



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

2022

ANNUAL REPORT



IMPORTANT NOTES

- I. The Board of Directors, Board of Supervisors, Directors, Supervisors and senior management of the Company guarantee that the contents of the Annual Report are truthful, accurate and complete, free from any false statement, misleading representation or major omission, and are legally liable therefore on a several and joint basis.
- II. Entire Directors of the Company are present at the meeting of Board of Directors.
- III. WUYIGE Certified Public Accountants LLP issued a standard Auditor's Report without qualified opinion for the Company.
- IV. LI Yihua, the Company's principal, ZHANG Jian, the accounting principal, and ZHANG Xiuyin, the accounting function's principal (the person in charge of the accounting function) undertake that: the financial report in this Annual Report is truthful, accurate and complete.
- V. Proposal for Profit Distribution or Proposal for Converting Capital Reserve into Share Capital for the Reporting Period as Adopted by the Board of Directors

As audited by WUYIGE Certified Public Accountants LLP, as of 31 December 2022, undistributed profit of the parent company was RMB-127,038,527.51. Meanwhile, considering the need for future investment in the Company's projects by the Board of Directors of the Company, in order to ensure the continuous and stable operation of the Company and long-term interests of all shareholders and after taking into account of the operating plans and capital needs of the Company in 2023, the proposal for profit distribution in 2022 is that there will be no profit distribution, nor will the capital reserves be capitalized.

VI. Forward-looking Risk Statements

Applicable Not applicable

This report contains some predictive statements based on subjective assumptions and judgments about future policies and economic trends. Subject to many variable factors, actual results or trends may deviate from these predictive statements.

Forward-looking statements such as future plans mentioned in this report do not constitute the Company's substantive undertakings to investors. Investors should be aware of investment risks. This report is prepared in both Chinese and English. Shall there be discrepancy between the two versions, the Chinese version shall prevail.



IMPORTANT NOTES

VII. Any Funds Occupied by the Controlling Shareholder or its Related Parties for Non-operating Purpose

No

VIII. Any Guarantee Provided for Any Third Party in Violation of Required Decision Procedures

No

IX. Is it possible that more than half of the Directors could not guarantee the authenticity, accuracy and completeness of the annual report disclosed by the Company

No.

X. Material Risk Disclosure

In 2023, the Company may mainly face cash flow risk, debt risk, litigation risk, operational benefit risk, market change and market competition risks. For details, please refer to “VI. Discussion and Analysis of Future Development of the Company – (IV) Potential Risks” under Section 3 “Management Discussion and Analysis (Directors’ Report)” of this Report. Investor attention is drawn thereto.

XI. Others

Applicable Not applicable

For the purpose of this Report, all amounts are expressed in RMB unless otherwise specified.

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SECTION 1 DEFINITIONS

DEFINITIONS

For the purpose of this report, unless the context otherwise requires, the following terms have the following meanings:

Definition of Common Terms

“the Company”, “Company”, “Chalieco”	:	China Aluminum International Engineering Corporation Limited (中鋁國際工程股份有限公司)
“Group”	:	the Company and its subsidiaries
“Chinalco”	:	Aluminum Corporation of China (中國鋁業集團有限公司), our controlling shareholder
“Luoyang Institute”	:	Luoyang Engineering & Research Institute for Nonferrous Metals Processing (洛陽有色金屬加工設計研究院有限公司), one of our promoters and shareholders
“State Council”	:	the State Council of the People’s Republic of China
“Ministry of Finance”	:	the Ministry of Finance of the PRC
“SASAC”	:	the State-owned Assets Supervision and Administration Commission of the State Council
“CSRC”	:	the China Securities Regulatory Commission
“SSE”	:	the Shanghai Stock Exchange
“HKEX”	:	the Stock Exchange of Hong Kong Limited
“SSE Listing Rules”	:	the Rules Governing the Listing of Stocks on Shanghai Stock Exchange
“HKEX Listing Rules”	:	the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited
“IAS”	:	the International Accounting Standards and their interpretation
“Board of Directors”	:	the board of directors of the Company
“Board of Supervisors”	:	the board of supervisors of the Company
“Audit Committee”	:	the audit committee under the Board of Directors
“Remuneration Committee”	:	the remuneration committee under the Board of Directors
“Risk Management Committee”	:	the risk management committee under the Board of Directors
“Strategy Committee”	:	the strategy committee under the Board of Directors
“Nomination Committee”	:	the nomination committee under the Board of Directors
“Articles of Association”	:	the Articles of Association of China Aluminum International Engineering Corporation Limited
“Company Law”	:	the Company Law of the People’s Republic of China
“Securities Law”	:	the Securities Law of the People’s Republic of China
“Chalco”	:	Aluminum Corporation of China Limited (中國鋁業股份有限公司), listed on the SSE (stock code: 601600) and the HKEX (stock code: 2600), a subsidiary of Chinalco
“Chinalco Finance”	:	Chinalco Finance Company Limited (中鋁財務有限責任公司), a subsidiary of Chinalco
“SAMI”	:	Shenyang Aluminum & Magnesium Engineering & Research Institute Co., Ltd. (瀋陽鋁鎂設計研究院有限公司), a wholly-owned subsidiary of the Company
“GAMI”	:	Guiyang Aluminum & Magnesium Design Institute Co., Ltd. (貴陽鋁鎂設計研究院有限公司), a wholly owned subsidiary of the Company
“CINF”	:	Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy (長沙有色冶金設計研究院有限公司), a wholly-owned subsidiary of the Company
“CNPT”	:	China Nonferrous Metals Processing Technology Co., Ltd. (中色科技股份有限公司), a subsidiary owned as to 92.35% by the Company
“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 wholly-owned subsidiary of the Company

SECTION 1 DEFINITIONS

“Kunming Survey and Design Institute”	:	Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals Industry (中國有色金屬昆明勘察設計研究院有限公司), a wholly owned subsidiary of the Company
“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 wholly-owned subsidiary of the Company
“Ninth Metallurgical Company”	:	Ninth Metallurgical Construction Co., Ltd. (九冶建設有限公司), a subsidiary as to 73.17% owned by the Company
“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 wholly-owned subsidiary of the Company
“Tianjin Construction”	:	Chalieco (Tianjin) Construction Co., Ltd. (中鋁國際(天津)建設有限公司), a wholly-owned subsidiary of the Company
“Contracting Company”	:	Guiyang Aluminum and Magnesium Design Institute Construction Contracting Co., Ltd. (貴陽鋁鎂設計研究院工程承包有限公司), a wholly-owned subsidiary of our wholly-owned subsidiary GAMI
“Kunming Institute”	:	Kunming Non-ferrous Metallurgical Design and Research Institute Corporation (昆明有色冶金設計研究院股份公司), a 67%-owned subsidiary of the Company
“Yunnan Metallurgical Group”	:	Yunnan Metallurgical Group Co., Ltd. (雲南冶金集團股份有限公司), its controlling shareholder China Copper Co., Ltd. (中國銅業有限公司) is a subsidiary of our controlling shareholder Chinalco
“Yunnan Aluminum International”	:	Yunnan Aluminum International Company Limited, whose controlling shareholder, Yunnan Aluminium Co., Ltd., is a subsidiary of Yunnan Metallurgical Group
“Miyu Company”	:	Yunnan Miyu Expressway Investment and Development Co., Ltd. (雲南彌玉高速公路投資開發有限公司), the target company of the Major Asset Disposal transaction of the Company, so far Miyu Company was held by Chinalco Southwest Construction, Sixth Metallurgical Company and Kunming Survey and Design Institute (all being wholly owned subsidiaries of the Company) as to 1%, 0.1% and 0.1% respectively
“Chinalco Southwest Construction”	:	Chinalco Southwest Construction Investment Co., Ltd. (中鋁西南建設投資有限公司), a wholly-owned subsidiary of the Company
“YCIH”	:	Yunnan Construction and Investment Holding Group Co., Ltd. (雲南省建設投資控股集團有限公司)
“Yunnan Infrastructure Investment”	:	Yunnan Infrastructure Investment Co., Ltd. (雲南建設基礎設施投資股份有限公司)
“Major Asset Restructuring”/“Restructuring”/“Major Asset Disposal”	:	China Aluminum International Engineering Corporation Limited (中鋁國際工程股份有限公司) and its wholly-owned subsidiary Chinalco Southwest Construction Investment Co., Ltd. (中鋁西南建設投資有限公司), 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) and Kunming Survey and Design institute Co., Ltd. of China Nonferrous Metals industry (中國有色金屬工業昆明勘察設計研究院有限公司) sell its combined 52.6% equity interest in Yunnan Miyu Expressway Investment and Development Co., Ltd. (雲南彌玉高速公路投資開發有限公司) to Yunnan Infrastructure Investment Co., Ltd. (雲南建設基礎設施投資股份有限公司)
“Ningyong Expressway Company” or “Ningyong Expressway”	:	Yunnan Ningyong Expressway Co., Ltd., the Company and Sixth Metallurgical Company, a wholly-owned subsidiary of the Company, held 15% equity of Ningyong Expressway respectively
“Linyun Expressway Company” or “Linyun Expressway”	:	Yunnan Linyun Expressway Co., Ltd., the Company and Sixth Metallurgical Company, a wholly-owned subsidiary of the Company, held 15% equity of Linyun Expressway respectively
“Linshuang Expressway Company” or “Linshuang Expressway”	:	Yunnan Linshuang Expressway Co., Ltd., the Company and Sixth Metallurgical Company, a wholly-owned subsidiary of the Company, held 15% equity of Linshuang Expressway respectively

