2,841,798</b>	1,980,232	2,024,299

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% (2016: 4.75%) and are within level 2 of the fair value hierarchy.

The effective interest rates of borrowings and loans are 3.35% to 7.49% and 1.00% to 8.73% as at 31 December 2017 and 2016, respectively.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 33. BORROWINGS (CONTINUED)

The Group has the following undrawn borrowing facilities:

	At 31 December	
	2017 RMB'000	2016 RMB'000
– Expiring within one year	14,829,967	13,473,329
– Expiring beyond one year	3,533,650	1,474,748
	<b>18,363,617</b>	14,948,077

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	
	2017 RMB'000	2016 RMB'000 (restated)
<b>Trade and notes payables</b>		
Trade payables	13,195,628	11,183,209
Notes payable (i)	1,590,993	925,125
	<b>14,786,621</b>	12,108,334
<b>Other payables</b>		
Advances from customers	1,270,756	1,490,332
Staff welfare payable	153,922	139,999
Tax payable	960,044	343,984
Deposit payable	607,877	506,373
Amounts to be paid by the Group on behalf of other parties	487,027	627,577
Amounts due to related parties (ii) – Note 44(b)	131,749	96,221
Others (iii)	308,041	353,723
	<b>3,919,416</b>	3,558,209
Total trade and other payables	<b>18,706,037</b>	15,666,543
Less: Non-current portion (iv)	(5,608)	(35,307)
Current portion	<b>18,700,429</b>	15,631,236

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 34. TRADE AND OTHER PAYABLES (CONTINUED)

Notes:

- (i) As of 31 December 2017, the notes payable include part of the consideration of 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 bank deposits, restricted cash and trade and notes receivables.
- (ii) The amounts are interest free, unsecured and repayable on demand.
- (iii) Included in other payables are outstanding consideration of RMB82,469,500 payable in connection with business combinations under common control as at 31 December 2017.
- (iv) In prior year, the main non-current portion mainly comprised of negative interest of RMB20 million in Shanghai Fengtong Fund, a joint venture (Note 20(b)).

The carrying amounts of the Group's trade and other payables at 31 December 2017 and 31 December 2016 approximate their fair values.

Ageing analysis of trade payables is as follows:

	At 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
Within 1 year	<b>10,018,138</b>	8,399,801
Between 1 and 2 years	<b>1,623,014</b>	1,528,442
Between 2 and 3 years	<b>630,927</b>	483,701
Over 3 years	<b>923,549</b>	771,265
	<b>13,195,628</b>	11,183,209

## 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	
	2017 RMB'000	2016 RMB'000 (restated)
RMB	18,492,739	15,067,052
USD	187,126	568,122
Others	26,172	31,369
	<b>18,706,037</b>	15,666,543

### 35. DEFERRED TAXATION

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

	At 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
At the beginning of the year	558,900	496,837
Arising on business combination (Note 42(a) and (b))	(50)	30,775
Adjustment in respect of reorganisation of a subsidiary	–	14,368
Deregistration of subsidiaries	(95)	–
Disposal of a subsidiary (Note 42(c))	(2,762)	–
Charged to equity for fair-value change of available-for-sale financial assets	2,443	192
Credited to equity for remeasurements of post-employment benefit obligations	(18,764)	(9,064)
Credited to the consolidated statement of comprehensive income (Note 11)	2,546	25,792
At the end of the year	<b>542,218</b>	558,900



## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 35. DEFERRED TAXATION (CONTINUED)

