CHALIECO

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 2016

CONTENTS


DANIELI

HE Zhihui
Chairman

Dear Shareholders,

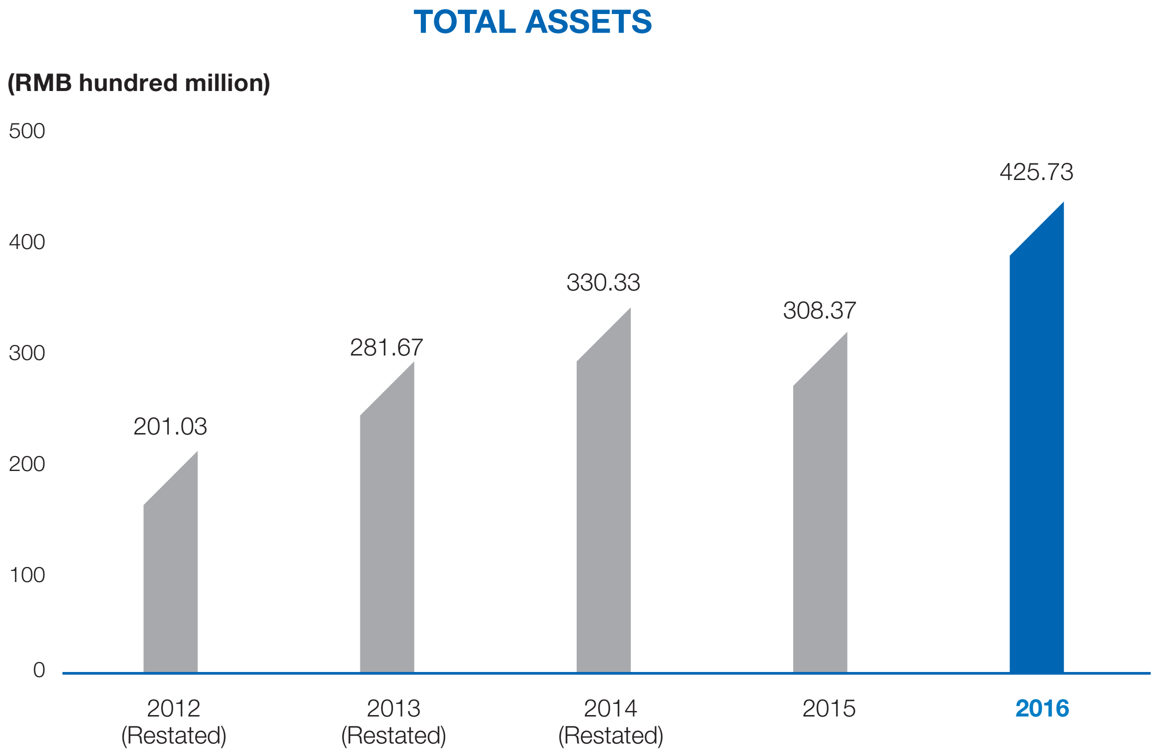
In 2016, every staff member of Chalieco strived hard, seized the hour to overcome the difficult time and was paid back for his efforts. In view of the recovering nonferrous industry and the continuing highly competitive market of the construction industry, we focused on improving the quality and efficiency, promoting the transformation and upgrading, and pioneered for innovation to bravely face the difficulties with a steady growth. We were able to maintain stable operating results and made a good start of the "Thirteenth Five-Year Plan". In 2016, operating revenue of the Group amounted to RMB24.8 billion, representing a year-on-year increase of 27.3%, profit attributable to owners amounted to RMB1.14 billion, representing a year-on-year increase of 111.5%, and earnings per share was RMB0.43. The aggregate amount of contracts newly signed in 2016 was RMB55.5 billion, representing an increase of 51.2% as compared to the corresponding period over last year. As at 31 December 2016, the contracts backlog amounted to RMB79.2 billion, representing an increase of 22% over the end of 2015, which was 4.7 times of the revenue as compared to the corresponding period (excluding trading business factor).

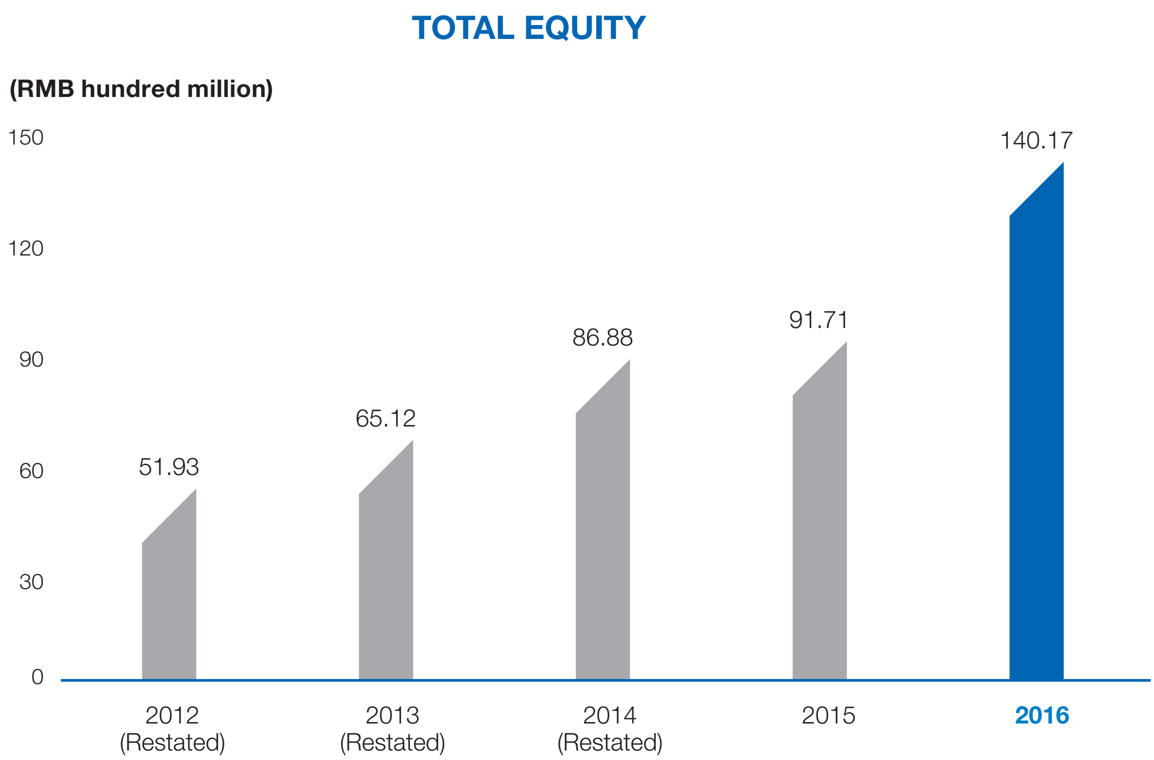
As at 31 December 2016, the total assets of the Group increased from RMB14.1 billion upon Listing to RMB42.6 billion, the consolidated net assets attributable to equity owners of the Company increased from RMB2.9 billion to RMB9.4 billion, both grew over 3 times. The Company always values the return on Shareholders. Since Listing, dividends of RMB1.537 billion (including the proposed dividend for the year) were paid. The Company and stakeholders have, together, developed and achieved a win-win situation, which was recognized widely by the society.

The world moves on in a never-ending process with the new replacing the old. In 2017, we shall accelerate the strategic transformation and structural adjustment by changing concept, promoting renovation and expanding the market. We shall grasp the strategic opportunities brought by the supply-side structural reform, "One Belt, One Road", new urbanization and PPP, further our strict control over risks, be vigilant in peacetime and strive for the best, in a bid to continue to create greater return for all investors.

Chairman,
HE Zhihui

FINANCIAL INFORMATION SUMMARY





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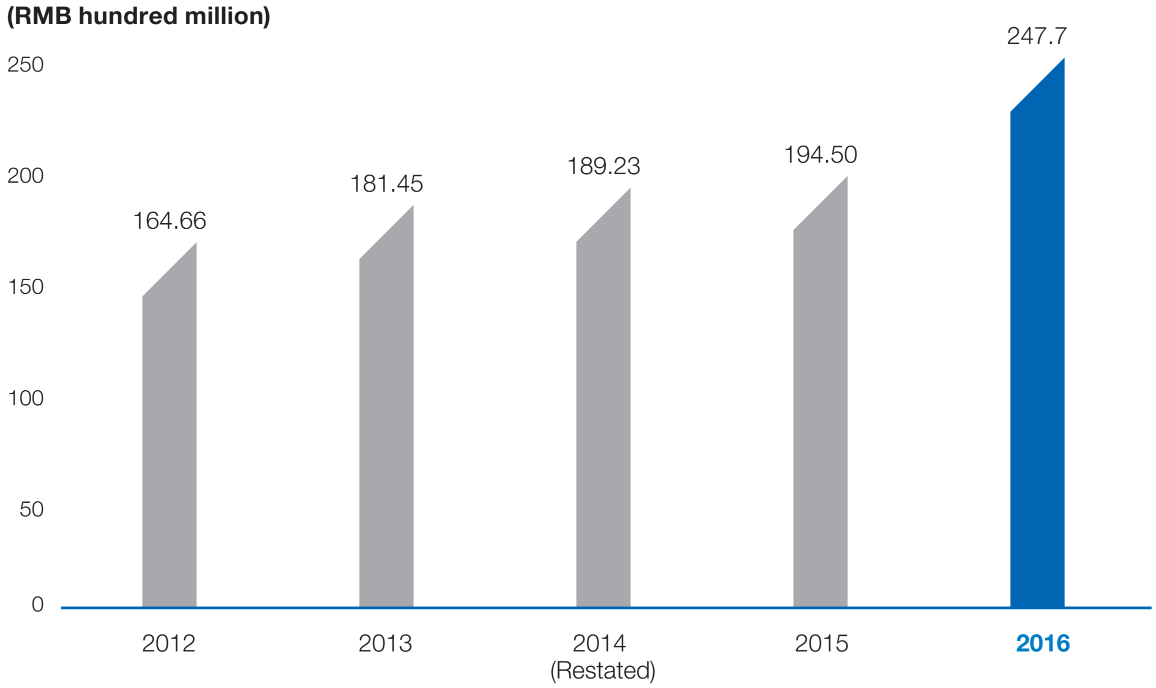

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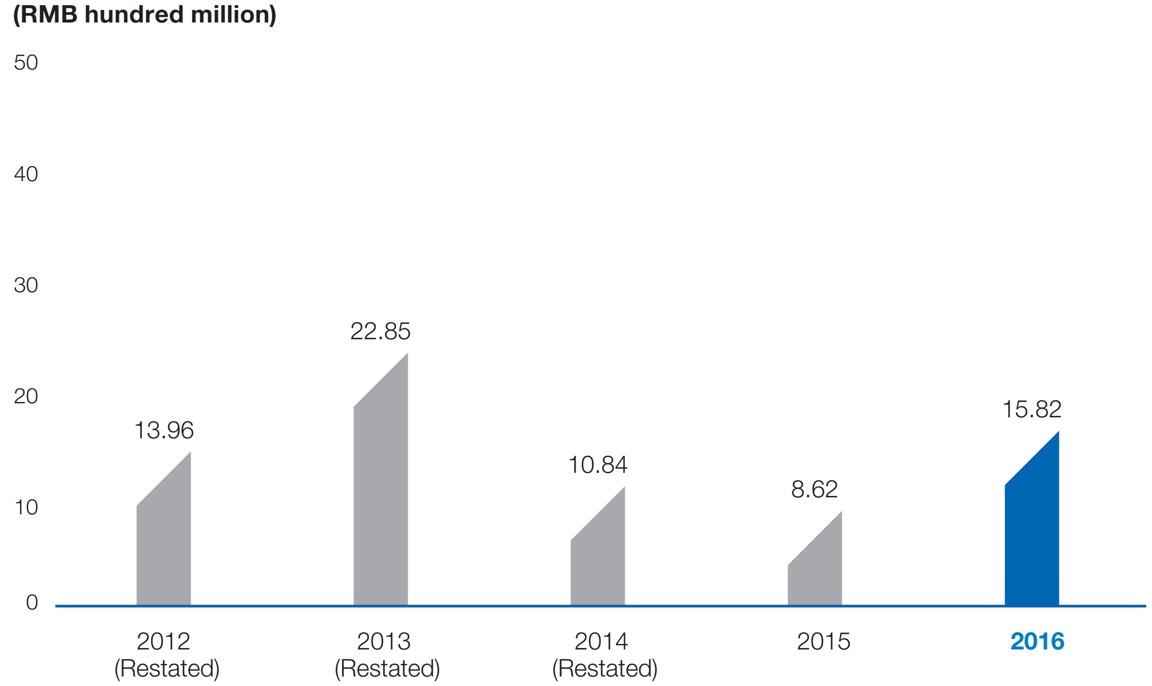
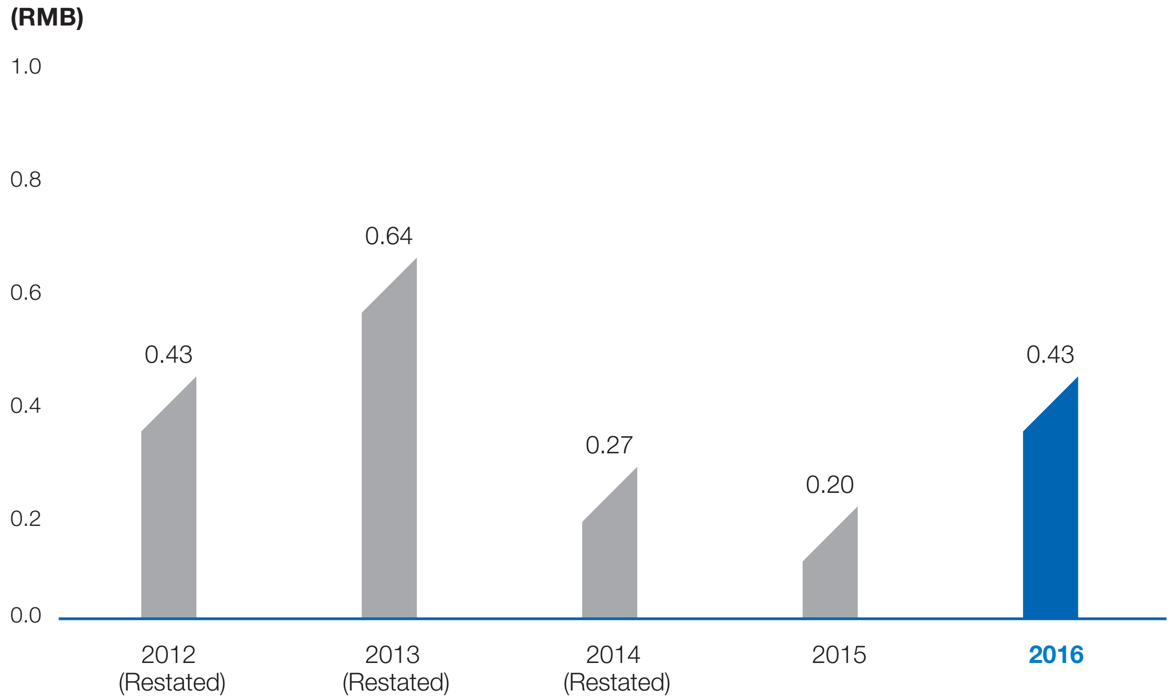
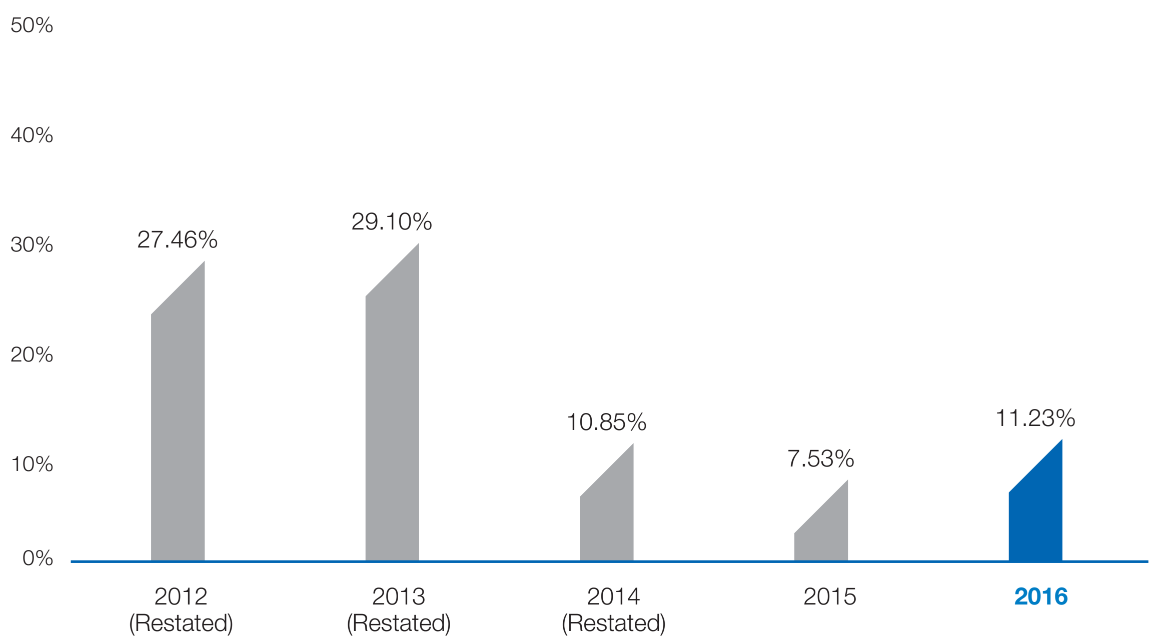


EARNINGS PER SHARE



RETURN ON NET ASSETS



CORPORATE PROFILE

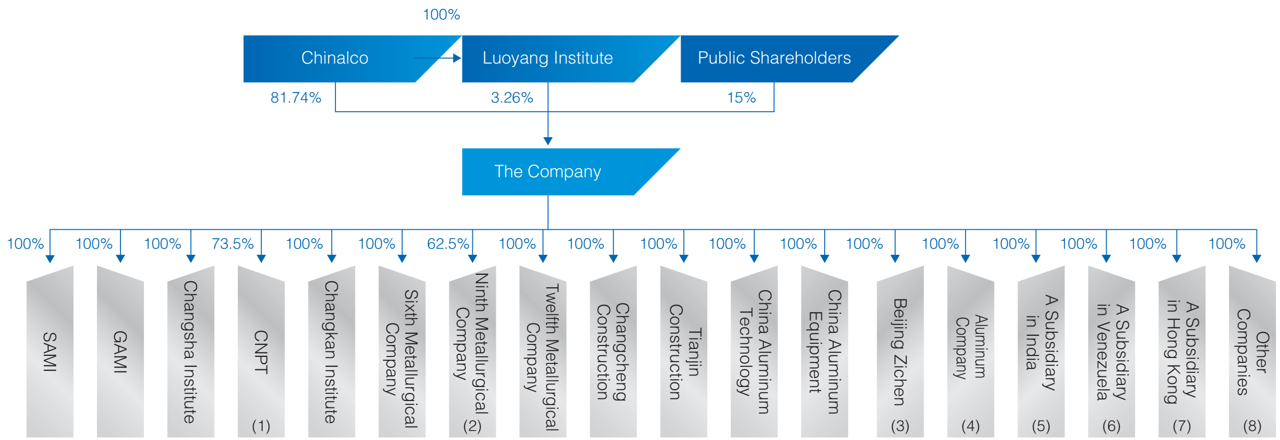
THE ISSUANCE AND LISTING OF THE SHARES

The Company is a subsidiary of Chinalco and listed on the Main Board of the Stock Exchange (Stock Code: 2068) on 6 July 2012 with an offering price of HK$3.93 per share. As at 31 December 2016, 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, representing 85% of the issued share capital.

BUSINESS OVERVIEW

The Group is a leading technology, engineering service and equipment provider in the nonferrous metals industry in China, capable of providing full business-chain integrated engineering solutions for various stages in nonferrous metals industry chain. 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 Ninth Metallurgical Construction Co., Ltd., the remaining 37.5% of the equity interest is held by natural persons as to 30.27%, and State-owned Assets Supervision and Administration Commission of Xianyang City as to 7.23%, both of them are independent third parties.

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

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

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

(6) represents Chalieco Venezuela C.A. (中鋁國際委內瑞拉股份有限公司)

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

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

MANAGEMENT DISCUSSION AND ANALYSIS

1. INDUSTRY OVERVIEW AND SEGMENT BUSINESS

Industry Overview in 2016

In 2016, though domestic and overseas conditions were complicated, China's economy recorded a steady growth, with GDP increased by 6.7% as compared to last year. By implementing various macro policies based on the core principle of supply side structural reform, transformation of economic development was facilitated while growth momentum strengthened continuously.

The nonferrous metals industry, as a periodical industry, showed an indication of rebound from the bottom as at the end of 2016. The production of the ten types of nonferrous metals for the whole year was 52 million tons. It still managed to record an increase compared to that of 2015. As market conditions improved, although production of some grades went down, the increasing of demand following by a significant rise on price. Domestic consumption on copper and aluminum increased by 5%-8%; the scaled-up enterprises in the nonferrous metals industry recorded a year-on-year profit growth of over 30%, whereas aluminum refining industry (including alumina, electrolytic aluminum and recycled aluminum etc.) which had been loss-making over the past few years recorded a turnover, posing a crucial effect on the improvement on the efficiency of the industry.

MANAGEMENT DISCUSSION AND ANALYSIS

The growth of fixed assets investment in China for 2016 eased. The completed fixed assets investment in China (excluding farmers) was RMB59.6 trillion, representing a year-on-year increase of 8.1%, slowed 1.9 percentage points as compared to last year. Investment eased in 2016, but its structure has been optimizing. Among which, the investment in infrastructure was sound, amounting to RMB11.8 trillion for the whole year, representing a growth of 17.4% as compared to last year; investment in the infrastructure accounted for 19.9% of the total investment, representing an increase of 1.5 percentage points as compared to last year. In 2016, the gross output of the construction industry in China amounted to RMB19.3 trillion, up 7.1% as compared to last year. Compared to 2015, the growth pace of the construction industry is stabilizing and adjustment and modification are likely to be seen in the future.

Business Operation Overview for 2016

(I) Achieving New Growth in Marketing

1. **Breakthrough in the nonferrous industry.** The Group undertook several new projects in the nonferrous industry, including Southeast Copper, which further expanded our influence in the nonferrous industry as well as establishing a new model for guiding the technological advancement of the non ferrous industry.

BALCO anode baking furnace in India

2. **Continuous expansion in the civil market.** We focused on the construction of cluster of cities, comprehensive experimental zone, innovation zone and industrial park, and the development in the civil market. Also, we participated in the business of municipal infrastructure, rebuilding and reformation, sponge city and traffic construction, and successively undertook the civil construction projects in an amount of over RMB1 billion, including the university town project in Guian New Area, project in Kaili City, Guizhou Province and rebuilding project of shantytowns in Weifang City.

3. **Efforts in moving into the overseas market.** Closely following the country's "One Belt, One Road", we put more efforts into enlarging the cooperation on production capacities in the international market by focusing on target clients, taking the initiative and proactively developing the emerging national markets. We signed a supply, field service and design contract with Vedanta, an India company, in respect of the project of 1.25 million tons of primary aluminum smelter. Besides, we successfully secured orders of projects in Russia, Indonesia, Ecuador and Guinea.

(II) Attaining a New Level in Project Management

1. **Obtaining results in benchmark guiding.** The site management levels in projects of Qujiang Yuyuan (曲江御園) in Xi'an City, Wuxiang New District in Nanning City and Dongli District in Tianjin City were further enhanced and highly recognized by owners and industry competent departments. The Group companies learned from one another the advanced ideas and management measures of project management through holding benchmarking projects' on-site observation and exchange sessions, thereby promoting the improvement in the project management level.

2. **Continuous innovation in management measures.** An e-commerce purchase platform developed by the Group has achieved the full coverage of materials, construction subcontracting and services. We achieved an annual purchase amount amounting to RMB4 billion on the platform. The application of information technology in project management has been widely promoted and a major progress was made in both BIM technology and project management system. Key projects are making good progress.

(III) New Progress in Transformation and Upgrading

1. **Speeding up PPP projects.** The Group targets on transformation and upgrading and focuses on infrastructure investment projects. It further its connection with the government and financial institutions, and successively won the bids of PPP projects such as urban road and underground pipeline of Tongchuan City, municipal roads and pipeline of Loudi City. The contracts of PPP projects secured amounting to RMB2.24 billion during the year.

2. **A good start in the emerging industry.** Changsha Institute, a wholly-owned subsidiary of the Group, further expanded and strengthened its business of natural gas distributed energy, combined projects of mines and tailing ponds by making full use of the characteristics of the nonferrous industry, as well as undertaking related photovoltaic business. Changkan Institute expanded its relevant business through the use of safety and environmental online monitoring technology, leveraging on its technology advantage.

3. **Development of aluminum for industrial use in full swing.** In 2016, the Group focused on the field of research regarding the expansion of aluminum applications, aiming at a breakthrough in the aluminum application on the field of engineering construction. We also actively commenced the work on transportation, 3C electronic goods, infrastructure, etc, and one by one developed a series of aluminum products, such as aluminum communication tower, aluminum template, aluminum bridges, aluminum flood wall, aluminum shell for cell-phone, aluminum dwelling and aluminum climber. At present, the Group's business of aluminum for industrial use is fully put to use, with aluminum bridges put under construction in Hohhot City and aluminum dwelling launched to the construction market.

First aluminum bridge in Chongqing

(IV) Broadening New Channels in Capital Operation

1. **Breakthrough in bond financing.** In 2016, the Group completed the issue of the first phase of each of small public offering bonds and renewable corporate bonds respectively, raising a total of RMB2.108 billion, and also completed the issue of the first phase of foreign perpetual debt, raising US$350 million. The issue of the above bonds has improved the Group's liability structure mainly comprised of short-term debts, enhanced the compatibility of the raised funds and the progress of construction projects, and reduced the finance cost.

2. **Continuous widening of financing channels.** In 2016, there was a new breakthrough in the Group's direct financing and indirect financing channels. It established good cooperation relationship with dozens of domestic and overseas banks. As at the end of 2016, a total of RMB27.3 billion comprehensive bank credits were obtained. The financing channels were effective and the financing products were full of variety.

(V) New Enhancement in Development Capability

1. **Repeating favorable outcome in qualifications.** In 2016, Sixth Metallurgical Company, a wholly-owned subsidiary of the Group, obtained the premium qualification for general contracting of housing and buildings construction.

2. **Strengthening supervision and enforcing immediate changes.** The Group carried out various supervision, such as specific supervision of the engineering field, supervision of the progress of performance assessment indicators, specific supervision of "Two Compensation (兩金)" settlement, specific supervision of safety management and specific supervision of promotion and application of e-commerce platform, on some of its sub-subsidiaries and project departments. Rectification must be done within a given period in case of problems.

3. **Pursuing safety production relentlessly.** The Group continuously increased its efforts in the inspection and governance of the safety hazards in the construction site and comprehensively promoted the standardization work on the construction site safety management. No major safety incidents occurred throughout the year.

4. **Enhancing basic management capability.** The Group has commenced an in-depth standardization work. Through implementing standardized construction, the regularization, homogenization and informatization of business management would be gradually achieved.

Contracts

The aggregated value of contracts newly signed in 2016 amounted to RMB55.5 billion, representing an increase of 51.2% as compared with the corresponding period over last year. The contracts backlog of the Group as at 31 December 2016 amounted to RMB79.21 billion, representing an increase of 22% over the end of 2015.

Credit Ratings

Standard & Poor's continued to assign the Company an issuer rating of BB+ and a stand-alone credit profile of B+ with stable outlook.

Conditions of Scientific Research

Technological Innovation Platform

The establishment of "Guiyang Aluminum and Magnesium Design Institute Co., Ltd." and "China Nonferrous Metals Processing Technology Co., Ltd." proposed to be established by a subsidiary of the Group has been approved by National Development and Reform Commission as the national enterprise technology center of 2016 (the 23rd group). The headquarters and some other subsidiaries of the Company were successfully recognized as the national high-and-new technology enterprises. As at 31 December 2016, the Group had a total of three engineering technical research centers and enterprise technology centers reaching the national level, three postdoctoral science research workstations reaching the national level, 13 technology centers reaching the provincial level, one postdoctoral innovation and practice base reaching the provincial level and one engineering laboratory reaching the provincial level. As at 31 December 2016, the Group had seven national survey and design masters in engineering field and 42 provincial survey and design masters in nonferrous metals industry.

Application for Patents and Authorisation

In 2016, the Group had 253 domestic patents applications, 265 domestic authorized patents and 10 international authorized patents. Applications for 17 patents of provincial industrial methods were granted. As at 31 December 2016, the Group has totally applied for 6,340 domestic patents and 4,663 were granted, while 134 for international patents were applied and 122 were granted. A total of seven patents of national industrial methods were granted.

Awards Attained

During the year, the Group accomplished ten scientific and technological achievement evaluations carried out by the industry association such as "Research and Application of Multifunctional Energy-efficient Aluminum Electrolysis in Power Supply Rectification Technology (多功能高效節能鋁電解供電整流技術的研究與應用)". 17 awards were granted the provincial scientific and technological prizes by the industry association, among which, five First Prizes and nine Second Prizes were awarded, which were the highest record in the history. Eight First Prizes, eight Second Prizes, two Third Prizes of the ministry-level excellent engineering consultancy results awards (部級優秀工程諮詢成果獎) were awarded by the industry association. Three First Prizes, four Second Prizes, three Third Prizes of ministry-level engineering survey awards were awarded by the industry association. Four First Prizes, five Second Prizes, two Third Prizes of ministry-level excellent engineering design awards (部級優秀設計獎) were awarded by the industry association.

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 of Electrolytic Cell Technology with Ultra-low Energy Consumption (超低能耗電解槽技術開發)" project led to the significant decrease in the level of electricity consumption of smelters of large capacity. Demand for existing inventory market was huge. "Research on Technology of Alumina Production by Low Temperature Bayer Process (低溫拜耳法生產氧化鋁工藝技術研究)" project laid a foundation for further energy savings on alumina industry. "Research on Equipment and Technology of Zinc-leaching Residues Disposal via Oxygen Side-blown Furnace (氧氣側吹爐處理鋅浸出渣裝備與工藝研究)" project was able to economically refine precious metals such as gold and silver from the large amount of zinc leaching residue inventory in China, which substantially expanded the market. Research on Integration of Beneficiation Technology and Engineering Transformation of Cu-Pb-Zn Polymetallic Ore in Tibet Jima (西藏甲瑪銅鉛鋅複雜多金屬礦選礦技術集成及工程轉化研究)" project was exemplary and had high marketable value to the improvement of flotation separation method, which deals with our country's complicated Polymetallic Ore mines, and to the promotion of the efficient development and use of mines and mineral assets in high attitude and extreme cold regions."Research on Equipment and Technology of Three-layer Multi-metal Cold Sandwich Rolling Process (三層多品種金屬冷複合軋製裝備與工藝研究)" has enhanced the research and development capacity and technological capacity of new equipment produced in China, and has been successfully applied on domestic aluminum processing industry, creating new point for profit growth.

Investment in R&D of Technology

For the year 2016, 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 RMB636.7 million, representing 2.6% of the total revenue of the year.

The sewage treatment project of the first Galla Chinensis deep processing plant in the world

2. OPERATING RESULTS ANALYSIS AND DISCUSSION

Overview

Revenue in 2016 increased significantly compared with 2015. Revenue amounted to RMB24,765.6 million, representing an increase of 27.3% by RMB5,316.1 million from RMB19,449.5 million in 2015. Profit for the year amounted to RMB1,302.4 million, representing an increase of 93.7% or RMB630.0 million from RMB672.4 million in 2015. Profit attributable to equity owners of the Company increased by RMB603.4 million from RMB541.0 million in 2015 to RMB1,144.4 million, representing an increase of 111.5%. Earnings per share were RMB0.43, representing an increase of 115.0% from RMB0.20 in 2015.

Operating revenue

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

Revenue in 2016 was RMB24,765.6 million, representing an increase of 27.3% or RMB5,316.1 million from RMB19,449.5 million in 2015. Excluding the revenue contributed by Ninth Metallurgical Construction in the second half of the year amounting to RMB3,001.8 million, the comparable revenue for 2016 amounted to RMB21,763.8 million, representing an increase of 11.9% over 2015. In 2016, the revenue from construction experienced a significant growth and the overall revenue improved as compared to that of 2015 due to the orders of the Group on hand entered into its construction peak and the increase in new projects as compared to that of last year.

	2016		2015		
	(RMB'000)	(% of total income before inter-segment elimination)	(RMB'000)	(% of total income before inter-segment elimination)	% of change over last year
Engineering design and consultancy	1,683,614	6.7	1,861,150	9.4	(9.5)
Engineering and construction contracting	14,772,222	58.7	10,832,162	54.5	36.4
Equipment manufacturing	736,338	2.9	590,070	3.0	24.8
Trading	7,961,134	31.7	6,590,273	33.1	20.8
Subtotal	25,153,308	100.0	19,873,655	100.0	26.6
Inter-segment elimination	(387,688)		(424,126)		
Total revenue	24,765,620		19,449,529		27.3

Cost of sales

In 2016, cost of sales of the Group amounted to RMB22,033.2 million, representing an increase of 28.0% as compared to that of RMB17,210.0 million for 2015. Excluding the effect of Ninth Metallurgical Construction's cost of sales of RMB2,760.5 million in the second half of the year, the comparable cost of sales of the Group was RMB19,272.7 million, representing an increase of 12.0% over 2015, mainly because the business scales of all other businesses, except for the engineering design and consultancy business, recorded stable growth along with the rising cost of sales.

Selling and marketing expenses and business tax and surcharges

In 2016, the selling and marketing expenses and business tax and surcharges of the Group amounted to RMB230.9 million, representing a decrease of 22.5% as compared to that of RMB298.1 million for 2015. Excluding the effect of Ninth Metallurgical Construction's selling and marketing expenses and business tax and surcharges of RMB5.7 million in the second half of the year, the comparable selling and marketing expenses and business tax and surcharges of the Group was RMB225.2 million, representing a decrease of 24.5% over 2015, primarily due to the tax reform of "replacing business tax with value-added tax (營改增)" fully implemented across Mainland China in 2016. As such, the value-added tax payable is deducted from revenue rather than presented as an expense resulting in a significant decrease of business tax.

Administrative expenses

In 2016, the administrative expenses of the Group amounted to RMB1,155.2 million, representing an increase of 10.1% as compared to that of RMB1,048.9 million in 2015. Excluding the effect of Ninth Metallurgical Construction's administrative expenses of RMB100.0 million in the second half of the year, the comparable administrative expenses of the Group amounted to RMB1,055.2 million, roughly the same as in 2015.

Other losses – net

In 2016, the other losses – net of the Group amounted to RMB128.4 million, representing an increase of 123.7% from RMB57.4 million in 2015, mainly due to exchange loss resulting from depreciation of RMB. In 2016, the net foreign exchange loss of the Group amounted to RMB95.4 million.

Finance expense – net

The Group recorded net finance expense of RMB184.2 million in 2016, representing an increase of 44.1% from RMB127.8 million in 2015. Excluding the effect of Ninth Metallurgical Construction's net finance expense of RMB15.0 million in the second half of the year, the comparable net finance expense of the Group amounted to RMB169.2 million, representing an increase of 32.4% over 2015, primarily due to the increase in cost resulting from the enlarged scale of the interest bearing liability during the year.

Operating profit

The Group recorded an operating profit of RMB1,327.2 million in 2016, representing an increase of 36.9% from RMB969.3 million in 2015. Excluding Ninth Metallurgical Construction's operating profit of RMB103.2 million in the second half of the year, the comparable operating profit of the Group amounted to RMB1,224.0 million in 2016, representing an increase of 26.3% over the corresponding period of last year, primarily due to the growth in scale of revenue.

Profit before tax

In 2016, profit before tax of the Group amounted to RMB1,581.7 million, representing an increase of 83.6% as compared to that of RMB861.6 million in 2015, which was mainly due to the growth in profit as a result of growth in scale of revenue, gain on buying allowance from the acquisition of Ninth Metallurgical Construction of RMB269.7 million and the gain of RMB258.3 million on the disposal and reclassification of an associate.