SECTION 2 COMPANY PROFILE AND KEY FINANCIAL INDICATORS

I. CORPORATE INFORMATION

Chinese Name of the Company	中鋁國際工程股份有限公司
Abbreviation of Chinese Name of the Company	中鋁國際
English Name of the Company	China Aluminum International Engineering Corporation Limited
Abbreviation of English Name of the Company	CHALIECO
Legal Representative of the Company	LI Yihua (李宜華)

II. CONTACTS AND CONTACT INFORMATION

	Secretary to the Board of Directors and Company Secretary	Representative for Securities Affairs
Name	ZHANG Jian (張建)	MA Shaozhu (馬韶竹)
Contact address	Building C, No. 99 Xingshikou Road, Haidian District, Beijing (北京市海澱區杏石口路99號C座)	Building C, No. 99 Xingshikou Road, Haidian District, Beijing
Tel	010-82406806	010-82406806
Fax	010-82406666	010-82406666
E-mail	IR-chalieco@chalieco.com.cn	IR-chalieco@chalieco.com.cn

SECTION 2 COMPANY PROFILE AND KEY FINANCIAL INDICATORS

III. BASIC INFORMATION

Registered address of the Company	Building C, No. 99 Xingshikou Road, Haidian District, Beijing
Historical changes to the registered address of the Company	At the time of establishment, the registered address of the Company was No. B12, Fuxing Road, Haidian District, Beijing (北京市海澱區復興路乙12號); in June 2009, the registered address was changed into the current one.
Office address of the Company	Building C, No. 99 Xingshikou Road, Haidian District, Beijing
Postal code for the office address of the Company	100093
Address of the Company's Hong Kong office	Room 4501, Far East Finance Centre, 16 Harcourt Road, Admiralty, Hong Kong
Website of the Company	http://www.chalieco.com.cn
E-mail	IR-chalieco@chalieco.com.cn

IV. INFORMATION DISCLOSURE AND PLACE AT WHICH THE REPORT IS AVAILABLE

The Company's designated press media for information disclosure	《證券日報》
CSRC designated website for Annual Report	www.sse.com.cn
HKEX designated website for Annual Report	www.hkex.com.hk
Annual Report is available at	Board Office of Chalieco at Building C, No. 99 Xingshikou Road, Haidian District, Beijing

V. STOCK PROFILE

Stock Profile				Previous Stock
Share Class	Listed on	Stock Abbreviation	Stock Code	Abbreviation
A Shares	SSE	中鋁國際	601068	—
H Shares	HKEX	CHALIECO	2068	—

SECTION 2 COMPANY PROFILE AND KEY FINANCIAL INDICATORS

VI. OTHER RELEVANT INFORMATION

CPA firm engaged by the Company (domestic)	Name Office address Names of accountants who signed the report	WUYIGE Certified Public Accountants LLP 15F Xueyuan International Tower, No.1 Zhichun Road, Haidian District, Beijing SHI Chenqi (石晨起), LIU Mingzhe (劉明哲)
Financial advisors who performed continuous supervisory duties during the Reporting Period	Name Office address Signing officers of financial advisors Period of continuous supervision and guidance	CSC Financial Co., Ltd. 3/F, Kaiheng Center B, No.2 Chaonei Dajie, Dongcheng District, Beijing Wang Yuming (王玉明), Chen Wei (陳煒), Zhang Bohua (張伯華) CSC Financial Co., Ltd. was appointed as the independent financial advisor of the Major Asset Disposal of the Company, its continuous supervision period is from 23 December 2022 to 31 December 2023
Legal advisor as to PRC laws	Name Office address	Jia Yuan Law Office (北京市嘉源律師事務所) F408, Ocean Plaza, 158 Fuxing Men Nei Street, Xicheng District, Beijing (北京市西城區復興門內大街158號 遠洋大廈F408)
Legal advisor as to overseas laws	Name Office address	Clifford Chance (高偉紳律師行) 27th Floor, Jardine House, One Connaught Place, Central, Hong Kong (香港中環康樂廣場一號怡和大廈27樓)
A Shares Registrar of the Company	Name Office address	China Securities Depository and Clearing Co., Ltd. Shanghai Branch (中國證券登記結算有限責任公司上海分公司) 188 South Yanggao Road, Pudong New Area, Shanghai (上海市浦東新區楊高南路188號)
H Shares Registrar of the Company	Name Office address	Computershare Hong Kong Investor Services Limited (香港中央證券登記有限公司) Shops 1712-1716, 17th Floor, Hopewell Centre, 183 Queen's Road East, Wan Chai, Hong Kong (香港灣仔皇后大道東183號合和中心17樓1712-1716號舖)

SECTION 2 COMPANY PROFILE AND KEY FINANCIAL INDICATORS

VII. KEY ACCOUNTING FIGURES AND FINANCIAL INDICATORS FOR RECENT THREE YEARS

(I) Key Accounting Figures

(Expressed in RMB'0,000)

Key Accounting Figures	2022	2021		Change for the period as compared with that of the same period of last year (%)	2020	
		After adjustment	Before adjustment		After adjustment	Before adjustment
Operating income	2,369,732.89	2,389,872.34	2,334,819.63	-0.84	2,471,782.33	2,302,595.10
Net profit attributable to shareholders of the listed company	11,250.63	-107,042.09	-95,012.97	N/A	-200,207.11	-197,613.84
Net profit attributable to shareholders of the listed company net of non-recurring profit and loss	-42,559.17	-115,725.62	-102,839.42	N/A	-213,599.31	-210,738.12
Net cash flow from operating activities	52,486.92	65,982.97	73,421.50	-20.45	64,125.14	61,073.56
		As at the end of 2021		Change for the end of the period as compared with that of the end of the same period of last year (%)	As at the end of 2020	
	As at the end of 2022	After adjustment	Before adjustment		After adjustment	Before adjustment
Net assets attributable to shareholders of the listed company	752,981.55	753,471.62	763,711.78	-0.07	873,875.59	873,307.42
Total assets	4,739,128.86	6,002,275.67	5,882,803.53	-21.04	5,593,193.83	5,448,884.59