The movement in deferred income tax assets/(liabilities) during the years ended 31 December 2017 and 2016 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	Others RMB'000	Total RMB'000
(restated)					
At 1 January 2016	44,234	265,381	261,790	19,330	590,735
Arising on business combination (Note 42(b))	6,093	2,438	55,362	-	63,893
Adjustment in respect of reorganisation of a subsidiary	-	14,368	-	-	14,368
(Charged)/credited to the profit or loss	(17,528)	(23,608)	64,189	13,671	36,724
Credited to equity for remeasurements of post-employment benefit obligations	-	(9,064)	-	-	(9,064)
At 31 December 2016	32,799	249,515	381,341	33,001	696,656
Arising on business combination (Note 42(a))	<b>12,590</b>	-	-	-	<b>12,590</b>
Deregistration of subsidiaries	-	-	(95)	-	(95)
Disposal of a subsidiary (Note 42(c))	<b>(2,583)</b>	-	(79)	<b>(505)</b>	<b>(3,167)</b>
(Charged)/credited to the profit or loss	<b>(1,926)</b>	<b>(19,125)</b>	<b>44,917</b>	<b>(2,372)</b>	<b>21,494</b>
Credited to equity for remeasurements of post-employment benefit obligations	-	<b>(18,764)</b>	-	-	<b>(18,764)</b>
<b>At 31 December 2017</b>	<b>40,880</b>	<b>211,626</b>	<b>426,084</b>	<b>30,124</b>	<b>708,714</b>

## 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 available- for-sale financial assets RMB'000	Unrealised earnings of long-term investments RMB'000	Others RMB'000	Total RMB'000
(restated)					
At 1 January 2016	72,552	–	8,991	12,355	93,898
Arising on business combination (Note 42(b))	33,118	–	–	–	33,118
(Credited)/charged to the profit or loss	(19,815)	–	21,804	8,943	10,932
Credited to equity for fair-value change of available-for-sale financial assets	–	(192)	–	–	(192)
At 31 December 2016	85,855	(192)	30,795	21,298	137,756
Arising on business combination (Note 42(a))	<b>12,640</b>	–	–	–	<b>12,640</b>
Disposal of a subsidiary (Note 42(c))	<b>(405)</b>	–	–	–	<b>(405)</b>
(Credited)/charged to the profit or loss	<b>(2,131)</b>	<b>30,795</b>	<b>(30,795)</b>	<b>21,079</b>	<b>18,948</b>
Credited to equity for fair-value change of available-for-sale financial assets	–	<b>(2,443)</b>	–	–	<b>(2,443)</b>
<b>At 31 December 2017</b>	<b>95,959</b>	<b>28,160</b>	<b>–</b>	<b>42,377</b>	<b>166,496</b>

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 RMB42.67 million and RMB43.10 million in respect of tax losses amounting to RMB200.18 million and RMB172.29 million as at 31 December 2017 and 2016, 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 2022 and 2020 respectively.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 36. DIVIDENDS PAYABLE

	At 31 December	
	2017 RMB'000	2016 RMB'000
<b>Dividends payable:</b>		
Equity owners of the subsidiaries before transferred to the Group pursuant to the Reorganisation before Listing	–	53,080
Dividends payable to non-controlling interest of a subsidiary	–	2,361
Dividends payable to the holders of renewable corporate bonds	<b>30,000</b>	–
	<b>30,000</b>	55,441

### 37. SENIOR PERPETUAL CAPITAL SECURITIES

On 28 February 2014, the Group's wholly owned subsidiary, Chalieco Hong Kong Corporation Limited (the "Issuer"), issued senior perpetual capital securities callable in and after 2017, with a total amount of USD300 million (the "2014 Senior Perpetual Securities"). The initial distribution rate of the 2014 Senior Perpetual Securities is 6.875% per annum semi-annually. The distribution rate will be reset each day falling every 3 calendar years after 28 February 2017; and the relevant reset distribution rate will be the sum of (a) the initial spread of 6.152%; (b) the treasure rate and (c) a margin of 5% per annum. The Group may, at its sole discretion, elect to defer any scheduled distribution on the 2014 Senior Perpetual Securities. According to the terms of 2014 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.