Income tax

The Group recorded income tax expense of RMB279.4 million in 2016, representing an increase of 47.6% from RMB189.2 million in 2015. The effective tax rate decreased to 17.7% in 2016 from 22.0% in 2015, primarily owing to the non-taxable gain on buying allowance from business combination of RMB269.7 million. Excluding this effect, the profit before taxation of the Group was RMB1,312.0 million and the effective tax rate decreased slightly to 21.3% in 2016 from 22.0% in 2015. The slight decrease is owing to the successful application of "High-tech Business" by the Company and, its wholly-owned subsidiary, Sixth Metallurgical Company, of which the income tax rate dropped from 25.0% to 15.0%.

Profit for the year

In 2016, the Group's profit for the year was RMB1,302.4 million, representing an increase of 93.7% from profit for the year of RMB672.4 million in 2015. Profit attributable to equity owners of the Company was RMB1,144.4 million, representing an increase of 111.5% from RMB541.0 million in 2015.

Dividends

In 2016, the Company proposed the payment of dividend of RMB0.87 for every 10 shares (tax inclusive) in cash, in an aggregated amount of RMB231.7 million, on the basis of RMB2,663.16 million ordinary shares in issue as at 31 December 2016, and a dividend of RMB0.6 (tax inclusive) for every 10 shares in cash was paid in 2015.

Segment Operating Results

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

	2016		2015		Change	
	Gross Profit (RMB'000)	Segment results (RMB'000)	Gross Profit (RMB'000)	Segment results (RMB'000)	Gross Profit (RMB'000)	Segment results (RMB'000)
Engineering design and consultancy	422,683	20,466	483,588	125,149	(60,905)	(104,683)
Engineering and construction contracting	1,997,839	1,186,814	1,593,895	780,637	403,944	406,177
Equipment manufacturing	89,098	(31,930)	48,221	18,351	40,877	(50,281)
Trading	227,086	143,772	189,377	170,537	37,709	(26,765)
Subtotal	2,736,706	1,319,122	2,315,081	1,094,674	421,625	224,448
Inter-segment elimination	(4,258)	8,127	(75,559)	(125,370)	71,301	133,497
Total	2,732,448	1,327,249	2,239,522	969,304	492,926	357,945

Engineering Design and Consultancy

The principal segment result data for our engineering design and consultancy business is as follows:

	2016		2015		
	(RMB'000)	% of segment revenue	(RMB'000)	% of segment revenue	% of change
Segment revenue	1,683,614	100.0	1,861,150	100.0	(9.5)
Cost of sales	(1,260,931)	(74.9)	(1,377,562)	(74.0)	(8.5)
Gross profit	422,683	25.1	483,588	26.0	(12.6)
Selling and marketing expenses, and business tax and surcharges	(61,610)	(3.7)	(57,181)	(3.1)	7.7
Administrative expenses	(344,542)	(20.5)	(407,006)	(21.9)	(15.3)
Other income and other gains or losses – net	3,935	0.2	105,748	5.7	(96.3)
Segment result	20,466	1.2	125,149	6.7	(83.6)

Segment revenue. Revenue from the engineering design and consultancy business before inter-segment elimination in 2016 amounted to RMB1,683.6 million, representing a decrease of 9.5% compared with RMB1,861.2 million in 2015, primarily due to the lack of motivation to invest in the nonferrous industry during the downturn of the nonferrous industry, and the slight decrease in revenue owing to relatively smaller proportion of design business in respect of the Company's orders on hand.

Cost of sales. Cost of sales of the engineering design and consultancy business in 2016 amounted to RMB1,260.9 million, representing a decrease of 8.5% compared with RMB1,377.6 million in 2015, primarily due to decrease in cost expenses corresponding to the decrease of income.

Gross profit. Gross profit of the engineering design and consultancy business in 2016 amounted to RMB422.7 million, representing a decrease of 12.6% compared with RMB483.6 million in 2015, primarily due to a decrease in revenue. Gross profit margin slightly decreased from 26.0% in 2015 to 25.1%.

Selling and marketing expenses, and business tax and surcharges. In 2016, the selling and marketing expenses, and business tax and surcharges of engineering design and consultancy business were RMB61.6 million, representing an increase of 7.7% from RMB57.2 million in 2015, primarily due to the increase in labour costs.

Administrative expenses. The administrative expenses of engineering design and consultancy business in 2016 amounted to RMB344.5 million, representing a decrease of 15.3% from RMB407.0 million in 2015, primarily due to the reduction in controllable costs such as travelling expense and entertainment fee.

Other income and other gains or losses – net. In 2016, the other income and other gains or losses – net of engineering design and consultancy business was RMB3.9 million, representing a decrease of 96.3% as compared to RMB105.7 million in 2015. The main reason was that Changsha Institute, a wholly-owned subsidiary of the Company, made capital contribution in a jointly-controlled entity by providing patented technology. Other gain, which represented the excess of the fair value over the carrying amount of the patented technology was recognised in 2015. No gain of such nature was received in 2016.

Segment result. Due to the above mentioned causes, segment result for the year from engineering design and consultancy business were RMB20.5 million, representing a decrease of 83.6% from RMB125.1 million in 2015, which contributed 1.6% to the operating results of the Group.

Engineering and Construction Contracting

The principal segment result data for our engineering and construction contracting business is as follows:

	2016		2015		
	(RMB'000)	(% of segment revenue)	(RMB'000)	(% of segment revenue)	% of change
Segment revenue	**14,772,222**	**100.0**	10,832,162	100.0	36.4
Cost of sales	**(12,774,383)**	**(86.5)**	(9,238,267)	(85.3)	38.3
Gross profit	**1,997,839**	**13.5**	1,593,895	14.7	25.3
Selling and marketing expenses, and business tax and surcharges	**(87,417)**	**(0.6)**	(205,826)	(1.9)	(57.5)
Administrative expenses	**(699,812)**	**(4.7)**	(571,506)	(5.3)	22.5
Other income and other gains or losses – net	**(23,796)**	**(0.2)**	(35,926)	(0.3)	(33.8)
Segment result	**1,186,814**	**8.0**	780,637	7.2	52.0

Segment revenue. In 2016, revenue of engineering and construction contracting business before inter-segment elimination was RMB14,772.2 million, representing an increase of 36.4% from RMB10,832.2 million in 2015. Excluding Ninth Metallurgical Construction's revenue contribution of RMB2,882.0 million in the second half of the year, comparable revenue of engineering and construction contracting business before inter-segment elimination was RMB11,890.2 million in 2016, representing an increase of 9.8% over 2015, primarily due to the increase in the projects in respect of the Group's orders on hand entered into its construction peak, resulting in the increase in the revenue.

Cost of sales. In 2016, cost of sales of engineering and construction contracting business was RMB12,774.4 million, representing an increase of 38.3% from RMB9,238.3 million in 2015. Excluding the effect of Ninth Metallurgical Construction of RMB2,685.1 million, comparable cost of sales of engineering and construction contracting business was RMB10,089.3 million in 2016, representing an increase of 9.2% over 2015, primarily due to increase in cost expenses corresponding to the increase of income.

Gross profit. In 2016, gross profit of engineering and construction contracting business was RMB1,997.8 million, representing an increase of 25.3% from RMB1,593.9 million in 2015. The gross profit margin was decreased to 13.5% from 14.7% in 2015, primarily due to the decrease in the gross profit margin attributable to the increased proportion of the municipal and civil business

Selling and marketing expenses, and business tax and surcharges. In 2016, selling and marketing expenses, and business tax and surcharges of engineering and construction contracting business were RMB87.4 million, representing a decrease of 57.5% compared to RMB205.8 million in 2015, primarily due to the tax reform of "replacing business tax with value-added tax (營改增)" fully implemented across the mainland China in 2016. As such, the value-added tax is deducted from revenue rather than presented as an expense, resulting in a significant decrease of business tax.

Administrative expenses. In 2016, administrative expenses of engineering and construction contracting business were RMB699.8 million, representing an increase of 22.4% from RMB571.5 million in 2015. Excluding the effect of Ninth Metallurgical Construction of RMB72.2 million, the comparable administrative expenses of engineering and construction contracting business were RMB627.6 million in 2016, representing an increase of 9.8% over 2015, primarily due to the increase in the provision for bad debts resulting from the increase in trade receivables.

Segment result. Due to the above mentioned causes, segment result of our engineering and construction contracting business were RMB1,186.8 million, representing an increase of 52.0% from RMB780.6 million in 2015, which contributed 90.0% to the operating results of the Group.

Equipment Manufacturing

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

	2016		2015		
	(RMB'000)	**(% of segment revenue)**	(RMB'000)	(% of segment revenue)	% of change
Segment revenue	**736,338**	**100.0**	590,070	100.0	24.8
Cost of sales	**(647,240)**	**(87.9)**	(541,849)	(91.8)	19.5
Gross profit	**89,098**	**12.1**	48,221	8.2	84.8
Selling and marketing expenses, and business tax and surcharges	**(20,743)**	**(2.8)**	(8,074)	(1.4)	156.9
Administrative expenses	**(99,804)**	**(13.6)**	(68,392)	(11.6)	45.9
Other income and other gains or losses– net	**(481)**	**(0.1)**	46,596	7.9	N/A
Segment result	**(31,930)**	**(4.3)**	18,351	3.1	N/A

Segment revenue. In 2016, revenue of the equipment manufacturing business before inter-segment elimination was RMB736.3 million, representing an increase of 24.8% from RMB590.1 million in 2015. Excluding Ninth Metallurgical Construction's revenue contribution of RMB119.9 million in the second half of the year, the comparable revenue of the equipment manufacturing business before inter-segment elimination was RMB616.4 million in 2016, representing an increase of 4.5% over 2015, primarily due to the recovery of price for the nonferrous metals and the increase in investments, leading to the equipment manufacturing business starting to rebound from the bottom during the second half of 2016.

Cost of sales. In 2016, cost of sales of our equipment manufacturing business was RMB647.2 million, representing an increase of 19.5% from RMB541.8 million in 2015. Excluding the effect of Ninth Metallurgical Construction of RMB75.9 million, the comparable cost of sales of our equipment manufacturing business was RMB571.3 million in 2016, representing an increase of 5.4% over 2015, primarily due to the increase of cost expenses corresponding to the increase of revenue.

Gross profit. In 2016, gross profit of our equipment manufacturing business was RMB89.1 million, representing an increase of 84.8% from RMB48.2 million in 2015. The gross profit margin increased from 8.2% in 2015 to 12.1%. Excluding the effect of Ninth Metallurgical Construction of RMB44.0 million, the comparable gross profit of our equipment manufacturing business was RMB45.1 million in 2016, representing a decrease of 6.4% over 2015. The gross profit margin decreased from 8.2% in 2015 to 7.3%.

Selling and marketing expenses, and business tax and surcharges. In 2016, selling and marketing expenses, and business tax and surcharges of equipment manufacturing business were RMB20.7 million, representing an increase of 156.9% from RMB8.1 million in 2015. Excluding the effect of Ninth Metallurgical Construction of RMB3.4 million, the comparable selling and marketing expenses, and business tax and surcharges of equipment manufacturing business were RMB17.3 million in 2016, representing an increase of 113.6% over 2015, primarily due to the significant increase in expenses such as labour costs and transportation expense.

Administrative expenses. In 2016, the administrative expenses of equipment manufacturing business was RMB99.8 million, representing an increase of 45.9% from RMB68.4 million in 2015. Excluding the effect of Ninth Metallurgical Construction of RMB27.8 million, the administrative expenses of equipment manufacturing business was RMB72.0 million in 2016, representing an increase of 5.3% over 2015, primarily due to the increase in the provision for bad debts of trade receivables.

Other income and other gains or losses – net. In 2016, Other income and other gains or losses – net of the equipment manufacturing business was RMB0.5 million in losses, representing a decrease of RMB47.1 million in revenue as compared to the net income of RMB46.6 million in 2015. It was mainly due to the reasons including that CNPT, our subsidiary, received equity interests of a company as a gift in 2015, resulting in more net income in 2015.

Segment result. As a result of the above mentioned, the segment loss of our equipment manufacturing business was RMB31.9 million.

Trading

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

	2016		2015		
	(RMB'000)	% of segment revenue	(RMB'000)	% of segment revenue	% of change
Segment revenue	**7,961,134**	**100.0**	6,590,273	100.0	20.8
Cost of sales	**(7,734,048)**	**(97.1)**	(6,400,896)	(97.1)	20.8
Gross profit	**227,086**	**2.9**	189,377	2.9	19.9
Selling and marketing expenses, and business tax and surcharges	**(61,126)**	**(0.8)**	(27,026)	(0.4)	126.2
Administrative expenses	**(15,347)**	**(0.2)**	(15,644)	(0.2)	(1.9)
Other income and other gains or losses – net	**(6,841)**	**(0.1)**	23,830	0.4	N/A
Segment result	**143,772**	**1.8**	170,537	2.6	(15.7)

Segment revenue. In 2016, revenue of trading segment before inter-segment elimination was RMB7,961.1 million, representing an increase of 20.8% from RMB6,590.3 million in 2015. The fast increase was due to the improvement in the capability of business expansion year by year.

Cost of sales. In 2016, cost of sales of trading segment was RMB7,734.0 million, representing an increase of 20.8% from RMB6,400.9 million in 2015, primarily due to the increase of purchasing cost corresponding to the increase of revenue.

Gross profit. In 2016, gross profit of trading segment was RMB227.1 million, representing an increase of 19.9% from RMB189.4 million in 2015. The gross profit margin remained at the level of 2.9%.

Selling and marketing expenses, and business tax and surcharges. In 2016, selling and marketing expenses, and business tax and surcharges of trading business were RMB61.1 million, representing an increase of 126.2% from RMB27.0 million in 2015, primarily due to the significant increase in the transportation expense and warehousing custody fee corresponding to the increase of revenue.

Administrative expenses. In 2016, administrative expenses of trading business were RMB15.3 million, representing a decrease of 1.9% from RMB15.6 million in 2015, and basically the same as last year.

Other income and other gains or losses – net. In 2016, the other income and other gains or losses – net of the trading business was a net loss of RMB6.8 million, representing an increase of RMB30.6 million in losses as compared to the net gain of RMB23.8 million in 2015, mainly because of the increase of net exchange loss in 2016 due to the depreciation of RMB.

Segment result. As a result of the above mentioned, segment result for the year of trading business were RMB143.8 million, representing a decrease of 15.7% from RMB170.5 million in 2015, contributing 10.9% to the operating results of the Group.

Conditions of Assets and Liabilities

As at the end of 2016, the total assets of the Group were RMB42,572.6 million, and the total liabilities were RMB28,556.1 million.

Composition of assets:

As at 31 December 2016, in the composition of assets, due to the characteristics of our business, trade and note receivables was the largest item which amounted to RMB16,056.8 million, representing 37.7% of the total assets; the amount due from customers for contract work was RMB6,164.1 million, representing 14.5% of the total assets; cash and cash equivalents amounted to RMB7,714.2 million, representing 18.1% of the total assets and an increase of RMB2,866.4 million from last year, mainly due to the issuance of senior perpetual capital securities of US$350.0 million at the end of the year.

Composition of liabilities:

As at 31 December 2016, in the composition of liabilities, trade and other payables was the largest item which amounted to RMB14,762.4 million, representing 51.7% of the total liabilities, followed by the long-term and short-term borrowings of a balance of RMB11,665.1 million as at the end of 2016, representing 40.8% of the total liabilities.

3. FINANCIAL REVIEW

Liquidity and Capital Resources

As at 31 December 2016, the Group had cash and cash equivalents of RMB7,714.2 million, representing an increase of RMB2,866.4 million from the cash and cash equivalents of RMB4,847.8 million as at 31 December 2015, primarily due to: (i) net cash outflow in operating activities was RMB1,192.4 million, representing an increase in outflow of RMB717.3 million from net cash outflow of RMB475.1 million in last year; (ii) net cash outflow in investment activities was RMB295.0 million, representing an increase in outflow of RMB1,859.9 million from net cash inflow of RMB1,564.9 million in last year; (iii) net cash inflow in financing activities of RMB4,329.9 million, representing an increase in inflow of RMB4,798.8 million from net cash outflow of RMB468.9 million in last year; and (iv) the exchange gain of RMB23.9 million arising from foreign currencies due to the depreciation of RMB.

As at 31 December 2016, current assets amounted to RMB34,858.4 million, representing an increase of 41.0% from the RMB24,724.0 million as at 31 December 2015, primarily due to the increase of trade and notes receivables, cash and cash equivalents, amounts due from customers for contract work, prepayments and other receivables owing to the increase in the balance of cash and cash equivalent as a result of the issuance of equity instrument as well as the possession of effective control over Ninth Metallurgical Construction in 2016 which led to the inclusion of Ninth Metallurgical Construction to the consolidated financial statements.

	At 31 December 2016 (RMB million)	At 31 December 2015 (RMB million)	Percentage of growth over last year	Year-on-year increase over last year RMB million
Trade and notes receivables	**14,419.0**	10,687.8	34.9	3,731.2
Cash and cash equivalents	**7,714.2**	4,847.8	59.1	2,866.4
Amounts due from customers for contract work	**6,164.1**	4,098.5	50.4	2,065.6
Prepayments and other receivables	**4,256.7**	3,330.5	27.8	926.2

As at 31 December 2016, the current liabilities amounted to RMB25,436.9 million, representing an increase of 31.9% from RMB19,288.4 million as at 31 December 2015, primarily due to the increase of trade and other payables. As at 31 December 2016, trade and other payables amounted to RMB14,740.4 million, representing an increase of 33.2% from RMB11,070.1 million as of 31 December 2015. The reason for the growth was mainly due to the inclusion of Ninth Metallurgical Construction in the consolidated financial statements for 2016 by the Company.

As at 31 December 2016, the net current assets were RMB9,421.5 million, representing an increase of 73.3% from the net current assets of RMB5,435.6 million as at 31 December 2015. The reasons for the growth were mainly due to the growth arising from the acquisition of Ninth Metallurgical Construction, and the increase in application of working capital resulting from the growth in revenue.

As at 31 December 2016, the current ratio was 1.37, representing an increase of 0.09 compared to the current ratio of 1.28 as at 31 December 2015. The Company maintained sufficient capability of repayment.

Borrowings

As at 31 December 2016, the Group had outstanding borrowings of RMB11,665.1 million (including ultra short-term financing notes of RMB2,541.0 million, short-term borrowings of RMB7,143.9 million, long-term corporate bonds of RMB919.5 million, and long-term borrowings of RMB1,060.7 million), representing an increase of RMB2,992.4 million from RMB8,672.7 million as at 31 December 2015. As at the end of 2016, net interest-bearing liabilities (interest-bearing liabilities less cash and cash equivalents) amounted to RMB3,950.9 million.

Gearing Ratio

The Group monitors our capital structure on the basis of gearing ratio. Such ratio is calculated as net debt divided by total capital. Net debt is 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) minus restricted cash, time deposits and cash and cash equivalents. Total capital is calculated as equity interests, as shown in the consolidated balance sheet, plus net debt minus non-controlling interests. We had a gearing ratio of approximately 66.3% as at 31 December 2016, representing a decrease from 67.1% of the gearing ratio as at 31 December 2015, which was mainly due to (i) an increase of RMB2,866.4 million of cash and cash equivalents as a result of the issue of the Group's equity instruments; and (ii) an increase of RMB4,846 million of total equity as a result of factors such as the increase in the retained earnings of the Group for the year and the increase in issue of equity instruments. The ratio is maintained within the reasonable range determined by the Company.

Capital Expenditure

The Group had capital expenditure of RMB776.4 million in 2016, representing an increase of 215.9% from RMB245.8 million in 2015. Except for additions of RMB442.4 million resulting from the acquisition of Ninth Metallurgical Construction, the capital expenditure was primarily used for the acquisition of production facilities and equipment. Among which, RMB73.2 million was for the engineering design and consultancy business segment; RMB187.7 million was for the engineering and construction contracting segment; RMB73.0 million was for the equipment manufacturing segment; and RMB0.1 million was for the trading segment. Capital resources mainly included self-owned capital and borrowings from banks and other financial institutions.

Pledge of Assets of the Company

As at 31 December 2016, the Group pledged an investment property, certain trade and notes receivables and certain time deposits to secure the long-term borrowing and short-term borrowing amounting to RMB344.2 million and RMB966.0 million respectively.

Financial Guarantee

(a) The Company is required to take the responsibility of paying the outstanding balance of the principal and the relevant expected earnings to Harvest Capital once Shanghai Fengtong Fund fails to make the payment in accordance with the terms of the relevant contracts.

The Board reviewed all of the relevant contracts and information, and assessed the fair value of the obligation of paying the outstanding balance. The fair value of such obligation was not material, as the payment of the principal and interests made by Shanghai Fengtong Fund was on schedule and the risk of default is remote. Therefore, no provision in relation to such obligation was made.

(b) As at 31 December 2016, the Group's subsidiary, Ninth Metallurgical Construction issued joint liability guarantees in respect of the following loans:

– a bank loan of RMB74 million borrowed by Mianxian Urban Development Investments Limited, which is due for repayment on 6 January 2023; and

– a loan with a principal of RMB160 million borrowed by Xianyang Emerging Textile Industry Park Electricity Supply Company Limited 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 2016, the Group's subsidiary, Hanzhong Ninth Metallurgical Construction Co., Ltd., issued a joint liability guarantee in respect of a bank loan of RMB100 million borrowed by Mianxian Urban and Rural Infrastructure Construction Co., Ltd, which is due for repayment on 19 October 2027.

The Board 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.

Contingent Liabilities

As at 31 December 2016, the Group did not have any material contingent liabilities.

Major Acquisitions and Disposals

On 30 June 2016, the Group completed the acquisition of Ninth Metallurgical Construction by obtaining the substantial control.

Save for the issue, during 2016, the Company's subsidiaries, associates and joint ventures did not have major acquisitions and disposals.

4. 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 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. 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.

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 additional 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 2016. 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 U.S. dollars and other foreign currencies, and a foreign exchange gain for liabilities denominated in 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 U.S. dollars and other foreign currencies and a foreign exchange loss for liabilities denominated in U.S. dollars and other foreign currencies.

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 US dollar or other foreign currencies. Fluctuations in exchange rates may adversely affect the value, converted into U.S. dollars or Hong Kong dollars, of our net assets, earnings 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 risks relating to the market price fluctuation of certain raw material and other products, for example, steel, cement, aluminum, wood, sand, explosives, waterproofing material, geotechnical material and additives used in our engineering and construction contracting, and equipment manufacturing. 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 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 and 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.

5. BUSINESS PROSPECTS IN 2017

Industry Outlook in 2017

Despite nonferrous metals industry shows signs of stabilization as a whole, the oversupply has not fundamentally reversed. The market environment remains grim, hence the eliminating or transferring of backward capacity will be the focus of the industry development. Opportunities of the Group in the nonferrous market mainly lie in extending the applications of aluminum, copper and other nonferrous metals and promoting international cooperation in production capacity and leading the technological improvement of the industry.

It is anticipated that investment in infrastructure will continue to increase in 2017. Market potentials can be seen in "One Belt, One Road", new urbanization construction, PPP projects which are based on "sponge city" and "underground integrated pipeline" and architectural industrialization, while the market competition remains severe.

Business Outlook of the Company in 2017

(I) Focusing on Market Development and Achieving Breakthrough in Marketing Quality

1. **To improve marketing capability.** We will strengthen the formulation of the three-level marketing system of the Group itself, its members and regional companies. We will also enhance our marketing planning, create differentiation advantage and increase the tender winning rate of tender projects. Efforts will be made in constructing the management system for major customers and strategic customers and collaboration will be conducted again with quality major customers that have cooperated with the Group previously.

2. **To decide marketing direction.** Capturing two markets with a market-oriented and customer-centric strategy: One of them is the nonferrous market. While capturing incremental engineering in such field, good technical results are applied on energy saving and consumption reduction of the existing stocks and technology improvement. The other is the civil market. With the focus on business such as municipal infrastructure, water environmental protection, energy saving and emission reduction, rebuilding of shantytowns and new town construction, we will concentrate our strengths to achieve a significant breakthrough.

3. **To change the business model.** We will fully utilize the function of funds and capitals, so as to support big projects with small funds and increase the proportion of large projects.

4. **To expand overseas markets.** The Group will set up overseas marketing institutions in key regions, including South Africa and Central Asia, to enhance the market development capability of existing overseas institutions in Vietnam, Indonesia, India and Central and South America regions. Closely following the country's "One Belt, One Road" strategy, we will strengthen the connection with Ministry of Commerce, Ministry of Foreign Affairs, domestic and international financial institutions and relevant state-owned enterprises, and strive to expand overseas markets by means of "borrowing boat to sail" and "creation of projects".

The technological transformation project for ETI Aluminum Company in Turkey

(II) Focusing on Project Management to Achieve Breakthrough in Branding

1. **To emphasize on project performance.** We will further enhance the equipment of project management personnel, attach importance to project management planning, secure resources investment, strengthen process control and ensure the effective performance of project schedules.

2. **To increase project efficiency.** By taking the measure of cost segregation, we will intensify the promotion of project manager responsibility system and project cost auditing system. Project risk is secured to accelerate the implementation of the above project systems, thereby realizing the simultaneous growth of project efficiency and employees' revenue.

3. **To develop branding project.** The promotion of the Group management experience of internal benchmarking projects is conducted on an on-going basis. We will thoroughly organize activities of benchmarking project building and create branding projects, so as to perform marketing on site.

(III) Focusing on Research and Development and Innovation to Achieve New Breakthrough in Technology Leadership

1. **To focus on technology research and development.** Emphasis will be placed on conducting relevant technology research and development based on the theme of "Made in China (2025)", especially in the intelligent manufacturing field such as "digital electrolytic bath", "3D smart mines", "MES system of nonferrous metal factories", "unmanned and automatic detecting technology for underground goafs" and other energy saving and environmental fields, with the aim to achieve new outcome as soon as possible. For the stock production capacity, the Group will target on energy saving, environmental protection and high efficiency to increase the intensity of technology promotion, therefore taking the initiative to create values for customers.

2. **To achieve breakthrough in major areas.** Efforts will be made in building technology research and development platform to accelerate cooperation with external technology enterprises and solve the industry technology difficulties. In 2017, we will work hard to solve the technology difficulties in respect of the production of alumina by low grade bauxite to achieve effective use of resources.

(IV) Focusing on Capital Operation to Achieve Breakthrough in Financing Channels

To widen financing channels. To introduce more financial institutions with state-owned background and strengthen communicate with institutions such as funds and trusts to complement resources. Attempt will be made in the commencement of financing business such as assets securitization, factoring and project funds. We will also optimize the existing debt structure and fully utilize a variety of debt financing instruments to reduce the finance cost of debts.

(V) Focusing on Transformation and Upgrading to Attain New Breakthrough in Value Creation

1. **To determine transformation strategy.** Industrial chain will be extended at all aspect. Firstly, it will move towards relevant diversification to develop the new business that is competitive, valuable and strategically compatible on the Group's business value chain; secondly, it will reach out to the field of technology engineering service, which will stretching towards the technology and investment and financing at upstream and technology service and maintenance security at downstream; thirdly, it will expand to the whole process project service to achieve general undertaking of whole procedure, whole process and whole elements; fourthly, exploration of overseas business in the nonferrous metals and ferrous metals industry markets will take place at the same time, during which transformation will be carried out towards the business of financial value-added service such as the provision of EPC+F, in order to enlarge the percentage of overseas business to the whole business.

2. **To develop aluminum for industrial use.** We will focus on searching the way to marketing and development management and greatly promote the development of aluminum for industrial use. The marketing investment on developed products will also be enhanced and signed contracts will be realized into profit. Moreover, the research and development of aluminum for industrial structural use, aluminum for construction ornament use and high value-added products of aluminum for transport, electronic and electricity use will be speeded up. We will enhance the cooperation with end customers to enlarge the engineering application of aluminum products on an on-going basis.

(VI) Focusing on Risk Management to Achieve Breakthrough in safety development

1. **To control the market risk.** Sound customer credit rating system and credit managing system will be in place to prevent any credit risk arising from customers. Also, risks of contracts, policies, politics and exchange rates of overseas projects will be under strict control to ensure a healthy development in overseas markets.

2. **To control the safety risk.** The safety risk security system is making progress. We will commence a comprehensive on-site standardized site construction regarding civilized construction and implement safety management obligation at all levels, thereby preventing any environmental safety risk.

3. **To control the "Two Compensation" risk.** We will strictly control the "Tow Compensation" limit and formulate an annual "Two Compensation" reduction plan to further improve the operating cash flow and solve the Group's operation risk.

CORPORATE MILESTONES IN 2016

26 January 2016

The list of winners of "2014-2015 State Construction Engineering Luban Award (National Quality Engineering)" was selected and released by the China Construction Industry Association. An electrolysis workshop for nonferrous metal project of aluminum and magnesium alloy in Yulin, Shaanxi designed by SAMI and construction project of hot rolling plant workshop with capacity of 300,000 tons of high-performance specialty aluminum for a company in Zhongfu, Henan contracted by Sixth Metallurgical Company were both awarded with State Construction Engineering Luban Award.

29 June 2016

Contract in relation to feasibility study of 500,000 tons electrolytic aluminum was entered into between the Company and Petroamazonas EP at the headquarter of the Company. HE Zhihui, Chairman of Chalieco, party secretary to the Company and President, and John Espinoza, deputy general manager of the foundation industry office of Petroamazonas EP, entered into the contract on behalf of each party, with the contract sum of US$4.5 million and a contract term of 9 months.

30 June 2016

Maochang Bauxite Mine of the Guizhou Branch of Chinalco held a ceremony for full construction completion and production commencement.

26 August 2016

The groundbreaking ceremony for the construction of first phase of Chinalco's project for relocating Guizhou Qingzhen Industrial Park from the city to industrial area was held in the industial park in Weicheng, Qingzhen, Guiyang, Guizhou.

21 September 2016

The subject of "Development and Application of Aluminum Electrolysis MES Based on Precise Perception and Intelligent Decision"in the National High-tech R&D Program (863 Program) that was undertook by GAMI has passed the inspection by the group of experts from Ministry of Science and Technology.

13 October 2016

The two technology results of "Aluminum Electrolysis MES Based on Precise Perception and Intelligent Decision" and "Conveyor system with new energy saving pneumatic suspension belt" by GAMI have been unanimously judged by the an assessment group comprised of seven experts from China Nonferrous Metals Industry Association and Beijing General Research Institute of Mining & Metallurgy to have reached international leading level.

24 October 2016

Chalieco and Chinalco entered into a cooperation framework agreement on the establishment of the PPP (Public-Private Partnership, Government and Social Capital Cooperation Fund.) funds at the headquarter of the Company.

Early November 2016	Ninth Metallurgical Company ranked thirteenth in the list of the top 100 construction companies published at the sixth members of congress and sixth session of one-off council and commendation general meeting of Shaanxi Construction Industry Association and was awarded the honorary title of "2015 Top 100 Construction Companies in Shaanxi" and "2016 Leading Construction Companies in Shaanxi Province."
29 November 2016	China Construction Enterprise Management Association convened the Construction Honesty Enterprise Promotion Conference in Beijing. At the conference, Ninth Metallurgical Company was awarded the honorary title of "2016 Construction Honesty Representative Companies", and passed the annual audit of the social credit evaluation of the construction project in 2016, and continued to maintain the "AAA" social credit rating.
8 December 2016	The aluminum products cooperation signing ceremony of Chalieco was held at the headquarter. Chalieco entered into 11 aluminum products cooperation agreement and sales contract in relation to tens of products including, among others, aluminum communication towers, aluminum bridges, aluminum templates, aluminum integrated housing, construction aluminum climbing frame, mobile phone case alloy, automobile parts, aluminum flood wall with various domestic partners including local governments, large central enterprises and well-known private enterprises.
9 December 2016	Chinalco and Hohhot Urban and Rural Construction Commission entered into a strategic cooperation agreement in Hohhot.

DIRECTORS' REPORT

PRINCIPLE BUSINESS

The Group is principally engaged in engineering design and consultancy, engineering and construction contracting, equipment manufacturing and trading. Details of major subsidiaries, associates and joint ventures of the Company are set out in Note 43 and Note 19(b) to the consolidated financial statements, respectively.

THE BUSINESS REVIEW

The business review of the Group for the year ended 31 December 2016 is set out respectively as follows:

a.	Fair review of the Group's business	Management Discussion and Analysis	Pages 8 to 12
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 2016	Note 45 to the financial statements	Page 279
d.	Indication of likely future development of the Group's business	Management Discussion and Analysis	Pages 31 to 33
e.	Analysis using financial key performance indicators	Financial Summary, Financial Highlights and Management Discussion and Analysis	Pages 4 to 33

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

1. The Group and its employees. 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.

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 elimating 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 its 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, Loudi City of Hunan, Kaili City of Guizhou, Duyun City of Guizhou and Guangxi Tourism Development Group for attempt of PPP models on areas such as livelihood improvement and construction of infrastructures. It has also signed a strategic cooperation agreement with a company in Changsha City and established joint ventures.

5. The Group's donation. The Company provided the Ecuadorian government with humanitarian assistance of US$50,000 to show its support towards the Ecuadorian government and its people and help with the commencement of relief work.

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.

Each of the design unit has continued to enhance the design optimization of technological proposal on energy saving and emission reduction, commenced the research on new technologies and new techniques and proactively initiated the research and development of new technologies, new materials and new products so as to provide property owners with quality technology services, and comprehensively promote and facilitate the environmental protection duties.

Each of the construction unit, project department/project company has improved the management and control of noise, sewage, wastage, dust and polluted air during the construction process. The Company has eliminated high energy consuming electrical (water) utilities, promoted the use of energy (water) saving devices, designated personnel for inspection of pipelines to eradicate the phenomenon of different levels of leakage for the pipes. It has also set up sedimentation and circulating pools for the operation of pre-mix concrete, so as to utilize the circulated water to the greatest extent. Through various forms of promotion of sophisticated construction technologies, reforming of outdated techniques, increasing the construction efficiency, technological advancement and technological reformation, energy saving and emission reduction were achieved.

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 RMB1,202.3 million and the senior perpetual capital securities amounting to USD350 million.

RESULTS

The audited results of the Company and its subsidiaries for the year ended 31 December 2016 are set out in the consolidated statement of comprehensive income on pages 128 to 129. The financial positions of the Company and its subsidiaries as at 31 December 2016 are set out in the consolidated balance sheet on pages 130 to 131. The consolidated cash flows of the Company and its subsidiaries for the year ended 31 December 2016 are set out in the statement of cash flows on pages 134 to 135. Results performance, discussion and analysis of important factors affecting results and financial position of the Group for the year are set out in the Management Discussion and Analysis on pages 8 to 34 of this annual 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 15 to the financial statements.

CAPITAL STRUCTURE

The Group monitors its capital structure on the basis of gearing ratio. As of 31 December 2016 and 31 December 2015, the Group's gearing ratios were 66.3% and 67.1%, respectively. The gearing ratio is maintained within the reasonable range determined by the Company.

SHARE CAPITAL

The total amount of share capital of the Company as at 31 December 2016 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.

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 of the PRC 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).

Business tax

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

RESERVES

The details of movements in reserves of the Group and the Company during the year are set out in Note 29 and Note 47 to the consolidated financial statements respectively, among which the details of the reserves of the Company available for distribution to shareholders are set out in Note 47 to the consolidated financial statements.

EVENTS AFTER THE BALANCE SHEET DATE

The details of events after the balance sheet date are set out in Note 45 to the financial statements.

DISTRIBUTION OF PROFITS AND PROPOSED DIVIDENDS

In accordance with the "Notice about the Issue of Distributing the Profits of Overseas Listed Pilot Enterprises Implementing the Shareholding System (Caihuizi [1995] No. 31) (《關於境外上市的股份制試點企業利潤分配問題的通知》(財會字[1995] 31號)), by comparing the profit available for distribution under the Accounting Standard for Business Enterprises of the PRC and International Financial Reporting Standards ("IFRSs"), the following distribution of profits is based on the profit available for distribution under IFRSs, which is the less stringent principle.

As shown in the consolidated financial statements, the profit available for distribution of the Group at the end of 2016 was RMB4,228.7 million.

The Company proposed to distribute a total of RMB231.7 million with a cash dividend of RMB0.87 (tax inclusive) per 10 shares based on the total share capital of 2,663,160,000 Shares as at 31 December 2016. The dividends shall be paid on or around Friday, 21 July 2017. The remaining undistributed profits of the Company are reserved for distribution in the coming years.