SECTION 2 COMPANY PROFILE AND KEY FINANCIAL INDICATORS

(II) Key Financial Indicators

Key Financial Indicators	2022	2021		Change for the period as compared with that of the same period of last year (%)	2020	
		After adjustment	Before adjustment		After adjustment	Before adjustment
Basic earnings per share (RMB/share)	0.00	-0.41	-0.37	N/A	-0.72	-0.71
Diluted earnings per share (RMB/share)						
Basic earnings per share net of non-recurring gains and losses (RMB/share)	-0.19	-0.44	-0.39	N/A	-0.76	-0.76
Weighted average return on net assets (%)	-0.21	-21.18	-18.91	N/A	-29.06	-28.78
Weighted average return on net assets net of non-recurring gains and losses (%)	-10.72	-22.71	-20.28	N/A	-30.89	-30.58

Explanation of key accounting figures and financial indicators of the Company for the previous three years as at the end of the reporting period

Applicable Not applicable

VIII. DIFFERENCES IN ACCOUNTING FIGURES UNDER DOMESTIC AND FOREIGN ACCOUNTING STANDARDS

(I) Differences in net profit and in net assets attributable to shareholders of the listed company in financial reports disclosed under IAS and under Chinese Accounting Standards

Applicable Not applicable

(II) Differences in net profit and in net assets attributable to shareholders of the listed company in financial reports disclosed under International Accounting Standards and under Chinese Accounting Standards

Applicable Not applicable

(III) Explanation of differences between Chinese Accounting Standards and International Accounting Standards:

Applicable Not applicable

SECTION 2 COMPANY PROFILE AND KEY FINANCIAL INDICATORS

IX. KEY FINANCIAL FIGURES BY QUARTERS IN 2022

(Expressed in RMB'0,000)

	First quarter (From January to March)	Second quarter (From April to June)	Third quarter (From July to September)	Fourth quarter (From October to December)
Operating income	478,078.94	557,235.78	574,798.13	759,620.04
Net profit attributable to shareholders of the listed company	1,828.06	4,804.71	1,646.87	2,970.99
Net profit attributable to shareholders of the listed company net of non-recurring profit and loss	1,162.56	5,005.75	-2,214.45	-46,513.03
Net cash flow from operating activities	-125,218.76	14,506.67	10,415.10	152,783.91

Explanation of differences between quarterly figures and those disclosed in regular reports

Applicable Not applicable

X. ITEMS AND AMOUNTS OF NON-RECURRING GAIN OR LOSS

Applicable Not applicable

(Expressed in RMB'0,000)

Non-recurring Gain or Loss	Amounts in 2022	Note (as applicable)	Amounts in 2021	Amounts in 2020
Gain or loss on disposal of non-current assets	13,376.5	-	275.8	1,069.15
Tax return, reduction or exemption arising from ultra vires approval, without official approval document, or on an occasional basis				
Government subsidies recorded in current P&L (except government subsidies closely related to normal business operations granted continuously in a fixed amount or quota according to the unified national standards)	2,361.68	-	3,718.79	4,590.04
Financing fee income from non-financial enterprises recorded in current P&L	3,092.65	-	2,972.41	2,952.21
Gain arising from the acquisition of interests in a subsidiary, associate or joint venture at an investment cost below the share in the fair value of net identifiable assets of the investee at the time of acquisition				

SECTION 2 COMPANY PROFILE AND KEY FINANCIAL INDICATORS

Non-recurring Gain or Loss	Amounts in 2022	Note (as applicable)	Amounts in 2021	Amounts in 2020
Gain or loss on non-monetary asset exchange				
Gain or loss on assets under discretionary investment or management				
Asset impairment provisions arising from force majeure factors such as natural disasters				
Gains or losses on debt restructuring	308.84	–	–3,420.78	744.22
Restructuring costs, such as employee settlement cost and integration cost				
Gain or loss in excess of fair value arising from transactions at obviously unfair prices				
Net profit or loss of a subsidiary arising from business combination under common control for the period from the beginning of the reporting period to the combination date	11,512.29	–	–	–
Gains or losses on contingencies not related to normal operations of the Company				
Gains on investment in the fair value of the held-for-trading financial assets, derivative financial assets, held-for-trading financial liabilities and derivative financial liabilities held by the Company and investment income from disposal of held-for-trading financial assets, derivative financial assets, held-for-trading financial liabilities, derivative financial liabilities and other debt investments other than the valid hedging services related to the normal operating activities of the Company				
Reversal of impairment provisions on receivables and contract assets tested for impairment individually	35,766.49	–	7,681.25	4,973.24
Gain or loss on entrusted loans				
Gain or loss on changes in the fair value of investment property subsequently measured at fair value				
Impact of non-off adjustments to current P&L as required by taxation and accounting laws and regulations				
Trustee fee income from entrusted operations				
Other non-operating revenue and expenses other than above items	–1,301.12	–	187.70	5,656.15
Other items falling within the definition of non-recurring gain or loss	–	–	410.29	–1,745.60
Less: Impact of income tax	8,553.11	–	1,926.44	1,409.60
Impact of minority interests (after tax)	2,754.42	–	1,215.49	3,437.61
Total	53,809.80	–	8,683.53	13,392.20

SECTION 2 COMPANY PROFILE AND KEY FINANCIAL INDICATORS

Description of defining the extraordinary profit and loss according to the “Explanatory Announcement No. 1 on Information Disclosure for Companies Offering Their Securities to the Public – Extraordinary Profit and Loss” by the Company, and defining the extraordinary profit and loss listed in the “Explanatory Announcement No. 1 on Information Disclosure for Companies Offering Their Securities to the Public – Extraordinary Profit and Loss” to be recurring profit and loss.

Applicable Not applicable

XI. ITEMS MEASURED AT FAIR VALUE

Applicable Not applicable

(Expressed in RMB'0,000)

Item	Opening Balance	Ending Balance	Change	Impact on Profit for the Current Period
Other equity instrument investments	7,520.12	5,716.73	-1,803.38	56.72
Total	7,520.12	5,716.73	-1,803.38	56.72

XII. OTHERS

Applicable Not applicable



MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)



SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

I. OPERATING RESULTS DISCUSSION AND ANALYSIS

Operating Results of FY2022

In 2022, the Company closely focused on the annual goals and tasks, continued to deepen the “technology + internationalism” development strategy, firmly implemented various measures of “stabilising operations, eliminating risks, promoting transformation and strengthening reform”, focused on achieving progress in the six arenas of “improving quality and efficiency, promoting technological innovation, deepening reform, risk prevention and control, strengthening management, and transformation and upgrading”, overcame the impact of various factors such as the recurrences of pandemic outbreaks in China and the drastic fluctuations in the external operating situation, and spared no efforts to organise production and operation, with all indicators showing a positive trend.

(I) Clarified the concept of development and laid a solid foundation for high-quality development

In 2022, the Company established the intensive high-quality development goal and focused on “stabilising operations” throughout the year, resulting in a significant improvement in production and operations and a substantial year-on-year decrease in financial expenses, achieving positive net profit for the current period. As for “minimising risks”, the Company strived to eliminate risks by reducing the “accounts receivable and inventory”, address the existing litigation cases and exercise control over the increase in litigation cases. There were no new major risk events during the year. As for “promoting transformation”, the business model of “One Main, One Special and One Expansion”¹ is constructing a new business layout, creating new profit growth drivers, with a significantly optimised income structure. As for “strengthening reform”, the Company has fully implemented the three-year action plan for reform on state-owned enterprises, further promoted the tenure system and contractual management of enterprises, steadily promoted the reform task of “demonstration action for science and technology reform” of CINF, CNPT and Kunming Institute, and stimulated the motivation and vitality of its enterprises.