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 2014 and 2016 Senior Perpetual Securities, the Group has no contractual obligation to repay their principals or to pay any distributions. The 2014 and 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 2014 Senior Perpetual Securities, with the principal amount of USD300 million, plus the profit of RMB24 million attributable to them and deducted by the distribution of RMB71 million paid for the year ended 31 December 2017. On 28 February 2017, the 2014 Senior Perpetual Securities were redeemed in full at a consideration of its principal amount plus profit attributable to them on 28 February 2017. In connection with this redemption, the Group made an appropriation of RMB231 million from capital reserve to non-controlling interests.

The 2016 Senior Perpetual Securities, with the principal amount of USD350 million, plus the profit of RMB134 million attributable to them and deducted by the distribution of RMB84 million paid for the year ended 31 December 2017, are recorded as non-controlling interests with an aggregate amounting to RMB2,307 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	
	2017 RMB'000	2016 RMB'000
Contracted but not provided for		
– Property, plant and equipment	54,144	21,768
– Investment (i)	816,775	867,125
Authorised but not contracted for		
– Property, plant and equipment	–	77,472
	<b>870,919</b>	966,365

## 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 2017 and 2016.

#### (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	
	2017 RMB'000	2016 RMB'000 (restated)
Within 1 year	18,757	5,218
Between 1 year to 5 years	8,985	2,721
Above 5 years	5,857	–
<b>Total</b>	<b>33,599</b>	<b>7,939</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 39. OTHER CASH FLOW INFORMATION

## (a) Reconciliation of profit before income tax to cash generated from/(used in) operations

	Year ended 31 December	
	2017 RMB'000	2016 RMB'000 (restated)
<b>Profit before income tax</b>	<b>1,077,283</b>	1,336,992
Adjustments for:		
Provision for impairment of trade and other receivables	<b>235,252</b>	415,022
Provision for impairment of inventories	<b>27,940</b>	4,195
Provision for impairment of amounts due from customers for contract work	<b>28,189</b>	34,961
Provision for impairment of available-for-sale financial assets	<b>–</b>	14,163
Provision for impairment of investment in associates	<b>8,372</b>	–
Depreciation of property, plant and equipment	<b>230,516</b>	200,102
Depreciation of investment properties	<b>7,147</b>	3,093
Amortisation of land use rights	<b>21,735</b>	22,783
Amortisation of intangible assets	<b>36,802</b>	35,189
Amortisation of other non-current assets	<b>6,217</b>	1,146
Gains on disposal of property, plant and equipment, land use rights and intangible assets	<b>(16,486)</b>	(1,725)
Interest income	<b>(266,547)</b>	(323,248)
Interest expense	<b>642,161</b>	512,456
Net foreign exchange (gains)/losses	<b>(20,984)</b>	95,400
Share of (profits)/losses of investment accounted for using the equity method	<b>(26,224)</b>	89,281
Gain on disposal of an associate	<b>–</b>	(190,249)
Gain on partial disposal of an associate	<b>–</b>	(68,079)
Gain on disposal of a subsidiary	<b>(8,402)</b>	–
Gain on bargain purchase from business combination	<b>(134)</b>	(269,651)
Gains on disposal of available-for-sale financial assets	<b>(7,383)</b>	–
Interests received from short-term investments	<b>(1,630)</b>	(4,570)
Write-back of long outstanding payables	<b>(29,841)</b>	(23,755)
Government grants	<b>(42,506)</b>	(10,993)
<b>Cash flows from operating activities before changes in working capital</b>	<b>1,901,477</b>	1,872,513
Changes generated in working capital		
– Inventories	<b>(726,030)</b>	(475,293)
– Contract work-in-progress	<b>(2,250,733)</b>	137,221
– Trade and other receivables	<b>1,272,242</b>	(3,085,601)
– Retirement and other supplemental benefit obligations	<b>(125,692)</b>	(127,735)
– Trade and other payables	<b>1,984,405</b>	(537,680)
– Restricted cash	<b>(196,711)</b>	1,128,016
<b>Cash generated from/(used in) operations</b>	<b>1,858,958</b>	(1,088,559)