In accordance with the "Enterprise Income Tax Law of the People's Republic of China" (《中華人民共和國企業所得稅法》) and its implementation regulations which came into effect from 1 January 2008, the Company is required to withhold and pay enterprise income tax at the tax rate of 10% on behalf of the non-resident enterprise Shareholders whose names appear on the register of members for H Shares when distributing the cash dividends to them. Any H Shares not registered under the name of an individual Shareholder, including Hong Kong Securities Clearing Company Nominees Limited, other nominees, agents or trustees, or other organizations or groups, shall be deemed as Shares held by non-resident enterprise Shareholders. Therefore, on this basis, enterprise income tax shall be withheld from dividends payable to such Shareholders. If Shareholders of H Shares intend to change its Shareholder status, they should enquire about the relevant procedures with their agents or trustees. The Company will strictly comply with the requirements of laws and regulations or relevant government authorities to withhold and pay the enterprise income tax on behalf of the relevant Shareholders based on the register of members for H Shares as at the record date for entitlement of the proposed payment of 2016 final dividends.

If the individual Shareholders of H Shares are Hong Kong or Macau residents or residents of other countries which have an agreed tax rate of 10% for the cash dividends paid to them with the PRC under the relevant tax agreements, the Company shall withhold and pay individual income tax on behalf of the relevant Shareholders at a tax rate of 10%. Should the individual Shareholders of H Shares be residents of the countries which have an agreed tax rate of less than 10% with the PRC under the relevant tax agreements, the Company shall withhold and pay individual income tax on behalf of the relevant Shareholders at a tax rate of 10%. In such case, if the relevant individual Shareholders of H Shares wish to reclaim the extra amount withheld and paid (the "Extra Amount"), the Company may, on behalf of the relevant Shareholders, apply for the agreed preferential tax treatment in accordance with the tax agreements provided that the relevant Shareholders shall submit the evidence required by the notice of the tax agreement to the Company's H Share registrar within the time limit. The Company will assist with the refund of the Extra Amount after the consideration and approval by the competent tax authorities. Should the individual Shareholders of H Shares be residents of the countries which have an agreed tax rate of over 10% but less than 20% with the PRC under the tax agreements, the Company shall, on behalf of the relevant Shareholders, withhold and pay the individual income tax at the agreed actual rate in accordance with the relevant tax agreements. In the case that the individual Shareholders of H Shares are residents of the countries which have an agreed tax rate of 20% with the PRC under the tax agreements, or which have not entered into any tax agreement with the PRC, or otherwise, the Company shall, on behalf of the relevant Shareholders, withhold and pay the individual income tax at a tax rate of 20%.

CLOSURE OF REGISTER OF MEMBERS

In order to determine the list of Shareholders entitled to the final dividends, the register of members will be closed from Saturday, 27 May 2017 to Thursday, 1 June 2017, both days inclusive. Shareholders of H Shares and Domestic Shares whose names appear on the register of members of the Company on Thursday, 1 June 2017 are entitled to the final dividends. In order to be entitled to the final dividends, the Shareholders of H Shares of the Company shall lodge all share transfer documents together with relevant H Share certificates with the Company's H Share registrar, Computershare Hong Kong Investor Services Limited, at Shops 1712–1716, 17th Floor, Hopewell Centre, 183 Queen's Road East, Wan Chai, Hong Kong, not later than 4:30 p.m. on Friday, 26 May 2017 for registration of transfer of Shares.

In order to determine the list of Shareholders entitled to attend and vote at the annual general meeting of the Company to be held on Tuesday, 23 May 2017, the register of members will be closed from Sunday, 23 April 2017 to Tuesday, 23 May 2017, both days inclusive. Shareholders of H Shares and Domestic Shares whose names appear on the register of members of the Company on Tuesday, 23 May 2017 are entitled to attend and vote at such general meeting. In order to be entitled to attend and vote at such general meeting, the Shareholders of H Shares of the Company shall lodge all share transfer documents together with relevant H Share certificates with the aforesaid H Share registrar no later than 4:30 p.m. on Friday, 21 April 2017 for registration of transfer of Shares. In order to be entitled to attend and vote at such general meeting, the Shareholders of Domestic Shares of the Company shall lodge all share transfer documents together with relevant Domestic Share certificates with the Company no later than 4:30 p.m. on Friday, 21 April 2017.

PURCHASE, REDEMPTION OR SALE OF LISTED SECURITIES

Neither the Company nor any of the subsidiaries purchased, sold or redeemed any of the Company's listed securities during the year ended 31 December 2016.

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 at 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.

MAJOR CUSTOMERS AND SUPPLIERS

In the financial year of 2016, the sales to the top five customers of the Group did not exceed 30% of the total sales of the Group. Also, the purchases from the top five suppliers of the Group did not exceed 30% of the total purchases of the Group for the year. There was no significant reliance on a few customers or suppliers.

During the year, to the knowledge of the Directors, none of the Directors, associates of Director or Shareholders of the Company (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 2016 are set out in Note 33 to the consolidated financial statements.

CHARITABLE DONATIONS

During the year ended 31 December 2016, the Group made charitable donations in aggregate of RMB350,000.

EQUITY-LINKED AGREEMENTS

During the year ended 31 December 2016, the Group did not enter into any equity-linked agreements that would or could result in the issue of Shares by the Company.

DIRECTORS, SUPERVISORS AND SENIOR MANAGEMENT

Part of the information of Directors, Supervisors and senior management of the Company for the year ended 31 December 2016 are set out in the table below.

Name	Office in the Company	Appointment date
Directors		
ZHANG Chengzhong (1)	Former Chairman and former non-executive Director	23 May 2014
HE Zhihui (1)	Chairman and executive Director	23 May 2014
WANG Jun	Non-executive Director	22 May 2015
LI Yihua (2)	Non-executive Director	25 May 2016
ZHANG Jian	Executive Director	9 June 2015
SUN Chuanyao	Independent non-executive Director	23 May 2014
CHEUNG Hung Kwong	Independent non-executive Director	23 May 2014
FU Jun	Independent non-executive Director	9 June 2015
Supervisors		
HE Bincong	Chairman of Supervisory Board and employee representative of Supervisory Board	28 March 2014
DONG Hai	Supervisor	23 May 2014
OU Xiaowu	Supervisor	23 May 2014
Senior Management		
ZONG Xiaoping (3)	President	31 October 2016
QIN Qiwu (4)	Former Vice President	23 May 2014
WU Zhigang (5)	Vice President	8 August 2016
CHANG Yaomin (6)	Vice President	8 August 2016
MA Ning	Vice President	23 May 2014
ZHANG Jian	Chief Financial Officer	22 May 2015
ZHAI Feng	Assistant to President and Secretary to the Board	12 March 2015

Notes:

(1) Due to the job reassignment, Mr. ZHANG Chengzhong resigned from the post of Chairman of the Company. Mr. HE Zhihui has been appointed in place of Mr. ZHANG Chengzhong as the Chairman of the Company from 8 March 2016.

(2) Mr. LI Yihua served as a non-executive Director of the Company from 25 May 2016.

(3) Due to the job reassignment, Mr. HE Zhihui resigned as the President of the Company. Mr. ZONG Xiaoping has been appointed in place of Mr. HE Zhihui as the President of the Company from 31 October 2016.

(4) Due to retirement, Mr. QIN Qiwu ceased to be the Vice President of the Company from 21 August 2016.

(5) Mr. WU Zhigang served as a Vice President of the Company from 8 August 2016.

(6) Mr. CHANG Yaomin served as a Vice President of the Company from 8 August 2016.

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 2014; 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 the 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 13 to the consolidated financial statements.

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

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

DIRECTORS' INTERESTS IN COMPETING BUSINESS

Save as disclosed below, during 2016, there was no Director or their associates who had any competing interests in business which competes or may compete, directly or indirectly, with the Group's business:

Name of Director	Post in the Company	Other interests
ZHANG Chengzhong (1)	Chairman	Deputy general manager of Chinalco
WANG Jun	Non-executive Director	Directors of the finance department and assets operating department of Chinalco
LI Yihua (2)	Non-executive Director	Director of the law department of Chinalco

Notes：

(1) Due to the job reassignment, Mr. ZHANG Chengzhong ceased to be the Chairman of the Company from 8 March 2016.

(2) Mr. LI Yihua served as a non-executive Director of the Company from 25 May 2016.

RESIGNATION OF DIRECTORS

Due to the job reassignment, Mr. ZHANG Chengzhong ceased to be the Chairman of the Company from 8 March 2016.

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

As at 31 December 2016, none of the Directors, Supervisors and senior management of the Company had any interest or short position in the shares, underlying shares or debentures of the Company or any of its associated corporations (within the meaning of Part XV of the SFO) which was required to be notified to the Company and the Stock Exchange pursuant to Divisions 7 and 8 of Part XV of the SFO (including interests and short positions which any such Director, Supervisor, and senior management was taken or deemed to have under such provisions of the SFO), or which are required, pursuant to Section 352 of the SFO, to be entered in the register referred to therein, or which are required, pursuant to the Model Code, to be notified to the Company and the Stock Exchange.

PERMITTED INDEMNITY

The Company has arranged sufficient and proper insurance for the Directors to better perform their responsibilities and risk aversion pursuant to 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 2016 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.

SUBSTANTIAL SHAREHOLDERS' INTERESTS IN SHARES

As at 31 December 2016, 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** (%)
Chinalco	Domestic Shares	Beneficial owner/ Interest of controlled corporation	2,263,684,000 (Long position) (Note 2)	100%	85%
The Seventh Metallugical 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 Limited	H Shares	Beneficial owner	20,579,000 (Long position)	5.15%	0.77%

Notes:

1. 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 2016.

2. 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.

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 2016.

SIGNIFICANT CONTRACTS

Save for disclosed under the heading of the "Connected Transactions" in this 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 following are the major connected transactions of the Group in 2016.

(1) Non-exempt one-off connected transactions

In 2016, the Group did not have any non-exempt one-off connected transaction which is required to be disclosed or to obtain approval from the independent shareholders under the Listing Rules.

(2) Non-exempt continuing connected transactions

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

The Company has entered into the Financial Services Agreement on 8 August 2016 with the general terms 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;

- 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).

The annual caps and actual transaction amount of the connected transactions for 2016 are set out in the following table:

Events of connected transactions	Connected persons	Annual cap for 2016 (RMB' million)	Actual transaction amount for 2016 (RMB' million)
1. Provision of engineering services by the Group	Chinalco	5,000	1,749
2. Provision of commodities by the Group	Chinalco	900	469
3. Provision of general services to the Group	Chinalco	160	82
4. Provision of commodities to the Group	Chinalco	160	87
5. Provision of general services by the Group	Chinalco	15	–
6. Provision of financial services-deposit services to the Group	Chinalco Finance	2,800	2,579

1. PROVISION OF ENGINEERING SERVICES BY THE GROUP

The Company entered into an engineering service general agreement with Chinalco on 22 August 2014, 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 2015 and shall expire on 31 December 2017, 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 is the controlling shareholder of the Company. Pursuant to the Listing Rules, Chinalco and its subsidiaries are the connected persons of the Company.

During the reporting period, the annual cap of this continuing connected transaction for 2016 was RMB5,000 million and the actual transaction amount was RMB1,749.3 million.

2. PROVISION OF COMMODITIES BY THE GROUP

The Company entered into a general sale and purchase agreement of commodities with Chinalco on 22 August 2014, pursuant to which, the Group could provide products of the Group to Chinalco and/or its associates from time to time as portion of our equipment manufacturing business. These products mainly include the equipment required for the normal operation of Chinalco, such as control box of the tank, environmentally-friendly equipment and material processing equipment.

The initial term of the general sale and purchase agreement of commodities commenced from 1 January 2015 and shall expire on 31 December 2017, 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 is the controlling shareholder of the Company. Pursuant to the Listing Rules, Chinalco and its subsidiaries are the connected persons of the Company.

During the reporting period, the annual cap of this continuing connected transaction for 2016 was RMB900 million and the actual transaction amount was RMB468.7 million.

3. PROVISION OF GENERAL SERVICES TO THE GROUP

The Company entered into a general agreement of general services with Chinalco on 22 August 2014, pursuant to which, Chinalco and/or its associates could provide certain categories of services to the Group from time to time, mainly including transportation and leasing of properties.

The initial term of the general agreement of general services commenced from 1 January 2015 and shall expire on 31 December 2017, 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 is the controlling shareholder of the Company. Pursuant to the Listing Rules, Chinalco and its subsidiaries are the connected persons of the Company.

During the reporting period, the annual cap of this continuing connected transaction for 2016 was RMB160.0 million and the actual transaction amount was RMB81.9 million.

4. PROVISION OF COMMODITIES TO THE GROUP

The Company entered into a general sale and purchase agreement of commodities with Chinalco on 22 August 2014, pursuant to which, the Group could purchase certain commodities from Chinalco and/or its associates which shall be used in our engineering and construction contracting business. These commodities mainly include materials such as coal block, aluminum wire and cement, etc.

The initial term of the general sale and purchase agreement of commodities commenced from 1 January 2015 and shall expire on 31 December 2017, 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 is the controlling shareholder of the Company. Pursuant to the Listing Rules, Chinalco and its subsidiaries are the connected persons of the Company.

During the reporting period, the annual cap of this continuing connected transaction for 2016 was RMB160.0 million and the actual transaction amount was RMB87.3 million.

5. PROVISION OF GENERAL SERVICES BY THE GROUP

The Company entered into a general agreement of general services with Chinalco on 22 August 2014, pursuant to which, the Group could provide certain categories of services to Chinalco and/or its associates from time to time, mainly including operation management.

The initial term of the general agreement of general services commenced from 1 January 2015 and shall expire on 31 December 2017, 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 is the controlling shareholder of the Company. Pursuant to the Listing Rules, Chinalco and its subsidiaries are the connected persons of the Company.

During the reporting period, the annual cap of this continuing connected transaction for 2016 was RMB15.0 million and the actual transaction amount was nil.

6. 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 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.

Chinalco is the controlling shareholder of the Company, and Chinalco Finance is the wholly-owned subsidiary of Chinalco. Pursuant to the Listing Rules, Chinalco Finance is the connected person of the Company.

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

During the reporting period, the cap of daily deposit balance of the deposit services under this continuing connected transaction for 2016 was RMB2,800 million and the actual maximum daily deposit balance was RMB2,579.0 million.

The independent non-executive Directors of the Company 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

(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 of the Company 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.38 of the Listing Rules. The Company has provided a copy of the said letter to the Stock Exchange.

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 on 2 June 2012, pursuant to which, Chinalco 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 of the Company 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.

During the year, the independent non-executive Directors of the Company have reviewed the implementation of the non-competition agreement and confirmed that Chinalco has been in full compliance with the agreement and there was no breach by Chinalco.

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 31 December 2016, 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%
QIN Qiwu (1)	Former Vice President	53.8103	0.1347%	0.0202%
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	0.5757%	0.0864%

Note:

1. Mr. QIN Qiwu retired on 21 August 2016 and shall not exercise the share appreciation rights that were not yet effective since the date of his retirement.

RETIREMENT AND EMPLOYEES BENEFIT SCHEME

Details of the Group's retirement and employees benefit scheme are set out in Note 14 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 2016, 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 63 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 the Company was considered and approved on the first extraordinary general meeting in 2012 held on 6 August 2012. There were no significant changes to the Articles of Association during the year.

PUBLIC FLOAT

Based on information publicly available to the Company and so far as the Directors are aware, 15% of the issued Shares of the Company 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 2016, 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.

AUDIT COMMITTEE

The Audit Committee of the Company has reviewed the Group's 2016 annual results and the financial statements for the year ended 31 December 2016 prepared in accordance with the IFRSs.

AUDITOR

PKF Hong Kong was appointed as the auditor to audit the consolidated financial statements for the year ended 31 December 2016 prepared in accordance with the IFRSs. PKF Hong Kong has audited the accompanying financial statements which are prepared in accordance with IFRSs. The engagement of PKF Hong Kong and Wuyige Certified Public Accountants LLP as the international auditor and domestic auditor of the Company respectively was considered and approved on the 2015 annual general meeting held on 25 May 2016.

FINANCIAL SUMMARY IN PAST 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, 20 March 2017

SUPERVISORY BOARD'S REPORT

The current session of the Supervisory Board was approved to establish in the inaugural meeting of the Company held on 30 June 2011. The current session of the Supervisory Board comprises three Supervisors in total. In 2016, 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. MEETINGS CONVENED BY THE SUPERVISORY BOARD

In 2016, the Supervisory Board held six meetings, particulars of which are as follows:

The 7th meeting of the second session of Supervisory Board was convened on 1 February 2016, at which the resolution on 2012, 2013 and 2014 Financial Report (《2012、2013及2014年度財務報告》) was considered.

The 8th meeting of the second session of Supervisory Board was convened on 31 March 2016, at which the resolutions on the Announcement of 2015 Annual Results and the Annual Report of the Company (《公司2015年度業績公告和年度報告》), the Report on 2015 Final Accounts of the Company (《公司2015年度財務決算報告》), 2016 Financial Budget Report of the Company(《公司2016年度財務預算報告》), 2015 Profit Appropriation and Dividend Distribution Plan of the Company (《公司2015年度利潤分配以及股息派發方案》), the Supervisory Board's Work Report of the Company for 2015 (《公司2015年監事會工作報告》) and the Supervisors' Emoluments of the Company in 2016 (《公司2016年度監事薪酬》) were considered.

The 9th meeting of the second session of the Supervisory Board was convened on 29 April 2016, at which the resolution on the 2016 Quarterly Report for the First Quarter of the Company (《公司2016年第一季度財務報告》) was considered.

The 10th meeting of the second session of the Supervisory Board was convened on 29 August 2016, at which the resolution on the 2016 Interim Report and the Announcement of Interim Results of the Company (《公司2016年中期報告及中期業績公告》) was considered.

The 11th meeting of the second session of the Supervisory Board was convened on 27 September 2016, at which the resolution on the 2016 Interim Report of China Aluminum International Engineering Corporation Limited (《中鋁國際工程股份有限公司2016年中期財務報告》) was considered.

The 12th meeting of the second session of the Supervisory Board was convened on 27 October 2016, at which the resolution on the 2016 Financial Report for the Third Quarter of China Aluminum International Engineering Corporation Limited (《中鋁國際工程股份有限公司2016年第三季度財務報告》) was considered.

2. DUTIES OF THE SUPERVISORY BOARD

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

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

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

2. Inspection of the financial information of the Company

During the reporting period, the Supervisory Board reviewed the relevant financial information of the Company and its subsidiaries, and the auditor's report of the Company and its subsidiaries. The Supervisory Board is of the opinion that the accounts and audit work of the Company and its subsidiaries are in compliance with the requirements of Accounting Law of the People's Republic of China (《中華人民共和國會計法》), the accounting systems promulgated by the Ministry of Finance of the People's Republic of China and the Hong Kong Financial Reporting Standards, for which no concerns have been found. Having duly reviewed the 2016 financial report and relevant information to be submitted by the Board to the general meeting, and as audited by the independent auditor with an unqualified opinion, the Supervisory Board is of the opinion that the report reflected the financial position and operating results of the Company on a consistent basis and in an accurate, true and fair manner.

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 of the Company. 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. 20 March 2017

CORPORATE GOVERNANCE REPORT

The Board of Directors of the Company hereby presents to the Shareholders the corporate governance report for the year ended 31 December 2016.

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 2016, the Board consisted of seven Directors, including two executive Directors, two non-executive Directors and three independent non-executive Directors. Among which, Mr. ZHANG Chengzhong ceased to be the Chairman of the Company due to job reassignment. Mr. HE Zhihui has been appointed in place of Mr. ZHANG Chengzhong as the Chairman of the Company on 8 March 2016. Mr. LI Yihua served as the non-executive Director of the Company, with effect from 25 May 2016.

The profile details of the Directors as at the date of this report are set out on pages 112 to 115 of this annual report. There are no relationships (including financial, business, family or other material or relevant relationship) among members of the Board. The structure of the Board is well balanced with each Director possessing sound knowledge, experience and expertise relevant to the business operation and development of the Group. All Directors are 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.

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

Name	Position in the Company	Date of Appointment
Director		
ZHANG Chengzhong (1)	Former Chairman and former non-executive Director	23 May 2014
HE Zhihui (1)	Chairman, executive Director	23 May 2014
WANG Jun	Non-executive Director	22 May 2015
LI Yihua (2)	Non-executive Director	25 May 2016
ZHANG Jian	Executive Director	9 June 2015
SUN Chuanyao	Independent non-executive Director	23 May 2014
CHEUNG Hung Kwong	Independent non-executive Director	23 May 2014
FU Jun	Independent non-executive Director	9 June 2015

(1) Due to the job reassignment, Mr. ZHANG Chengzhong resigned from the post of Chairman of the Company. Mr. HE Zhihui has been appointed in place of Mr. ZHANG Chengzhong as the Chairman of the Company from 8 March 2016.

(2) Mr. LI Yihua served as the non-executive Director of the Company from 25 May 2016.

Pursuant to the latest amendment and requirement of the Corporate Governance Code and the Corporate Governance Report in the Listing Rules of the Stock Exchange, 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 of the Board 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.

In 2016, the Board held eleven 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
ZHANG Chengzhong (1)	Former Chairman and former non-executive Director	1/1	0/0	100%
HE Zhihui (1)	Chairman, executive Director	11/11	0/0	100%
WANG Jun	Non-executive Director	11/11	0/0	100%
LI Yihua (2)	Non-executive Director	7/7	0/0	100%
ZHANG Jian	Executive Director	11/11	0/0	100%
SUN Chuanyao	Independent non-executive Director	10/10	1/1	100%
CHEUNG Hung Kwong	Independent non-executive Director	11/11	0/0	100%
FU Jun	Independent non-executive Director	10/10	1/1	100%

Note:

(1) Due to the job reassignment, Mr. ZHANG Chengzhong resigned as the Chairman of the Company. Mr. HE Zhihui has been appointed in place of Mr. ZHANG Chengzhong as the Chairman of the Company from 8 March 2016.

(2) Mr. LI Yihua served as the non-executive Director of the Company from 25 May 2016.

1.3 Functions and Powers Exercised by the Board and the Management

The powers 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 on 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.

1.4 Chairman and President

The posts of the Chairman and the President (i.e. chief executive officer pursuant to the relevant 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.

According to the announcements of the Company dated 8 March 2016 and 31 October 2016, during the period between 8 March 2016 and 31 October 2016, Mr. HE Zhihui had been the Chairman and President of the Company, the executive Director, the chairman of the Risk Management Committee and the chairman of the Nomination Committee of the Company. The roles of chairman and chief executive officer should be separated and should not be performed by the same individual according to code provision A.2.1 of the Corporate Governance Code set out in Appendix 14 to the Listing Rules. However, as Mr. ZHANG Chengzhong resigned as the Chairman of the Company, the Company had to appoint Mr. HE Zhihui as the Chairman and he temporarily took up the duty of President at the same time. However, on 31 October 2016, the Company appointed Mr. ZONG Xiaoping as the President of the Company to separate the roles of Chairman and President of the Company. The Company will ensure consistent adherence to the good corporate governance practices in the future.

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 (excluding the Chairman) who do not serve as senior managements of the Company shall not receive remuneration from the Company.

1.7 Directors' Training

During 2016, 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
ZHANG Chengzhong (1)	Former Chairman and former non-executive Director	2 hours	including compliance of listed company and corporate governance
HE Zhihui (1)	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 (2)	Non-executive Director	7 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) Due to the job reassignment, Mr. ZHANG Chengzhong resigned as the Chairman of the Company. Mr. HE Zhihui has been appointed in place of Mr. ZHANG Chengzhong as the chairman of the Company from 8 March 2016.

(2) Mr. LI Yihua served as the non-executive Director of the Company from 25 May 2016.

1.8 Training for Company Secretary

Mr. WANG Jun and Mr. ZHAI Feng, the Joint Company Secretaries of the Company, received relevant training in 2016, which is in accordance with the requirements set out in Rule 3.29 of the Listing Rules.

1.9 Change of Company Secretary and Authorized Representatives

During the reporting period, Mr. WANG Jun and Mr. ZHAI Feng acted as the Joint Company Secretaries. Mr. HE Zhihui and Mr. ZHAI Feng acted as the Authorized Representatives of the Company.

1.10 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 Director of the Company; 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 (independent non-executive Director), Mr. WANG Jun (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.

During the reporting period, the Audit Committee of the second session of the Board convened six meetings in total, which has reviewed and considered 12 resolutions.

In 2016, the Audit Committee of the Board convened six meetings in total, particulars of which are as follows:

The 9th meeting of the Audit Committee of the second session of the Board was held on 14 January 2016, at which the resolution on the 2012, 2013 and 2014 Annual Financial report (《2012、2013及2014年度財務報告》) was considered.

The 10th meeting of the Audit Committee of the second session of the Board was held on 30 March 2016, at which the resolution on the Announcement of 2015 Annual Results and the Annual Report of the Company (《公司2015年度業績公告和年度報告》), the Report on 2015 Final Accounts of the Company (《公司2015 年度財務決算報告》), the resolution on 2016 Financial Budget Report of the Company (《公司2016年度財務預算報告》), the resolution on 2015 Profit Appropriation and Dividend Distribution Plan (《公司2015年度利潤分配及股息派發方案》),the resolution on 2015 Internal Control Evaluation Report of the Company(《公司2015年內部控制評價報告》),the resolutions of Change of the International Auditor and the Domestic Auditor (《更換國際核數師和國內審計師》) and Change of the Accountant of A Share Issuance (《關於公司更換A股發行之會計師議案》) were considered.

The 11th meeting of the Audit Committee of the second session of the Board was held on 28 April 2016, at which the resolution on the Quarterly Report of the Company for the first quarter of 2016 (《公司2016年第一季度季度報告》) was considered.

The 12th meeting of the Audit Committee of the second session of the Board was held on 25 August 2016, at which the resolution on the 2016 Interim Report and the Announcement of 2016 Interim Results (《公司2016年中期報告及中期業績公告》) was considered.

The 13th meeting of the Audit Committee of the second session of the Board was held on 27 September 2016, at which the resolution on the 2016 Interim Financial Report of China Aluminum International Engineering Corporation Limited (《中鋁國際工程股份有限公司2016年中期財務報告》) was considered.

The 14th meeting of the Audit Committee of the second session of the Board was held on 26 October 2016, at which the resolution on the Financial Report of the Third Quarter of 2016 of China Aluminum International Engineering Corporation Limited (《中鋁國際工程股份有限公司2016年第三季度財務報告》) was considered.

The attendance of the meetings is as follows:

Name	Position	Number of Meetings Attended/Held	Attendance
CHEUNG Hung Kwong	Chairman of the Audit Committee	6/6	100%
WANG Jun	Member of the Audit Committee	6/6	100%
FU Jun	Member of the Audit Committee	6/6	100%

2.2 Remuneration Committee

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

The Company has adopted the model as recommended by the Remuneration Committee 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.

During the reporting period, the Remuneration Committee of the second session of the Board convened one meeting, which has reviewed and considered two resolutions.

The second meeting of the Remuneration Committee of the second session of the Board was held on 31 March 2016, at which: (1) the resolution on the Remuneration of the Directors of the Company for 2016 (《公司2016年度董事薪酬》); (2) the resolution on the Remuneration of the Senior Management of the Company for 2016 (《公司2016年度高級管理人員薪酬》) were considered.

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 (executive Director), Mr. SUN Chuanyao (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.

In accordance with the requirement of relevant laws and regulations and the Articles of Association, the Committee shall examine the selection criteria and procedures and the terms of office for the proposed Directors of the Company 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; to 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, to 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 of the Company 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 5th meeting of the Nomination Committee of the second session of the Board was held on 31 March 2016, at which the structure and size of the Board as well as the qualifications of Directors was considered.

The attendance of the meeting is as follows:

Name	**Position**	**Number of Meetings Attended/Held**	**Attendance**
HE Zhihui (1)	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%

Note:

(1) Mr. He Zhihui has been appointed in place of Mr. ZHANG Chengzhong as the chairman of the Nomination Committee from 8 March 2016.

2.4 Risk Management Committee

The Risk Management Committee consists of three Directors, namely: Mr. HE Zhihui (executive Director), Mr. LI Yihua (non-executive Director) 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.

In 2016, the Risk Management Committee of the Board convened one meeting, details of which are as follows:

The third meeting of the Risk Management Committee of the second session of the Board was held on 31 March 2016, at which the resolutions on the Compliance with the OFAC Undertakings in 2015 and the Overall Risk Management of the Company for 2016 were reviewed.

The attendance of the meetings is as follows:

Name	Position	Number of Meetings Attended/Held	Attendance
HE Zhihui (1)	Chairman of the Risk Management Committee	1/1	100%
LI Yihua (2)	Member of the Risk Management Committee	N/A	N/A
FU Jun	Member of the Risk Management Committee	1/1	100%

Note:

(1) Mr. ZHANG Chengzhong ceased to be the chairman of the Risk Management Committee of the Company from 8 March 2016. Mr. HE Zhihui served as the chairman of the Risk Management Committee of the Company from 8 March 2016.

(2) Mr. LI Yihua served as the member of the Risk Management Committee of the Company from 8 August 2016.

3. Independence of the Board

Each of the independent non-executive Directors of the Company 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.

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 2016.

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

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

6. Internal Control

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

The Company has attached prime importance to internal control. An internal control system covering the headquarters of the Company and each branch and subsidiary has been established to safeguard the investments of Shareholders and the assets of the Company. Based on the Requirements of Application Guidelines for Internal Control of SASAC (國資委內部控制應用指引要求) and COSO framework's Five Components, the internal control systems includes five aspects, namely internal environment, risk assessment, control activities, information and communications, and supervision. The company level includes internal environment, risk assessment, information and communications, and internal supervision, which involves a total of 98 control standards, while the process level 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 2016, 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 2016 and did not identify any material and significant deficiency. The Board considers that such risk management and control systems are adequate and effective.

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

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

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

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 2016, 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 submit 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 control systems of the Group by the Audit Committee and internal control department, the Board was of the view that, in 2016 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 2016, 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 of policies, systems and implementation, organizational responsibilities, human resources, finance, 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 are 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 2016, 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 2016, the Board and the Audit Committee have received, and discussed the 2016 internal control assessment report of the Company while the Board and the Risk Management Committee have received, and discussed the 2016 risk assessment report and compliance report of the Company. Such internal control systems aim at managing, but not eliminating, risk related to failure of achieving business goals and the Board only provides reasonable but not absolute assurance on the absence of material misstatement or loss.

7. Auditors and their remuneration

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

During the year, the total remuneration for audit and non-audit services provided by PKF was RMB1.88 million, including audit service fee of RMB1.1 million and non-audit service fees, in which fee charged for review of interim financial report was RMB0.5 million, fee charged for issuing comfort letter for working capital forecast of the Company was RMB0.06 million and fee charged for issuing comfort letter for senior perpetual capital securities issued by a subsidiary of the Company was RMB0.22 million; during the year, the total remuneration for the audit services provided by Wuyige was RMB5.3 million, including audit service fee of RMB1.9 million and non-audit service fees, in which the fee for listing of A Share was RMB3.3 million and fee charged for issuing comfort letter for renewable corporate bonds issued by the Company was RMB0.1 million.

The statement of reporting obligation of PKF Hong Kong, as the external auditor of the Company, in respect of the consolidated financial statements is set out on pages 126 to 127 of this annual report.

8. Shareholders' meeting

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

On 25 May 2016, the annual general meeting of 2015, the first H Share class meeting of 2016 and the first Domestic Share class meeting of 2016 were held by the Company, at which 10 resolutions, including the Directors' Work Report for 2015, the Supervisors' Work Report for 2015, the Report on Final Accounts for 2015 and the Financial Budget Report for 2016, were reviewed and passed.

The first extraordinary general meeting of 2016 was held by the Company on 27 September 2016, at which the resolution on updating the financial services agreement was considered and approved.

The auditors attended the above four general meetings.

9. Communications with Shareholders

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

9.1 Shareholders' Rights

The Board is committed to maintaining communications with Shareholders and discloses significant development of the Company to Shareholders and investors when appropriate. The annual general meeting of the Company provides a communication opportunity between Shareholders and the Board. In the event of convening a general meeting, a written notice, which specifies on the meeting agenda in the meeting 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 convening 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 of the Company for 90 consecutive days may convene meetings on their own accord. The convening procedures shall as much as possible be equivalent to those of for meeting convened by the Board.

9.2 Enquires of and Communication with Shareholders

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

The Board welcomes Shareholders' views and encourages them to attend general meetings in order to propose any concerns they might have directly 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.

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 2016, the Company has complied with all code provisions as set out in the Corporate Governance Code contained in Appendix 15 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 63 to 80 of this annual report.

11. Investor Relations

11.1 Investor Relations Activities

Announcement of Results and Results Roadshows

On 17 March 2016, the management of the Company held the 2015 annual results conference in Hong Kong to introduce the Company's 2015 annual operating situation and financial performance. Dozens of analysts from leading investment banks in the world attended the conference.

Investors' Routine Visits

In 2016, 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 60 announcements on the website of the Stock Exchange.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

1. SOCIAL RESPONSIBILITY MANAGEMENT

Chalieco adheres to Chinalco's concepts of corporate social responsibility and management requirements, the Company has integrated its social responsibility into daily operations and management. After being included in Chinalco's corporate social responsibility pilot units in 2013 and by focusing on the theme of corporate governance, Chalieco has clarified a core concept of social responsibilities. 18 responsibility indicators in four categories, 8 responsible departments, 20 management processes and 39 management systems and made a negative list with 80 items. Since the start of the pilot project, relevant departments and personnel of the Company have been awarded Advanced Group and Advanced Individual in corporate social responsibility by Chinalco. The Company also listed *Integrating Responsibility into Technology, Sparing no Efforts in The Belt and Road* and 2 other corporate social responsibility cases as Chinalco's top ten excellent cases.

The Company's general meeting, the Board and the Supervisory Board, performed their respective functions, convened meetings and deliberated proposals according to the prescribed procedures. In 2016, we held four general meetings, reviewed and approved 15 proposals; 11 meetings of the Board, reviewed and approved 34 proposals; six meetings of the Supervisory Board, reviewed and approved 11 proposals. The Company has timely and effectively delivered its information to the public and established effective channels to maintain investor relations by performance conferences, road shows, site visits, special meetings, and other methods.

In 2015, the Company won The Listed Company with the Best Corporate Governance award in China Securities Golden Bauhinia Award Ceremony sponsored by Hong Kong Ta Kung Pao. In 2016, the Company's Secretary to the Board ZHAI Feng won The Best Secretary to the Board of Listed Company award in the 6th China Securities Golden Bauhinia Award Ceremony.

1.1 Concept of Social Responsibility

By combining with industry characteristics and the Company's actual situation, Chalieco introduced the social responsibility concept of "Led by Technology, Build an Ideal Home". "Led by Technology" implies that Chalieco takes advantage of technology to improve scientific and technological transformation and upgrades for the nonferrous metals industry. This serves the urban infrastructure construction and drives international cooperation for the industry. "Build an Ideal Home" highlights that the Company performs its social responsibility actively in both domestic and foreign construction projects and expresses its vision to jointly build beautiful homes and create value for stakeholders.

Vision:	To be a world-class integrated engineering company;
Development mission:	To create a better future;
Management concept:	Meticulous, Integrity, Simple and Efficient;
Values:	Creating value, Harmony and HSE mindset, Accountability, Learning and innovation, Integrity and honesty, Excellence, Consequence orientation, Openness.

1.2 Communication with Stakeholders

Chalieco attaches great importance to communicate with stakeholders, promoting the Company's corporate social responsibility concepts through various channels, putting concepts into actions vigorously, understanding stakeholders' needs, and performing correspondent measures to meet stakeholders' reasonable expectations and aspirations.

Stakeholders	Expectations and requirements	Communication and response methods
Government and regulatory authorities	To implement national policies and laws and regulations To promote local economic development To boost the development of industry	Reporting materials Offering advice and suggestions Special report Negotiation and cooperation
Shareholders	Revenue and return Compliant operation Safe production	Company announcement Special report Field visit
Customers and partners	To perform contracts according to law To operate honestly High quality products and services	Business communication Customer feedback Exchange and discussion
Environment	Compliant emission Energy conservation and emission reduction Ecology protection	Work report Report submission Investigation
Employees	Rights and interests maintenance Occupational health Salary and welfare Career development	Employees' Assembly Collective negotiation Democratic communication platform
Community and the public	To improve the community environment To participate in philanthropy Open and transparent	Company website Company announcement Interview and communication

1.3 Identification of Material ESG Issues

To understand stakeholders' expectations and aspirations and to improve the pertinence and responsiveness of reports, Chalieco identifies issues of sustainable development and determined the significance of such issues according to *Environmental, Social and Governance Reporting Guide* and *Sustainability Reporting Guidelines (G4.0)*, to ensure that the information disclosed in reports fully covers the Company's development and key issues of stakeholders concerns.