¹ “One Main”: the Company will focus on strengthening its main businesses, being the non-ferrous metals business and industrial business, consolidate the core position of its main business in the Company and continuously increase its market share to provide strong support for the development of enterprises. “One Special”: the Company will endeavor to achieve professional development by optimising its special business, aiming to develop unique competitiveness, develop competitive advantages in specific fields and strengthen its market leading advantages in the traditional non-ferrous industry with a market-oriented approach and a focus on technological innovation. “One Expansion”: the Company will expand new increments of business development, and procure its member enterprises to achieve transformation and development in various fields including new infrastructure, new energy and the transformation of new scientific and technological achievements while focusing on the diversification of their main business and capitalizing on their unique advantages.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

The Company continued to strengthen the construction of the Board and the Board of Supervisors to continuously improve the level of corporate governance. The Board of Supervisors of the Company was awarded the “Pioneering Award for the Board of Supervisors of Listed Companies (上市公司監事會積極進取獎)” by China Association for Public Companies, the secretary to the Board was awarded the 4A grade on performance by China Association for Public Companies in 2022, and the office of the Board was awarded the “Excellent Practice of Board Office of Listed Companies in 2022 (2022上市公司董辦優秀實踐)” by China Association for Public Companies.

The Company won 177 quality awards at provincial and ministerial level or above for the whole year, including 5 national quality awards, hitting a record high. The Shenhua Green Hydropower and Aluminum Integration Project (神火綠色水電鋁材一體化項目), launched by GAMI and Sixth Metallurgical Company Yunnan Branch, won the National Quality Project Gold Award (國家優質工程金獎). Chalco's overseas bauxite projects in Guinea, launched by Sixth Metallurgical Company, CINF and Twelfth Metallurgical Company, won the National Quality Project Award (國家優質工程獎). The Beijing Universal Studios Theme Park Project (北京環球影城主題公園項目), launched by Sixth Metallurgical Company, won the China Construction Engineering Luban Prize (中國建設工程魯班獎). The Inner Mongolia Montadalat Aluminum Strip Project (內蒙古蒙泰達拉特鋁板帶項目), launched by SAMI, won the National Quality Project Award. Xinjiang Xinhua Bookstore Project (新疆新華書店工程), launched by Ninth Metallurgical Company, was awarded the China Steel Structure Gold Award (中國鋼結構金獎).

(II) Full efforts to expand the market and gradually improve the quality of contracts

The Company strengthened the overall management of marketing, established the “Marketing Management Committee”, established a monthly coordination regular meeting system for marketing, and formulated the Administrative Measures for International and Domestic Business Marketing of China Aluminum International (《中鋁國際國際國內業務市場營銷管理辦法》) and the “Administrative Measures for Marketing Coordination of China Aluminum International (《中鋁國際市場營銷協同管理辦法》) to expand the depth and breadth of marketing coordination.

The Company paid close attention to the quality of contracts, improved the conversion rate of contracts. As a result, the proportion of effective contracts significantly increased, and the overall market development structure was optimised. The value of design and consulting contracts of CINF and GAMI doubled year-on-year. Ninth Metallurgical Company signed special business contracts with a value of more than RMB2.5 billion in metallurgy, coking, logistics and steel structure, and the newly signed contract of Changkan Institute was listed among the top ten in the field of ecological restoration of mines in China.

The Company continuously increased its resource investment in overseas market and reshaped the development landscape of overseas market, thereby initially establishing a headquarter-centric overseas marketing system with overseas marketing institutions coordinating regional market development and advantageous member enterprises responsible for specific implementation. The Company vigorously explored markets in Indonesia, Africa, South America and Russia.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

(III) Strengthened the leading role of science and technology and continuously delivered scientific research results

The Company highlighted its positioning of high-quality development led by science and technology and increased its investment in research and development so as to ensure the delivery of major special projects. In accordance with its general idea of “focusing on key areas, hierarchical management, and key supervision and promotion”, the Company established a three-level R&D project management system covering major special projects, key projects, and scientific research projects of member companies. The Company actively participated in national science and technology projects, secured 3 new national key research and development projects and 13 other major government projects. The Company held its first scientific and technological innovation conference.

Major breakthroughs have been achieved for the national innovation platform. CINF became the only design and research entity in China to be awarded the “National Demonstrative Enterprise of Technology Innovation (國家技術創新示範企業)” in 2022. SAMI, CINF and Kunming Survey and Design Institute were recognised by the National Enterprise Technology Centre, and SAMI and Kunming Survey and Design Institute and Design Institute were approved to establish a national post-doctoral research station. At present, the Company has a total of 13 national innovation platforms, 25 provincial innovation platforms and 1 provincial key laboratory.

A number of major scientific and technological achievements were implemented. 15 achievements, including “R&D and Application of Integrated Platform for Digital Delivery and Intelligent Operation and Maintenance of Aluminum Smelter (鋁冶煉數字化交付與智能運維一體化集成平台的研發與應用)” have passed the technological achievement evaluation by the industry association and other organisations, and all of them have reached the international advanced level, 10 of which have reached the international leading level. The Company was the winner of 22 provincial and ministerial-level science and technology awards, including 9 first prizes. The “Key Technology and Industrialisation of Green Extraction of Lead, Antimony and Polymetallic Metal (鉛銻銀多金屬綠色提取關鍵技術與產業化)” won the first prize of the Science and Technology Progress Award of Guangxi Autonomous Region. “A Process for Rolling and Manufacturing of Wide-area Magnesium Alloy Strip (一種軋製寬幅鎂合金板帶的工藝)” won the Excellence Award of the 23rd China Patent Excellence Award (第二十三屆中國專利獎優秀獎), and the Company has won the China Patent Award (中國專利獎) for five consecutive years. During the year, the Company applied for a total of 381 patents, more than 46% of which were invention patents. The Company received more than 300 new patents at home and abroad, established 16 new technical standards, and secured more than 40 new construction methods at the ministerial level.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

The Company is empowered by digital intelligence and informatization. The Company accelerated the development of the application of digital delivery technology among survey and design enterprises, focused on the requirements of establishing a high-standard design system of “new model of digital delivery, new scenarios of intelligent application and new standards of standardised operation”, formulated the delivery requirements for non-ferrous metals from various stages including mining, smelting, processing and special equipment manufacturing, developed the project-level digital delivery standards for each stage, continued to promote the digital transformation of major key scientific research projects, signed a number of digital delivery design engineering projects, and carried out research and application of new scenarios of intelligent application in combination with the process site and production process, achieving a revenue of more than RMB200 million from provision of digital intelligence services. The construction enterprises fully leveraged the additional effects of BIM technology in cost, quality and progress control to achieve the digitisation and refinement of construction project management and control. The Company coordinated its technical management information system for construction projects, formed an integrated management and control platform for integration of business and finance, and successfully launched the project management information system of Sixth Metallurgical Company.

(IV) Steadily improving operation quality by tightening cost control

In accordance with the overall requirements of refined cost control, the Company formulated the work plan for improving the gross profit margin in 2022, clarified that the core of project management is to focus on the cost of the whole process of project implementation, established a three-level cost management system, paid close attention to project cost planning, focused on the closed-loop management of cost of projects under construction, and strengthened the formulation of the cost management map of new construction projects and the implementation of cost reduction plans. As such, the contract-signing rate of the two project management system¹, risk mortgage payment rate and project cost planning rate basically reached 100%, with continuously improving quality of project cost management.