## 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 (restated)	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
Prepayments 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

### 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 2017, the Group's subsidiary, Ninth Metallurgical Construction issued the joint liability guarantees in respect of the following loans:

- a bank loan of RMB65,000,000 (2016: RMB74,000,000) 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
- a loan with a principal of RMB160,000,000 (2016: RMB160,000,000) borrowed by Xianyang Emerging Textile Industrial Park Electricity Supply Company Limited (咸陽市新興紡織工業園供電服務有限公司) from China Huarong Asset Management Co., Ltd. (中國華融資產管理股份有限公司), which is due for repayment on 29 July 2018.

As at 31 December 2017, 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 (2016: 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.

The Directors reviewed all of the relevant contracts and information, and assessed that the fair values 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 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)

(a) (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
<hr/>	
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.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 42. BUSINESS COMBINATION AND DISPOSAL OF A SUBSIDIARY (CONTINUED)

- (b) On 1 December 2015, the Group entered into an Equity Transfer Agreement with Shaanxi Jiuan to acquire 62.5% of equity interest in Ninth Metallurgical Construction. The acquisition was completed on 30 June 2016.

The purchase consideration for the acquisition was in the form of cash of RMB49,980,000, of which RMB29,980,000 was paid last year, and the remaining amount was fully settled during the year.

The fair values of the identifiable assets and liabilities of Ninth Metallurgical Construction as at the date of acquisition were as follows:

	Fair value recognised on acquisition RMB'000
Property, plant and equipment	299,156
Land use rights	103,475
Investment properties	15,368
Intangible assets	591
Investment accounted for using the equity method	11,996
Available-for-sale financial assets	5,000
Cash and cash equivalents	376,386
Deferred income tax assets	63,893
Other non-current assets	71
Inventories	86,709
Trade and note receivables	1,352,435
Prepayments and other receivables	881,992
Amounts due from customers from contract work	2,114,799
Current income tax prepayments	228
Restricted cash	556,097
Trade and other payables	(3,833,548)
Amounts due to customers from contract work	(157,121)
Borrowings	(1,230,785)
Current income tax liabilities	(80,437)
Deferred income tax liabilities	(33,118)
Retirement and other supplemental benefit obligations	(21,528)
Deferred income	(250)
<b>Total identifiable net assets at fair value</b>	<b>511,409</b>
Non-controlling interests	(191,778)
	319,631
Gain on bargain purchase from business combination	(269,651)
<b>Satisfied by cash</b>	<b>49,980</b>

## 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 (2016) (No. BJV 4048)) issued by an independent asset valuer, ZhongHe Appraisal Co., Ltd.

Included above are certain property, plant and equipment of approximately RMB39,037,000 for which Ninth Metallurgical Construction has not yet obtained the relevant ownership certificates. The Directors confirmed that the Group will make application for the ownership certificates for the aforementioned assets.

The gain on bargain purchase is mainly attributable to the immediate exit opportunity offered to the Shaanxi Jiuan and the ability of the Group in negotiating the terms of transactions with the Shaanxi Jiuan.

An analysis of the cash flows in respect of the acquisition of a subsidiary is as follows:

	RMB'000
Cash consideration	(49,980)
Consideration paid in last financial year	29,980
Cash and cash equivalents acquired	376,386
Net inflow of cash and cash equivalents included in cash flows from investing activities	356,386

Transaction cost of the acquisition is immaterial.

Since the acquisition, Ninth Metallurgical Construction contributed RMB3,001,817,000 to the Group's revenue and RMB93,427,000 to the consolidated profit for the year ended 31 December 2016.