Identifying Process of Environmental, Social and Governance Issues

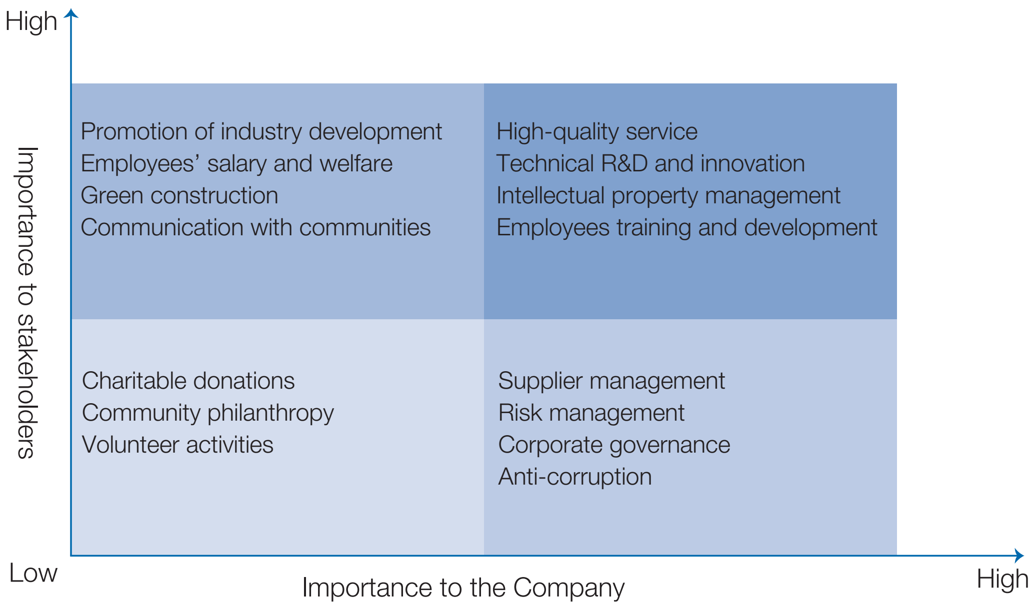
Source of issues

– Recommendations from the Company's management
– Analysis and suggestions from internal and external experts
– Analysis of multimedia information
– Research on benchmarking both domestic and overseas
– Guidelines for social responsibility standards

Selecting standards

– Contribution to sustainable development
– General concerns of stakeholders
– Emphasizing guidelines for social responsibility
– Meeting the Company's needs for strategic development

Materiality Matrix



2. PATH OF INNOVATION AND OPERATION WITH SCIENCE AND TECHNOLOGY

Chalieco is a leading provider of technology, engineering service and equipment in China nonferrous metals industry. The Company's philosophy is to provide services and products with industry advantages by relying on innovation and solving environmental and social problems with its own technological advancements to fulfill its corporate social responsibility. The Company vigorously advocates innovation, drives operation with science and technology, and always places technical innovation as its core position to drive corporate development and strategic transformation. Chalieco consistently improves its technical innovation mechanism and management system, thereby taking the lead in the industry by combining the promotion of the development of industry value chains with the development of its own services and products. The Company strengthens cooperation with customers, peers and upstream and downstream supply chains to promote sustainable development for the whole industry.

2.1 Improvement of the Innovation Mechanism

Chalieco has sound systems in fields such as research and development project management, intellectual property management, and research funds management, which guarantee the effective execution and implementation of innovative ideas.

In 2016, the Group continuously increased input into technical research and development with a total investment of RMB636.7 million to ensure our technologys leading edge in the industry. The management of research funds was further strengthened and *Interim Procedures Concerning Financial Management of R&D Costs of China Aluminum International Engineering Corporation Limited* was published to enhance scientific utilization of research funds and make full use of them in technical innovation and R&D. In addition, great incentive policies for its technical innovations has been developed, such as *Interim Procedures in Performance Incentives of China Aluminum International Engineering Corporation Limited for Engineering-oriented Aluminum Projects*, and the *Appraisal and Reward Reporting System of Technical Achievements of China Aluminum International Engineering Corporation Limited*. The rapid development of technology benefits from its strengthening and implementing of its technical management system.

2.2 Pursuit of Innovative Technology

Science and technology are the primary productive forces. Chalieco always insists that it is of great importance for the Company to provide high-tech products and to propose high-tech designs to customers. During the continuous pursuit of innovative technology, the Company has possessed industry-leading technology, thereby responding to social expectations and taking its corporate social responsibility through technology.

2.2.1 Comprehensive Technology Coverage

The Company has constantly relied on technical innovation to improve its business position. Regarding their construction engineering, designing business, exploration engineering and nonferrous metals industry, the Company continues to develop, test, promote and apply multiple innovative technologies, such as water environment monitoring technology for real-time monitoring of potential water quality problems and red mud stacking capacity expansion to reduce the land occupation area. Chalieco's goal is to solve environmental and social problems through its own technological advances and to fulfill its corporate social responsibility.

With regard to engineering construction, the Company pioneered the comprehensive service provider concept of Industrial Upgrading and Sustainable Development of Resource-based Cities to fully implement the Company's independent innovational ideas to promote urban construction and social sustainable developments.

For example, with respect to intelligent construction, the Company has successfully applied BIM modeling technology at construction job sites, which greatly improved the efficiency and reduced risks from implementation. Through analogue of real buildings information, the technology may provide simulation analysis in the operation system, play a significant role in enhancing the pre-control of engineering and improve professional service abilities.

Regarding engineering management, the Company has developed and employed a 3D visualization information management system. The system is a professional application based on 3D visualization, including cadastral mapping, ventilation, production, safety warning, monitoring and controlling, integrated automation, emergency rescue and other modes. The 3D visualization system is achieved from roaming macro scene to micro scene and ensures efficient and accurate on-site monitoring management.

In the area of design business, the Company always advocates, from top to bottom, that Good Design Creates Good Benefit and the design quality is the vital interests of customers. It's the common aspiration of all employees to design high-quality products for customers in a rigorously scientific manner.

With respect to exploration engineering, the Company constantly adheres to caring for life and health, takes practical measures, innovates and improves technology to prevent, control, reduce and eliminate all kinds of hazards and strives to achieve zero accident, zero injury, zero pollution and zero loss.

According to market demands and requirements of relevant state authorities for safety production, the Company successfully developed a mine and geological disaster online safety monitoring system technology with their independent intellectual property to reinforce safety protection, reduce the accident rate and ensure safe production and operation. Such technology has been successfully applied at the Tailings Pond monitoring mining enterprises in Jinchuan, Qinghai and Yunnan and geological disaster monitor at Bailong Elevator in Zhangjiajie, which effectively saved operating costs of production enterprises and reduced operational risks. This technology also won the Best Science and Technology Prize awarded by China Nonferrous Metals Industry Association and the First Batch of National Key Projects with Industrialization and Information Integration to Promote Safe Production awarded by the Ministry of Industry and Information Technology of the PRC.

With respect to the nonferrous metals industry, the Company has undertaken nearly 100 key scientific and research projects over the past 60 years, making the technical level of China nonferrous metals industry, especially the aluminum smelting technology, the most advanced in the world. With leading technical advantages in the whole industry chain of the aluminum industry, the Company is committed to aluminum alloy products and engineering services of various industries and actively guides and promotes the expansion of aluminum product applications.

After years of efforts, the Company has overcome a series of technical difficulties in production and maintenance of large and ultra-large electrolytic cells and has developed a set of maintenance processes and equipment technology for large aluminum electrolysis that support safe and uninterrupted production. Chalieco is a world leader in the technology of electrolytic cells and has provided great economic benefits for the electrolytic aluminum industry.

Aluminum itself is a kind of sustainable and lightweight metallic material. With regard to the promotion of engineered-oriented aluminum, the Company is actively committed to Replacing Steel with Aluminum to effectively extend the service life of products and reduce the production of steel, thereby reducing the emission of greenhouse gases and hazardous substances and effectively alleviating air pollution. On the special topic of engineered-oriented aluminum technology, Chalieco has completed the preparations of standard drawings of aluminum enclosures for Chinalco and Guizhou province. We have undertaken the preparation of standard drawings of roll-profiled metal sheet for the country through cooperation with the Central Research Institute of Building and Construction Co., Ltd. It has also developed a number of products in the areas of construction-oriented aluminum, traffic-oriented aluminum, telecommunication equipment and products, industrial equipment and infrastructure.

2.3 High-Quality Products and Services

In recent years, Chalieco took its advantages in capital and management to continuously expand its engineering construction and general contracting business, and constantly implemented business model innovations. Based on BT project and management projects, it has gradually explored more operation behavior and is actively trying to contract construction with third-party funds at the same time, to provide customers with more diversified and higher quality products and services.

2.3.1 Quality Optimization and Management Improvement

With strong technical strength and rich experience, Chalieco provides domestic and foreign customers with exploration, design and consultation services for engineering projects in the nonferrous metals industry, industrial and civil architecture, and infrastructure construction. In 2016, the Company clearly expressed its requirements for project quality based on the *Integrated Management System Manual* and 22 control program files. They monitored the product quality of its member units by information methods. This approach helped achieve quality management targets, i.e. 100% of qualified final design products, more than 90% of excellent final design products, 100% of one-time acceptance and approval of unit projects, and more than 90% of one-time acceptance and approval of sub-engineering projects. In addition, it carried out the establishment of safe production and standardization pilots throughout the Company to further improve the design quality of industrial projects, strengthen the concept of design essence, and implement advanced intrinsic safety design methods.

2.3.2 Attention to Customer Satisfaction

In September 2016, a customer satisfaction survey was conducted by the Company for projects under construction and the results showed that customer satisfaction reached 97.40%, far beyond the Company’s target and industrial average.

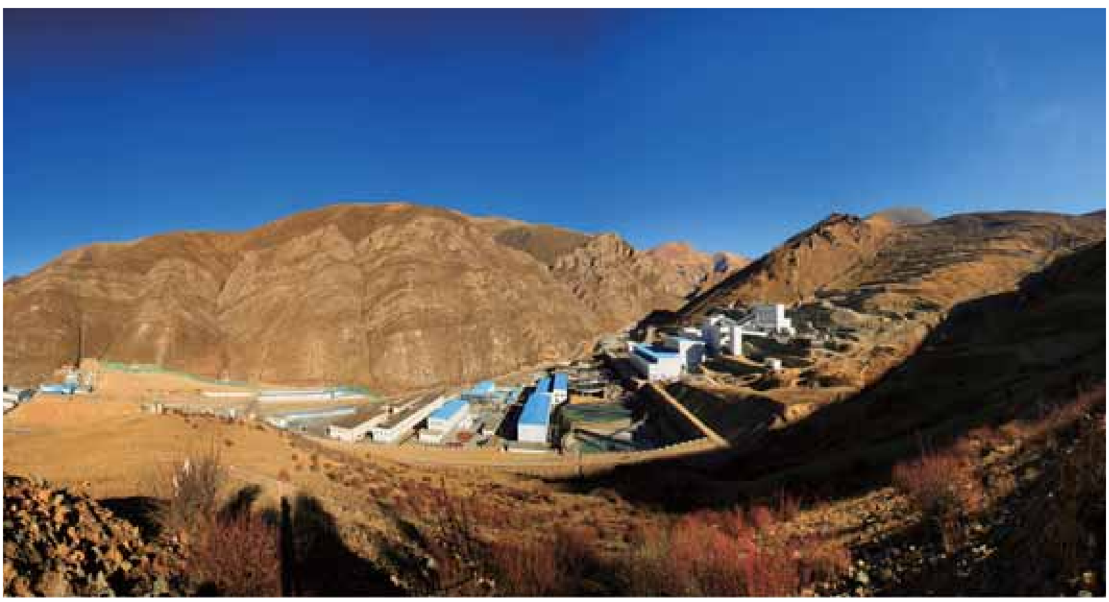
Chalieco’s concept of creating values for customers is highly praised. The Company conducted a benchmarking with private owned design enterprises to reform its design management. For example, in the design process of Huajin aluminum oxide project, the distribution system, i.e. linking up a designers income with the construction investment of project, the full cost of project operation and the owners satisfaction, had a remarkable effect and received recognition from the customer. After a long period of endeavors, the Company delivered a satisfying report to customers with many outstanding engineering projects.

High-quality engineering project cases:

Ship channel subsidence observation of Gaolan Port in Zhuhai, side slope supporting project, Cableway in Tianmen Mountain, Zhangjiajie, and etc;

Observation of Ship Channel Subsidence, Gaolan Port, Zhuhai

Mine engineering projects which have been completed include Jiama copper-polymetallic deposit project in Tibet (large-scale green mine with the highest elevation in China) and the lead zinc ore project in Fankou, Guangdong;



Jiama Copper-Polymetallic Deposit Project in Tibet

In engineering construction business, the Company has also involved in the design and construction of many large projects, such as the Zhuhai-Macao Lotus Bridge, urban subway and the Changsha South high-speed rail Station, etc.

Zhuhai-Macao Lotus Bridge Project

2.4 Cooperation and Mutual Improvement

2.4.1 Promoting Development of the Industry

Chalieco has participated in the development of domestic industrial standards and has cooperated with other advanced domestic and foreign enterprises to develop new technologies and new products.

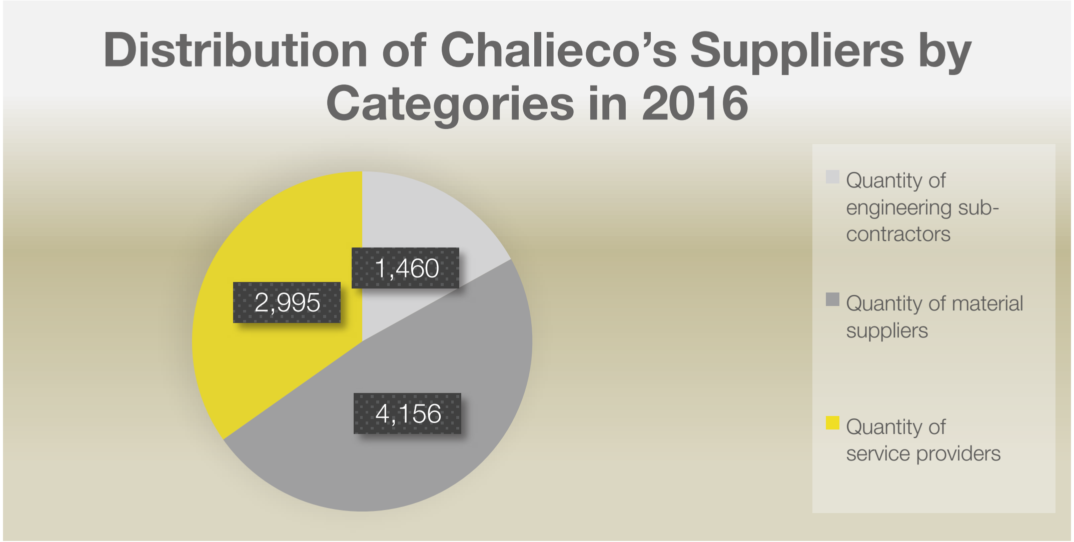
In 2016, the Company edited and participated in writing 53 national industrial technical standards and one local standard, including code for titanium smelting technology design, technical code dust removal by ventilation and flue gas cleaning for aluminum oxide factories design, safety technical regulation for red mud yards, code bismuth smelting processes design, and code for waste dump for nonferrous metal mines (revision). The Company also participated in writing clean production assessment indicator system for the zinc smelting industry (GB), code for waste-heat utilization design for the nonferrous metals industry (GB), technical code for waste gas management of nonferrous metals smelting (GB), technical code for nonferrous metals process engineering, etc.

Rich scientific achievements acquired in 2016 effectively confirmed the Company's tireless efforts and leading position in promoting technological advances for the industry. This year, the Company was granted 17 provincial and ministerial science and technology awards by the industry association, including five First Prizes and nine Second Prizes, reaching a new record. As of December 31, 2016, it had obtained more than 500 provincial and ministerial and above scientific achievements, nearly 100 national science and technology improvement awards, more than 800 provincial and ministerial science and technology awards, and more than 4,700 domestic and international patents.

2.4.2 Building a Sustainable Supply Chain

In order to strengthen supplier management system, Chalieco continuously improved the internal supplier management system and focused on its implementation. At the same time, the Company established and promoted an e-commerce platform to achieve intensive management of project procurement. Through the platform, we have established more effective communication channels with suppliers to further increase the win-win opportunities.

In 2016, among the Company's district-based suppliers, there were 1,460 engineering sub-contractors, 4,156 material suppliers and 2,995 service providers.



At the end of 2016, the Company improved its supplier management provisions and revised the *Supplier Management Measures for the China Aluminum International Engineering Corporation Limited (Tentative)*. Combining with the operating features of the e-commerce platforms, it has redefined the organization and responsibility of supplier management and the access, evaluation, categories, incentives and exit, files, supervision and assessment of suppliers.

At the same time, the Company has strengthened credit risk management for suppliers and trade customers in the *Trade Customer and Supplier Management Measures (Tentative) of China Aluminum International Engineering Corporation Limited* and carried out category and credit-rating management according to customers' comprehensive information. The credit rating follows the principle of dynamic adjustment and the idea of annual rating, timely adjustment to renew customers credit rating in a timely manner and ensure the timeliness of the management system.

Regarding implementation of management, the Company has established an e-commerce center for the daily management of suppliers and customers, including researching and developing the Company's supplier and customer management systems, organizing and carrying out on-site inspections and annual assessments, and listing the qualified suppliers and customers and taking responsibility for access approval and exit management of the Company's suppliers and customers. In addition, the Company has established a strict blacklist management system. If a supplier or customer is included in the blacklist, its communications with the Company will be strictly limited.

With regard to supplier management and daily cooperation, the Company has been equipped with intelligent applications to improve management and has established a dynamic assessment and evaluation system with suppliers. Since 2016, Chalieco has begun promoting the application of e-procurement with the establishment of the e-commerce procurement platforms. It has now basically covered the Company-wide procurement, i.e., the coverage of material procurement, project subcontracting and service subcontracting.

2.5 Technical Export Serving the World

2.5.1 Promoting the Development of the Worlds Aluminum Industry

To respond to China Going out and The Belt and Road strategies, Chalieco actively promoted international cooperation and successively established branches (subsidiaries) or representative offices in Vietnam, India, Venezuela and other countries to set up overseas business network. At present, the Company has output technology, equipment and labor service to more than ten countries and regions including India, Vietnam, Venezuela, Malaysia, Mozambique and Indonesia, established cooperative relationship with enterprises and scientific research institutions in more than 40 countries and regions and provided design, construction, equipment and EPC services for overseas projects which have a capacity of more than five million tonnages of aluminum oxide and three million tonnages of electrolytic aluminum, becoming one of the major technology suppliers of the worlds aluminum industry. With advanced technology and management experience, the Company influenced and promoted technological advances and construction management of the local aluminum industry and the development of the worlds aluminum industry.

- By fully involving in the construction of Vietnam aluminum industry system, the Company has become the largest general constructor of the aluminum oxide project in Vietnam;

- The Company assumed the planning, design and procurement of 1.25 million tonnages of electrolytic aluminum project and three million tonnages of aluminum oxide project of Vedanta Aluminum Company in India, which are the world's largest newly-established electrolytic aluminum factory and aluminum oxide factory designed and completed at one time respectively;

- Successively undertaken Alcasa and Venalum projects with CVG Group in Venezuela, Chalieco now becomes one of the most popular Chinese enterprises in Venezuela.

2.5.2 Fulfilling Overseas Social Responsibility

Chalieco attaches great importance to communication with overseas stakeholders. We actively invited local government, owners, potential partners and the public to visit our Company so that we could be understood, recognized and supported by them. Venezuelan President Mr. Maduro and Deputy Prime Minister of Vietnam Mr. Hoang Trung Hai have led delegations to inspect projects and praised the projects undertaken by our Company.

During the construction, the Company's overseas projects provided a large number of jobs for local people. During the civil construction of Alcasa project in Venezuela, 100 jobs were provided for local people and nearly 200 jobs in peripheral services, trading and manufacturing were created.

During the construction of the aluminum oxide project invested in Nhan Co, Dak Nong, Vietnam, the Company learned that there was a lack of sewage treatment equipment, so the Company invested 750 million Vietnam dollars and 3 billion Vietnam dollars (RMB1,144,000 in total) to build two sewage treatment plants with the capacity of 14 m^3 and 144 m^3 respectively, which were the only two plants invested and built by an enterprise and highly praised by local government and residents.

3. PATH OF GREEN AND IMPROVEMENT OF QUALITY DEVELOPMENT

Chalieco is committed to the concept of green development, actively exploring green development patterns and building a resource-conserving and environment-friendly enterprise. We make full use of professional and technical advantages to provide society with green solutions, build environment management systems to protect the environment and resources through various steps of design and R&D, engineering construction and equipment manufacturing, incorporate the concept of energy conservation and emission reduction into operation, while advocate the concept of green development and environmental protection while pursuing the coordinated development between corporate development and environmental protection.

3.1. Green Projects with Environmental Protection Design

The Group gives full play to its own professional and technical advantages and greatly contributes to building green projects. We have participated in multiple projects of energy conservation, emission reduction and pollution prevention, which have been awarded. More than this, we have also provided green solutions for industrial development and helped more social enterprises achieve green development. In 2016, the Group made great effort in multiple areas including environment monitoring and treatment, technical renovation and consumption reduction, waste resource recovery and green buildings etc., which emphasizes the Group's dedication to improving the environment with technologies, realizing its own value in environmental protection projects and combining its development with environment protection organically.

3.1.1 Environment Monitoring and Treatment Technologies

The water monitoring technology serves as a representative environment monitoring technology. As a real-time online monitoring technology for water environment, it is an integrated intelligent supervising information management platform with independent intellectual property rights. It can accelerate the monitoring of water quality and variation trends, detect environmental pollutions in time and provide scientific basis for the prevention, treatment and supervision of pollution and environmental management in drainage areas. The Company has successfully applied the technology into the comprehensive ecological corridor treatment project of Nanming River in Guiyang City, which has improved the monitoring efficiency, lowered the intensity of manual monitoring and promoted user's information level of water environment monitoring, consequently producing considerable direct and indirect economic benefits for users.

In terms of environment treatment, Chalieco applied heavy metals wastewater treatment and resource recovery technology to the heavy metals wastewater treatment and resource recovery project at Nandan Industrial Park, Hechi, the first project of high-concentration heavy metals wastewater treatment and resource recovery in Guangxi Zhuang Autonomous Region. In addition, the Company also employed the wastewater treatment technology in the deep-processing nutgall wastewater treatment project of Aowei Science and Technology Co., Ltd. in Zhangjiajie. The Company became the first enterprise that settled the problem in the world for settlement of the deep-processing nutgall water pollution problem.

3.1.2 Energy Conservation by Technical Innovation

The Group has always helped clients to decline energy consumption in production through technical innovation as well as pollution by its technologies. The new Energy-saving Cathode Technology for Aluminum Electrolysis Cells developed by SAMI has been applied to variety types of electrolytic cells. It has been employed by seven enterprises up to now on 686 electrolytic cells. It can save over 200 kilowatt-hours per tonnage of aluminum, and make a significant contribution to their energy conservation and profitability. This technology won the second prize of National Scientific and Technological Progress Award and was granted the First Science and Technology Prize by China Nonferrous Metals Industry Association.

In 2016, the Environmental Impact Assessment of Chalieco Zhongzhou Aluminum Corporation Limiteds Metallurgical Grade Aluminum Oxide Process Optimization and Energy Conservation & Emissions Reduction Program of, delivered by China Nonferrous Metals Processing Technology Co., Ltd., won the Second Prize of Excellent Consultation Outcome awarded by the China Nonferrous Metals Industry Association (ministerial level).

3.1.3 Green and Low-Carbon Community

In 2016, green environmental protection remains to be a national key concern under the concept of Innovative, Coordinated, Green, Open and Shared Development. The Group will conscientiously summarize experiences in application of new technologies and actively understand national policies. According to practical situations of the Company, we will further apply new energy-savings and environment-friendly technologies to new projects based on the promotion and application of existing new technologies to lead the development of green energy-saving buildings and to provide society with the best energy-saving and environment-friendly buildings.

Twelfth Metallurgical Company actively responded to the new national situations and requirements of energy conservation, emission reduction and green development by imposing varieties of green architectural technologies on the construction of the Palm Garden project in Taiyuan City such as photovoltaic technology, solar hot water supply technology, public lighting human body sensing technology, life wastewater reuse technology, etc. These technologies significantly declined energy consumption and emission and improved the resource utilization rate and users experience, which generates dramatic economic and social benefits. The photovoltaic technology generated an average of 178.4 kilowatt hour per day with annual energy output of 60,000 kilowatt hour. It saved 632.52 tonnages of standard coal and reduced CO_2, SO_2 and dust emission by 1581.3 tonnages, 15.82 tonnages and 2.29 tonnages every year respectively.

3.2 Green Projects for Nature Protection

To improve the resource utilization rate and further perfect the Group's organization structure of energy management, we work to continuously raise its energy efficiency management level and advance energy efficiency management projects. Meanwhile, it also encourages the research, development and promotion of new environment-friendly technologies and focuses on the delivery of green concept during various steps in the construction.

3.2.1 Energy Conservation, Emission Reduction, and Resource Saving

In order to strengthen the efficient utilization of our resources, Chalieco published the *Notification on Further Strengthening Cost and Expenditure Reduction of the Headquarters* to improve corporate competitiveness through strict control of operation cost, efficient utilization of existing resources and avoiding gratuitous waste.

The Group employs new technologies, techniques and equipment such as fabricated reusable fences used for closing the scene in the process of construction and production. The repeatable utilization rate of temporary houses and fences in the construction site reaches 85%. Solar powered street lamps are employed at the construction site. Serviceable vehicles gas emission meet national Standard IV. Consumption of power and product oil is reduced dramatically for the sake of resource conservation. During the construction, matters of run, risk, drip and leaks are reduced and avoided through maintaining pipes, valves and faucets used for construction timely.

For the protection of water resource at the construction site, the Company collects construction-site bath water and rainwater and reused it for on-site watering and concrete curing after precipitation. Maintenance water is sprayed on the surface of the structural layer with sprinkler pipes for saving water. Water pumped from foundation pits and wastewater used for cleaning concrete mixer trucks and concrete dump trucks can be reused for on-site watering and concrete curing after precipitation to fully use water resource.

3.2.2 Emission Control for Reducing Environmental Impact

The Group gives priority to prevention in the treatment of three wastes. When taking measures of comprehensive utilization, checking at each level and emission reduction, it focuses on combining three wastes treatment with environment protection research and improving environmental quality.

In terms of solid waste disposal, the Group has improved management and control measures for the emission of solid waste and conducts reasonable disposal of solid waste at the construction site. For example, toxic and hazardous substances are prohibited for backfilling of the construction site to prevent the contamination of the surrounding environment.

In addition, the Group constructs closed waste storage tanks for stacking classified waste and cleans disposal without delay. Meanwhile, trays are laid at the potential oil-leakage machineries for gathering oil that finally will be handled by qualified institutes, thereby avoiding environmental pollution.

Meanwhile, the Group pays attention to the protection of water resources during each step in the construction, to reduce pollution to the water resources to the largest extent by:

- Conducting reasonable treatment of wastewater derived from construction by means of precipitation, diversion, etc;
- Surrounding the deep foundation pit with waterproof curtains during the excavation to prevent groundwater pollution;
- Performing precipitation measures to recharge the groundwater pumped once the construction is completed to maintain groundwater balance;
- Precipitating mud water in secondary sedimentation tanks and then discharging it into municipal pipelines if qualified after testing;
- Disposing the dining hall oil sewage through oil-filtering tanks and sedimentation tanks, and then discharging it into municipal pipelines if qualified after testing;
- Prohibiting toxic and hazardous substances for backfilling of the construction site to prevent contamination of water resources.

3.2.3 Sustainable Construction for Reducing the Damage to Nature

Sustainable construction gives expression to sustainable development concept in the construction and is the comprehensive application of green construction technologies. Focusing on protection and restoration of natural environment, the Group takes a series of management and control measures to carry out environmental protection concepts and management requirements during each operational step in order to minimize negative effects on the natural environment.

In order to reduce natural environment damage, deliver green construction concept and achieve sustainable construction, the Company formulated the Regulations on Environmental Protection and Management of Construction Projects, the Regulations on Dust and Poison Management of Construction Projects, the Regulations on On-site Water Management of Construction Projects, the Regulations on Solid Waste Management of Construction Projects and other systems, which give guidance in details to sewage discharge, hazardous disposal, wastes recycle and other steps for construction projects.

In respect of alumina technology, the Company has successfully overcame the key technology problem in the process of dry storage and dry method in capacity expansion of wet storage of red mud. It achieves secondary utilization of 76ha of land occupied by the former wet red mud storage pond in Guizhou, thereby an expansion of 18.425 million m^3 in capacity and an extension of 15.4 years in service life of the storage pond.

After exploration operation is finished, all drill holes are sealed by cement paste grouting to ensure the ground restored completely.

In the construction process, earthworks are excavated hierarchically to protect surface soil and excavation and earthwork stack area are reduced to the largest extent. Covering measures are taken after on-site stack nearby. Earthworks are allocated reasonably and will be used immediately after excavation while balance will be kept between excavation and backfilling. After the construction is completed, backfilling and vegetation restoration are guaranteed.

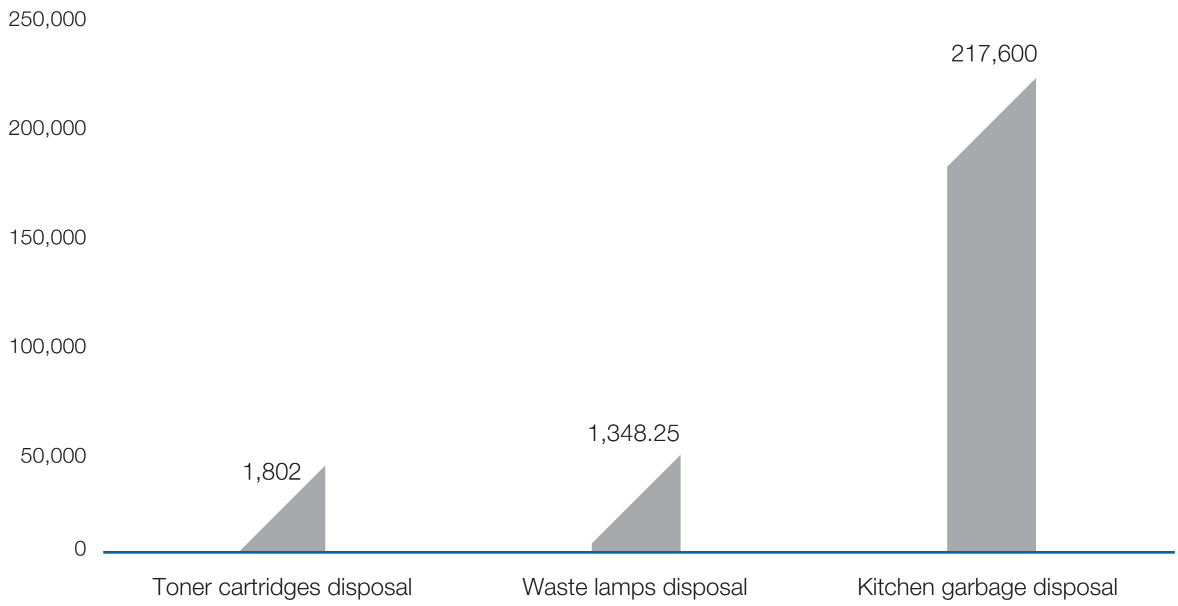
3.3 Green Office for Energy Conservation and Emission Reduction

As important parts of sustainable development of enterprises, energy conservation and emission reduction within corporate office areas need involvement and efforts of each employee. They not only reduce operating cost of the enterprise, but also keep corporate concept of resource conservation and green development in employee's minds.

Summary of resource consumption of the Group in 2016

Domestic water consumption	423,099 T
Electricity consumption for office use	13,906,857 KWh
Gas consumption for office and restaurant use	216,952 m^3
Office paper consumption	3,610 boxes
Official vehicle gasoline consumption	640,343.2 L
Official vehicle diesel consumption	24,378 L

Solid Waste Disposal of the Group in 2016 (Kg)



Energy conservation is advocated in various branches of the Group with energy saving light bulbs used in office and living areas. High-efficiency energy such as solar and electric energy is employed in all areas except the restaurants which use liquefied natural gas. In 2016, the total electricity consumption of the Group amounted to 13,906,857 KWh, and total natural gas consumption by restaurants of the Group is 216,952 m^3.

In terms of water resource use, water saving systems and instruments are employed in office and living areas of the Group. Flow-type removable plank houses are used for on-site office and living occupancy; saving measures such as timely closing the water and electricity facilities and properly using papers are taken to lower resource consumption. In 2016, the total water consumption of the Group for office use amounted to 423,099 tonnages, and total office paper consumption of the Group is 3,610 boxes.

Meanwhile, the Group has continuously strengthening the propaganda of environmental protection concept to cultivate saving and environment-friendly habits for employees and create a green corporate culture to lower its operating cost. The Group employs eye-catching marks on each saving step in the aspect of environmental protection concept propaganda. Water savings marks are posted on internal hand washing sinks and water tanks to remind employees to cherish water resources.

The Group advocates green travel by encouraging employees to take new energy automobiles and public transportations and reduce the use of official vehicles. In 2016, the Company installed three charging piles for new energy automobiles at its underground garage for the convenience of users; the annual gasoline and diesel consumption of its official vehicles amounted to 664,721.2 L totally.

4. EMPLOYEES, TALENTS MAKE THE ENTERPRISE

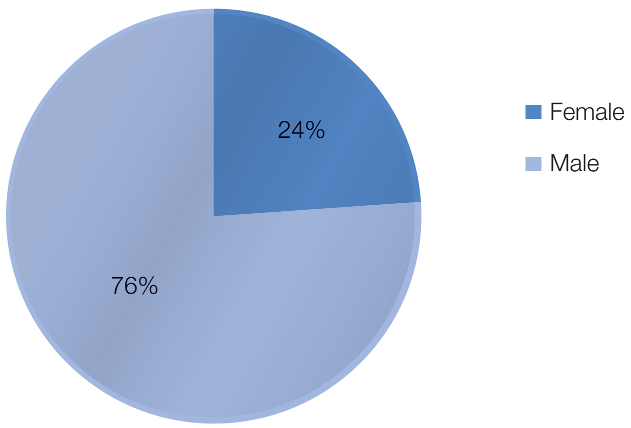
The Company has deeply aware that it is the infinite wisdom and unremitting endeavor of employees that bring continuous improvement and success to Chalieco. We treasure every employee's contribution and keep a watchful eye on their growth. We do our utmost to attract and train employees to elevate their comprehensive quality and enhance their independent innovation ability to motivate the internal impetus of the Company by not only creating a comfortable working environment, but also providing a vast arena for them to fully display their talents.

The Company has formulated related systems concerning anti-corruption and incorruptible employment to strengthen the construction of combating corruption and building a clean company, standardize leader's professional behaviors and reduce the risk of insiders abusing official power for personal interest. Under the five principles of seeking truth from facts, standardizing and quantizing, the public acceptance, combining quantification with qualification and connecting and integrating, the Company carried out an incorruptible employment evaluation for the management levels each year according to the responsible authority of each level.

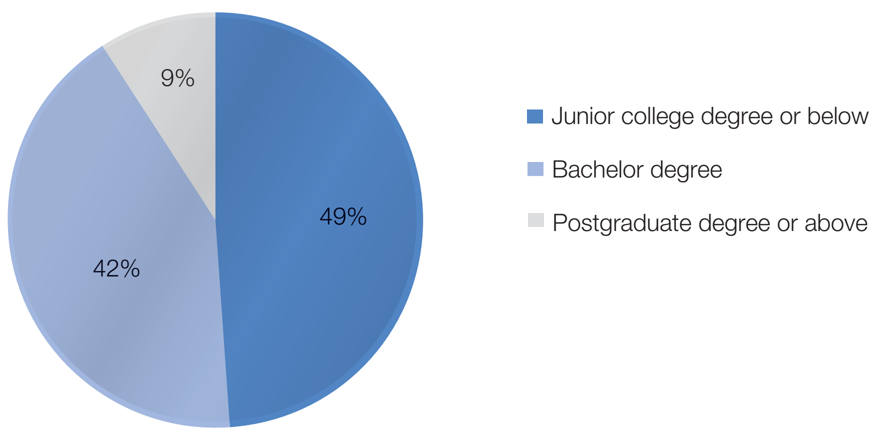
4.1 Fair Employment

The Company has implemented undifferentiated recruitment standards and management methods for employees of different ages, genders, marriage conditions and races in strict accordance with the Labor Laws, the Labor Contract Law, the Law of the Protection of Rights and Interests of Women and other relevant laws and regulations, and by the principle of justice and equality, forbidden employment of children and forced labor of any form. We ensure equal pay for equal work and provide guarantees for each employee's personal development. In 2016, the total number of our on-the-job employees was 11528, among which 50.1% were under 40 years old, which indicates that we have an inexhaustible momentum of rapid development by virtue of a young and talented team.