¹ The two project management systems are namely the project manager accountability system and project cost accountability system.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

II. INDUSTRY OVERVIEW OF THE COMPANY WITHIN THE REPORTING PERIOD

In 2022, the central and local governments of the PRC have successively issued industrial policies to promote the upgrading and development of the non-ferrous metal industry. Two documents have been issued at the national level. The “Non-Ferrous Metal Industry Carbon Peak Implementation Plan” (《有色金屬行業碳達峰實施方案》) guides the efficient and intensive development of the industry, promotes the accumulation of factor resources to green and low-carbon advantageous enterprises; develops green direct financing, supports qualified green and low-carbon enterprises to go public for financing; and encourages social capital to set up relevant equity investment funds to promote the implementation of green and low-carbon projects. The “Guidelines for the Implementation of Energy Conservation and Carbon Reduction Transformation and Upgrading in Key Areas of High Energy Consumption Industries (2022 Edition)” (《高耗能行業重點領域節能降碳改造升級實施指南(2022年版)》) puts forward clear requirements for the scientific improvement and upgrading of energy saving and carbon reduction in key areas, among which, the “Implementation Guide for Energy Saving and Carbon Reduction in Non-ferrous Metals Refining Industry” (有色金屬冶煉行業節能降碳改造升級實施指南) has the work target of further improving the energy efficiency of key products such as copper, aluminum, lead and zinc by 2025 through the implementation of energy saving and carbon reduction technology transformation. The proportion of production capacity above the benchmark level for electrolytic aluminum energy efficiency reaches 30%, and the proportion of production capacity above the benchmark level for copper, lead, and zinc smelting energy efficiency reaches 50%.

According to the National Bureau of Statistics, from January to December, China's ten non-ferrous metal production was 67.743 million tons, an increase of 4.3% year-on-year. Among them, the output of refined copper and primary aluminum were 11.063 million tons and 40.214 million tons respectively, up 4.5% and 4.5% year-on-year, with a steady growth in output; the output of copper was 22.865 million tons, up 5.7% year-on-year; the output of aluminum was 62.216 million tons, down 1.4% year-on-year; the national imports of bauxite was 125 million tons, representing an increase of 16.9% from last year.

In 2022, by continuously promoting a package of policies to stabilize the economy and fully implementing successive measures, the PRC effectively played the role of policy-oriented developmental financial instruments to promote the construction of major projects, accelerate the renewal and transformation of equipment and increase support for the private economy, maintaining stable growth in investment. According to the National Bureau of Statistics, from January to December, the PRC's fixed asset investment (excluding rural households) increased by 5.1% year-on-year, the PRC moderately advanced infrastructure investment, accelerated the layout of new infrastructure construction, strengthened weak areas to make up for shortcomings, and strongly supported the recovery of infrastructure investment. According to statistics, infrastructure investment increased by 9.4% year-on-year.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

In 2022, the central and local governments invested in traditional infrastructure, new energy infrastructure and major engineering projects. The growth rate of infrastructure investment maintained a steady growth, which played an important fundamental role in stabilizing investment and growth. With the support of special bonds and policy-oriented development financial instruments, the growth rate of infrastructure investment will continue to pick up, and the policy environment facing infrastructure investment will continue to improve, with the capital side and project side improving significantly. In general, the number of construction enterprises in China is increasing year by year. By the end of 2022, there had been more than 130,000 construction enterprises in the PRC, and the competition in the industry became increasingly fierce. The competitiveness of state-owned enterprises with advantages in scale, financing and technology is more prominent, resulting in the concentration of orders in the construction industry to leading enterprises. The construction industry carried out three major reforms, including bidding reform, qualification reform and labor service reform. The digital transformation of the construction industry, such as digital industrial sites and BIM technology, progressed steadily. A large number of smart construction-related companies have emerged in the industry, and a number of smart construction demonstration sites have been built nationwide. The Ministry of Housing and Urban-Rural Development has also identified 24 smart construction pilot cities. In the housing construction industry, real estate regulation and control continues the main tone of "housing for live in, not speculation" (房住不炒). The Central Economic Work Conference emphasized the importance of real estate to economic recovery, and several local governments have adjusted their housing policies, which has positive implications for housing construction projects.

Looking ahead to 2023, in the context of macro policy structural relaxation, the macro environment and downstream demand facing the construction industry are expected to continue to improve, infrastructure investment will still be an important grip to drive economic growth. Housing construction projects have improved, but regional differences or project differentiation is obvious. It is expected that the macro environment will bring certain development opportunities to the Company's transformation upgrade and business expansion in general.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

III. BUSINESS OVERVIEW OF THE COMPANY FOR THE REPORTING PERIOD

(I) Principal business and operation modes

The Company is a leading technology, engineering service and equipment provider in the nonferrous metals industry in China, capable of providing a full range of integrated technical and engineering design and construction services for various businesses in the entire nonferrous metals industry chain. The Company's businesses mainly include engineering survey, design and consultancy, engineering and construction contracting, equipment manufacturing and equipment trading. In 2022, the Company continued to be among the China's Fortune 500; meanwhile, in the 2022 "THE TOP 150 GLOBAL DESIGN FIRMS" and "THE TOP 250 GLOBAL CONTRACTORS" issued by the Engineering News-Record (ENR) magazine in the U.S., Chalieceo was included again and ranked at 97th and 119th, respectively.

1. Engineering survey, design and consultancy business

Engineering survey, design and consultancy are the Company's traditional key business, covering mining, ore dressing, smelting and processing in the non-ferrous metal industry, geological survey and building construction in the construction industry, as well as engineering design in energy, chemical and environmental protection, etc.. The Company's main customers are non-ferrous metal smelting and processing enterprises, and employers in construction and other industries. The Company's technicians have expertise in over 40 professional fields such as geological survey, process design, equipment design, electrical automation, general layout and transportation design, civil engineering, public facilities construction, environmental protection, project budget and technical economy, and have provided engineering design and consultancy services for over 2,000 key construction projects of the state and various industries as well as over 100 overseas projects.

2. Engineering and construction contracting business

The Company's engineering and construction contracting business covers metallurgy industry, housing construction, highways, building materials, electricity, water conservancy, chemical industry, mining, municipal utilities, steel structure and other fields. The Company adopts a couple of engineering and construction contracting business modes, including EPC, E+P, E+C, P+C, EPCM. Meanwhile, the Company takes part in project construction and operation management through PPP and other modes. With its technology and experience, the Company has established a leading position in China's non-ferrous metal industry, particularly in the area of engineering contracting for the aluminum industry. In recent years, the Company has undertaken many large-scale EPC projects at home and abroad.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

3. Equipment manufacturing business

Equipment manufacturing is a high-tech industry that the Company develops vigorously. The Company insists on independent technological innovation, and focuses on research and development of new process, new technologies, advanced materials and new equipment of non-ferrous metal, leading the direction of technology development of China's non-ferrous metal industry. The Company's equipment manufacturing segment mainly provide customized core metallurgical and processing equipment, environmental protection equipment, mechanical and electronic equipment, industrial automation systems and mine safety monitoring and emergency response intelligent systems. The Company's products are used in many areas in the non-ferrous metal industry chain, including mining, ore dressing, smelting and metal material processing.

4. Trading business

In order to strengthen cost and risk control, the Company adopted centralized procurement approach, mainly carried out the equipment and raw material procurement business related to its principal operations, and fully stopped the external trade business irrelevant to the Company's principal business.

(II) Specific business models for engineering design and consultancy, and engineering and construction contracting

The Company has long been engaging in survey, design and project contracting in the non-ferrous metal field. With technological innovation and industrialization as its core competitiveness, the Company has its business covering engineering survey and design and consultancy, engineering and construction, equipment manufacturing and other fields, and has established a business model covering full industrial chain of "investment and financing-planning-design-engineering construction asset operation/industrial service". Among them, the engineering and construction contracting business covers metallurgical industry, housing construction, highways, municipal engineering and other fields, and adopts various business development modes such as construction contracting and general engineering contracting (including EPC, E+P, E+C, P+C, EPCM, etc.).