Had the combination taken place at the beginning of 2016, the revenue of the Group and the profit of the Group for the year would have been RMB26,567,724,000 and RMB1,327,180,000, respectively.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### 42. BUSINESS COMBINATION AND DISPOSAL OF A SUBSIDIARY (CONTINUED)

- (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:

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)
<b>Net assets disposed of</b>	<b>60,364</b>
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)
<b>Gain on disposal</b>	<b>8,402</b>
Net cash inflow arising on disposal:	
Consideration	46,000
Cash and cash equivalents disposed of	(475)
	<b>45,525</b>

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 will be settled on or before 1 October 2018.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 43. PARTICULARS OF PRINCIPAL SUBSIDIARIES

As at 31 December 2017, 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 RMB'000	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2016	2017
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	Registered capital: 470,743 Paid capital: 403,743	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 RMB'000	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2016	2017
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 RMB'000	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2016	2017
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 RMB'000	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2016	2017
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	Registered capital: 100,000 Paid capital: 2,881.8	–	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)
Suzhou Engineering & Research Institute for Nonferrous Metal Research Co., Ltd. (蘇州有色金屬研究院有限公司)	The PRC/ 2 December 2002/ Limited liability company	99,130	40.35%	43.84%	15.81%	Engineering & research/ 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 RMB'000	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2016	2017
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	658,838	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 RMB'000	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2016	2017
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 RMB'000	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2016	2017
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)
Challico 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 RMB'000	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2016	2017
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 Sixth Metallurgical Leasing Co., Ltd. (河南六冶租賃有限公司)	The PRC/ 24 March 2015/ Limited liability company	5,000	–	100%	–	Construction engineering machinery and equipment leasing/ 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 RMB'000	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2016	2017
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	Registered capital: 50,000 Paid capital: 35,000	–	100%	–	Trading/ The PRC	(i)	(i)
Tianjin Giants Building Services Co., Ltd. (天津勁旅建築勞務有限公司)	The PRC/ 1 April 2015/ Limited liability company	2,000	–	100%	–	Construction labour contract/ 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: 494,000	5.06%	94.94%	–	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)

## 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 RMB'000	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2016	2017
Pingyang Tongyuan Construction Co., Ltd. (平陽通源建設有限公司)	The PRC/ 6 August 2013/ Limited liability company	20,000	90%	10%	–	Construction/ 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)

## 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 RMB'000	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2016	2017
Guizhou Yundu Properties Company Limited (貴州勻都置業有限公司)	The PRC/ 7 January 2013/ Limited liability company	128,000	–	100%	–	Property management/ The PRC	(i)	(i)
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	Registered capital: 400,000 Paid capital: 250,000	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 Tongdu 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)



## 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 RMB'000	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2016	2017
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 Trading Co., Ltd. (中鋁國際山東化工商貿有限公司)	The PRC/ 27 June 2014/ Limited liability company	50,000	–	100%	–	Sales of equipment/ The PRC	(i)	(i)
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)

## 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 RMB'000	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2016	2017
Xianyang Ninth Metallurgical Steel Structural Ltd. (咸陽九冶鋼結構有限公司)	The PRC/ 11 March 2004/ Limited liability company	6,300	–	62.5%	37.5%	Manufacturing equipment/ 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)
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)

## 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 RMB'000	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2016	2017
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)
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)

## 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 RMB'000	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2016	2017
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. (長沙華恒圓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	N/A	(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: USD30,000 Paid capital: USD15,000	–	100%	–	Engineering and construction/ The PRC	N/A	(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 RMB'000	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2016	2017
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	N/A	(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	N/A	(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	N/A	(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	N/A	(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 2017 and 2016, and balances as at 31 December 2017 and 31 December 2016 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	
	2017 RMB'000	2016 RMB'000 (restated)
Sales of goods or provision of service to:		
– Ultimate holding company	–	526
– Associates of ultimate holding company	4,545,007	56,437
– Fellow subsidiaries	4,231,950	2,859,943
	<b>8,776,957</b>	2,916,906
Purchases of goods and services from:		
– Associates of ultimate holding company	3,232	–
– Fellow subsidiaries	1,184,148	304,877
	<b>1,187,380</b>	304,877
Rental expenses paid to fellow subsidiaries	12,030	13,070
Borrowings from fellow subsidiaries	2,868,783	2,075,000
Interests received from:		
– An associate	203	–
– Fellow subsidiaries	12,050	13,341
	<b>12,253</b>	13,341
Interests paid to:		
– A subsidiary of a joint venture	151	–
– Fellow subsidiaries	28,936	32,056
	<b>29,087</b>	32,056