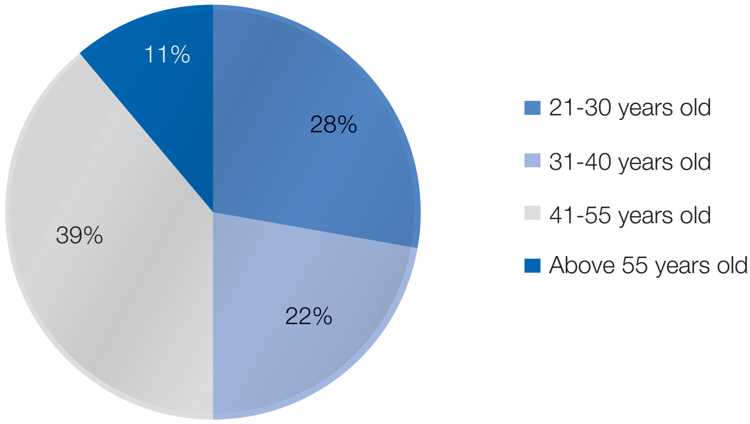
Distribution of Male and Female Employees



Percentage of Employees with Different Educational Credentials



Age Distribution of the Employees



4.2 Motivating Employees for Self-Growth

The Company takes To Help Employees Succeed as our own duty, focus on the development, motivation and training of talents, especially the promotion incentives and continuing education for the employees, and make great efforts to elevate their initiatives and professional achievement.

4.2.1 Optimizing the Motivation Mechanism

Through rank management principles of person-position matching, competition and selection and dynamic management, the Company establishes different ranks by position and perform a dual channel promotion of profession and management.

We establish performance management files to offer a chance of unconventional promotion for those who perform excellent work. In 2016, Chalieco improved the performance assessment schemes and incentive measures and confirmed the detailed rules of the alignment of remuneration with performance assessments. We further strengthened incentives and improved the motivation mechanism through organizing activities such as the special President Award Fund and excellent staff election.

The Group also devotes itself to building a remuneration incentive mechanism in accordance with the market condition. In 2016, it vigorously carried out the salary distribution reform to benefit more cadre employees, with its subsidiaries of CNPT, Changkan Institute and Sixth Metallurgical Company as the pilot units. The Company established compensation modes including annual and post-performance salary systems, seniority allowance and subsidy for expatriate employees, and created a better environment for talents to further develop their abilities.

4.2.2 Optimizing Training System

In 2016, the Group continuously improved the training system by increasing intensity and enriching contents of training after multiple surveys. We conducted level-to-level training by developing training courses with different types and levels in accordance with principles of on-demand training and serving the practical purpose.

Chalieco pays equal attention to the skills and business trainings, successively conducting trainings in English, the Belt and Road (B&R) program and comprehensive ability of international marketing and project practices, etc. In 2016, the headquarters personnel training reached 323 person-times and 1,643 hours. These trainings not only improved the professional ability of the business personnel, but also strengthened the Company's communication and cooperation between internal and external staff, reinforcing the unity of the Company.

In order to strengthen the whole personnel and multidirectional trainings, Ninth Metallurgical Company built an online training institute to develop the entire personnel training and established a Ninth Metallurgical Company expert database. It also invited external experts to conduct individualized training for the employees of different positions to comprehensively and precisely improve the entire management level and business competence. In 2016, more than 30 trainings were successively concluded for cost engineers, informatization, and primary registered construction engineers, replacing business tax with value-added tax business and BIM technology, which were attended by a total of more than 800 people.

4.2.3 Safeguarding Occupational Safety

Chalieco pays close attention to the safety and health of each employee. To this end, we continue to perfect the standardized management, improve the occupational health and safety management system, and make unremitting efforts to ensure the safety of each employee.

Safety Standardization Management

In accordance with the Project HSE Management System Assembly of China Aluminum International Engineering Corporation Limited and the Work Safety Standardization Management Standard Assembly, the Company actively carried out the safety standardization construction, established, improved and strictly implemented the safety regulation system. We continue to advocate restraining accidents through preventive inspections. The Company implemented the production management safety system of level-to-level management and responsibility, and established a specialized organization to conduct safety checks. It organized various activities such as environmental protection and safety education and training, ensuring 100% coverage.

Measures for Occupational Health

The Company has established an Occupational Health Safety and Environmental Committee to formulate an Operation Procedure for the Environment and Occupational Health Safety strictly in accordance with national laws and regulations on occupational health and safety. The Company have built the work-related injury insurance mechanism to guarantee the arrangement of the injured staff under the national and local work-related injury insurance systems. In addition, we have set up a smooth communication mechanism, by which employees can have a reasonable right to win a lawsuit against a job harmful to their health and safety; finally, we have attached great importance to the knowledge training for occupational health, ensuring that the entire personnel receive a regular physical examination.

4.3 Caring for Staff Life

The Company encourages our staff to maintain a balance between work and life, provide them a platform to display talents and communicate with each other by carrying out a variety of cultural and sports activities. At the same time, we create a warm working environment for employees by issuing benefits and caring for special employees that will lead them in the pursuit of a better life.

In 2016, the Company established a unified welfare standard, with which each employee could enjoy free working lunch period, public bathroom, medical expense subsidies and commercial insurance. In addition, the Company issued an additional holiday solatium on Women's Day, Children's Day, Army Day, etc. Besides that, brisk walking in the botanical garden, yoga activity for female staff, Women's Day forum, dancing class and cultural and sports activities of various forms and rich contents were carried out to provide employees a wonderful life after work.

For example, on Women's Day, SAMI established a 10 m^2 Maternal Love breastfeeding room with warm interior decoration and humane facilities, providing a convenient place for breastfeeding and now it has been considered by the female staff as sweet welfare.

Brisk Walking in the Botanical Garden

Women's Day Forum

5. BENEFITTING THE PUBLIC, INTERPRETING RESPONSIBILITY BY SERVICE

The Group gives back to society and actively fulfil corporate social responsibilities while developing ourselves by contributing to the local economic and social development. In 2016, the Group supported local construction and participated in community philanthropy through donations as high as RMB350,000.

5.1. Supporting Local Construction

The Group proactively put ourselves into supporting local construction against the background of the regional development strategy of the state that brought vitality to local industrial expansions. By means of the opening-up and win-win philosophy, we cooperated with the local government, and brought utility into the city. In 2016, the Group strictly fulfilled their tax liability in accordance with the law and increased fiscal revenue of the local government while driving local economic development. We also took an active part in communications and cooperation with the local government and enterprises in business and technology research and development. In addition, we promoted the development of the local economy through the people's livelihood projects and urban construction in response to national policies.

Changkan Institute took part in the industrial development in the Economic Development Zone of Ningxiang County, Hunan Xiangjiang New Area in forms of joint venture, cooperation, investment and construction, mergers and acquisitions, and reorganization through active communication and contact with the local governments, contributing to the economic development. Tianjin Construction completed the livelihood projects working together with the government, like shantytowns transformation in Pei County, Jiangsu Province, Large Hospital Project of the Shuozhou City, Shanxi Province, and living facilities for the Foxconn Technology Group in the Export Processing Zone of Zhengzhou City, Henan Province. Ninth Metallurgical Company, actively responsed to national policies in the newly-developing industrialization, informatization, agricultural modernization and urbanization, based in Shaanxi, Henan, Xinjiang and other central and western provinces. and actively joined in the construction of the underground pipe gallery and the sponge city, exploring the key areas of highway, water conservancy and hydropower, new urbanization, energy saving and environmental protection and sewage treatment, to support the development of national emerging industries.

5.2 Participating in Community Philanthropy

Community is the root of the Group and as a member of the community, every employee is deeply aware of our responsibilities. During self-developing, the Company focuses on community demands, serve the community and create more value by making improvements to the community.

We have developed methods related to social responsibilities and have established mechanisms and channels for communication between the Group and communities. We ensured participation in the local philanthropy and emergency and disaster rescue and relief and confirmed our duties to ensure that we can understand the community needs. We spare no effort to respond and satisfy these needs. In 2016, the Group actively carried out charitable donations and voluntary services by encouraging employees to vigorously participate in several philanthropic activities, such as voluntary blood donations, visiting the elderly and caring for visual impaired orphans.

Participating in a charity bazaar of oil paintings by visual impaired orphans

Condoling the elderly

ESG INDEX

Index	Index Description	Relevant Section
General Disclosure	Information on the policies and compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste	3.2.3
A1.1	The types of emissions and respective emissions data	3.3
A1.2	Greenhouse gas emissions in total (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	–
A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	–
A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	–
A1.5	Description of measures to mitigate emissions and results	3.2.2 3.3
A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved	3.2.2
General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials	3.2.1
A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in 000s) and intensity (e.g. per unit of production volume, per facility)	3.3
A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility)	3.3
A2.3	Description of energy use efficiency initiatives and results achieved	3.2.1 3.3
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
A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced	–

Index	Index Description	Relevant Section
General Disclosure	Policies on minimising the issuers significant impact on the environment and natural resources	3.2.3
A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them	3.2.2 3.2.3
General Disclosure	Information on the policies and 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	4.1
B1.1	Total workforce by gender, employment type, age group and geographical region	4.1
B1.2	Employee turnover rate by gender, age group and geographical region	–
General Disclosure	Information on the policies and compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards	4.2.3
B2.1	Number and rate of work-related fatalities	–
B2.2	Lost working days due to work injury	–
B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored	4.2.3
General Disclosure	Policies on improving employee's knowledge and skills for discharging duties at work. Description of training activities.	4.2.2
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	–

Index	Index Description	Relevant Section
General Disclosure	Information on the policies and compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour	4.1
B4.1	Description of measures to review employment practices to avoid child and forced labour	4.1
B4.2	Description of steps taken to eliminate such practices when discovered	–
General Disclosure	Policies on managing environmental and social risks of the supply chain	2.4.2
B5.1	Number of suppliers by geographical region	2.4.2
B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored	2.4.2
General Disclosure	Information on the policies and compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress	2.3
B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons	N/A
B6.2	Number of products and service related complaints received and how they are dealt with	2.3.2
B6.3	Description of practices relating to observing and protecting intellectual property rights	2.1
B6.4	Description of quality assurance process and recall procedures	2.3.1
B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored	N/A

Index	Index Description	Relevant Section
General Disclosure	Information on the policies and compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering	4
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	4
B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored	4
General Disclosure	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	5.2
B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport)	5.2

PROFILES OF DIRECTORS, SUPERVISORS 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, including the business manager of the general section of the finance department, from April 1998 to March 2002; served in various positions in Chinalco, 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 and the executive Director 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 China Aluminum Finance Co., Ltd (中鋁財務有限公司) since August 2014; has been a capital operation controller of Chinalco 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, 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. 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 Chinalco, 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).

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 Guiyan Platinum Co., Limited (貴研鉑業股份有限公司) including the deputy head, the head, and the representative of securities affairs of the 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 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. (雲南省投資控股集團有限責任公司) from November 2012 to May 2013. He has been the deputy director general and the director general of the legal department of Chinalco since May 2013, the 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. Mr. LI Yihua obtained his bachelor's degree from Southwest University of Political Science and Law (西南政法大學) in June 2001, and a master's degree in business administration from Yunnan University (雲南大學) in June 2011. Mr. LI Yihua was employed as economist in 2005.

Executive Directors

Mr. HE Zhihui (賀志輝): born in October 1962, served in various positions in GAMI, including the dean, from August 1987 to April 2006. He acted as the executive Director and Vice President 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 Company since March 2016, the chairman of CNPT from May 2013 to May 2016, the director of the joint board of directors of RTCI (中鋁一力拓技術合作中心) since December 2014; the party secretary to the Company since July 2015; the chairman of the labour union of the Company since August 2015 and the assistant to the general manager of Chinalco 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 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 2013.

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 April 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 April 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 May 2003 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 Chinalco in 2000.

Independent Non-Executive Directors

Mr. SUN Chuanyao (孫傳堯): born in December 1944, worked at the Xinjiang Keketuohai Ore Processing Plant (新疆可可托海礦務局) from 1968 to 1978 and served as the deputy factory director. He has served in various positions in Beijing General Research Institute of Mining and Metallurgy (北京礦冶研究總院) since November 1981 and became its dean from February 1988 to February 2007. He served as the chairman of the board of directors of North Magnetic Materials Science and Technology Co., Ltd. (北礦磁材科技股份公司) (stock code: 600980.SH) from August 2000 to May 2007. He has been an independent non-executive Director of the Company since December 2011. Mr. SUN has been an independent non-executive director of China Nonferrous Mining Corporation Limited (中國有色礦冶有限公司) (stock code: 01258.HK) and an independent non-executive director of Harbin Electric Corporation Jiamusi Electric Machine Co., Ltd (哈爾濱電氣集團佳木斯電機股份有限公司) (stock code: 000922.SZ) since June 2012. He served as the independent non-executive director of Jiangxi Copper Company Limited from August 2016. Mr. SUN Chuanyao graduated from Northeast University of Technology (東北工學院) (currently known as Northeastern University (東北大學)) in 1968 and was awarded a master degree in BGRIMM (北京礦冶研究總院) with a major in ore processing in 1981. Mr. Sun Chuanyao is an associate of Chinese Academy of Engineering (中國工程院) and St Petersburg Academy of Engineering and Science in Russia (俄羅斯聖彼德堡工程科學院). He was a council member of International Council on Mineral Processing (國際礦物加工大會理事會) and is currently a deputy director of Committee of Experts of China Nonferrous Metal Industry Association (中國有色金屬工業協會專家委員會), the director of the Mineral Processing Committee of China Mining Association (中國礦業聯合會選礦委員會), the director of the Ore Processing Academic Committee of the Nonferrous Metals Society of China (中國有色金屬學會選礦學術委員會) and the director of the National Key Laboratory for Mineral Processing Science & Technology (礦物加工科學與技術國家重點實驗室). He served as the professor and doctoral tutor in University of Science and Technology Beijing (北京科技大學), Central South University (中南大學), Northeastern University (東北大學) and China University of Mining and Technology (中國礦業大學).

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 and has been the company secretary and chief financial officer of Culture Landmark Investment Limited (stock code: 674) since January 2017. 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.

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) during 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. (株洲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).

Mr. DONG Hai (董海): born in August 1955, served in various positions in the PLA Beijing Military Region (解放軍北京軍區), including a soldier, a vice company-level staff (副連職幹事), company instructor (連隊指導員), deputy battalion and battalion-level staff (副營職及正營職幹事), from January 1971 to June 1986. He worked for the national Ministry of Personnel and Ministry of Supervision (國家人事部、監察部) from June 1986 to January 1993. He served in various positions in Central Commission for Discipline Inspection of the Communist Party of China (中共中央紀律檢查委員會), including the discipline inspector (紀律檢查員) and inspector (監察專員) of the comprehensive monitoring bureau (監察綜合室正局級), from January 1993 to May 2009. Mr. DONG has been a deputy director of the party and discipline inspection team of Chinalco since May 2009 and has been the director of discipline inspection committee (patrol office) of Chinalco since December 2009. He has been a Supervisor of the Company since June 2011. Mr. DONG Hai obtained his master's degree in business administration from Zhongnan University of Economics and Law (中南財經政法大學) in June 2008.

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 division I of the audit department, from December 1992 to October 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 September 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 November 2009. He has been the director of the audit department of Chinalco from December 2009 to February 2016. He has been the director and chief financial officer of China Copper Co. Ltd (中國銅業有限公司) since August 2015. 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).

SENIOR MANAGEMENT

Mr. ZONG Xiaoping(宗小平): Mr. ZONG Xiaoping was 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 November 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 November 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 October 2016, 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), the chairman and legal representative of China Construction Aluminum Advanced Material Co., Ltd (中建鋁新材料有限公司) since August 2015 and the president and the deputy party secretary to China Aluminum International Engineering Corporation Limited (中鋁國際工程股份有限公司) since October 2016. Mr. ZONG Xiaoping obtained a bachelor degree in construction materials and products and a master 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 2007, respectively. Mr. ZONG Xiaoping is a professor-level senior engineer.

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 (機械化工程公司). From April 1999 to March 2011, he served various positions such as general manager in Sixth Metallurgical Company. He has been an executive director and the general manager in Sixth Metallurgical Company since March 2011 and the Vice President of the Company since August 2016. Mr. WU Zhigang studied in Luoyang Engineering & Research Institute for Nonferrous Metals Processing (洛陽有色金屬加工設計研究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. 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 May 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. MA Ning (馬寧): born in July 1963, held various positions in SAMI, including the engineer of the hot wind department, the head of the purification department, the chief designer and the vice dean, successively from September 1986 to March 2010. He served in various positions in Shenyang Branch of Chalieco (中鋁國際瀋陽分公司), including the deputy general manager, from May 2006 to March 2010. He has been the Vice President of the Company since April 2010. Mr. MA has been a director of Duyun Tongda since May 2011. He has been the chairman of Wenzhou Tonggang since August 2012. He has been the chairman of Wenzhou Tongrun since November 2012 as well as an executive director of Beijing Zichen Investment Development Company Limited (北京紫宸投資發展有限公司) since February 2014 and an executive director of China Aluminum International Aluminum Technological Development Co., Ltd. (中鋁國際鋁材科技產業有限公司) since July 2016. In July 1986, Mr. MA graduated from Shenyang University (瀋陽大學), majoring in environmental engineering. Mr. MA was granted the title of excellent senior engineer by Chinalco.

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 in the audit department of KPMG Huazhen (畢馬威華振會計師事務所) from July 1999 to August 2001. He served as the assistant manager of the audit department of KPMG Huazhen (畢馬威華振會計師事務所) from January 2003 to March 2004. Mr. ZHAI served in various positions such as the senior operation manager of the capital market division of the capital operation department, operation manager, operation manager of the secretary to the Board of Chalco (中國鋁業) from April 2004 to December 2008. He served as the vice director of the capital market division of the capital operation department of Chinalco from January 2009 to March 2011. He served as a director of the capital market division of the capital operation department of Chinalco from April 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. Mr. ZHAI 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 2016, the Group had a total of 11,528 employees, of which 8,712 are male and 2,816 are female, representing 76% and 24% of the total staff, respectively. In addition, the Group has off-post reserve labor force of 2,446.

Table I: The following table shows a breakdown of our employees by business function as of 31 December 2016:

No.	Category	Number of Employees	Percentage
1	Operation and management personnel	2,785	24%
2	Engineering technicians	6,192	54%
3	Production and operation personnel	2,090	18%
4	Service and other personnel	461	4%
Total		11,528	100%

Table II: The following table shows a breakdown of our employees by level of education as of 31 December 2016:

No.	Category	Number of Employees	Percentage
1	Graduate degree and above	1,038	9%
2	Undergraduate degree	4,842	42%
3	Associate degree	2,536	22%
4	Secondary school and below	3,112	27%
Total		11,528	100%

INCENTIVES FOR EMPLOYEES

The Group keeps responding to the needs of employees' development. 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 trainings items 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 and performance-based salary. 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

PKF
Accountants &
business advisers

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

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

OPINION

We have audited the consolidated financial statements of China Aluminum International Engineering Corporation Limited (the "Company") and its subsidiaries (together, the "Group") set out on pages 128 to 284, which comprise the consolidated balance sheet as at 31 December 2016, 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 2016, 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.

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 23 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.

PROVISION FOR IMPAIRMENT OF TRADE AND OTHER RECEIVABLES

The Group's provision for impairment of trade and other receivables as disclosed in Notes 21 and 22 to the consolidated financial statements was determined to be a key audit matter because of the significant of the balances, and the inherent subjectivity involved in making judgement in relation to credit risk exposure and estimating the provision.

Our procedures included, amongst others:

- evaluating provisioning 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 overdue 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.

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 62.5% of equity interest in Ninth Metallurgical Construction Co., Ltd. ("Ninth Metallurgical Construction", 九冶建設有限公司) 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 Ninth Metallurgical Construction Co., Ltd. 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;

- 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 2016 (“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.

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.

– 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.

The engagement partner on the audit resulting in this independent auditor's report is Wan Tak Shing as appearing on his Practicing Certificate.

PKF
Certified Public Accountants
Hong Kong

20 March 2017

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

	Note	Year ended 31 December 2016 RMB'000	2015 RMB'000
Revenue	5	**24,765,620**	19,449,529
Cost of sales	6	**(22,033,172)**	(17,210,007)
Gross profit		**2,732,448**	2,239,522
Business tax and surcharges	6	**(113,358)**	(210,605)
Selling and marketing expenses	6	**(117,538)**	(87,502)
Administrative expenses	6	**(1,155,247)**	(1,048,861)
Other income	7	**109,364**	134,191
Other losses – net	8	**(128,420)**	(57,441)
Operating profit		**1,327,249**	969,304
Finance income	9	**322,076**	323,608
Finance expenses	9	**(506,296)**	(451,437)
Gain on disposal of an associate	19(b)	**190,249**	–
Gain on partial disposal of an associate	19(b)	**68,079**	–
Gain on bargain purchase from business combination	42	**269,651**	–
Share of (losses)/profits of investments accounted for using equity method	19(b)	**(89,281)**	20,152
Profit before income tax		**1,581,727**	861,627
Income tax expense	10	**(279,360)**	(189,214)
Profit for the year		**1,302,367**	672,413
Other comprehensive income			
Items that may be reclassified to profit or loss			
Fair value (losses)/gains on available-for-sale financial assets, net of tax		**(1,090)**	9,807
Reclassified to profit on disposal of available-for-sale financial assets, net of tax		**–**	(27,443)
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		**81,413**	73,038
Item that will not be reclassified subsequently to profit or loss			
Remeasurements of post-employment benefit obligations, net of tax		**33,094**	(32,148)
Other comprehensive income for the year, net of tax		**56,503**	23,254
Total comprehensive income for the year		**1,358,870**	695,667

	Note	Year ended 31 December 2016 RMB'000	2015 RMB'000
Profit attributable to:			
Equity owners of the Company		**1,144,403**	540,979
Non-controlling interests		**157,964**	131,434
		1,302,367	672,413
Total comprehensive income attributable to:			
Equity owners of the Company		**1,200,796**	563,366
Non-controlling interests		**158,074**	132,301
		1,358,870	695,667
Earnings per share for profit attributable to equity owners of the Company		**RMB**	RMB
– Basic	11	**0.43**	0.20
– Diluted	11	**0.43**	0.20

The notes on pages 136 to 284 form an integral part of these consolidated financial statements.

CONSOLIDATED BALANCE SHEET

	Note	At 31 December 2016 RMB'000	2015 RMB'000
Assets			
Non-current assets			
Property, plant and equipment	15	**2,440,728**	2,052,454
Land use rights	16	**788,902**	792,950
Investment properties	17	**179,774**	77,994
Trade and notes receivables	21	**1,637,814**	1,752,312
Prepayments and other receivables	22	**1,639,934**	592,047
Intangible assets	18	**128,364**	142,610
Investments accounted for using the equity method	19(b)	**212,831**	299,539
Available-for-sale financial assets	20	**233,799**	9,973
Deferred income tax assets	35	**424,159**	381,250
Other non-current assets		**27,912**	12,015
Total non-current assets		**7,714,217**	6,113,144
Current assets			
Available-for-sale financial assets	20	**18,000**	149,200
Inventories	24	**1,339,558**	771,765
Trade and notes receivables	21	**14,419,026**	10,687,753
Prepayments and other receivables	22	**4,256,685**	3,330,491
Amounts due from customers for contract work	23	**6,164,121**	4,098,534
Current income tax prepayments		**18,187**	85,978
Restricted cash	25	**910,192**	723,510
Time deposits	26	**18,426**	28,929
Cash and cash equivalents	27	**7,714,218**	4,847,792
Total current assets		**34,858,413**	24,723,952
Total assets		**42,572,630**	30,837,096
Equity			
Share capital	28	**2,663,160**	2,663,160
Reserves	29	**6,743,868**	4,500,560
Consolidated equity attributable to equity owners of the Company		**9,407,028**	7,163,720
Non-controlling interests		**4,609,546**	2,006,863
Total equity		**14,016,574**	9,170,583

	Note	At 31 December 2016 RMB'000	2015 RMB'000
Liabilities			
Non-current liabilities			
Deferred income	30	**85,793**	88,269
Long-term borrowings	33	**1,980,232**	1,210,935
Retirement and other supplemental benefit obligations	32	**979,448**	1,076,882
Deferred income tax liabilities	35	**51,748**	629
Trade and other payables	34	**21,949**	1,431
Total non-current liabilities		**3,119,170**	2,378,146
Current liabilities			
Trade and other payables	34	**14,740,430**	11,070,114
Dividends payable	36	**55,441**	55,347
Amounts due to customers for contract work	23	**643,790**	420,286
Short-term borrowings	33	**9,684,897**	7,461,720
Current income tax liabilities		**183,965**	143,710
Retirement and other supplemental benefit obligations	32	**128,363**	137,190
Total current liabilities		**25,436,886**	19,288,367
Total liabilities		**28,556,056**	21,666,513
Total equity and liabilities		**42,572,630**	30,837,096
Net current assets		**9,421,527**	5,435,585
Total assets less current liabilities		**17,135,744**	11,548,729

The notes on pages 136 to 284 form an integral part of these consolidated financial statements.

The consolidated financial statements were approved by the Board of Directors on 20 March 2017 and were signed on its behalf.

He Zhihui	**Zhang Jian**
Director	*Director*

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

	Attributable to equity owners of the Company											
	Share capital RMB'000 (Note 28)	**Capital reserve** RMB'000	**Statutory surplus reserve** RMB'000 (Note 29)	**Investment revaluation reserve** RMB'000	**Remeasure-ments of post-employment benefit obligations** RMB'000	**Currency translation differences** RMB'000	**Special reserve** RMB'000 (Note 29)	**Other equity instruments** RMB'000 (Note 29)	**Retained earnings** RMB'000	**Total** RMB'000	**Non-controlling interests** RMB'000	**Total equity** RMB'000
At 1 January 2015	2,663,160	756,507	113,459	17,636	75,790	4,050	21,790	–	3,012,524	6,664,916	2,022,985	8,687,901
Profit for the year	–	–	–	–	–	–	–	–	540,979	540,979	131,434	672,413
Other comprehensive income:												
Fair value change of available-for-sale financial assets – gross	–	–	–	11,538	–	–	–	–	–	11,538	–	11,538
Fair value change of available-for-sale financial assets – tax	–	–	–	(1,731)	–	–	–	–	–	(1,731)	–	(1,731)
Reclassified to profit on disposal of available-for-sale financial assets – gross	–	–	–	(32,286)	–	–	–	–	–	(32,286)	–	(32,286)
Reclassified to profit on disposal of available-for-sale financial assets – tax	–	–	–	4,843	–	–	–	–	–	4,843	–	4,843
Remeasurements of post-employment benefit obligations – gross	–	–	–	–	(41,042)	–	–	–	–	(41,042)	1,020	(40,022)
Remeasurements of post-employment benefit obligations – tax	–	–	–	–	8,027	–	–	–	–	8,027	(153)	7,874
Currency translation differences	–	–	–	–	–	73,038	–	–	–	73,038	–	73,038
Total comprehensive income	–	–	–	(17,636)	(33,015)	73,038	–	–	540,979	563,366	132,301	695,667
Dividends to equity owners	–	–	–	–	–	–	–	–	(266,316)	(266,316)	(695)	(267,011)
Capital contributions by non-controlling interest of the subsidiaries	–	–	–	–	–	–	–	–	–	–	2,629	2,629
Capital contributions by other equity owners of associates – gross	–	15,500	–	–	–	–	–	–	–	15,500	–	15,500
Capital contributions by other equity owners of associates – tax	–	(3,875)	–	–	–	–	–	–	–	(3,875)	–	(3,875)
Interests paid for senior perpetual capital securities	–	–	–	–	–	–	–	–	–	–	(126,792)	(126,792)
Appropriation to special reserve	–	–	–	–	–	–	1,704	–	(1,704)	–	–	–
Appropriation to statutory surplus reserve	–	–	17,167	–	–	–	–	–	(17,167)	–	–	–
Losing control of subsidiaries	–	–	–	–	–	–	–	–	–	–	(23,565)	(23,565)
Issuing of perpetual medium-term notes	–	–	–	–	–	–	–	190,129	–	190,129	–	190,129
At 31 December 2015	2,663,160	768,132	130,626	–	42,775	77,088	23,494	190,129	3,268,316	7,163,720	2,006,863	9,170,583

The notes on pages 136 to 284 form an integral part of these consolidated financial statements.

	Attributable to equity owners of the Company											
	Share capital RMB'000 (Note 28)	Capital reserve RMB'000	Statutory surplus reserve RMB'000 (Note 29)	Investment revaluation reserve RMB'000	Remeasure-ments of post-employment benefit obligations RMB'000	Currency translation differences RMB'000	Special reserve RMB'000 (Note 29)	Other equity instruments RMB'000 (Note 29)	Retained earnings RMB'000	Total RMB'000	Non-controlling interests RMB'000	Total equity RMB'000
At 1 January 2016	2,663,160	768,132	130,626	–	42,775	77,088	23,494	190,129	3,268,316	7,163,720	2,006,863	9,170,583
Profit for the year	–	–	–	–	–	–	–	–	1,144,403	1,144,403	157,964	1,302,367
Other comprehensive income:												
Fair value loss on available-for-sale financial assets – gross	–	–	–	(1,282)	–	–	–	–	–	(1,282)	–	(1,282)
Fair value loss on 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	–	–	–	–	42,021	–	–	–	–	42,021	129	42,150
Remeasurements of post-employment benefit obligations – tax	–	–	–	–	(9,037)	–	–	–	–	(9,037)	(19)	(9,056)
Currency translation differences	–	–	–	–	–	81,413	–	–	–	81,413	–	81,413
Total comprehensive income	–	(56,914)	–	(1,090)	32,984	81,413	–	–	1,144,403	1,200,796	158,074	1,358,870
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 interest of the subsidiaries	–	–	–	–	–	–	–	–	–	–	1,602	1,602
Capital withdrawal by non-controlling interests of subsidiaries	–	–	–	–	–	–	–	–	–	–	(2,405)	(2,405)
Appropriation of special reserve	–	–	–	–	–	–	(12,795)	–	12,795	–	–	–
Appropriation to statutory surplus reserve	–	–	26,740	–	–	–	–	–	(26,740)	–	–	–
At 31 December 2016	2,663,160	711,218	157,366	(1,090)	75,759	158,501	10,699	1,402,731	4,228,684	9,407,028	4,609,546	14,016,574

The notes on pages 136 to 284 form an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENT OF CASH FLOWS

	Note	Year ended 31 December 2016 RMB'000	2015 RMB'000
Cash flows from operating activities			
Cash used in operations	39	**(1,013,858)**	(284,963)
Income tax paid		**(221,402)**	(237,869)
Interest received		**42,903**	47,764
Net cash used in operating activities		**(1,192,357)**	(475,068)
Cash flows from investing activities			
Purchase of property, plant and equipment		**(139,196)**	(236,593)
Purchase of intangible assets		**(3,564)**	(5,475)
Purchase of other non-current assets		**(6,193)**	–
Purchase of available-for-sale financial assets		**(1,139,500)**	(5,964,200)
Prepayment for investment		**–**	(29,980)
Cash inflows arising from business combination	42	**356,386**	–
Payment for investments accounted for using the equity method		**(22,042)**	–
Cash outflows arising from disposal of subsidiaries		**–**	(7,014)
Interest received from available-for-sale financial assets and time deposits		**6,713**	45,122
(Increase)/decrease in time deposits		**(9,497)**	732,575
Proceeds from disposal of property, plant and equipment		**5,507**	23,555
Proceeds from disposal of available-for-sale financial assets		**1,266,700**	6,353,286
Proceeds from disposal of investments accounted for using the equity method		**77,959**	–
Receipt of government grants		**8,267**	3,137
Financing provided to proprietors		**(1,231,480)**	(391,641)
Receiving payment of financing provided to proprietors		**534,964**	1,034,367
Dividends received from available-for-sale financial assets		**8**	7,772
Net cash (used in)/generated from investing activities		**(294,968)**	1,564,911

		Year ended 31 December	
		2016	2015
	Note	**RMB'000**	RMB'000
Cash flows from financing activities			
Capital contributions made by the non-controlling interests		**1,602**	2,629
Draw down of bank borrowings		**5,471,483**	4,924,833
Repayments of bank borrowings		**(4,715,660)**	(4,696,810)
Borrowings received from a financial institution		**735,848**	–
Borrowings received from related parties	33(vii)	**2,075,000**	1,350,000
Repayment of borrowings received from related parties	33(vii)	**(3,017,000)**	(1,240,000)
Cash inflows arising from notes financing		**611,613**	–
Increase in restricted cash		**(832,163)**	–
Interests paid		**(375,669)**	(412,951)
Dividends paid to shareholders of the Company		**(160,358)**	(266,316)
Dividends paid to non-controlling interests		**(983)**	(2,931)
Net proceeds from issuance of perpetual medium-term notes	29	**–**	199,400
Net proceeds from issuance of renewable corporate bonds	29	**1,201,960**	–
Net proceeds from issuance of senior perpetual capital securities	37	**2,391,466**	–
Dividends paid to the holders of perpetual medium-term notes		**(10,300)**	–
Dividends paid to the holders of senior perpetual capital securities	37	**(136,449)**	(126,792)
Net proceeds from issuance of short-term bonds	33(vi)	**2,494,000**	4,300,000
Net proceeds from issuance of long-term bonds	33(vi)	**895,500**	–
Repayment of short-term bonds		**(2,300,000)**	(4,500,000)
Net cash generated from/(used in) financing activities		**4,329,890**	(468,938)
Net increase in cash and cash equivalents		**2,842,565**	620,905
Cash and cash equivalents at beginning of year		**4,847,792**	4,207,857
Exchange gains on cash and cash equivalents		**23,861**	19,030
Cash and cash equivalents at end of year		**7,714,218**	4,847,792

The notes on pages 136 to 284 are an integral part of these 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 (中國鋁業公司, "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.

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.

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 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.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.1 Basis of preparation (continued)

2.1.1 Changes in accounting policy and disclosures

(a) Initial application of IFRSs

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

IAS 1	Amendments – Disclosure Initiative
IAS 16	Amendments – Clarification of Acceptable Methods of Depreciation and Amortisation
IAS 16	Amendments – Bearer Plants
IAS 27	Amendments – Equity Method in Separate Financial Statements
IAS 28	Amendments – Investment Entities: Applying the Consolidation Exception
IAS 38	Amendments – Clarification of Acceptable Methods of Depreciation and Amortisation
IAS 41	Amendments – Bearer Plants
IFRS 10	Amendments – Investment Entities: Applying the Consolidation Exception
IFRS 11	Amendments – Accounting for Acquisitions of Interests in Joint Operations
IFRS 12	Amendments – Investment Entities: Applying the Consolidation Exception
Annual Improvements (2012-2014)	Amendments to IFRS 5, IFRS 7 and IAS 19

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.

IFRS 14 "Regulatory Deferral Accounts" is not applicable to the Group.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.1 Basis of preparation (continued)

2.1.1 Changes in accounting policy and disclosures (continued)

(b) IFRSs in issue but not yet effective

The following IFRSs in issue at 31 December 2016 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 2016:

IFRS 9	Financial Instruments[2]
IFRS 15	Revenue from Contracts with Customers[2]
IFRS 16	Leases[3]
IFRIC 22	Foreign Currency Transactions and Advance Consideration[2]
Amendments to IFRS 4	Applying IFRS 9, Financial Instruments with IFRS 4, Insurance Contracts[2]
Amendments to IAS 7	Disclosure Initiative[1]
Amendments to IAS 12	Recognition of Deferred Tax Assets for Unrealised Losses[1]
Amendments to IAS 28 and IFRS 10	Sale or Contribution of Assets between an Investor and its Associate or Joint Venture[4]
Amendments to IAS 40	Transfers of Investment Property[2]
Amendments to IFRS 2	Classification and Measurement of Share-based Payment Transactions[2]
Amendments to IFRSs	Annual Improvements to IFRS 2014-2016 Cycle[5]

1 Effective for annual periods beginning on or after 1 January 2017
2 Effective for annual periods beginning on or after 1 January 2018
3 Effective for annual periods beginning on or after 1 January 2019
4 Effective for annual periods beginning on or a date to be determined
5 Effective for annual periods beginning on or after 1 January 2017 or 1 January 2018, as appropriate

The Group is in the process of making an assessment of the impact of these new and revised IFRSs upon initial application. So far, the Group considers that these new and revised IFRSs are unlikely to have a significant impact on the Group's financial performance and financial position.