1. The Company's engineering design and consultancy business involves compiling relevant technical data and provide technical services based on the engagement of owners, and to carry out engineering consultancy, design and survey services according to the design consultation process to ensure compliance with the requirements stipulated in the contract. Rights and obligations: based on the true and accurate basic information provided by the owner, we have the obligation to provide qualified technical products as agreed in the contract, and also have the right to collect service fees in a timely manner as agreed in the contract. Pricing mechanism: service fees are charged generally by reference to national fee rates for engineering survey and market conditions and based to specific conditions such as the complexity of the project. Relying on the Company's technical advantages in the non-ferrous metallurgy industry, this business brings a higher profit margin compared with engineering construction projects. As to payment terms in the contract, usually an advance payment of about 10%-20% is required, and the remaining amount is paid in installments according to the amount of work completed (as for engineering design business) or settled in full upon delivery of the consultation report (as for engineering consultancy business). The Company bears the risks associated with product design quality and progress pursuant to the contract. This business segment does not involve financing.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

2. The Company's engineering and construction contracting business covers metallurgical industry, housing construction, highways, mines, municipal utilities and other fields. The Company adopts a number of business modes, including traditional contracting, EPC (including EP and PC), and investment-finance-build (including PPP), etc.. Risks: under the traditional contracting mode, the Company acts as a contractor and is responsible for project construction and equipment installation; Under the EPC mode, the Company takes charge of the whole design process, procurement of materials and equipment, construction, equipment installation and testing, and is liable to the proprietor for the quality, safety, on-time delivery and cost of the project. The main risk for the Company involves material difference not higher than a certain rate as agreed in the contract, while the proprietor assumes compliance risks of the project and ensures the availability of project funds; Under the PC mode, the Company undertakes the procurement and construction of the project according to the contract, and is liable for the quality, safety, progress and cost of the project. Pricing: through participating in competitive bidding, the Company will conduct detailed research on the proposed project in deciding the bid. Specifically, based on on-site visit, the Company will analyze and study on technical conditions, commercial conditions and other factors, forecast the project costs, and based on this, adds proposed gross profit to derive the bid price. Payment collection: mainly project progress payments, settled and collected according to the monthly progress or milestones, and advance payment (if any) is collected according to the contract.
3. According to the direction of national policies, where the risks are manageable, the Company has chosen to undertake some PPP investment-finance-build projects, to promote technology-based investment, financing and construction business. Risks: the Company, as the general contractor and non-government equity investor of the project, mainly undertakes engineering construction and shares operational risks of the project with the government, while the government mainly bears compliance risk and land acquisition and relocation risks. Finance: in addition to capital injected by all equity investors, project loans represent a major source of funds for the project. Payment collection: the Company, as the general contractor and non-government equity investor of the project, has different sources of income during the construction period and the operation period. During the construction period, income mainly comes from progress payments made by the project company, while during the operation period, income mainly comes from fees paid by users and feasibility gap subsidy from the government. Pricing based on the PPP mode, the pricing is mainly to determine the rate of return on non-governmental investment (including financing), including the annual discount rate, reasonable profit margin, and engineering construction profit, and the government determines the nongovernmental investor through public tender. Profit: The Company, as both an investor and a project contractor, mainly generates profits from construction during the construction period, and from feasibility gap subsidy from the government during the operation period. Rights and obligations: the Company has the right of construction and payment collection of projects during the construction period, and the right to collect fees from users and feasibility gap subsidies from the government as agreed in the contract during the operation period, and the obligation to ensure successful completion and normal operation of the project.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

IV. CORE COMPETENCE ANALYSIS IN THE REPORTING PERIOD

Applicable Not applicable

(I) Technical and talents advantages

The Company has strong capabilities of scientific research and technical innovation, has 5 grade A design research institutes, 2 grade A survey and design research institutes, and 3 large comprehensive construction and installation enterprises, has an experienced professional and technical team, and has 34 national level survey and design masters from the industry. As at the end of 2022, the Company has 9 national level engineering technology research centers and national level technology centers, 4 national level corporate postdoctoral research stations, 22 provincial level engineering technology centers, 2 provincial level postdoctoral innovation practice base and 1 provincial level engineering laboratory.

In the “eight major fields”, such as investigation and exploration, alumina, electrolytic aluminum and aluminum carbon, mining, nonferrous metal processing, heavy nonferrous and rare metal smelting, construction, and emerging business and in the “five major directions”, such as “double carbon” governance, key process technology and equipment of nonferrous industry, big data service and intelligent manufacturing, comprehensive utilization of resources, and municipal public services, guided by the Company’s “14th Five-Year Plan” science and technology planning and technology research and development guidelines, increasing core technology research and development, and constantly enhancing its leading edge in science and technology. A total of 381 patents were applied for during the year, among which inventions accounted for more than 46%; more than 300 newly authorized patents at home and abroad; 16 new technical standards of various kinds were approved; more than 40 ministerial construction methods were newly acquired.

(II) Full industry chain advantages

The Company has full professional and wide-ranging technology integration capabilities and full industry chain comprehensive competitiveness, operating engineering survey, engineering design and consulting, engineering construction, equipment manufacturing, operation and maintenance, and other business. Clued by strong technology, supported by refined management, by means of professional services, the Company can provide industry customers with a full range of services in engineering design and consulting, engineering construction, operation management and specialized equipment manufacturing, to solve common problems and “high, deep, difficult, special” problems for customers.

(III) Qualification advantages

As a construction enterprise, the Company has various qualifications, 345 in total. Among them, there are 1 Grade A construction design integrated qualification, 2 Grade A comprehensive qualifications for prospecting, 4 Grade A qualifications for design, 3 extra-grade qualifications for general contract and 13 Grade A qualifications for supervision in construction projects.

(IV) Strong customer network and good customer relations

The Company maintains a good business relationship with many large domestic non-ferrous metal companies, and with our good reputation and fame gained in the historical cooperation, the Company will be a priority choice for engineering projects of major non-ferrous metal companies.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

V. MAIN OPERATIONS WITHIN THE REPORTING PERIOD

In 2022, the Company recorded operating revenue RMB23,697 million, down by 0.84% year-on-year; total profit RMB285 million, up by RMB1,221 million year-on-year; and net profit attributable to the parent company RMB113 million, up by RMB1,183 million year-on-year.

(I) Principal Business Analysis

1. Analysis of changes in relevant items on income statement and cash flow statement

(Expressed in RMB'0,000)

Item	Current	Previous	Change, (%)
Operating revenue	2,369,732.89	2,389,872.34	-0.84
Operating cost	2,067,321.21	2,079,832.74	-0.60
Sales expense	11,927.27	9,816.86	21.50
Administrative expense	106,907.87	106,281.41	0.59
Financial expense	28,734.76	55,278.53	-48.02
R&D expense	91,206.62	78,549.51	16.11
Net cash flow from operating activities	52,486.92	65,982.97	-20.45
Net cash flow from investing activities	-432,104.59	-408,621.33	-5.75
Net cash flow from financing activities	386,695.71	343,478.95	12.58

Reasons for changes in operating revenue: No material change

Reasons for changes in operating cost: No material change

Reasons for changes in sales expense: The Company further stepped up its efforts in marketing team building, and expenses such as staff salaries and sales commissions increased.