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	
	2017 RMB'000	2016 RMB'000 (restated)
<b>Trade receivables</b>		
– Ultimate holding company	–	1,004
– Associates	<b>32,083</b>	–
– Fellow subsidiaries	<b>1,767,536</b>	2,110,700
– Associates of ultimate holding company	<b>582,121</b>	231,816
	<b>2,381,740</b>	2,343,520



## 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	
	2017 RMB'000	2016 RMB'000 (restated)
<b>Prepayments to suppliers</b>		
– Joint venture	4,996	–
– Associates	576	–
– Fellow subsidiaries	28,844	16,635
– Associates of ultimate holding company	–	17
	<b>34,416</b>	16,652
<b>Other receivables</b>		
– Ultimate holding company	–	20
– Joint ventures	1,812	–
– Associates	56,580	–
– Fellow subsidiaries	56,887	309,854
– Associates of ultimate holding company	10,153	3,105
	<b>125,432</b>	312,979
<b>Amounts due to customers for contract work</b>		
– Fellow subsidiaries	5,997	62,276
<b>Trade payables</b>		
– Joint venture	10,094	–
– Associates	3,206	–
– Fellow subsidiaries	215,766	130,757
– Associates of ultimate holding company	450	–
	<b>229,516</b>	130,757
<b>Advance from customers</b>		
– Fellow subsidiaries	43,885	49,978
– Associates of ultimate holding company	101,862	–
	<b>145,747</b>	49,978
<b>Other payables (Note 34)</b>		
– Ultimate holding company	–	4,236
– Joint ventures	423	–
– Associates	1,063	–
– Fellow subsidiaries	130,263	91,938
	<b>131,749</b>	96,174
<b>Borrowings (Note 33)</b>		
– Fellow subsidiaries	1,707,783	260,000

## 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)

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.

#### (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	
	2017 RMB'000	2016 RMB'000
Salaries and other allowances	3,921	4,076
Discretionary bonus	2,514	3,364
Retired benefits	660	571
	<b>7,095</b>	8,011

### 45. EVENTS AFTER THE BALANCE SHEET DATE

There are no significant subsequent events took place subsequent to 31 December 2017.

### 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	
	2017 RMB'000	2016 RMB'000 (restated)
<b>Assets</b>		
<b>Non-current assets</b>		
Property, plant and equipment	86,705	82,000
Intangible assets	5,103	4,713
Land use rights	155,919	162,031
Investments in subsidiaries	4,012,301	3,324,340
Investments accounted for using equity method	36,357	316
Available-for-sale financial assets	225,198	214,826
Trade and notes receivables	33,700	7,722
Prepayments and other receivables	1,621,047	2,493,730
Deferred income tax assets	20,941	25,388
Other non-current assets	573	264
<b>Total non-current assets</b>	<b>6,197,844</b>	6,315,330
<b>Current assets</b>		
Inventories	238,779	28,490
Trade and notes receivables	1,870,963	1,923,440
Prepayments and other receivables	7,382,941	5,144,974
Amounts due from customers from contract work	842,095	470,310
Current income tax prepayments	4,083	6,057
Cash and cash equivalents	2,072,774	1,779,180
<b>Total current assets</b>	<b>12,411,635</b>	9,352,451
<b>Total assets</b>	<b>18,609,479</b>	15,667,781
<b>Equity</b>		
Share capital	2,663,160	2,663,160
Reserve	2,670,861	2,352,304
<b>Total equity</b>	<b>5,334,021</b>	5,015,464