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. 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.

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.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.2 Subsidiaries (continued)

2.2.2Separate financial statements

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

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.

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.

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".

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.

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 (losses)/gains – 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.

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.

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.

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.

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.

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.

(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.

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 (losses)/gains – 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.

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

(a) Assets carried at amortised cost

The Group assesses at the end of each reporting period whether there is objective evidence that a financial asset or group of financial assets is impaired. A financial asset or a group of financial assets is impaired and impairment losses are incurred 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.

Evidence of impairment may include indications that the debtors or a group of debtors is experiencing significant financial difficulty, default or delinquency in interest or principal payments, the probability that they will enter bankruptcy or other financial reorganisation, and where observable data indicate that there is a measurable decrease in the estimated future cash flows, such as changes in arrears or economic conditions that correlate with defaults.

For loans and receivables category, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future credit losses that have not been incurred) discounted at the financial asset's original effective interest rate. The carrying amount of the asset is reduced and the amount of the loss is recognised in consolidated statement of comprehensive income. If a loan or held-to-maturity investment has a variable interest rate, the discount rate for measuring any impairment loss is the current effective interest rate determined under the contract. As a practical expedient, the Group may measure impairment on the basis of an instrument's fair value using an observable market price.

If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognised (such as an improvement in the debtor's credit rating), the reversal of the previously recognised impairment loss is recognised in the consolidated statement of comprehensive income.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.13 Impairment of financial assets (continued)

(b) Assets classified as available for sale

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 also 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.

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. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

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 allowance for impairment.

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.

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. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

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.

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.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.20 Employee benefits (continued)

(a) Pension obligations (continued)

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.

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.

2.21 Share-based payments

The Group entered into cash-settled share-based payment transaction with certain directors, senior management officers and other employees, under which the entity receive service from employees as consideration for share appreciation rights (“SAR”) granted by the Company.

The SAR granted by the Company to the employees of the subsidiary undertakings in the Group is treated as a cash-settled share-based payments transaction among group entities, recognised at the fair value of the liability incurred and is expensed over the vesting period. The liability is re-measured at each end of the reporting period to its fair value, with all changes recognised immediately in the consolidated statement of comprehensive income.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.22 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.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.22 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.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.22 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.

2.23 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.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.24 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.

2.25 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.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.26 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.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.27 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.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.27 Revenue recognition (continued)

(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.

(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. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.28 Research and development

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

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

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

2.29 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. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.30 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.

3. CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENT

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 (CONTINUED)

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.

3.3 Provision for impairment of trade receivables and other receivables

A provision for impairment of trade and other receivables is established when there is objective evidence that the Group will not be able to collect all amounts due according to the original terms of the receivables. Significant financial difficulties of the debtor, probability that the debtor will enter bankruptcy or financial reorganisation, and default or delinquency in payments are considered indicators that a receivable is impaired. The amount of the provision is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the original effective interest rate. Cash flows relating to trade receivables and other receivables are discounted if the effect of discounting is material. The carrying amount of the asset is reduced through the use of an allowance account and the amount of the loss is recognised in the consolidated statement of comprehensive income. When trade receivables or other receivables are uncollectible, it is written off against the allowance account for trade and other receivables. Subsequent recoveries of amounts previously written off are recognised as income in the consolidated statement of comprehensive income. The impairment is subject to management's assessment at the end of the reporting period, and hence, the provision amount is subject to uncertainty.

3. CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENT (CONTINUED)

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.

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. CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENT (CONTINUED)

3.6 Jointly control

As described in the Note 19(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.

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.

4. 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.

4.1 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 2016 and 2015.

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.

4. FINANCIAL RISK MANAGEMENT (CONTINUED)

4.1 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			
	2016		2015	
	USD	**Others**	USD	Others
	RMB'000	**RMB'000**	RMB'000	RMB'000
Restricted cash, time deposit and cash and cash equivalents (Note 25, 26, 27)	**3,502,221**	**26,372**	337,909	40,804
Trade receivables (Note 21)	**100,641**	**497,327**	637,517	173,398
Other receivables (Note 22)	**–**	**1,920**	–	1,915
Borrowings (Note 33)	**(1,791,210)**	**–**	(1,445,084)	–
Trade and other payables (Note 34)	**(568,122)**	**(31,368)**	(371,176)	(34,127)
Net exposure in RMB	**1,243,530**	**494,251**	(840,834)	181,990

A 5% strengthening of RMB against the USD as at 31 December 2016 and 2015 would have increased/(decreased), the net profit by the amounts shown below:

	As at 31 December	
	2016	2015
	RMB'000	RMB'000
Net profit change	**(46,632)**	31,531

A 5% weakening of RMB against USD as at 31 December 2016 and 2015 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.

4. FINANCIAL RISK MANAGEMENT (CONTINUED)

4.1 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 2016 and 2015, the notional principal amounts of the outstanding forward currency contract were nil.

The stated changes represent management's assessment of reasonably possible changes in foreign exchange rates over the period until the next annual balance sheet date. The analysis is performed on the same basis for the years ended 31 December 2016 and 2015.

(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 2016, the Group's borrowings of approximately RMB748 million (2015: RMB478 million) and trade receivables of approximately RMB683 million (2015: RMB321 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.

4. FINANCIAL RISK MANAGEMENT (CONTINUED)

4.1 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	
	2016	2015
Change in equity securities price	**5%**	5%

	For the year ended 31 December	
	2016 RMB'000	2015 RMB'000
Impact on equity		
Increase/(decrease) in equity for the year		
– as a result of increase in equity securities price	**9,130**	–
– as a result of decrease in equity securities price	**(9,130)**	–

4. FINANCIAL RISK MANAGEMENT (CONTINUED)

4.1 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 impairment allowance. The carrying amounts of trade receivables, showing separately those receivables that are past due or impaired, are disclosed in Note 21.

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 4.1(c).

4. FINANCIAL RISK MANAGEMENT (CONTINUED)

4.1 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 2016					
Borrowings	9,951,466	515,232	1,560,197	31,454	12,058,349
Trade and other payables (excluding non-financial liabilities)	12,844,119	21,949	–	–	12,866,068
Dividends payable	55,441	–	–	–	55,441
	22,851,026	537,181	1,560,197	31,454	24,979,858
Financial guarantees issued					
Maximum amount guaranteed	2,355,000	–	–	–	2,355,000

4. FINANCIAL RISK MANAGEMENT (CONTINUED)

4.1 Financial risk factors (continued)

(c) Liquidity risk (continued)

	Within 1 year RMB'000	1–2 years RMB'000	2–5 years RMB'000	Over 5 years RMB'000	Total RMB'000
At 31 December 2015					
Borrowings	7,677,984	1,223,083	10,043	–	8,911,110
Trade and other payables (excluding non-financial liabilities)	9,006,643	1,431	–	–	9,008,074
Dividends payable	55,347	–	–	–	55,347
	16,739,974	1,224,514	10,043	–	17,974,531
Financial guarantees issued					
Maximum amount guaranteed (Note 41(a))	2,000,000	–	–	–	2,000,000

4.2 Capital risk management

The objectives of the Group when managing capital are to safeguard the ability of the Group in continuing as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

In order to maintain or adjust the capital structure, the Group may adjust the amount of dividends paid to shareholders, issue new shares or sell assets to reduce debts.

4. FINANCIAL RISK MANAGEMENT (CONTINUED)

4.2 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	
	2016	2015
	RMB'000	RMB'000
Total borrowings and other liabilities	**27,126,739**	20,219,833
Less: Restricted cash, time deposits and cash and cash equivalents (Note 25, 26, 27)	**(8,642,836)**	(5,600,231)
Net debt	**18,483,903**	14,619,602
Total equity attributed to equity owners of the Company	**9,407,028**	7,163,720
Total capital	**27,890,931**	21,783,322
Gearing ratio	**66%**	67%

4. FINANCIAL RISK MANAGEMENT (CONTINUED)

4.3 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 2016 and 2015.

	At 31 December	
	2016	2015
	RMB'000	RMB'000
Level 1		
Available-for-sale financial assets		
Listed equity securities	**214,826**	–
Level 3		
Available-for-sale financial assets		
Unlisted equity securities	**18,973**	9,973
Short-term investments	**18,000**	149,200
	251,799	159,173

There were no transfer between level 1 and level 2.

4. FINANCIAL RISK MANAGEMENT (CONTINUED)

4.3 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 fair value 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.

4. FINANCIAL RISK MANAGEMENT (CONTINUED)

4.3 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 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)	5,000	–
Settlement on expiration	–	(1,266,700)
At end of the year	18,973	18,000

The following table presents the changes in level 3 instruments for the year ended 31 December 2015:

	Available-for-sale financial assets	
	Unlisted equity securities RMB'000	Short-term investments RMB'000
At beginning of the year	9,973	501,000
Additions	–	149,200
Settlement on expiration	–	(501,000)
At end of the year	9,973	149,200

5. REVENUE AND SEGMENT INFORMATION

(a) Revenue

The Group's revenue is set out below:

	Year ended 31 December	
	2016	2015
	RMB'000	RMB'000
Engineering design and consultancy	**1,606,718**	1,761,056
Engineering and construction contracting	**14,580,402**	10,740,412
Equipment manufacturing	**658,079**	486,382
Trading	**7,920,421**	6,461,679
	24,765,620	19,449,529

(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.

5. REVENUE AND SEGMENT INFORMATION (CONTINUED)

(b) Segment information (continued)

Capital expenditure comprises additions to property, plant and equipment (Note 15), land use rights (Note 16), investment properties (Note 17), intangible assets (Note 18), investments accounted for using the equity method (Note 19(b)), unlisted equity securities (Note 20) 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 2016:

The segment results for the year ended 31 December 2016 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
Segment revenue and results						
Segment revenue	1,683,614	14,772,222	736,338	7,961,134	(387,688)	24,765,620
Inter-segment revenue	(76,896)	(191,820)	(78,259)	(40,713)	387,688	–
Revenue	1,606,718	14,580,402	658,079	7,920,421	–	24,765,620
Segment result	20,466	1,186,814	(31,930)	143,772	8,127	1,327,249
Finance income	79,679	384,189	28,712	237,348	(407,852)	322,076
Finance expenses	(51,889)	(759,222)	(25,536)	(216,299)	546,650	(506,296)
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						(279,360)
Profit for the year						1,302,367
Other segment items						
Amortisation	34,833	19,387	3,354	–	–	57,574
Depreciation	63,848	87,974	28,389	49	–	180,260
Provision for						
– foreseeable losses on construction contracts	–	12,801	–	–	–	12,801
– impairment on trade and other receivables	55,067	79,655	9,641	113	–	144,476
– provision of inventories	2,008	1,660	3,052	–	–	6,720

5. REVENUE AND SEGMENT INFORMATION (CONTINUED)

(b) Segment information (continued)

(i) As at and for the year end 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:

	Engineering design and consultancy RMB'000	Engineering and construction contracting RMB'000	Equipment manufacturing RMB'000	Trading RMB'000	Inter-segment elimination RMB'000	Total RMB'000
Assets						
Segment assets	5,205,550	31,912,163	3,362,213	7,149,753	(5,712,226)	41,917,453
Unallocated assets						
– Deferred income tax assets						424,159
– Current income tax prepayments						18,187
– Investments accounted for using equity method						212,831
Total assets						42,572,630
Liabilities						
Segment liabilities	3,153,491	20,738,898	2,604,565	6,732,246	(4,908,857)	28,320,343
Unallocated liabilities						
– Deferred income tax liabilities						51,748
– Current income tax liabilities						183,965
Total liabilities						28,556,056
Capital expenditure	73,194	630,077	72,984	146	–	776,401

5. REVENUE AND SEGMENT INFORMATION (CONTINUED)

(b) Segment information (continued)

(ii) As at and for the year ended 31 December 2015:

The segment results for the year ended 31 December 2015 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
Segment revenue and results						
Segment revenue	1,861,150	10,832,162	590,070	6,590,273	(424,126)	19,449,529
Inter-segment revenue	(100,094)	(91,750)	(103,688)	(128,594)	424,126	–
Revenue	1,761,056	10,740,412	486,382	6,461,679	–	19,449,529
Segment result	125,149	780,637	18,351	170,537	(125,370)	969,304
Finance income	62,688	287,916	9,414	68,336	(104,746)	323,608
Finance expenses	(82,204)	(397,431)	(27,343)	(38,190)	93,731	(451,437)
Share of (losses)/profit of associates	(517)	1,253	(1,302)	–	–	(566)
Share of (losses)/profit of joint ventures	(1,764)	22,482	–	–	–	20,718
Income tax expense						(189,214)
Profit for the year						672,413
Other segment items						
Amortisation	61,483	14,192	2,897	6	–	78,578
Depreciation	50,401	56,086	19,876	69	–	126,432
Provision for/(reversal of)						
– foreseeable losses on construction contracts	–	5,132	–	–	–	5,132
– impairment on trade and other receivables	40,963	25,654	12,309	(181)	–	78,745
– provision of inventories	–	(2,256)	–	–	–	(2,256)

5. REVENUE AND SEGMENT INFORMATION (CONTINUED)

(b) Segment information (continued)

(ii) As at and for the year ended 31 December 2015: (continued)

The segment assets and liabilities as at 31 December 2015 and capital expenditure for the year then ended are as follows:

	Engineering design and consultancy RMB'000	Engineering and construction contracting RMB'000	Equipment manufacturing RMB'000	Trading RMB'000	Inter-segment elimination RMB'000	Total RMB'000
Assets						
Segment assets	5,469,299	21,736,148	1,687,454	3,676,383	(2,498,955)	30,070,329
Unallocated assets						
– Deferred income tax assets						381,250
– Current income tax prepayments						85,978
– Investments accounted for using equity method						299,539
Total assets						30,837,096
Liabilities						
Segment liabilities	3,192,954	17,378,473	1,491,275	1,667,290	(2,207,818)	21,522,174
Unallocated liabilities						
– Deferred income tax liabilities						629
– Current income tax liabilities						143,710
Total liabilities						21,666,513
Capital expenditure	166,352	56,150	23,018	261	–	245,781

5. REVENUE AND SEGMENT INFORMATION (CONTINUED)

(b) Segment information (continued)

(iii) Analysis of information by geographical regions:

Revenue

	Year ended 31 December	
	2016	2015
	RMB'000	RMB'000
The PRC	**23,921,159**	18,301,976
Other countries	**844,461**	1,147,553
	24,765,620	19,449,529

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

	At 31 December	
	2016	2015
	RMB'000	RMB'000
The PRC	**7,029,051**	5,695,773
Other countries	**27,208**	26,148
	7,056,259	5,721,921

(iv) For the years ended 31 December 2016 and 2015, revenue of approximately RMB589 million and RMB1,314 million were derived from a single largest third party and a single largest related party customer respectively. These revenues are attributed to the trading segment.

For the years ended 31 December 2016 and 2015, the Group does not have any single customer with the transaction value over 10% of the total external sales.

6. EXPENSES BY NATURE

	Year ended 31 December	
	2016	2015
	RMB'000	RMB'000
Raw materials and consumables used	**12,195,486**	9,226,521
Purchased equipment	**1,169,036**	1,092,372
Subcontracting charges	**6,801,087**	5,244,942
Employee benefits	**1,568,658**	1,415,169
Depreciation and amortisation		
– property, plant and equipment	**177,167**	123,587
– investment properties	**3,093**	2,845
– land use rights	**22,783**	21,421
– intangible assets	**34,791**	57,157
Business tax and other transaction taxes	**129,420**	253,052
Travelling expenses	**195,743**	186,718
Office expenses	**40,652**	29,161
Freight charges	**50,213**	82,869
Operating lease rentals	**47,687**	46,522
Provision for impairment of assets		
– trade and notes receivables	**188,747**	106,472
– prepayments and other receivables	**55,459**	31,033
– amounts due from customers for contract work	**12,801**	5,132
– inventories	**6,720**	–
Reversal of provision for impairment of assets		
– trade and notes receivables	**(79,548)**	(56,556)
– prepayments and other receivables	**(20,182)**	(2,204)
– inventories	**–**	(2,256)
Research and development costs	**214,419**	106,131
Professional and technical consulting fees	**179,185**	138,098
Auditor's remuneration	**7,180**	9,000
Outsourcing charges	**5,640**	6,951
Bank charges	**35,421**	37,665
Business development and entertainment	**31,007**	26,474
Property management fees	**38,646**	13,620
Others	**308,004**	355,079
Total cost of sales, business tax and surcharges, selling and marketing expenses and administrative expenses	**23,419,315**	18,556,975

7. OTHER INCOME

	Year ended 31 December	
	2016	2015
	RMB'000	RMB'000
Dividend income from available-for-sale financial assets	**–**	1,405
Interest from short-term investments	**4,570**	20,822
Write-back of long outstanding payables (i)	**23,755**	23,941
Government grants (ii)	**38,806**	55,339
Others	**42,233**	32,684
	109,364	134,191

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.

8. OTHER LOSSES – NET

	Year ended 31 December	
	2016	2015
	RMB'000	RMB'000
Net foreign exchange losses	**(95,411)**	(43,079)
Gains on disposal of available-for-sale financial assets	**–**	35,813
Gains on disposal of property, plant and equipment, and intangible assets	**2,213**	3,481
Others	**(35,222)**	(53,656)
	(128,420)	(57,441)

9. FINANCE EXPENSES – NET

	Year ended 31 December	
	2016	2015
	RMB'000	RMB'000
Interest income on deposits with banks	81,812	161,175
Interest income on receivables with interests	220,196	152,996
Interest income on deposit in related parties (Note 44(a))	13,341	9,437
Interest income on loans to third parties	6,727	–
Finance income	322,076	323,608
Interest expense of retirement and other supplemental benefit obligations (Note 32)	34,366	62,336
Interest expense on bank and other borrowings	481,997	392,326
Less: capitalised interest expense	(10,067)	(3,225)
Finance expenses	506,296	451,437
Net finance expenses recognised in the consolidated statement of comprehensive income	184,220	127,829

10. INCOME TAX EXPENSE

	Year ended 31 December	
	2016	2015
	RMB'000	RMB'000
Current tax		
PRC enterprise income tax for the year (i)	249,086	205,658
Overseas income tax for the year	153	–
	249,239	205,658
Deferred tax		
Obligations and reversal of temporary differences (Note 35)	30,121	(16,444)
Income tax expense	279,360	189,214

10. 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 2016.

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	
	2016	2015
	RMB'000	RMB'000
Profit before income tax	**1,581,727**	861,627
Taxation calculated at the statutory tax rate of 15% (2015: 25%)	**237,259**	215,407
Income tax effects of:		
Tax rate differential of certain companies	**43,728**	(22,992)
Gain on bargain purchase from business combination	**(40,448)**	–
Non-deductible expenses	**6,642**	17,791
Others	**32,179**	(20,992)
Income tax expense	**279,360**	189,214
Effective income tax rate	**18%**	22%

11. EARNINGS PER SHARE

(a) Basic

The basic earnings per share for each of the years ended 31 December 2016 and 2015 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	
	2016	2015
Profit attributable to equity owners of the Company (RMB'000)	**1,144,403**	540,979
Weighted average number of ordinary shares in issue	**2,663,160,000**	2,663,160,000
Basic earnings per share (RMB)	**0.43**	0.20

(b) Diluted

As the Company had no dilutive ordinary shares for each of the years ended 31 December 2016 and 2015, dilutive earnings per share for the years ended 31 December 2016 and 2015 are the same as basic earnings per share.

12. DIVIDENDS

Dividends represented dividends proposed by the Company during each of the years ended 31 December 2016 and 2015.

	Year ended 31 December	
	2016	2015
	RMB'000	RMB'000
Final, proposed, of RMB0.087 per ordinary share (2015: RMB0.06)	**231,695**	159,790

2015 final dividend of RMB0.06 per ordinary share, totaling approximately RMB159.8 million was approved by the Company's shareholders in the Annual General Meeting on 25 May 2016.

Pursuant to the board meeting on 20 March 2017, the Directors recommended the payment of the final dividend of RMB0.087 per ordinary share, totaling amounting to approximately RMB231.7 million. Such a dividend is subject to approval by the shareholders at the Annual General Meeting to be held in 2017. This recommended dividend has not been reflected as a dividend payable in the consolidated financial statements of 2016.

13. DIRECTORS' AND SUPERVISORS' EMOLUMENTS AND FIVE HIGHEST PAID INDIVIDUALS' EMOLUMENTS

(a) Details of directors' and supervisors' emoluments are as follows:

	Year ended 31 December	
	2016	2015
	RMB'000	RMB'000
Directors and supervisors		
– Salaries, housing allowances, other allowances and benefits-in-kind	**1,781**	1,376
– Contributions to pension plans	**230**	225
– Discretionary bonuses	**639**	1,035
	2,650	2,636

13. 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 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
Directors				
– Mr. Zhang Chengzhong (張程忠) (i)	–	–	–	–
– Mr. He Zhihui (賀志輝)	461	88	339	888
– Mr. Wang Jun (王軍) (i)	–	–	–	–
– 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
Supervisors				
– 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

13. 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 2015

	Salaries, housing allowances, other allowances, and benefits-in-kind	Contributions to pension plans	Discretionary bonuses	Total
	RMB'000	RMB'000	RMB'000	RMB'000
Directors				
– Mr. Zhang Chengzhong (張程忠) (i)	–	–	–	–
– Mr. He Zhihui (賀志輝)	410	90	431	931
– Mr. Wang Jun (王軍)	151	30	126	307
– Mr. Cheung Hung Kwong (張鴻光)	143	–	–	143
– Mr. Sun Chuanyao (孫傳堯)	143	–	–	143
– Mr. Zhang Jian (張建)	152	35	176	363
– Mr. Fu Jun (伏軍)	80	–	–	80
Supervisors				
– Mr. Ou Xiaowu (歐小武) (i)	–	–	–	–
– Mr. He Bincong (賀斌聰)	297	70	302	669
– Mr. Dong Hai (董海) (i)	–	–	–	–
	1,376	225	1,035	2,636

13. DIRECTORS' AND SUPERVISORS' EMOLUMENTS AND FIVE HIGHEST PAID INDIVIDUALS' EMOLUMENTS (CONTINUED)

(a) Details of directors' and supervisors' emoluments are as follows: (continued)

Notes:

(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 2016 and 2015 is minimal.

During the years ended 31 December 2016 and 2015, 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 2016 and 2015 are set forth below:

	Year ended 31 December	
	2016	2015
Director or supervisor	**2**	2
Non-director or supervisor	**3**	3
	5	5

13. 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	
	2016	2015
	RMB'000	RMB'000
Basic salaries, housing allowances, other allowances and benefits-in-kind	**1,472**	943
Contributions to pension plans	**197**	203
Discretionary bonuses	**2,281**	740
	3,950	1,886

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

	Year ended 31 December	
	2016	2015
Nil to HK$1,000,000	**–**	3
HK$1,000,001 to HK$1,500,000	**2**	–
HK$1,500,001 to HK$2,000,000	**1**	–
	3	3

14. EMPLOYMENT BENEFITS

	Year ended 31 December	
	2016	2015
	RMB'000	RMB'000
Salaries, wages and bonuses	**1,000,988**	821,490
Retirement benefits (i)	**158,664**	155,329
Early retirement and supplemental pension benefit (Note 32)		
– interest cost	**34,366**	62,336
– past service cost	**9,032**	73,187
– current service cost	**1,015**	290
Housing fund (ii)	**94,080**	89,514
Welfare, medical and other expenses	**304,879**	278,189
Share Appreciation Rights granted (Note 31)	**–**	(2,830)
	1,603,024	1,477,505

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 2016 and 2015. 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.

15. PROPERTY, PLANT AND EQUIPMENT

	Buildings and other facilities	Equipment, plant and machinery	Transportation equipment	Furniture, office and other equipment	Construction-in-progress	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Year ended 31 December 2015						
Opening net book amount	1,074,996	239,775	79,035	93,287	229,356	1,716,449
Transfers	145,696	88,434	–	27,576	(261,706)	–
Additions	339,119	16,355	8,630	27,832	157,388	549,324
Depreciation	(28,204)	(40,553)	(16,171)	(38,659)	–	(123,587)
Disposals/write-off	(9,886)	(12,181)	(3,305)	(969)	(10,195)	(36,536)
Transfer to investment properties (Note 17)	(53,196)	–	–	–	–	(53,196)
Closing net book amount	1,468,525	291,830	68,189	109,067	114,843	2,052,454
At 31 December 2015						
Cost	1,764,191	648,013	192,287	289,887	114,843	3,009,221
Accumulated depreciation	(295,434)	(355,498)	(124,098)	(180,820)	–	(955,850)
Impairment	(232)	(685)	–	–	–	(917)
Net book amount	1,468,525	291,830	68,189	109,067	114,843	2,052,454
Year ended 31 December 2016						
Opening net book amount	**1,468,525**	**291,830**	**68,189**	**109,067**	**114,843**	**2,052,454**
Transfers	**45,508**	**1,890**	**–**	**–**	**(47,398)**	**–**
Transfer from other non-current assets	**10,814**	**–**	**–**	**–**	**–**	**10,814**
Additions	**29,163**	**24,815**	**10,979**	**25,564**	**186,038**	**276,559**
Arising on business combination (Note 42)	**170,587**	**42,900**	**43,130**	**6,664**	**35,875**	**299,156**
Depreciation	**(69,942)**	**(54,981)**	**(22,884)**	**(32,616)**	**–**	**(180,423)**
Disposals	**(1,514)**	**(4,202)**	**(4,869)**	**(2,971)**	**–**	**(13,556)**
Transfer to investment properties (Note 17)	**(4,276)**	**–**	**–**	**–**	**–**	**(4,276)**
Closing net book amount	**1,648,865**	**302,252**	**94,545**	**105,708**	**289,358**	**2,440,728**
At 31 December 2016						
Cost	**1,984,454**	**696,062**	**225,677**	**313,602**	**289,358**	**3,509,153**
Accumulated depreciation	**(335,357)**	**(393,125)**	**(131,132)**	**(207,894)**	**–**	**(1,067,508)**
Impairment	**(232)**	**(685)**	**–**	**–**	**–**	**(917)**
Net book amount	**1,648,865**	**302,252**	**94,545**	**105,708**	**289,358**	**2,440,728**

15. PROPERTY, PLANT AND EQUIPMENT (CONTINUED)

Depreciation expenses recognised are analysed as follows:

	Year ended 31 December	
	2016	2015
	RMB'000	RMB'000
Cost of sales	**118,507**	80,865
Selling and marketing expenses	**479**	834
Administrative expenses	**61,437**	41,888
	180,423	123,587

Included above are certain buildings and transportation equipment with the respective carrying amounts of approximately RMB573 million and RMB7 million as of 31 December 2016, 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.

16. LAND USE RIGHTS

	Year ended 31 December	
	2016	2015
	RMB'000	RMB'000
At beginning of year	**792,950**	813,384
Additions	**489**	987
Arising on business combination (Note 42)	**103,475**	–
Transfer to investment properties (Note 17)	**(85,229)**	–
Amortisation	**(22,783)**	(21,421)
At end of the year	**788,902**	792,950

16. 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 50 years.

(ii) As of 31 December 2016, the Group secured certain land use rights with net carrying amount of Nil (2015: RMB4.8 million) for borrowings (Note 33).

Included above are certain land use rights with carrying amount of approximately 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	
	2016	2015
	RMB'000	RMB'000
Cost of sales	**2,036**	–
Administrative expenses	**20,747**	21,421
	22,783	21,421

17. INVESTMENT PROPERTIES

	Year ended 31 December	
	2016	2015
	RMB'000	RMB'000
At beginning of the year	**77,994**	27,643
Arising on business combination (Note 42)	**15,368**	–
Transfer from property, plant and equipment (Note 15)	**4,276**	53,196
Transfer from land use rights (Note 16)	**85,229**	–
Depreciation	**(3,093)**	(2,845)
At end of the year	**179,774**	77,994
Fair value at end of the year	**376,442**	159,702

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 2016, the Group secured an investment property with carrying amount of approximately RMB12 million for bank borrowings (Note 33).

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

	Year ended 31 December	
	2016	2015
	RMB'000	RMB'000
Rental income	**20,624**	13,642
Depreciation recorded as rental costs	**3,093**	2,845

17. 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 2016.

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.

18. INTANGIBLE ASSETS

	Goodwill	Patent	Computer software	Others	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Year ended 31 December 2015					
Opening net book amount	9,250	148,558	20,961	13,289	192,058
Additions	–	672	4,009	6,080	10,761
Amortisation	–	(47,890)	(8,945)	(322)	(57,157)
Disposals	–	(2,890)	–	(162)	(3,052)
Closing net book amount	9,250	98,450	16,025	18,885	142,610
At 31 December 2015					
Cost	9,250	276,911	88,839	19,838	394,838
Accumulated amortisation	–	(178,461)	(72,814)	(953)	(252,228)
Net book amount	9,250	98,450	16,025	18,885	142,610
Year ended 31 December 2016					
Opening net book amount	**9,250**	**98,450**	**16,025**	**18,885**	**142,610**
Additions	**–**	**481**	**6,773**	**12,731**	**19,985**
Transfers	**–**	**11,263**	**–**	**(11,263)**	**–**
Arising on business combination (Note 42)	**–**	**–**	**591**	**–**	**591**
Amortisation	**–**	**(24,309)**	**(6,804)**	**(3,678)**	**(34,791)**
Disposals	**–**	**–**	**(31)**	**–**	**(31)**
Closing net book amount	**9,250**	**85,885**	**16,554**	**16,675**	**128,364**
At 31 December 2016					
Cost	**9,250**	**288,656**	**95,922**	**21,306**	**415,134**
Accumulated amortisation	**–**	**(202,771)**	**(79,368)**	**(4,631)**	**(286,770)**
Net book amount	**9,250**	**85,885**	**16,554**	**16,675**	**128,364**

As at 31 December 2016 and 2015, there is no impairment of goodwill.

18. INTANGIBLE ASSETS (CONTINUED)

Amortisation expense recognised is analysed as below:

	Year ended 31 December	
	2016	2015
	RMB'000	RMB'000
Cost of sales	**6,362**	–
Administrative expenses	**28,429**	57,157
	34,791	57,157

19. SUBSIDIARIES AND INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD

(a) Material non-controlling interests

The total non-controlling interest as at 31 December 2016 is RMB4,610 million of which RMB221 million is for Ninth Metallurgical Construction Co., Ltd. (九冶建設有限公司), RMB4,267 million (Note 37) is for Chalieco Hong Kong Corporation Limited (中鋁國際香港有限公司), RMB74 million is for China Nonferrous Metals Processing Technology Co., Ltd. (中色科技股份有限公司) and RMB28 million is attributed to Shenyang Gina Advanced Materials Co., Ltd. (瀋陽金納新材料有限公司). The non-controlling interests in respect of other non-wholly-owned subsidiaries are immaterial.

19. 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., Shenyang Gina Advanced Materials Co., Ltd., and Chalieco Hong Kong Corporation Limited that has non-controlling interests that are material to the Group.

Summarised balance sheets

	Ninth Metallurgical Construction Co., Ltd. (Consolidated)		China Nonferrous Metals Processing Technology Co., Ltd. (Consolidated)		Shenyang Gina Advanced Materials Co., Ltd.		Chalieco Hong Kong Corporation Limited (Consolidated)	
	2016 RMB'000	2015 RMB'000	**2016 RMB'000**	2015 RMB'000	**2016 RMB'000**	2015 RMB'000	**2016 RMB'000**	2015 RMB'000
Current								
Assets	**5,443,558**	N/A	**1,286,847**	1,091,265	**22,214**	26,528	**4,646,293**	1,909,537
Liabilities	**(5,124,938)**	N/A	**(1,465,003)**	(1,164,962)	**(34,745)**	(31,867)	**(88,036)**	(1,250)
Total net current assets/ (liabilities)	**318,620**	N/A	**(178,156)**	(73,697)	**(12,531)**	(5,339)	**4,558,257**	1,908,287
Non-current								
Assets	**790,494**	N/A	**554,136**	871,004	**89,260**	90,391	**11**	17
Liabilities	**(520,955)**	N/A	**(69,422)**	(461,245)	**(13,940)**	(14,296)	**(4,550,987)**	(1,985,721)
Total net non-current assets/ (liabilities)	**269,539**	N/A	**484,714**	409,759	**75,320**	76,095	**(4,550,976)**	(1,985,704)
Net assets/(liabilities)	**588,159**	N/A	**306,558**	336,062	**62,789**	70,756	**7,281**	(77,417)

19. 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)		Shenyang Gina Advanced Materials Co., Ltd.		Chalieco Hong Kong Corporation Limited (Consolidated)	
	2016	2015	**2016**	2015	**2016**	2015	**2016**	2015
	RMB'000	RMB'000	**RMB'000**	RMB'000	**RMB'000**	RMB'000	**RMB'000**	RMB'000
Revenue	**3,035,408**	N/A	**342,932**	442,219	**36,723**	31,594	**190,547**	215,732
Profit/(loss) before income tax	**124,636**	N/A	**(35,674)**	11,165	**(9,525)**	(3,450)	**62,081**	26,101
Income tax (expense)/ income	**(11,759)**	N/A	**6,950**	(3,477)	**1,559**	410	**(3,101)**	(4,700)
Post-tax profit/(loss) from continuing operations	**112,877**	N/A	**(28,724)**	7,688	**(7,966)**	(3,040)	**58,980**	21,401
Other comprehensive income/ (loss)	**–**	N/A	**412**	3,271	**–**	–	**(39,797)**	(33,266)
Total comprehensive income/ (loss)	**112,877**	N/A	**(28,312)**	10,959	**(7,966)**	(3,040)	**19,183**	(11,865)
Total comprehensive income/ (loss) allocated to non-controlling interests	**42,329**	N/A	**(2,260)**	367	**(3,346)**	(1,277)	**471**	215
Dividend paid to non-controlling interests	**–**	N/A	**–**	–	**–**	–	**(58)**	–

19. 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)		Shenyang Gina Advanced Materials Co., Ltd.		Chalieco Hong Kong Corporation Limited (Consolidated)	
	2016 RMB'000	2015 RMB'000	**2016 RMB'000**	2015 RMB'000	**2016 RMB'000**	2015 RMB'000	**2016 RMB'000**	2015 RMB'000
Cash flows from operating activities								
Cash generated from/(used in) operating activities	**369,852**	N/A	**35,967**	(59,461)	**1,237**	(3,036)	**360,803**	(133,044)
Interest paid	**(70,364)**	N/A	**(61,556)**	(22,834)	**(1,392)**	–	**(137,383)**	(128,871)
Income tax paid	**(154,088)**	N/A	**(22,471)**	(138)	**(906)**	(1)	**(3,894)**	(202)
Net cash generated from/(used in) operating activities	**145,400**	N/A	**(48,060)**	(82,433)	**(1,061)**	(3,037)	**219,526**	(262,117)
Net cash generated from/(used in) investing activities	**113,849**	N/A	**67,472**	(33,418)	**705**	(1,531)	**(219,786)**	(103,268)
Net cash generated from/(used in) financing activities	**403,408**	N/A	**(2,748)**	52,000	**(1,392)**	3,643	**2,321,113**	354,877
Net increase/(decrease) in cash and cash equivalents	**662,657**	N/A	**16,664**	(63,851)	**(1,748)**	(925)	**2,320,853**	(10,508)
Cash and cash equivalents at beginning of year	**376,386**	N/A	**43,961**	107,812	**2,477**	3,402	**430,403**	808,116
Exchange losses on cash and cash equivalents	**–**	N/A	**–**	–	**–**	–	**(8,092)**	(367,205)
Cash and cash equivalents at end of year	**1,039,043**	N/A	**60,625**	43,961	**729**	2,477	**2,743,164**	430,403

19. 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	
	2016	2015
	RMB'000	RMB'000
Associates	**166,792**	202,952
Joint ventures	**46,039**	96,587
At 31 December	**212,831**	299,539

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

	For the year ended 31 December	
	2016	2015
	RMB'000	RMB'000
Associates	**(2,704)**	(566)
Joint ventures	**(86,577)**	20,718
	(89,281)	20,152

Investments in associates

	Year ended 31 December	
	2016	2015
	RMB'000	RMB'000
At 1 January	**202,952**	137,514
Addition	**50,401**	51,637
Arising on business combination (Note 42)	**11,996**	–
Share of losses	**(2,704)**	(566)
Disposal	**(92,653)**	–
Share of changes in other equity	**–**	15,499
Dividends received from associates	**(3,200)**	(1,132)
At 31 December	**166,792**	202,952

19. 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 2016, 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 2016:

Name of entity	Place/date of incorporation	Registered and fully paid capital	Effective interest held Indirectly held		Nature of relationship	Measurement method
		RMB'000	2016	2015		
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	25%	N/A	Note 4	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.