Reasons for changes in administrative expense: No material change

Reasons for changes in financial expense: The Company continues to optimize the financing structure, controls the financing scale, and reduces financial expenses. At the same time, the Company was affected by the exchange rate fluctuations of the RMB against the US dollar, resulting in part of the exchange gains.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

Reasons for changes in R&D expense: The Company continued to increase investment in research and development.

Reasons for changes in net cash flow from operating activities: The Company actively responded to the call of the country, practiced the central corporate responsibility, and strengthened the construction of social responsibility, vigorously carried out the payment work such as the assistance to small and medium-sized enterprises, and the cash for purchasing goods and accepting labor payment increased year-on-year.

Reasons for changes in net cash flow from investing activities: Mainly because the projects advances recovered by the Company during the period decreased compared with the same period of the previous year.

Reasons for changes in net cash flow from financing activities: During the Reporting Period, the Miyu Company received investment from government shareholders increased compared with the same period of the previous year.

Detailed explanation for the significant changes in the Company's current business type, profit composition or source.

Applicable Not applicable

2. Revenue and cost analysis

Applicable Not applicable

The Company's operating income in 2022 was RMB23,697 million, a year-on-year decrease of 0.84%, and the Company's business scope covers engineering design and consulting, engineering construction and contracting, equipment manufacturing, and trade business. In terms of the development pattern of the business sector, the engineering design and consulting and equipment manufacturing business increased significantly compared with the previous year, and the operating income from the design segment increased by 9.62%, that from equipment manufacturing segment grew by 58.37%, and that from engineering contracting business decreased by 5.31%.. The business scope of the Company covers China, India, Indonesia, Italy, Laos, Congo, Guinea, and other countries and regions.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

(1). *Principal business by sector, product, geography and by sales mode*

(Expressed in RMB'0,000)

Principal business by sector						
Sector	Operating revenue	Operating cost	Gross margin (%)	Changes in operating revenue over the previous year (%)	Changes in operating cost over the previous year (%)	Changes in gross margin over the previous year (%)
Engineering and consulting	268,680.34	187,975.43	30.04	9.62	0.81	Up by 6.93 percentage points
Construction and contracting	1,871,038.50	1,681,004.82	10.16	-5.31	-2.67	Down by 2.43 percentage points
Equipment manufacturing	244,907.95	213,069.87	13.00	58.37	50.75	Up by 4.4 percentage points
Trading	-	-	-	N/A	N/A	N/A
Inter-segment elimination	-14,893.90	-14,728.90	N/A	N/A	N/A	N/A
Total	2,369,732.89	2,067,321.21	12.76	-0.84	-0.60	Down by 0.21 percentage points

Principal business by geography						
Geography	Operating revenue	Operating cost	Gross margin (%)	Changes in operating revenue over the previous year (%)	Changes in operating cost over the previous year (%)	Changes in gross margin over the previous year (%)
PRC	2,269,997.86	1,991,993.94	12.25	-2.66	-2.12	Down by 0.48 percentage points
Other countries and regions	99,735.03	75,327.27	24.47	72.52	68.62	Up by 1.75 percentage points
Total	2,369,732.89	2,067,321.21	12.76	-0.84	-0.60	Down by 0.21 percentage points

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

Explanation of principal business by sector, product, geography and by sales mode

- ① Engineering design and consultancy segment (before elimination of inter-segment transactions)

(Expressed in RMB'0,000)

Item	2022	2021	Growth (%)
Operating revenue	268,680.34	245,103.77	9.62
Operating cost	187,975.43	186,466.92	0.81
Gross profit	80,704.92	58,636.85	42.5
Gross margin (%)	30.04	23.92	Up by 6.93 percentage points
Sales expense	7,388.30	4,939.64	49.57
Administrative expense	36,579.88	33,780.22	8.29
R&D expense	30,089.63	22,094.57	36.19
Total profit	7,545.08	3,096.44	143.67

The Company's revenue from engineering and consulting business amounted to RMB2.687 billion in 2022, representing an increase of 9.62% as compared with 2021, with a gross profit margin of 30.04%, representing an increase of 6.93 percentage points as compared with the previous year. This was mainly due to the increase in revenue, but expenses such as labor costs are relatively fixed, and the decline in the cost of outsourced labor services led to an increase in gross profit margin.

During the Reporting Period, the total profit of engineering and consulting business sector amounted to RMB75 million, up by 143.67% year-on-year, mainly due to the Company continued to promote the transformation and upgrading of survey and design business, strengthened the three-dimensional forward design, strengthened the technical research in the fields of energy conservation and carbon reduction, and improved the core competitiveness. The amount of newly signed contracts increased, the operating income increased, the gross profit margin increased significantly and the total profit increased.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

- ② Construction and contracting segment (before elimination of inter-segment transactions)

(Expressed in RMB'0,000)

Item	2022	2021	Growth (%)
Operating revenue	1,871,038.50	1,975,858.69	-5.31
Operating cost	1,681,004.82	1,727,099.06	-2.67
Gross profit	190,033.68	248,759.63	-23.61
Gross margin (%)	10.16	12.59	Down by 2.43 percentage points
Sales expense	2,966.04	2,817.72	5.26
Administrative expense	64,340.27	63,334.53	1.59
R&D expense	50,110.59	46,165.49	8.55
Total profit	15,557.76	12,806.94	21.48

In 2022, the Company's revenue from construction and contracting business amounted to RMB18.71 billion, a decrease of 5.31% as compared with 2021, mainly due to the decrease in revenue scale in 2022 under the impact of the Company's business transformation and the pandemic. Gross profit margin was 10.16%, representing a year-on-year decrease of 2.43 percentage points. This was mainly because the Company strictly controlled the relatively high-risk advance contracting business, the proportion of expressway projects with high gross profit decreased during the Reporting Period, and their contributions to profit decreased.

In this report, the total profit of the engineering construction contracting business was RMB156 million, a year-on-year increase of 21.48%, mainly because the Company strengthened the collection of creditor's rights and reduced impairment losses, which contributed more to profits.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

③ Equipment manufacturing business (before elimination of inter-segment transactions)

(Expressed in RMB'0,000)

Item	2022	2021	Growth (%)
Operating revenue	244,907.95	154,639.55	58.37
Operating cost	213,069.87	141,337.01	50.75
Gross profit	31,838.08	13,302.53	139.34
Gross margin (%)	13.00	8.60	Up by 4.4 percentage points
Sales expense	1,581.51	1,318.81	19.92
Administrative expense	6,115.59	6,632.88	-7.80
R&D expense	11,006.40	10,329.38	6.55
Total profit	6,547.22	-8,864.17	N/A

The Company's equipment manufacturing business revenue in 2022 was RMB2,449 million, an increase of RMB903 million compared with 2021, mainly because the Company insisted on independent technological innovation, focused on the research and development of new processes, new technologies, new materials and new equipment for non-ferrous metals, and adhered to the leadership of science and technology high-quality development, projects such as overseas electrolytic aluminum and all-graphite cathode carbon blocks with large order amounts were steadily advancing, and the scale of revenue increased significantly. The gross profit margin was 13.00%, an increase of 4.4 percentage points compared with 2021, mainly due to the increase in the proportion of businesses and revenue with relatively high gross profit margins, and the increase in gross profit contribution; at the same time, we continued to strengthen cost reduction measures in all links of the production process, and have achieved good results, contributing more gross profits.

During the Reporting Period, the total profit of the equipment manufacturing business was RMB65 million, a significant year-on-year increase, mainly due to the effects brought by the improved business quality and scale simultaneously.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

④ Trading business (before elimination of inter-segment transactions)

(Expressed in RMB'0,000)

Item	2022	2021	Growth (%)
Operating revenue	-	32,643.67	N/A
Operating cost	-	43,004.41	N/A
Gross profit	-	-10,360.74	N/A
Gross margin (%)	-	-31.74	N/A
Sales expense	-	740.68	N/A
Administrative expense	-	2,792.52	N/A
R&D expense	-	-	N/A
Total profit	-	-100,457.37	N/A

In order to strengthen cost and risk control, the Company adopted centralized procurement approach, mainly carried out the equipment and raw material procurement business related to its principal operations, and fully stopped the external trade business irrelevant to the Company's principal business.