## 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	
	2017 RMB'000	2016 RMB'000 (restated)
<b>Liabilities</b>		
<b>Non-current liabilities</b>		
Trade and other payables	–	20,029
Retirement and other supplemental benefit obligations	5,014	7,991
Long-term borrowings	1,970,675	919,552
<b>Total non-current liabilities</b>	<b>1,975,689</b>	947,572
<b>Current liabilities</b>		
Short-term borrowings	6,347,192	6,100,169
Trade and other payables	4,895,890	3,548,953
Amounts due to customers for contract work	23,887	52,163
Retirement and other supplemental benefit obligations	2,800	3,460
Dividend payable	30,000	–
<b>Total current liabilities</b>	<b>11,299,769</b>	9,704,745
<b>Total liabilities</b>	<b>13,275,458</b>	10,652,317
<b>Total equity and liabilities</b>	<b>18,609,479</b>	15,667,781
<b>Net current assets/(liabilities)</b>	<b>1,111,866</b>	(352,294)
<b>Total assets less current liabilities</b>	<b>7,309,710</b>	5,963,036

The balance sheet of the Company was approved by the Board of Directors on 12 March 2018 and was signed on its behalf.

**He Zhihui**  
Director

**Zhang Jian**  
Director

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

47. BALANCE SHEET AND RESERVE MOVEMENT OF THE COMPANY  
(CONTINUED)

## Reserve movement of the Company

(restated)	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
<b>At 1 January 2016</b>	857,417	110,617	–	6,564	(60,158)	190,129	1,104,569
Profit for the year	–	–	–	–	258,530	–	258,530
Fair value change of available-for-sale financial assets-gross	–	–	(1,282)	–	–	–	(1,282)
Fair value change of available-for-sale financial assets-tax	–	–	192	–	–	–	192
Reclassification upon partial disposal of an associate	(15,593)	–	–	–	–	–	(15,593)
Reclassification upon disposal of an associate	(41,321)	–	–	–	–	–	(41,321)
Remeasurements of post-employment benefit obligations – net of tax	–	–	–	4,697	–	–	4,697
Dividends to equity owners	–	–	–	–	(159,790)	–	(159,790)
Appropriation to other equity instruments	–	–	–	–	(10,300)	10,300	–
Net proceeds from offering of renewable corporate bonds (Note 30)	–	–	–	–	–	1,202,302	1,202,302
Appropriation to statutory surplus reserve	–	19,837	–	–	(19,837)	–	–
<b>At 31 December 2016</b>	800,503	130,454	(1,090)	11,261	8,445	1,402,731	2,352,304

## 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
<b>At 1 January 2017</b>	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)
<b>At 31 December 2017</b>	<b>598,191</b>	<b>167,363</b>	<b>(14,935)</b>	<b>11,777</b>	<b>8,234</b>	<b>1,900,231</b>	<b>2,670,861</b>

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.

### 48. APPROVAL OF FINANCIAL STATEMENTS

These consolidated financial statements have been approved for issue by the Board of Directors on 12 March 2018.

## GLOSSARY OF TERMS

“Articles of Association” or “Articles”	the articles of association of the Company, being adopted on 26 July 2011
“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, Shanghai Stock Exchange and the Stock Exchange (stock code: 2600) and a subsidiary of Chinalco (中鋁集團, formerly known as 中鋁公司)
“Changcheng Construction”	China Aluminum Great Wall Construction Co., Ltd. (中鋁長城建設有限公司)
“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 Business”	China Aluminum Business Factoring (Tianjin) Co., Ltd. (中鋁商業保理(天津)有限公司), a company established in the PRC with limited liability
“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
“Chinalco”	Aluminum Corporation of China (中國鋁業集團有限公司), a state-owned enterprise incorporated under the laws of the PRC and a controlling shareholder of the Company
“Chinalco Capital”	Chinalco Capital Holdings Company Limited (中鋁資本控股有限公司), a company established in the PRC with limited liability
“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