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.

19. SUBSIDIARIES AND INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD (CONTINUED)

(b) Investments accounted for using the equity method (continued)

Investments in associates (continued)

There are no contingent liabilities relating to the Group's interest in associates.

All of the above entities are private entity.

During the year, the following investment was reclassified to available-for-sale financial assets.

Name of entity	Place/date of incorporation	Registered and fully paid capital	Effective interest held Indirectly held		Nature of relationship	Measurement method
		RMB'000	2016	2015		
Zhuzhou Tianqiao Crane Co., Ltd. 株洲天橋起重機股份有限公司	The PRC/ 26 November 1999	562,159	3.80%	5.24%	Note	Equity method up to date of disposal

Note: Zhuzhou Tianqiao Crane Co., Ltd. ("Zhuzhou Tianqiao Crane", 株洲天橋起重機股份有限公司) is a strategic partnership in providing equipment manufacturing service of steel industry and electrolytic aluminum industry.

During the year, the Group gradually reduced its shareholding in Zhuzhou Tianqiao Crane from 5.24% to 3.80% while maintaining significant influence over the investee until 19 October 2016 on which the 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 3.80% shareholding in Zhuzhou Tianqiao Crane with fair value of approximately RMB216,108,000 to available-for-sale financial assets. During the 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.

19. 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 summaried financial information for Jiangsu Rabily, Guizhou Tongye, Luoyang Huazhong, Hebi Diendi and other associates which are accounted for using the equity method.

Summarised balance sheets

	Zhuzhou Tianqiao Crane		Jiangsu Rabily		Guizhou Tongye		Luoyang Huazhong		Hebi Diendi		Other associates		Total	
	2016	2015	**2016**	2015	**2016**	2015	**2016**	2015	**2016**	2015	**2016**	2015	**2016**	2015
	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
Current														
Total current assets	**N/A**	1,987,466	**105,837**	103,987	**891,855**	571,454	**55,806**	56,514	**–**	N/A	**448,027**	143,288	**1,501,525**	2,862,709
Total current liabilities	**N/A**	(955,487)	**(82,942)**	(78,574)	**(56,080)**	(35,978)	**(50,116)**	(149,647)	**(2)**	N/A	**(299,218)**	(78,769)	**(488,358)**	(1,298,455)
Non-current														
Total non-current assets	**N/A**	803,979	**47,796**	51,989	**1,793**	2,346	**825,288**	827,950	**45,000**	N/A	**228,397**	15,406	**1,148,274**	1,701,670
Total non-current liabilities	**N/A**	(15,562)	**–**	–	**(804,099)**	(500,000)	**(543,063)**	(546,843)	**–**	N/A	**(277,911)**	–	**(1,625,073)**	(1,062,405)
Net assets	**N/A**	1,820,396	**70,691**	77,402	**33,469**	37,822	**287,915**	187,974	**44,998**	N/A	**99,295**	79,925	**536,368**	2,203,519

19. 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

	Zhuzhou Tianqiao Crane		Jiangsu Rabily		Guizhou Tongye		Luoyang Huazhong		Hebi Diendi		Other associates		Total	
	2016 RMB'000	2015 RMB'000	**2016 RMB'000**	2015 RMB'000	**2016 RMB'000**	2015 RMB'000	**2016 RMB'000**	2015 RMB'000	**2016 RMB'000**	2015 RMB'000	**2016 RMB'000**	2015 RMB'000	**2016 RMB'000**	2015 RMB'000
Revenue	**N/A**	916,753	**109,766**	58,024	**120,515**	132,229	**1,014**	–	**–**	N/A	**405,226**	11,268	**636,521**	1,118,274
Post-tax profit/(loss) from continuing operations	**N/A**	82,031	**(6,711)**	(3,284)	**(4,353)**	(4,476)	**(59)**	(26)	**(2)**	N/A	**3,423**	(4,964)	**(7,702)**	69,281
Total comprehensive income/(loss)	**N/A**	82,031	**(6,711)**	(3,284)	**(4,353)**	(4,476)	**(59)**	(26)	**(2)**	N/A	**3,423**	(4,964)	**(7,702)**	69,281

Reconciliation of summarised financial information

	Zhuzhou Tianqiao Crane		Jiangsu Rabily		Guizhou Tongye		Luoyang Huazhong		Hebi Diendi		Other associates		Total	
	2016 RMB'000	2015 RMB'000	**2016 RMB'000**	2015 RMB'000	**2016 RMB'000**	2015 RMB'000	**2016 RMB'000**	2015 RMB'000	**2016 RMB'000**	2015 RMB'000	**2016 RMB'000**	2015 RMB'000	**2016 RMB'000**	2015 RMB'000
Opening net assets	**N/A**	1,138,204	**77,402**	72,356	**37,822**	42,298	**187,974**	188,000	**–**	N/A	**79,925**	51,869	**383,123**	1,492,727
Capital injection	**N/A**	617,334	**–**	8,330	**–**	–	**100,000**	–	**45,000**	N/A	**20,664**	33,020	**165,664**	658,684
Profit/(loss) for the year	**N/A**	82,031	**(6,711)**	(3,284)	**(4,353)**	(4,476)	**(59)**	(26)	**(2)**	N/A	**3,423**	(4,964)	**(7,702)**	69,281
Dividends to equity owners	**N/A**	(17,173)	**–**	–	**–**	–	**–**	–	**–**	N/A	**(4,717)**	–	**(4,717)**	(17,173)
Closing net assets	**N/A**	1,820,396	**70,691**	77,402	**33,469**	37,822	**287,915**	187,974	**44,998**	N/A	**99,295**	79,925	**536,368**	2,203,519
Interest in associates	**N/A**	93,006	**21,207**	23,221	**15,061**	17,020	**28,192**	28,200	**45,000**	N/A	**57,332**	41,505	**166,792**	202,952
Goodwill	**N/A**	–	**–**	–	**–**	–	**–**	–	**–**	N/A	**–**	–	**–**	–
Carrying value	**N/A**	93,006	**21,207**	23,221	**15,061**	17,020	**28,192**	28,200	**45,000**	N/A	**57,332**	41,505	**166,792**	202,952

19. 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	
	2016	2015
	RMB'000	RMB'000
At 1 January	**96,587**	55,604
Capital injection	**25,000**	26,905
Share of (losses)/profits	**(86,577)**	20,718
Disposal	**(9,000)**	–
Dividends received from joint ventures	**–**	(6,640)
Reclassification to other payables (Note 34)	**20,029**	–
At 31 December	**46,039**	96,587

Set out below are the joint ventures of the Group as at 31 December 2016, 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.

19. SUBSIDIARIES AND INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD (CONTINUED)

(b) Investments accounted for using the equity method (continued)

Investments in joint ventures (continued)

Name of entity	Place/date of incorporation	Registered and fully paid capital	Effective interest held Indirectly held		Nature of relationship	Measurement method
		RMB'000	2016	2015		
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

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. Up to 31 December 2016, Shanghai Fengtong Fund has made repayments aggregated to RMB950,000,000. Subsequent to the 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.

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.

19. 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)

The Group continued the recognition of further losses of this joint venture as the Directors considered the financial guarantee given by the Company constituted a binding agreement. As at the balance sheet date, the negative interest in this joint venture of RMB20 million is included in other payables (Note 34).

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.

Summarised financial information for joint ventures

Set out below are the summarised financial information for Shanghai Fengtong Fund and Zhongji Sunward Technology and other joint ventures which are accounted for using equity method.

Summarised balance sheets

	Shanghai Fengtong Fund (Consolidated)		Zhongji Sunward Technology		Other joint ventures		Total	
	2016 RMB'000	2015 RMB'000	**2016 RMB'000**	2015 RMB'000	**2016 RMB'000**	2015 RMB'000	**2016 RMB'000**	2015 RMB'000
Current								
Total current assets	**575,248**	634,787	**96,422**	41,327	**30,604**	–	**702,274**	676,114
Total current liabilities	**(1,083,124)**	–	**(60,242)**	(19,216)	**(31)**	–	**(1,143,397)**	(19,216)
Non-current								
Total non-current assets	**609,005**	1,000,002	**23,134**	25,812	**58**	–	**632,197**	1,025,814
Total non-current liabilities	**–**	(1,456,821)	**–**	–	**–**	–	**–**	(1,456,821)
Net assets	**101,129**	177,968	**59,314**	47,923	**30,631**	–	**191,074**	225,891

19. 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		Other joint ventures		Total	
	2016 RMB'000	2015 RMB'000	2016 RMB'000	2015 RMB'000	2016 RMB'000	2015 RMB'000	2016 RMB'000	2015 RMB'000
Revenue	22,868	216,269	36,522	10,500	–	–	59,390	226,769
(Loss)/profit before tax (i)	(76,839)	45,121	11,391	1,018	(1,369)	–	(66,817)	46,139

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.

19. SUBSIDIARIES AND INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD (CONTINUED)

(b) Investments accounted for using the equity method (continued)

Reconciliation of summarised financial information

	Shanghai Fengtong Fund (Consolidated)		Zhongji Sunward Technology		Other joint ventures		Total	
	2016 RMB'000	2015 RMB'000	**2016 RMB'000**	2015 RMB'000	**2016 RMB'000**	2015 RMB'000	**2016 RMB'000**	2015 RMB'000
Opening net assets	**177,968**	133,155	**47,923**	–	**–**	–	**225,891**	133,155
Capital injection	**–**	–	**–**	46,905	**32,000**	–	**32,000**	46,905
Profit/(loss) for the year	**(76,839)**	44,813	**11,391**	1,018	**(1,369)**	–	**(66,817)**	45,831
Closing net assets	**101,129**	177,968	**59,314**	47,923	**30,631**	–	**191,074**	225,891
Interest in joint venture (Capital injected by the Company and the equity pick up of the joint venture according to the distribution agreement)	**–**	71,446	**30,723**	25,141	**15,316**	–	**46,039**	96,587
Carrying value	**–**	71,446	**30,723**	25,141	**15,316**	–	**46,039**	96,587

20. AVAILABLE-FOR-SALE FINANCIAL ASSETS

	At 31 December	
	2016	2015
	RMB'000	RMB'000
At beginning of the year	**159,173**	536,720
Additions of available-for-sale financial assets	**4,000**	–
Additions of short-term investments	**1,135,500**	5,964,200
Arising on business combination (Note 42)	**5,000**	–
Reclassification from associate (i)	**216,108**	–
Settlement on expiration of short-term investments	**(1,266,700)**	(6,316,000)
Fair value (losses)/gains on available-for-sale financial assets	**(1,282)**	11,539
Disposal of listed securities	**–**	(37,286)
At end of the year	**251,799**	159,173
Less: Current portion	**(18,000)**	(149,200)
Long-term portion of available-for-sale financial assets	**233,799**	9,973

Available-for-sale financial assets include the following:

	At 31 December	
	2016	2015
	RMB'000	RMB'000
Listed securities:		
Equity securities – PRC	**214,826**	–
Unlisted securities:		
Equity securities – PRC	**18,973**	9,973
Short-term investments (ii)	**18,000**	149,200
	251,799	159,173
Market value of listed securities	**214,826**	–

Notes:

(i) During the year, the investment in Zhuzhou Tianqiao Crane was reclassified to available-for-sale financial assets following the Group lost its power to significant influence. Other details are set out in note 19(b).

As at 31 December 2016, the fair value of the Group's interest in Zhuzhou Tianqiao Crane, which is listed on the Shenzhen Stock Exchange, was approximately RMB215 million (2015: RMB284 million).

(ii) The short-term investments shown in available-for-sale financial assets represent commercial bank products, with an annual investment return of 1.65% – 2.95% for the year ended 31 December 2016 per annum, and will be mature within one year. As at 31 December 2016, the carrying amount approximated the fair value. The fair values are based on cash flow discounted using the excepted return based on management judgment and are within level 3 of the fair value hierarchy (see Note 4).

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

21. TRADE AND NOTES RECEIVABLES

	At 31 December	
	2016 RMB'000	2015 RMB'000
Trade receivables	**15,957,288**	12,659,265
Less: Provision for impairment	**(615,921)**	(516,569)
Trade receivables – net	**15,341,367**	12,142,696
Notes receivable (ii)	**715,473**	297,369
Trade and notes receivables – net	**16,056,840**	12,440,065
Less: Non-current portion (i)	**(1,637,814)**	(1,752,312)
Current trade and notes receivables	**14,419,026**	10,687,753

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 2016, the non-current trade receivables recognised amounted to RMB404.13 million (2015: RMB746.72 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 2016, the non-current trade receivables recognised amounted to RMB388.33 million (2015: RMB283.22 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 2016, the non-current trade receivables recognised amounted to RMB682.66 million (2015: RMB321.19 million).

(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 2016, the Group secured certain trade and notes receivables with carrying amount of approximately RMB983 million and RMB311 million for borrowings amounting to approximately 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.

21. TRADE AND NOTES RECEIVABLES (CONTINUED)

Ageing analysis of trade receivables is as follows:

	At 31 December	
	2016 **RMB'000**	2015 RMB'000
Within 1 year	**10,130,958**	8,882,391
Between 1 and 2 years	**3,524,056**	2,178,334
Between 2 and 3 years	**1,096,400**	763,436
Between 3 and 4 years	**557,883**	412,950
Between 4 and 5 years	**349,505**	159,466
Over 5 years	**298,486**	262,688
Trade receivables – gross	**15,957,288**	12,659,265
Less: Provision for impairment	**(615,921)**	(516,569)
Trade receivables – net	**15,341,367**	12,142,696

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.

21. TRADE AND NOTES RECEIVABLES (CONTINUED)

The trade receivables, that were past due but not impaired relate to a number of independent customers with no recent history of default.

The ageing analysis of these trade receivables is as follows:

	At 31 December	
	2016	2015
	RMB'000	RMB'000
Within 1 year	**10,083,823**	8,881,595
Between 1 and 2 years	**1,914,591**	1,278,157
Between 2 and 3 years	**547,610**	372,574
Between 3 and 4 years	**234,878**	188,190
Between 4 and 5 years	**128,481**	50,293
Over 5 years	**62,691**	54,293
Total	**12,972,074**	10,825,102

Trade receivables wholly or partially impaired are as follows:

	At 31 December	
	2016	2015
	RMB'000	RMB'000
Trade receivables	**2,985,214**	1,834,163
Provision for impairment	**(615,921)**	(516,569)
Trade receivables – net	**2,369,293**	1,317,594

21. TRADE AND NOTES RECEIVABLES (CONTINUED)

The ageing analysis of these impaired trade receivables are as follows:

	At 31 December	
	2016	2015
	RMB'000	RMB'000
Within 1 year	**47,135**	796
Between 1 and 2 years	**1,609,465**	900,177
Between 2 and 3 years	**548,790**	390,862
Between 3 and 4 years	**323,005**	224,760
Between 4 and 5 years	**221,024**	109,173
Over 5 years	**235,795**	208,395
Total	**2,985,214**	1,834,163

The movements of provision for impairment of trade receivables are as follows:

	At 31 December	
	2016	2015
	RMB'000	RMB'000
At the beginning of the year	**516,569**	590,687
Provisions	**188,747**	106,472
Receivables written off as uncollectible	**(9,847)**	(124,034)
Reversal	**(79,548)**	(56,556)
At the end of the year	**615,921**	516,569

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

	At 31 December	
	2016	2015
	RMB'000	RMB'000
RMB	**16,074,793**	12,145,719
USD	**100,641**	637,517
Others	**497,327**	173,398
	16,672,761	12,956,634

22. PREPAYMENTS AND OTHER RECEIVABLES

	At 31 December	
	2016	2015
	RMB'000	RMB'000
Prepayments		
Prepayments to suppliers	**873,555**	1,224,744
Prepayment for investment (i)	**–**	29,980
	873,555	1,254,724
Other receivables		
Financing provided to proprietors (ii)	**3,038,858**	1,719,829
Financing provided to a supplier (iii)	**184,873**	211,016
Amounts due from related parties (iv)	**312,146**	48,163
Retention fund	**139,135**	24,946
Receivables of export tax refund	**17,858**	–
Staff advances	**100,506**	79,107
Bid security	**627,694**	219,179
Deposits	**172,982**	194,870
Payments on behalf of third parties	**232,840**	104,575
Deductible value-added tax	**151,384**	137,186
Others	**203,756**	52,634
	5,182,032	2,791,505
Total prepayments and other receivables	**6,055,587**	4,046,229
Less: Provision for impairment	**(158,968)**	(123,691)
Prepayments and other receivables – net	**5,896,619**	3,922,538
Less: Non-current portion (v)	**(1,639,934)**	(592,047)
Current portion	**4,256,685**	3,330,491

Notes:

(i) On 1 December 2015, the Company entered into an Equity Transfer Agreement with Shaanxi Jiuan Properties Co., Ltd. (陝西久安房地產有限公司) to acquire 62.5% of the equity interest in Ninth Metallurgical Construction Co., Ltd. (九冶建設有限公司) with a cash consideration of RMB49,980,000. The amount of RMB29,980,000 represented partial payment of the purchase consideration. The acquisition was completed during the year (Note 42).

22. 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. As of 31 December 2016, RMB360 million was provided. The principal and the relevant interest receivables aggregating to approximately RMB400 million was secured by 20% of the equity interests of Zhongmai Ruiyang held by Henan Zhongmai Group Co. Ltd. (河南中邁集團有限公司, "Henan Zongmai") and Luoyang Zhongmai Properties Co., Ltd. (洛陽中邁置業有限公司, "Luoyang Zhongmai") and guaranteed by the controlling party of Zhongmai Ruiyang, Henan Zongmai and Luoyang Zhongmai.

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 2016, RMB150 million was provided and the relevant interest receivable was RMB25.8 million. The land development project has been terminated. According to the notification issued by government authority of East Lake District, Nancheng 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 2016, RMB450 million was provided. The principal and the relevant interest receivables aggregating to approximately RMB615 million was secured by 100% of the equity interests of Zhongsheng Home.

On 4 July 2014, the Group entered into a construction contract with Jiangsu Chutian Property Co., Ltd. (江蘇楚天置業有限公司, "Chutian Property") to construct a creative industrial park in Huaian, the PRC. In accordance with the contract terms, the Group is required to provide financing amounting to RMB125 million at an interest rate per annum of 15%. As at 31 December 2016, RMB100 million was provided. The principal and the relevant interest receivables aggregating to approximately RMB114 million was secured by 100% of the equity interests of Chutian Property.

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. 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 2016, RMB700 million was provided. The principal and the relevant interest receivables aggregating to approximately RMB712 million were secured by certain land use rights in Xianyang Emerging Textile Industrial Park.

22. PREPAYMENTS AND OTHER RECEIVABLES (CONTINUED)

(ii) The financing provided to proprietors mainly comprised of the following: (continued)

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. As at 31 December 2016, RMB220 million was provided. The principal and the relevant interest receivables aggregating to approximately RMB221 million was secured by 100% of the equity interest of Huada Real Estate.

On 23 May 2016, the Group entered into a cooperation agreement with Xinyang Yiwu Wanjiadenghuo International Trade City Co., Ltd. (信陽義烏萬家燈火國際商貿城有限公司, "Yiwu Wanjiadenghuo") for the construction of Xinyang Yiwu International Trade City in Xinyang, the PRC. In accordance with the contract terms, the Group is required to provide financing amounting to RMB400 million to Yiwu Wanjiadenghuo at an interest rate of 8% per annum. On 1 June 2016, the Group has provided RMB400 million to Yiwu Wanjiadenghuo. This receivable will be due after 18 months since the financing is provided. The principal and the relevant interest receivables aggregating to approximately RMB409 million were unconditionally and irrevocably guaranteed by China Minsheng Bank Xinyang Branch.

(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 x 1.15 x 1.17 (value-added tax rate) announced by the People's Bank of China. On 4 January 2016, the Group entered into a supplementary contract with Xinjiang Jiarun, the principal of the financing was agreed to reduce to RMB200 million. As at 31 December 2016, 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.

(iv) The amounts due from related parties are unsecured, interest free and repayable on demand except for an amount of RMB100 million due from Taiyuan City Jiaxin Palm Real Estate Development Co., Ltd. (太原市佳信棕櫚房地產開發有限公司, "Jiaxin Palm"). On 14 March 2016, the Group entered into a construction contract with Jiaxin Palm to undertake a residential district project in Taiyuan, the PRC. In accordance with the construction contract, the Group is required to provide financing amounting to RMB100 million at an interest rate of 16% per annum and the balance will become due after 12 months from the date of the provision of financing. As at 31 December 2016, RMB100 million was provided. The principal and relevant interest receivables aggregating to RMB112.5 million were secured by 100% of the equity interest of Jiaxin Palm.

(v) The remaining non-current prepayments and other receivables mainly relate to 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.

22. PREPAYMENTS AND OTHER RECEIVABLES (CONTINUED)

Ageing analysis of other receivables is as follows:

	At 31 December	
	2016	2015
	RMB'000	RMB'000
Within 1 year	**3,237,539**	1,145,110
Between 1 and 2 years	**515,074**	1,417,440
Between 2 and 3 years	**1,297,890**	106,125
Between 3 and 4 years	**45,472**	29,938
Between 4 and 5 years	**17,568**	25,559
Over 5 years	**68,489**	67,333
Other receivables – gross	**5,182,032**	2,791,505
Less: Provision for impairment	**(158,968)**	(123,691)
Other receivables – net	**5,023,064**	2,667,814

As at 31 December 2016 and 2015, other receivables that were past due but not impaired relate to a number of independent customers with no relevant history of default. The ageing analysis of these other receivables is as follows:

	At 31 December	
	2016	2015
	RMB'000	RMB'000
Within 1 year	**3,197,751**	1,141,820
Between 1 and 2 years	**326,955**	1,251,124
Between 2 and 3 years	**1,079,908**	56,255
Between 3 and 4 years	**7,557**	1,877
Between 4 and 5 years	**758**	3,012
Over 5 years	**2,111**	2,171
	4,615,040	2,456,259

22. PREPAYMENTS AND OTHER RECEIVABLES (CONTINUED)

Other receivables wholly or partially impaired are as follows:

	At 31 December	
	2016	2015
	RMB'000	RMB'000
Impaired other receivables – gross	**566,992**	335,246
Provision for impairment	**(158,968)**	(123,691)
Impaired other receivables – net	**408,024**	211,555

The ageing analysis of these impaired other receivables are as follows:

	At 31 December	
	2016	2015
	RMB'000	RMB'000
Within 1 year	**39,788**	3,290
Between 1 and 2 years	**188,119**	166,316
Between 2 and 3 years	**217,982**	49,870
Between 3 and 4 years	**37,915**	28,061
Between 4 and 5 years	**16,810**	22,547
Over 5 years	**66,378**	65,162
	566,992	335,246

22. PREPAYMENTS AND OTHER RECEIVABLES (CONTINUED)

The movements of provision for impairment of other receivables are as follows:

	At 31 December	
	2016	2015
	RMB'000	RMB'000
At beginning of the year	**123,691**	95,300
Additions	**55,459**	31,033
Receivables written off as uncollectible	**–**	(438)
Reversal	**(20,182)**	(2,204)
At end of the year	**158,968**	123,691

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

	At 31 December	
	2016	2015
	RMB'000	RMB'000
RMB	**5,180,112**	2,789,590
Others	**1,920**	1,915
	5,182,032	2,791,505

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

	At 31 December	
	2016	2015
	RMB'000	RMB'000
Contract cost incurred plus recognised profit less recognised losses	**76,328,551**	70,950,100
Less: Progress billings	**(70,808,220)**	(67,271,852)
Contract work-in-progress	**5,520,331**	3,678,248
Representing:		
Amounts due from customers for contract work	**6,181,458**	4,103,701
Less: Provision	**(17,337)**	(5,167)
Net amounts due from customers for contract work	**6,164,121**	4,098,534
Amounts due to customers for contract work	**(643,790)**	(420,286)
	5,520,331	3,678,248

	Year ended 31 December	
	2016	2015
	RMB'000	RMB'000
Contract revenue recognised as revenue	**14,580,402**	10,740,412

24. INVENTORIES

	At 31 December	
	2016	2015
	RMB'000	RMB'000
Raw materials	**180,667**	131,750
Work-in-progress	**587,628**	379,527
Finished goods	**552,488**	253,112
Turnover materials and spare parts	**18,775**	7,376
	1,339,558	771,765

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

	Year ended 31 December	
	2016	2015
	RMB'000	RMB'000
At beginning of the year	**15,221**	17,477
Additions	**6,720**	–
Written off	**(2,534)**	–
Reversal	**–**	(2,256)
At end of the year	**19,407**	15,221

The cost of inventories recognised as expense and included in "Cost of sales" amounted to RMB13,365 million and RMB10,319 million for the years ended 31 December 2016 and 2015, respectively.

25. RESTRICTED CASH

	At 31 December	
	2016 **RMB'000**	2015 RMB'000
Restricted cash		
RMB	**898,569**	608,491
USD	**11,623**	115,019
	910,192	723,510

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% and 0.30% to 2.25% as at 31 December 2016 and 2015, respectively.

The maximum exposure to credit risk approximates the carrying amounts of the Group's restricted cash at the respective balance sheet dates.

26. TIME DEPOSITS

	At 31 December	
	2016 **RMB'000**	2015 RMB'000
Time deposits with initial term of over three months		
RMB	**14,291**	25,980
Others	**4,135**	2,949
	18,426	28,929

The effective interest rates per annum on time deposits, with maturities ranging from six months to one year, approximately 2.10% to 7.00% and 1.82% to 2.90% as at 31 December 2016 and 2015, respectively.

The maximum exposure to credit risk approximates the carrying amounts of the Group's time deposits at the respective balance sheet dates.

27. CASH AND CASH EQUIVALENTS

	At 31 December	
	2016	2015
	RMB'000	RMB'000
Cash at bank and on hand	**3,505,772**	3,553,618
Balances placed with Chalieco Finance Company Limited (i)	**1,667,615**	1,265,982
Short-term bank deposits	**2,540,831**	28,192
	7,714,218	4,847,792

	At 31 December	
	2016	2015
	RMB'000	RMB'000
Denominated in:		
RMB	**4,201,383**	4,587,047
HKD	**136**	87
USD	**3,490,598**	222,890
Others	**22,101**	37,768
	7,714,218	4,847,792

Note:

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

28. SHARE CAPITAL

	At 31 December	
	2016	2015
Number of shares	**2,663,160,000**	2,663,160,000
Share capital (RMB'000)	**2,663,160**	2,663,160

29. 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.

29. RESERVES (CONTINUED)

Notes: (continued)

(iii) Other equity instruments (continued):

On 2 September 2016, the Company's application for the public issuance of renewable corporate bonds to qualified investors in the PRC with an aggregate nominal value of not exceeding RMB4,000,000,000 was approved by China Securities Regulatory Commission. The issuance period is valid within 24 months form the date of approval.

On 17 October 2016, the Company issued the first tranche of renewable corporate bonds for the year 2016 of an issuance amount of RMB1,208,000,000, with a maturity period of 3+N years (the "2016 renewable corporate bonds"). The initial coupon rate of the 2016 renewable corporate bonds is 5.00%, the initial spread (2.60%) = initial coupon rate (5.00%) – benchmark interest rate (2.40%); annual dividend is to be paid on 13 October each year. Since the fourth interest calculation year, the Company should reset coupon rate every three years. The formula of resetting coupon rate is as follows: current coupon rate = current benchmark interest rate + initial spread (2.60%) + 3%. The current benchmark interest rate is the arithmetic mean of Treasury Bond yield with 3 years maturity periods as shown in China Bond inter-bank fixed rate Treasury Bond yield curve which is announced by China Bond information website (中國債券信息網) 10 working days before the reset of coupon rate. The Company can choose to defer the interest payment with no restriction on times of deferral. If the Company declares profit distribution to shareholders or reduces registered capitals during the 12-month period ending on the day before the contractual scheduled distribution payment date, the Company should not defer the current period interests and all interests and fruits which have already been deferred according to relevant terms.

Pursuant to the terms of the 2016 renewable corporate bonds, the Company can defer the principal payment of perpetual bonds with no restriction. The 2016 renewable corporate bonds do not meet the definition of financial liabilities according to IAS 32 Financial Instruments and the net amount arising from raising of this fund is recognised as other equity instruments in the consolidated financial statements.

The Company declared profit distribution in respect of the year ended 31 December 2015 at the Annual General Meeting of shareholders on 5 June 2016 and such dividend was paid on 14 July 2016. 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 second distribution of interest on 24 July 2017 and the first distribution of interest on 13 October 2017 for the 2015 perpetual medium-term notes and 2016 renewable corporate bonds respectively.

30. DEFERRED INCOME

Government grants mainly relate to purchase of property, plant and equipment conducted by the Group.

	Year ended 31 December	
	2016	2015
	RMB'000	RMB'000
At beginning of the year	**88,269**	99,209
Arising on business combination (Note 42)	**250**	–
Additions	**8,267**	13,146
Charged to consolidated statement of comprehensive income	**(10,993)**	(24,086)
At end of the year	**85,793**	88,269

31. CASH-SETTLED SHARE-BASED PAYMENTS

The Group had adopted a cash-settled share-based payment arrangement, also known as Share Appreciation Rights (the "SAR") scheme (the "Scheme"), which was approved by the first extraordinary general meeting on 10 October 2013. The Scheme provides for the grant of the SAR to eligible participants as approved by the Company's Board of Directors. The validity of the plan is ten years.

Under the plan, the holders of the SAR are entitled the rights to receive an amount in respect of the appreciation in market value of the Company's H shares from the date of grant of the SAR to the date of exercise. No shares will be issued under the Scheme and therefore the Company's equity interest will not be diluted as a result of the SAR.

The total amount of the SAR granted under the Scheme shall not exceed 10% of the total share capital of the Company, and the SAR granted to any eligible participant pursuant to any share incentive scheme with full affected, in aggregate, shall not exceed 1% of the total issued share capital. The exercise period of 33% of the SAR commences after a vesting period of two years and ends on a date which is not later than seven years from the date of grant of the SAR; the exercise period of 33% of the SAR commences after a vesting period of three years and ends on a date which is not later than seven years from the date of grant of the SAR; the exercise period of remaining 34% of the SAR commences after a vesting period of four years and ends on a date which is not later than seven years from the date of grant of the SAR.

31. CASH-SETTLED SHARE-BASED PAYMENTS (CONTINUED)

The Board of Directors of the Company granted approximately 21,326,365 of the SAR of the Company on 24 October 2013. The expiry date of the SAR is 23 October 2020. Movements in the number of the SAR granted by the Company during the year ended 31 December 2015 are set out as follows:

	For the year ended 31 December 2015 Number of units of SAR						
Category	Exercise Price	Outstanding as at 1 January 2015	Granted during the year	Exercised during the year	Expired during the year	Forfeited during the year	Outstanding as at 31 December 2015
Directors and senior management	HKD2.83	2,206,666	–	–	–	(2,206,666)	–
Management officers and key employees	HKD2.83	17,289,269	–	–	–	(17,289,269)	–
		19,495,935	–	–	–	(19,495,935)	–

The Group hired Towers Watson Consulting (Shenzhen) Co., Ltd., to assess the fair value of the stock appreciation rights. As of 31 December 2015, the Group anticipated not being able to achieve the performance appraisal conditions as original set up, such as return on net assets, revenue growth rate and operating margin rate etc. The stock appreciation rights granted by the Company is only effective when both the Group and individual performance appraisal conditions are met simultaneously for the year. As a result, the stock appreciation rights originally granted by the Company with the exercise period from 18 October 2017 to 17 October 2020 have lapsed during 2015.

Accordingly the management reversed all liabilities in relation to this SAR (Note 14).

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 14).

The total cost charged to consolidated statement of comprehensive income during the years ended 31 December 2016 and 2015 are as follows:

	Year ended 31 December	
	2016	2015
	RMB'000	RMB'000
Contributions to state-managed retirement plans	**158,664**	155,329

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	
	2016	2015
	RMB'000	RMB'000
Amounts due to state-managed retirement plans included in trade and other payables	**3,707**	3,443

32. RETIREMENT AND OTHER SUPPLEMENTAL BENEFIT OBLIGATIONS (CONTINUED)

(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	
	2016	2015
	RMB'000	RMB'000
Current portion of defined benefits obligations	**128,363**	137,190
Non-current portion of defined benefits obligations	**979,448**	1,076,882
Present value of defined benefits obligations	**1,107,811**	1,214,072

The movements of the Group's early retirement and supplemental benefit obligations for each of the years ended 31 December 2016 and 2015 are as follows:

	Year ended 31 December	
	2016	2015
	RMB'000	RMB'000
At beginning of the year	**1,214,072**	1,159,691
For the year		
– arising on business combination (Note 42)	**21,528**	–
– interest expense	**34,674**	62,336
– payment	**(130,052)**	(120,788)
– re-measurement (gains)/losses	**(42,458)**	39,356
– past service cost (Note 14)	**9,032**	73,187
– current service cost (Note 14)	**1,015**	290
At end of the year	**1,107,811**	1,214,072

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.

32. RETIREMENT AND OTHER SUPPLEMENTAL BENEFIT OBLIGATIONS (CONTINUED)

(b) Early retirement and supplemental benefit obligations (continued)

The material actuarial assumptions used in valuing these obligations are as follows:

(i) Discount rates adopted (per annum):

	At 31 December	
	2016	2015
Discount rate	**3.00%**	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.

33. BORROWINGS

	At 31 December	
	2016	2015
	RMB'000	RMB'000
Bank borrowings		
– guaranteed by the Company to its subsidiaries	**2,141,703**	999,800
– secured by an investment property (i)	**20,000**	–
– secured by land use right (ii)	**–**	12,000
– secured by trade and notes receivables (iii)	**625,246**	–
– secured by time deposits (iv)	**19,110**	–
– secured by land use rights held by third parties (v)	**250,000**	–
– unsecured	**4,152,690**	4,128,903
Borrowings from financial institutions		
– guaranteed by the Company to its subsidiaries	**200,000**	–
– secured by trade and notes receivables (iii)	**535,848**	–
Short-term and long-term bonds		
– unsecured (vi)	**3,460,532**	2,329,952
Borrowings from fellow subsidiaries (vii) (Note 44(b))		
– secured by trade and notes receivables (iii)	**100,000**	–
– unsecured	**160,000**	1,202,000
	11,665,129	8,672,655
Less: non-current portion	**(1,980,232)**	(1,210,935)
Current portion	**9,684,897**	7,461,720

33. BORROWINGS (CONTINUED)

Notes:

(i) As of 31 December 2016, the Group secured an investment property with carrying amount of approximately RMB12 million for borrowings amounting to RMB20 million (Note 17).

(ii) As of 31 December 2015, the Group secured certain land use rights with carrying amount of RMB4.8 million for borrowings amounting to RMB12 million.

(iii) As of 31 December 2016, the Group secured certain trade and notes receivables with carrying amounts of approximately RMB983 million and RMB311 million for borrowings amounting to approximately RMB1,261 million (Note 21).

(iv) As of 31 December 2016, the Group secured certain time deposits with carrying amounts of RMB20 million for borrowings amounting to approximately RMB19 million (Note 26).

(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.

As of 31 December 2016, 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.

(vi) Short-term and long-term bonds

The Group issued the 2016-first tranche, 2016-second tranche and 2016-third tranche of ultra short-term financing notes and long-term financing bond on 8 June 2016, 19 July 2016, 22 September 2016 and 20 June 2016 with issuance amounts of RMB1,000 million, RMB1,000 million, RMB500 million, and RMB900 million with maturity periods of 270 days, 270 days, 270 days and 1,095 days, respectively. The unit par value is RMB100 with an interest rate of 3.50%, 3.50%, 3.50%, and 4.70% per annum, respectively.

Outstanding bonds as at 31 December 2016 and 2015 are summarised as follows:

	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**
			3,460,532

	Face value (RMB'000)/ maturity	Effective interest rate	31 December 2015 (RMB'000)
2015 short-term bonds	800,000/2016	4.70%	820,586
2015 short-term bonds	200,000/2016	3.90%	202,535
2015 short-term bonds	500,000/2016	4.15%	503,343
2015 short-term bonds	300,000/2016	4.00%	301,567
2015 short-term bonds	500,000/2016	4.15%	501,922
			2,329,953

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 2016, the Group borrowed RMB1,870 million from Chinalco Finance and repaid RMB2,870 million. As of 31 December 2016, RMB80 million was borrowed from Chinalco Finance, which will be repaid in 2017.

On 22 April 2016 and 26 April 2016, the Group got entrusted borrowing 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 21 April 2017 and 25 April 2017 respectively. In addition, during the year of 2016, the Group repaid the entrusted borrowing amounted to RMB70 million which was borrowed from Luoyang Institute in 2015.

On 16 March 2016 and 28 December 2016, the Group got entrusted borrowing from Guiyang Aluminium Magnesium Asset Management Co., Ltd. (貴陽鋁鎂資產管理有限公司) amounting to RMB25 million and RMB10 million at an interest rate of 6.15% and 4.75% per annum, respectively. The entrusted borrowing amounting to RMB25 million was repaid during the year while that of amounting to RMB10 million will be repaid on 24 December 2018. In addition, during the year of 2016, the Group repaid the entrusted borrowing amounting to RMB52 million which was borrowed from Guiyang Aluminium Magnesium Asset Management Co., Ltd. in 2014 and 2015.

On 18 September 2016, the Group got an entrusted borrowing from China Aluminum Business Factoring (Tianjin) Co., Ltd (中鋁商業保理(天津)有限公司) amounting to RMB100 million at an interest rate of 5%. The principal and relevant interest will be repaid on 17 September 2017.

As at 31 December 2016 and 31 December 2015, the Group's borrowings were repayable as follows:

	Bank borrowings		**Other borrowings**	
	2016 RMB'000	2015 RMB'000	**2016 RMB'000**	2015 RMB'000
Within 1 year	**6,358,070**	3,951,768	**3,326,827**	3,509,952
Between 1 and 2 years	**415,679**	1,178,935	**10,000**	22,000
Between 2 and 5 years	**606,000**	10,000	**919,553**	–
Beyond 5 years	**29,000**	–	**–**	–
	7,408,749	5,140,703	**4,256,380**	3,531,952

33. BORROWINGS (CONTINUED)

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

	At 31 December	
	2016	2015
	RMB'000	RMB'000
RMB	**9,873,919**	7,227,571
USD	**1,791,210**	1,445,084
	11,665,129	8,672,655

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 2016		At 31 December 2015	
	Carrying amount	**Fair value**	Carrying amount	Fair value
	RMB'000	**RMB'000**	RMB'000	RMB'000
Bank borrowings	**1,050,679**	**1,072,366**	1,188,935	1,108,157
Other borrowings	**929,553**	**951,933**	22,000	20,322
Total	**1,980,232**	**2,024,299**	1,210,935	1,128,479

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% (2015: 5.0%) and are within level 2 of the fair value hierarchy.

The effective interest rates of borrowings and loans are 1.00% to 8.73% and 2.20% to 8.00% as at 31 December 2016 and 2015, respectively.

33. BORROWINGS (CONTINUED)

The Group has the following undrawn borrowing facilities:

	At 31 December	
	2016 RMB'000	2015 RMB'000
– Expiring within one year	**13,473,329**	9,826,920
– Expiring beyond one year	**1,474,748**	408,810
	14,948,077	10,235,730

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	
	2016 RMB'000	2015 RMB'000
Trade and notes payables		
Trade payables	**10,584,518**	7,624,363
Notes payable (i)	**767,277**	476,465
	11,351,795	8,100,828
Other payables		
Advances from customers	**1,433,030**	1,692,975
Staff welfare payable	**137,994**	101,446
Tax payable	**325,287**	269,050
Deposit payable	**501,376**	438,763
Amounts to be paid by the Group on behalf of other parties	**621,015**	251,751
Amounts due to related parties (ii) – Note 44(b)	**96,168**	79,092
Others	**295,714**	137,640
	3,410,584	2,970,717
Total trade and other payables	**14,762,379**	11,071,545
Less: Non-current portion (iii)	**(21,949)**	(1,431)
Current portion	**14,740,430**	11,070,114

34. TRADE AND OTHER PAYABLES (CONTINUED)

Notes:

(i) As of 31 December 2016, the Group secured certain bank deposits for notes payable.

(ii) The amounts are interest free, unsecured and repayable on demand.

(iii) The main non-current portion mainly comprised of negative interest of RMB20 million in Shanghai Fengtong Fund, a joint venture (Note 19(b)).

The carrying amounts of the Group's trade and other payables at 31 December 2016 and 31 December 2015 approximate their fair values.

Ageing analysis of trade payables is as follows:

	At 31 December	
	2016	2015
	RMB'000	RMB'000
Within 1 year	**7,874,901**	5,131,263
Between 1 and 2 years	**1,464,939**	1,331,979
Between 2 and 3 years	**477,501**	708,740
Over 3 years	**767,177**	452,381
	10,584,518	7,624,363

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

	At 31 December	
	2016	2015
	RMB'000	RMB'000
RMB	**14,162,889**	10,666,242
USD	**568,122**	371,176
Others	**31,368**	34,127
	14,762,379	11,071,545

35. DEFERRED TAXATION

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

	At 31 December	
	2016	2015
	RMB'000	RMB'000
At the beginning of the year	**380,621**	357,066
Arising on business combination (Note 42)	**30,775**	–
Charged to equity for fair-value change of available-for-sale financial assets	**192**	3,112
Tax in relation to capital contributions by other equity owners of associate	**–**	(3,875)
(Charged)/credited to equity for remeasurements of post-employment benefit obligations	**(9,056)**	7,874
Tax (charged)/credited to the consolidated statement of comprehensive income (Note 10)	**(30,121)**	16,444
At the end of the year	**372,411**	380,621

The movement in deferred income tax assets/(liabilities) during the years ended 31 December 2016 and 2015 without taking into consideration the offsetting of balances within the same tax jurisdiction is as follows:

Deferred income tax assets

	Tax losses	**Provision for retirement and other supplemental benefit obligations**	**Provision for impairment of assets**	**Others**	**Total**
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
At 1 January 2015	14,884	253,242	164,171	21,724	454,021
Credited/(charged) to the profit or loss	29,350	(1,734)	(12,593)	(2,399)	12,624
Charged to equity for remeasurements of post-employment benefit obligations	–	7,874	–	–	7,874
At 31 December 2015	44,234	259,382	151,578	19,325	474,519
Arising on business combination (Note 42)	**6,093**	**2,438**	**55,362**	**–**	**63,893**
(Charged)/credited to the profit or loss	**(17,528)**	**(22,299)**	**6,897**	**785**	**(32,145)**
Credited to equity for remeasurements of post-employment benefit obligations	**–**	**(9,056)**	**–**	**–**	**(9,056)**
At 31 December 2016	**32,799**	**230,465**	**213,837**	**20,110**	**497,211**

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
At 1 January 2015	83,801	3,112	5,399	4,643	96,955
(Credited)/charged to the profit or loss	(11,249)	–	(283)	7,712	(3,820)
Credited to equity for fair-value change of available-for-sale financial assets	–	(3,112)	–	–	(3,112)
Charged to equity for tax in relation to capital contributions by other equity owners of associate	–	–	3,875	–	3,875
At 31 December 2015	72,552	–	8,991	12,355	93,898
Arising on business combination (Note 42)	**33,118**	**–**	**–**	**–**	**33,118**
(Credited)/charged to the profit or loss	**(11,473)**	**–**	**21,804**	**(12,355)**	**(2,024)**
Credited to equity for fair-value change of available-for-sale financial assets	**–**	**(192)**	**–**	**–**	**(192)**
At 31 December 2016	**94,197**	**(192)**	**30,795**	**–**	**124,800**

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 RMB60.89 million and RMB30.86 million in respect of tax losses amounting to RMB357.82 million and RMB180.32 million as at 31 December 2016 and 2015, respectively, as management believes it is more likely than not that such tax losses would not be realised. The tax loss of RMB21.39 million and RMB12.92 million for which no deferred income tax assets recognised will expire before 2021 and 2020 respectively while the remaining tax loss will not expire.

36. DIVIDENDS PAYABLE

	At 31 December	
	2016	2015
	RMB'000	RMB'000
Dividends payable:		
Acquisition of subsidiary under non-common control	**–**	306
Equity owners of the subsidiaries before transferred to the Group pursuant to the Reorganisation before Listing (i)	**53,080**	53,080
Dividends payable to non-controlling interest of a subsidiary	**2,361**	1,961
	55,441	55,347

(i) The payment plan of the dividends payable to the then equity shareholder of the subsidiary before transfer to the Group pursuant to the Reorganisation (Note 1.2), amounting to RMB53.08 million has not yet to be agreed between the subsidiary and the then shareholder as at 31 December 2016 and 2015.

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.

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 and the 2016 Senior Perpetual Securities, with the respective of principal amounts of USD300 million and USD350 million, plus the respective profits of RMB143 million and RMB12 million attributable to the holders of the 2014 and 2016 Senior Perpetual Securities and deducted by the respective distributions of RMB136 million and nil paid for the year ended 31 December 2016, are recorded as non-controlling interests with an aggregate amounting to RMB4,267 million (Note 19(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	
	2016	2015
	RMB'000	RMB'000
Contracted but not provided for		
– Property, plant and equipment	**21,768**	3,280
– Investment (i)	**867,125**	811,700
Authorised but not contracted for		
– Property, plant and equipment	**77,472**	15,000
	966,365	829,980

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 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	
	2016	2015
	RMB'000	RMB'000
Within 1 year	**1,287**	5,459
Between 1 year to 5 years	**2,721**	9,866
Total	**4,008**	15,325

39. CASH USED IN OPERATIONS

	Year ended 31 December	
	2016	2015
	RMB'000	RMB'000
Profit before income tax	**1,581,727**	861,627
Adjustments for:		
Provision for impairment for trade and other receivables	**144,476**	78,745
Provision for inventories	**6,720**	(2,256)
Provision for amounts due from customers for contract work	**12,801**	5,132
Depreciation of property, plant equipment	**177,167**	123,587
Depreciation of investment properties	**3,093**	2,845
Amortisation of intangible assets	**34,791**	57,157
Amortisation of land use rights	**22,783**	21,421
Amortisation of other non-current assets	**1,146**	2,298
Gains on disposal of property, plant and equipment	**(2,213)**	(3,481)
Interest income	**(322,076)**	(323,608)
Interest expense	**506,296**	451,437
Net foreign exchange losses	**95,411**	43,079
Share of losses/(profits) of investment accounted for using the equity method	**89,281**	(20,152)
Dividend income from available-for-sale financial assets	**–**	(1,405)
Gain on disposal of an associate	**(190,249)**	–
Gain on partial disposal of an associate	**(68,079)**	–
Gain on bargain purchase from business combination	**(269,651)**	–
Gains on disposal of available-for-sale financial assets	**–**	(35,813)
Interests received from short-term investments	**(4,570)**	(20,822)
Government grants	**(10,993)**	(3,615)
Cash flows from operating activities before changes in working capital	**1,807,861**	1,236,176
Changes generated in working capital		
– Inventories	**(487,804)**	213,984
– Contract work-in-progress	**102,794**	2,991,582
– Trade and other receivables	**(2,546,258)**	(1,294,150)
– Retirement and other supplemental benefit obligations	**(120,005)**	45,309
– Trade and other payables	**(992,024)**	(3,255,412)
– Restricted cash	**1,221,578**	(222,452)
Cash used in operations	**(1,013,858)**	(284,963)

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

(a) As described in the Note 19(b), the Company is required to take the responsibility of paying the outstanding balance of the principal or the relevant expected earnings of Harvest Capital once Shanghai Fengtong Fund fails to make the payment in accordance with the terms of the relevant contracts.

The Directors of the Company reviewed all of the relevant contracts and information, and assessed that the fair value of this obligation was not material, as the repayment made by Shanghai Fengtong Fund was on schedule and the Directors considered that the risk of default is remote. Therefore, no provision was made for this obligation.

(b) As at 31 December 2016, the Group's subsidiary, Ninth Metallurgical Construction issued the joint liability guarantees in respect of the following loans:

- a bank loan of 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 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 2016, 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 is remote. As such, no provision was made for such financial guarantees.

42. BUSINESS COMBINATION

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)
Total identifiable net assets at fair value	511,409
Non-controlling interests	(191,778)
	319,631
Gain on bargain purchase from business combination	(269,651)
Satisfied by cash	49,980

42. BUSINESS COMBINATION (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 the year, 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.

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES

As at 31 December 2016, the Company has direct and indirect interests in the following subsidiaries:

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2015	2016
		RMB'000						
China Aluminum International Technology Development Co., Ltd. (中鋁國際技術發展有限公司)	The PRC/ 15 August 2006/ Limited liability company	60,000	100%	–	–	Technical service/ The PRC	(i)	(i)
China Aluminum International Engineering & Equipment Co., Ltd. (中鋁國際工程設備有限公司)	The PRC/ 2 November 2010/ Limited liability company	200,000	100%	–	–	Engineering & equipment/ The PRC	(i)	(i)
Duyun Development Zone Tongda Construction Co., Ltd. (都勻開發區通達建設有限公司)	The PRC/ 27 January 2011/ Limited liability company	230,000	50%	50%	–	Construction/ The PRC	(i)	(i)
Shenyang Aluminum & Magnesium Engineering Research Institute Co., Ltd. (瀋陽鋁鎂設計研究院有限公司)	The PRC/ 17 January 1991/ Limited liability company	Registered capital: 470,743 Paid capital: 403,743	100%	–	–	Design & engineering/ The PRC	(ii)	(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	Registered capital: 20,250 Paid capital: 9,700	–	100%	–	Industrial manufacturing/ The PRC	(ii)	(i)

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
		RMB'000	Directly held	Indirectly held			2015	2016
Shenyang Beiding Estate Management Co., Ltd. (瀋陽北鼎物業管理有限責任公司)	The PRC/ 14 June 1999/ Limited liability company	500	–	100%	–	Property management/ The PRC	(ii)	(i)
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	(ii)	(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	(ii)	(i)
Shenyang Gina Advanced Materials Co., Ltd. (瀋陽金納新材料股份有限公司)	The PRC/ 6 December 2001/ Limited liability company	40,000	–	58%	42%	Manufacturing/ The PRC	(ii)	(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)

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2015	2016
		RMB'000						
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: 1,424,815 Paid capital: 376,815	100%	–	–	Construction/ The PRC	(ii)	(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	(ii)	(i)
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	(ii)	(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	50,730	100%	–	–	Design & engineering/ The PRC	(ii)	(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)

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
		RMB'000	Directly held	Indirectly held			2015	2016
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	215,536	100%	–	–	Construction/ The PRC	(ii)	(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	(ii)	(i)
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)

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2015	2016
		RMB'000						
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)
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	(ii)	(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	(ii)	(i)

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
		RMB'000	Directly held	Indirectly held			2015	2016
Hainan Changkan Investigation and Design Co., Ltd. (海南長勘勘察設計有限公司)	The PRC/ 8 November 2001/ Limited liability company	9,062	–	100%	–	Engineering & research/ The PRC	(ii)	(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	(ii)	(i)
Hunan Huachu Machinery Co., Ltd. (湖南華楚機械有限公司)	The PRC/ 17 October 2007/ Limited liability company	4,500	–	100%	–	Sales of equipment/ The PRC	(ii)	(i)
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	(ii)	(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	(ii)	(i)

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2015	2016
		RMB'000						
Liaoning Sixth Metallurgical Construction Co., Ltd. (遼寧六冶建設有限公司)	The PRC/ 23 September 2011/ Limited liability company	20,000	–	100%	–	Construction/ The PRC	(ii)	(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	(ii)	(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	(ii)	(i)
Chinalco Huada High-Tech Co. Ltd. (中鋁華大科技股份有限公司)	The PRC/ 9 December 2011/ Limited liability company	Registered capital: 53,000 Paid capital: 20,944	–	75.92%	24.08%	Engineering & research/ The PRC	(i)	(i)

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2015	2016
		RMB'000						
China Nonferrous Metals Industry's Twelfth Metallurgical Construction (Liaoning) Co., Ltd. (中色十二冶金建設(遼寧)有限公司)	The PRC/ 9 October 2011/ Limited liability company	20,000	–	100%	–	Construction/ The PRC	(ii)	(i)
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	(ii)	(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%	7%	–	Construction/ The PRC	(ii)	(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	(ii)	(i)
Chalieco Venezuela C.A (中鋁國際委內瑞拉股份有限公司)	The Venezuela/ 31 August 2012/ Limited liability company	USD10,000	100%	–	–	Construction/ The Bolivarian Republic of Venezuela	N/A	N/A

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2015	2016
		RMB'000						
Chalieco Hong Kong Corporation Limited (中鋁國際香港有限公司)	Hong Kong/ 10 December 2013/ Limited liability company	USD10,000	100%	–	–	Investment/ Hong Kong	(ii)	(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)
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	(ii)	(i)
China Aluminum International Engineering (India) Private Limited (中鋁國際工程(印度)私人有限責任公司)	The India/ 22 November 2012/ Private limited company	USD1,000	99.99%	0.01%	–	Construction/ The Republic of India	N/A	N/A
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	(ii)	(i)

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
		RMB'000	Directly held	Indirectly held			2015	2016
Henan Sixth Metallurgical Trading Co., Ltd. (河南六冶貿易有限公司)	The PRC/ 24 March 2015/ Limited liability company	Registered capital: 30,000 Paid capital: 5,000	–	100%	–	Construction materials wholesale/ The PRC	(ii)	(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	(ii)	(i)
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	(ii)	(i)
Shenyang Century Huatong Properties Co., Ltd. (瀋陽世紀華通置業有限公司)	The PRC/ 25 December 2015/ Private limited company	40,000	–	65%	35%	Real estate development/ The PRC	N/A	(i)

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2015	2016
		RMB'000						
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	(ii)	(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	(ii)	(i)
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	(ii)	(i)
Wenzhou Tongyang Construction Co., Ltd. (溫州通洋建設有限公司)	The PRC/ 19 August 2013/ Limited liability company	10,000	80%	20%	–	Construction and investment/ The PRC	N/A	(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	(ii)	(i)

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2015	2016
		RMB'000						
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	18,000	–	66.67%	33.33%	Energy performance contracting/ The PRC	(ii)	(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	(ii)	(i)
Yunnan Kunye Construction and Development Co., Ltd. (雲南昆冶建設發展有限公司)	The PRC/ 12 August 2013/ Limited liability company	9,000	–	51%	49%	Construction/ The PRC	(ii)	(i)
China Aluminum Leaders Engineering Limited (中鋁灃得建築工程(蘇州)有限公司)	The PRC/ 9 December 2013/ Limited liability company	8,000	73.50%	–	26.50%	Construction/ The PRC	(ii)	(i)
Guizhou Chenhuida Mining Design Company Limited (貴州晨輝達礦業工程設計有限公司)	The PRC/ 27 September 2006/ Limited liability company	3,000	–	100%	–	Design and consulting/ The PRC	(i)	(i)

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2015	2016
		RMB'000						
Zhuhai Xinfeng Mechanical and Electrical Equipment Company Limited (珠海新峰機電設備有限公司)	The PRC/ 26 September 2003/ Limited liability company	20,000	–	100%	–	Engineering and equipment/ The PRC	(i)	(i)
Guizhou Yundu Properties Company Limited (貴州匀都置業有限公司)	The PRC/ 7 January 2013/ Limited liability company	128,000	–	100%	–	Property management/ The PRC	(i)	(i)
Guangxi Tongrui Investment Construction Co.,Ltd. (廣西通鋭投資建設有限公司)	The PRC/ 5 December 2013/ Limited liability company	Registered capital: 400,000 Paid capital: 250,000	100%	–	–	Property development/ The PRC	(ii)	(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)
Shanxi Huachu Mining Co., Ltd. (山西華楚礦山工程有限公司)	The PRC/ 21 March 2014/ Limited liability company	1,000	–	100%	–	Construction/ The PRC	N/A	(i)

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2015	2016
		RMB'000						
Hunan Tondgu Investment & Development Company Limited (湖南通都投資開發有限公司)	The PRC/ 21 January 2014/ Limited liability company	Registered capital: 30,000 Paid capital: 10,000	60%	40%	–	Investment/ The PRC	(ii)	(i)
China Aluminum Huaheng High-Tech Technology (Hunan) Co., Ltd. (中鋁華亨高新科技(湖南)有限公司)	The PRC/ 6 March 2014/ Limited liability company	Registered capital: 114,000 Paid capital: 24,481	–	100%	–	Engineering and equipment/ The PRC	N/A	(i)
Xinchengtong Investment Management (Tianjin) Co., Ltd. (鑫誠通投資管理(天津)有限公司)	The PRC/ 3 April 2013/ Limited liability company	50,000	–	40%	60%	Financing service/ The PRC	N/A	(i)
Xinchengtong Trading (Tianjin) Co., Ltd. (鑫誠通貿易(天津)有限公司)	The PRC/ 13 February 2014/ Limited liability company	5,000	–	100%	–	Trading/ The PRC	(ii)	(i)
Xinchengtong (Tianjin) Construction Engineering Co., Ltd. (鑫誠通(天津)建築工程有限公司)	The PRC/ 30 May 2014/ Limited liability company	100	–	100%	–	Construction/ The PRC	(ii)	(i)

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
		RMB'000	Directly held	Indirectly held			2015	2016
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)
Xi'an Haodong Properties Co., Ltd. (西安浩東置業有限責任公司)	The PRC/ 4 December 2014/ Limited liability company	Registered capital: 10,000 Paid capital: 3,000	–	20%	80%	Real estate development/ The PRC	(ii)	(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	N/A	(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	N/A	(i)
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	N/A	(i)

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2015	2016
		RMB'000						
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	N/A	(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	N/A	(i)
Hanzhongshi Wanjia Properties Management Ltd. (漢中市萬佳置業管理有限公司)	The PRC/ 20 October 2008/ Limited liability company	1,000	–	62.5%	37.5%	Property management and leasing/ The PRC	N/A	(i)
Shandong Ninth Metallurgical Construction Ltd. (山東九冶建設有限公司)	The PRC/ 23 October 2006/ Limited liability company	20,000	–	62.5%	37.5%	Engineering and construction/ The PRC	N/A	(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	N/A	(i)

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2015	2016
		RMB'000						
Mianxian Ninth Metallurgical Construction Materials Detection Co., Ltd. (勉縣九冶建材檢測有限責任公司)	The PRC/ 19 April 2012/ Limited liability company	1,000	–	62.5%	37.5%	Quality inspection of construction projects/ The PRC	N/A	(i)
China Aluminum International Aluminum Technological Development Co., Ltd. (中鋁國際鋁材科技產業有限公司)	The PRC/ 1 September 2016/ Limited liability company	Registered capital: 95,000 Paid capital: 16,000	100%	–	–	Technology research, testing and development/ The PRC	N/A	(i)
Zhengzhou Ninth Metallurgical Hailian Mechanical and Electrical Equipment Co., Ltd. (鄭州九冶海聯機電設備有限公司)	The PRC/ 22 July 2003/ Limited liability company	6,000	–	62.5%	37.5%	Manufacturing/ The PRC	N/A	(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	Registered capital: 100,000 Paid capital: 2,200	–	62.5%	37.5%	Design, manufacturing, instalment and selling/ The PRC	N/A	(i)

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2015	2016
		RMB'000						
Henan Ninth Metallurgical Steel Structural Ltd. (河南九冶鋼構有限公司)	The PRC/ 29 December 2004/ Limited liability company	Registered capital: 30,000 Paid capital: 6,000	–	62.5%	37.5%	Design, manufacturing and selling/ The PRC	N/A	(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	N/A	(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	N/A	(i)

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name	Place and date of incorporation/ establishment and type of legal entity	Registered and fully paid capital	Effective interest held		Proportion of ordinary shares held by non-controlling interests	Principal activities and place of operation	Statutory auditors	
			Directly held	Indirectly held			2015	2016
		RMB'000						
China Aluminum International 12MCC Construction Co., Ltd. (中鋁國際12MCC建設有限公司)	Korea/ Limited liability company	KRW625,000	–	80%	20%	Installation and construction/ The PRC	N/A	(i)
Shanghai China Aluminum International Supply Chain Management Co., Ltd. (上海中鋁國際供應鏈管理有限公司)	The PRC/ 9 August 2016/ Limited liability company	30,000	70%	30%	–	Trading/ The PRC	N/A	(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	N/A	(i)
Changsha Huahengyuan Information Technology Co., Ltd. (長沙華恒園資訊科技有限責任公司)	The PRC/ 21 August 2003/ Limited liability company	2,000	60%	40%	–	Development and construction/ The PRC	N/A	(i)

Notes:

(i) Wuyige Certified Public Accountants LLP (大信會計師事務所（特殊普通合夥）)

(ii) PricewaterhouseCoopers Zhong Tian LLP (普華永道中天會計師事務所（特殊普通合夥）)

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 2016 and 2015, and balances as at 31 December 2016 and 31 December 2015 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.

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	
	2016	2015
	RMB'000	RMB'000
Sales of goods or provision of service to:		
– Ultimate holding company	**526**	540
– Associates of ultimate holding company	**56,402**	390,084
– Fellow subsidiaries	**2,160,977**	1,313,351
	2,217,905	1,703,975
Purchases of goods and services from fellow subsidiaries	**162,105**	119,857
Rental expenses paid to fellow subsidiaries	**7,001**	8,333
Borrowings from fellow subsidiaries	**2,075,000**	1,350,000
Interests received from fellow subsidiaries	**13,341**	9,437
Interests paid to fellow subsidiaries	**32,056**	44,593

General contracting services includes services of project constructions and projects designs.

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.

44. SIGNIFICANT RELATED PARTY TRANSACTIONS AND BALANCES (CONTINUED)

(b) Year end balances arising from Chinalco and its subsidiaries, associates and jointly controlled entity

	At 31 December	
	2016	2015
	RMB'000	RMB'000
Trade receivables		
– Ultimate holding company	**1,004**	770
– Fellow subsidiaries	**1,804,178**	1,374,040
– Associates of ultimate holding company	**212,820**	264,450
	2,018,002	1,639,260
Prepayments to suppliers		
– Fellow subsidiaries	**9,063**	3,238
Other receivables		
– Ultimate holding company	**20**	–
– Fellow subsidiaries	**245,748**	45,338
– Associates of ultimate holding company	**66,378**	2,825
	312,146	48,163
Amounts due to customers for contract work		
– Fellow subsidiaries	**62,276**	62,282
Trade payables		
– Fellow subsidiaries	**143,426**	117,254
Advance from customers		
– Fellow subsidiaries	**36,896**	38,311
– Associates of ultimate holding company	**–**	11,813
	36,896	50,124
Other payables (Note 34)		
– Ultimate holding company	**4,236**	1,535
– Fellow subsidiaries	**91,932**	73,042
– Associates of ultimate holding company	**–**	4,515
	96,168	79,092
Borrowings (Note 33)		
– Fellow subsidiaries	**260,000**	1,202,000

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	
	2016	2015
	RMB'000	RMB'000
Salaries and other allowances	**4,076**	2,090
Discretionary bonus	**3,364**	2,005
Retired benefits	**571**	429
	8,011	4,524

45. EVENTS AFTER THE BALANCE SHEET DATE

Other than the subsequent events disclosed below and elsewhere in the consolidated financial statements, no other significant subsequent events took place subsequent to 31 December 2016:

(a) Chalieco Hong Kong Corporation Limited, a wholly-owned subsidiary of the Company (the "Issuer"), redeemed US$300,000,000 6.875% senior perpetual capital securities (the "Securities") in full at a consideration of its principal amount plus accrued interests on 28 February 2017, the First Maturity Date. After the completion of redemption, the Securities was cancelled and delisted from the official list of The Stock Exchange of Hong Kong Limited.

(b) The Company issued the 2017-first tranche of ultra short-term financing notes of an issuance amount of RMB1.5 billion on 14 March 2017, with a maturity period of 180 days. The unit face value is RMB100 with an interest rate of 4.6% per annum, which was principally underwritten by China Construction Bank Corporation.

(c) The Company completed the issuance of the first tranche of renewable corporate bonds for the year 2017 of an issuance amount of RMB500,000,000 on 17 March 2017, with a maturity period of 3+N years. The unit nominal value is RMB100 with an interest rate of 6.00% per annum, which was principally underwritten by Haitong Securities Co., Ltd.

46. ULTIMATE HOLDING COMPANY

The directors of the Company (the "Directors") regard Aluminum Corporation of China (中國鋁業公司, "Chalieco") 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.

47. BALANCE SHEET AND RESERVE MOVEMENT OF THE COMPANY

Balance sheet of the Company

	As at 31 December	
	2016	2015
	RMB'000	RMB'000
Assets		
Non-current assets		
Property, plant and equipment	**82,000**	87,217
Intangible assets	**4,713**	4,938
Land use rights	**162,031**	168,165
Investments in subsidiaries	**3,324,340**	2,938,934
Investments accounted for using equity method	**316**	164,451
Available-for-sale financial assets	**214,826**	–
Trade and notes receivables	**7,761**	–
Prepayments and other receivables	**2,498,100**	1,770,480
Deferred income tax assets	**3,200**	45,431
Other non-current assets	**264**	–
Total non-current assets	**6,297,551**	5,179,616
Current assets		
Inventories	**28,490**	18,226
Trade and notes receivables	**2,065,048**	1,786,145
Prepayments and other receivables	**5,146,873**	4,100,058
Amounts due from customers from contract work	**470,310**	926,581
Current income tax prepayments	**6,057**	61,246
Cash and cash equivalents	**1,779,180**	2,253,508
Total current assets	**9,495,958**	9,145,764
Total assets	**15,793,509**	14,325,380
Equity		
Share capital	**2,663,160**	2,663,160
Reserve	**2,478,032**	1,221,429
Total equity	**5,141,192**	3,884,589

47. BALANCE SHEET AND RESERVE MOVEMENT OF THE COMPANY (CONTINUED)

Balance sheet of the Company (continued)

	As at 31 December	
	2016	2015
	RMB'000	RMB'000
Liabilities		
Non-current liabilities		
Trade and other payables	**20,029**	–
Retirement and other supplemental benefit obligations	**7,991**	16,326
Long-term borrowings	**919,552**	852,935
Total non-current liabilities	**947,572**	869,261
Current liabilities		
Short-term borrowings	**6,100,169**	5,264,154
Trade and other payables	**3,548,953**	4,195,421
Amounts due to customers for contract work	**52,163**	107,106
Retirement and other supplemental benefit obligations	**3,460**	4,849
Total current liabilities	**9,704,745**	9,571,530
Total liabilities	**10,652,317**	10,440,791
Total equity and liabilities	**15,793,509**	14,325,380
Net current liabilities	**(208,787)**	(425,766)
Total assets less current liabilities	**6,088,764**	4,753,850

The balance sheet of the Company was approved by the Board of Directors on 20 March 2017 and was signed on its behalf.

He Zhihui
Director

Zhang Jian
Director

47. BALANCE SHEET AND RESERVE MOVEMENT OF THE COMPANY (CONTINUED)

Reserve movement of the Company

	Capital reserve	Statutory surplus reserve	Remeasurements of post–employment benefit obligations	Retained earnings	Other equity instruments	Total
	RMB'000	RMB'000 (i)	RMB'000	RMB'000	RMB'000	RMB'000
At 1 January 2015	845,792	113,459	7,107	148,504	–	1,114,862
Profit for the year	–	–	–	171,672	–	171,672
Remeasurements of post-employment benefit obligations – net of tax	–	–	(543)	–	–	(543)
Dividends to equity owners	–	–	–	(266,316)	–	(266,316)
Contribution by other equity owners of associates	11,625	–	–	–	–	11,625
Issuing of perpetual medium-term notes (Note 29)	–	–	–	–	190,129	190,129
Appropriation to statutory surplus reserve	–	17,167	–	(17,167)	–	–
At 31 December 2015	857,417	130,626	6,564	36,693	190,129	1,221,429

47. BALANCE SHEET AND RESERVE MOVEMENT OF THE COMPANY (CONTINUED)

Reserve movement of the Company (continued)

	Capital reserve RMB'000	Statutory surplus reserve RMB'000 (i)	Investment revaluation reserve RMB'000	Remeasurements of post-employment benefit obligations RMB'000	Retained earnings RMB'000	Other equity instruments RMB'000	Total RMB'000
At 1 January 2016	857,417	130,626	–	6,564	36,693	190,129	1,221,429
Profit for the year	–	–	–	–	267,398	–	267,398
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 29)	–	–	–	–	–	1,202,302	1,202,302
Appropriation to statutory surplus reserve	–	26,740	–	–	(26,740)	–	–
At 31 December 2016	800,503	157,366	(1,090)	11,261	107,261	1,402,731	2,478,032

47. BALANCE SHEET AND RESERVE MOVEMENT OF THE COMPANY (CONTINUED)

Reserve movement of the Company (continued)

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 20 March 2017.

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
"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 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 (中國鋁業公司), a state-owned enterprise incorporated under the laws of the PRC and our controlling shareholder
"Chinalco Finance"	Chinalco Finance Company Limited

"CNPT"	China Nonferrous Metals Processing Technology Co., Ltd. (中色科技股份有限公司), a joint stock limited company incorporated in the PRC and a subsidiary owned as to 73.5% by our Company, and (where the context requires) its subsidiaries
"Companies Ordinance"	the Companies Ordinance (Chapter 32 of the Laws of Hong Kong), as amended, supplemented or otherwise modified from time to time
"Company" or "our Company", "Chalieco", "we", "us" or "our"	China Aluminum International Engineering Corporation Limited (中鋁國際工程股份有限公司), a joint stock limited company incorporated under the laws of the PRC on 30 June 2011, and except where the context otherwise requires in respect of the period before our Company became the holding company of our present subsidiaries, the present subsidiaries of our Company and the business carried on by such subsidiaries or (as the case may be) their respective predecessors
"connected person(s)"	has the meaning ascribed thereto in the Listing Rules
"connected transaction(s)"	has the meaning ascribed thereto in the Listing Rules
"controlling shareholder(s)"	has the meaning ascribed thereto in the Listing Rules
"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%)
"ESG"	Environment, Society and Governance
"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 HK dollars and for which an application has been made for the granting of listing, and permission to deal, on the Stock Exchange
"HK$" or "Hong Kong dollars" or "HK dollars"	Hong Kong dollars, the lawful currency of Hong Kong
"IFRS"	International Financial Reporting Standards issued by the International Accounting Standards Board
"International Accounting Standards"	the International Accounting Standards and its interpretation
"Latest Practicable Date"	9 April 2016, 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, Macau Special Administration Region of the PRC 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
"SFO"	the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong), as amended, supplemented or otherwise modified from time to time
"Shandong Construction"	Aluminum International Shandong Construction Co., Ltd. (中鋁國際山東建設有限公司)
"Shareholder(s)"	holder(s) of the Shares
"Shares"	shares in the share capital of the Company with a nominal value of RMB1.00 each, comprising the 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
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Admiralty
Hong Kong

AUTHORIZED REPRESENTATIVES

Mr. HE Zhihui
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Mr. ZHAI Feng
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COMPANY SECRETARIES

Mr. WANG Jun
Mr. ZHAI Feng

AUDIT COMMITTEE

Mr. CHEUNG Hung Kwong (Chairman)
Mr. WANG Jun
Mr. FU Jun

REMUNERATION COMMITTEE

Mr. SUN Chuanyao (Chairman)
Mr. WANG Jun
Mr. FU Jun

NOMINATION COMMITTEE

Mr. HE Zhihui (Chairman)
Mr. SUN Chuanyao
Mr. FU Jun

RISK MANAGEMENT COMMITTEE

Mr. HE Zhihui (Chairman)
Mr. LI Yihua
Mr. FU Jun

AUDITOR

PKF Hong Kong
Certified Public Accountants
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LEGAL ADVISORS

As to Hong Kong law

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Central
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As to PRC law

Jia Yuan Law Offices
F407–408, Ocean Plaza
Fuxingmennei Avenue
Beijing
PRC

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, Xinjiekouwai Avenue
Xicheng District
Beijing
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H SHARE REGISTRAR

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Shops 1712–1716, 17th Floor, Hopewell Centre, 183 Queen's Road East, Wan Chai
Hong Kong

STOCK CODE

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INVESTORS' ENQUIRIES

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CHALIECO

中鋁國際工程股份有限公司

China Aluminum International Engineering Corporation Limited