## GLOSSARY OF TERMS

“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 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. (都勻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
“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 Hong Kong 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”	Hong Kong dollars, the lawful currency of Hong Kong
“IFRS”	International Financial Reporting Standards issued by the International Accounting Standards Board
“IAS”	the International Accounting Standards and its interpretation



## GLOSSARY OF TERMS

“Latest Practicable Date”	10 April 2018, 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 Growth Enterprise Market 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
“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 Special Administration Region, Macau Special Administration Region and Taiwan
“Promoter(s)”	our Promoters, being Chinalco and Luoyang Institute
“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
“Renminbi” or “RMB”	the lawful currency of the PRC
“Remuneration Committee”	the Remuneration Committee of the Board
“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

## GLOSSARY OF TERMS

“SFO”	the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong), as amended, supplemented or otherwise modified from time to time
“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 Domestic 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
“State Council”	the State Council of the People’s Republic of China
“Stock Exchange”	The Stock Exchange of Hong Kong Limited
“subsidiaries”	has the meaning ascribed thereto in Section 2 of the Companies Ordinance
“Supervisor(s)”	one (or all) of our supervisors
“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. dollars” or “US\$”	United States dollars, the lawful currency of the United States
“Wenzhou Tonggang”	Wenzhou Tonggang Construction Co., Ltd.
“Wenzhou Tongrun”	Wenzhou Tongrun Construction Co., Ltd.
“Ninth Metallurgical Company” or “Ninth Metallurgical Construction”	Ninth Metallurgical 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  
Haidian District  
Beijing  
PRC

### **PRINCIPAL PLACE OF BUSINESS IN HONG KONG**

Room 4501, Far East Finance Centre  
No. 16 Harcourt Road  
Admiralty  
Hong Kong

### **AUTHORIZED REPRESENTATIVES**

Mr. HE Zihui  
Building C, No. 99, Xingshikou Road  
Haidian District  
Beijing  
PRC

Mr. ZHAI Feng  
Building C, No. 99, Xingshikou Road  
Haidian District  
Beijing  
PRC

### **COMPANY SECRETARIES**

Mr. WANG Jun  
Mr. ZHAI Feng

## CORPORATE INFORMATION

### 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. HE Zihui (Chairman)  
Mr. GUI Weihua  
Mr. FU Jun

### RISK MANAGEMENT COMMITTEE

Mr. HE Zihui (Chairman)  
Mr. LI Yihua  
Mr. FU Jun

### AUDITOR

PKF Hong Kong Limited  
Certified Public Accountants  
26/F, Citicorp Centre  
18 Whitfield Road  
Causeway Bay  
Hong Kong

### LEGAL ADVISORS

#### As to Hong Kong law

Clifford Chance  
28th Floor  
Jardine House  
One Connaught Place  
Central  
Hong Kong

#### As to PRC law

Jia Yuan Law Offices  
F407-408, Ocean Plaza  
Fuxingmennei Avenue  
Beijing  
PRC

## CORPORATE INFORMATION

### PRINCIPAL BANKERS

#### China Construction Bank Corporation

Beijing Jin'an Sub-branch  
Wu No. 12, Fuxing Road  
Haidian District  
Beijing  
PRC

#### Bank of China Limited

Beijing Finance Street Sub-branch  
2nd Floor, Investment Square  
No. 27, Finance Street  
Xicheng District  
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, Xijiekouwai Avenue  
Xicheng District  
Beijing  
PRC

### H SHARE REGISTRAR

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

### STOCK CODE

02068

### INVESTORS' ENQUIRIES

Investors' hotline: 010-82406806  
Fax: 010-82406797  
Website: [www.chalieco.com.cn](http://www.chalieco.com.cn)  
E-mail: [IR-chalieco@chalieco.com.cn](mailto:IR-chalieco@chalieco.com.cn)



**中鋁國際工程股份有限公司**  
China Aluminum International Engineering Corporation Limited