(2). *Analysis of production volume and sales volume*

Applicable Not applicable

(3). *Performance of major purchase or sales contracts*

Applicable Not applicable

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

(4). Cost analysis

(Expressed in RMB'0,000)

Sector	Cost composition project	By sector		Previous	Percentage	Change	Description
		Current	Percentage (%)				
Engineering and consulting	Labor, raw materials, outsourced labor cost, etc.	187,975.43	9.09	186,466.92	8.97	0.81	Increased along with revenue increase.
Contracting	Subcontractor costs, labor costs, raw materials, machinery usage fees, etc.	1,681,004.82	81.31	1,727,099.06	83.04	-2.67	Decreased along with revenue decrease.
Equipment manufacturing	Subcontractor costs, labor costs, raw materials, machinery usage fees, depreciation and amortization, etc.	213,069.87	10.31	141,337.01	6.80	50.75	Increased along with revenue increase.
Trading	Goods outsourcing	-	-	43,004.41	2.07	N/A	No trading business was carried out during the year.
Inter-segment elimination		-14,728.90	-0.71	-18,074.67	-0.87	N/A	-
Total		2,067,321.21	100.00	2,079,832.74	100.00	-0.60	The Company continued promoting cost reduction and expenditure control, and the costs were lowered

Description of other cases in cost analysis

No

(5). Changes in consolidation scope due to changes in equity of major subsidiaries within the Reporting Period

Applicable Not applicable

During the Reporting Period, the Company completed the sale of 52.6% equity of Miyu Company, and Miyu Company was no longer included in the scope of the Company's consolidated statements.

During the Reporting Period, the Company completed the acquisition of 67% equity of Kunming Institute, and Kunming Institute was included in the scope of the Company's consolidated statements.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

(6). *Major changes or adjustments to business, products or services within the Reporting Period*

Applicable Not applicable

(7). *Particulars of major customers and major suppliers*

A. Major clients of the Company

Applicable Not applicable

Sales to top five customers amounted to RMB4,046,107,300, representing 5.86% of total sales for the year, among which sales to related parties amounted to RMB0, representing 0% of total sales for the year.

Particulars that the sales to a single customer accounted for more than 50% of total sales, and there was any new customer in the top five customers, or seriously relying on a few customers within the reporting period.

Applicable Not applicable

B. Major suppliers of the Company

Applicable Not applicable

Purchases from top five suppliers amounted to RMB1,544,945,600, representing 7.47% of total purchases for the year, among which purchases from related parties amounted to RMB0, representing 0% of total purchases for the year.

Particulars that the purchases from a single supplier accounted for more than 50% of total purchases, and there was any new supplier in the top five suppliers, or seriously relying on a few suppliers within the reporting period.

Applicable Not applicable

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

3. Expense

Applicable Not applicable

Sales expenses in this period were RMB119 million, an increase of 21.5% from the previous year. The Company further stepped up its efforts in marketing team building, and expenses such as staff salaries and sales commissions increased.

Administrative expenses for the period were RMB1.069 billion, an increase of 0.59% over the previous year, and basically the same as the previous year.

Research and development expenses for the period were RMB91.2 thousand, an increase of 16.11% over the previous year, mainly due to the Company's further increase in research and development investment.

Financial expenses for the period are RMB28.7 thousand, a decrease of 48.02% from the previous year, mainly because the Company continued to optimize the financing structure, control the financing scale, and reduce financial expenses. At the same time, it is affected by the fluctuation of the exchange rate of RMB against the US dollar, resulting in some exchange gains.

4. R&D investments

(1). *Particulars of R&D investments*

Applicable Not applicable

(Expressed in RMB'0,000)

Expensed R&D investment for the period	91,206.62
Capitalised R&D investment for the period	382.3
Total R&D investment	91,206.62
Percentage of total R&D investment in operating revenue (%)	3.86
Percentage of capitalised R&D investment (%)	0.42

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

(2). Particulars of R&D team

Applicable Not applicable

Number of R&D team members of the Company	2,479
Number of R&D team members in total headcount of the Company (%)	20

Educational structure

Category of educational structure	Number
Doctor's degree	16
Master's degree	471
Bachelor's degree	1,607
Junior college	317
Middle school or lower	68

Age structure

Category of age structure	Number
< 30 years old (excluding 30)	400
30-40 years old (including 30, excluding 40)	930
40-50 years old (including 40, excluding 50)	664
50-60 years old (including 50, excluding 60)	478
>=60 years old	7

(3). Description

Applicable Not applicable

In 2022, CHALIECO formulated and released the 14th Five-Year Plan for Science and Technology Development around the development strategy of “technology + international”, and clearly put forward the “eight fields” and “five directions” to support the development of the principal business as the key directions of science and technology innovation. CHALIECO also sorted out the structure of the R&D task system to guide the systematic implementation and key research of technologies. The Company further improved the scientific research management system, strengthened and standardized the management of R&D projects, implemented the autonomy of scientific research, and implemented the whole-process incentive for key projects. Relying on the innovative advantages of integrated scientific research and engineering in the whole industrial chain of the business, the Company organized and obtained the project approvals for the first batch of major scientific research projects of CHALIECO and the Company's annual key scientific research projects on the basis of carefully formulating the annual R&D investment plan.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

The Company focused on key projects to ensure investment in R&D and improve the quality and efficiency of investment. In the field of exploration and prospecting, we continued to carry out research and development of key technologies in geotechnical engineering, mine evaluation and management, disaster prevention, control and monitoring, and mining area management to fill the technical gaps in the industry and solve the difficult problems of secondary geological disasters. In the field of aluminum smelting, the Company carried out research on core processes such as enhanced dissolution and decomposition of alumina, energy saving, emission reduction and carbon reduction in the smelting process, and product quality improvement; The Company accelerated research on technical problems such as flexible production of electrolytic aluminum, high energy consumption and flue gas emission in the electrolysis process to achieve significant improvement in efficiency and effectiveness; In the field of mining, the Company solidly promoted the solution of the "three high" problems, and successively gave Chinese solutions to resource strategic issues such as high-altitude and deep-seated mineral resource mining; In the field of heavy non-ferrous and rare metal smelting, the Company continued to promote the research of clean production and comprehensive utilization of resources, and made important achievements in complex polymetallic refining and the reduction and recycling of heavy non-ferrous hazardous solid waste, practicing the concept of "green development" and taking solid steps toward the goal of "double carbon". In the field of intelligent manufacturing, the Company pushed forward the in-depth integration and application of digital delivery and intelligent service technology and equipment in the non-ferrous metals industry, build intelligent production processes, integrated information control platforms and collaborative intelligent production systems, leading the non-ferrous metals industry into a new era of digital intelligence; In the field of construction, the Company comprehensively carried out the in-depth integration of digital information technology and engineering construction process management, realizing the reasonable matching and convergence of resources and links of the design, construction, materials and equipment, professional subcontracting, labor, subcontracting, etc.. In the field of construction, the research and effectiveness of the technology and equipment of road construction, deep foundation construction, large-span steel structure construction and other engineering methods have helped enterprises to develop steadily in the market competition. The research and development of new technologies were of great benefit in promoting design optimization, reducing construction investment, making full use of resources and efficient production, etc.. The industrialization and application of the new achievements played a positive role in solving the difficulties of production enterprises in terms of production cost, market environment and environmental protection, and maximize production efficiency, and provided strong technical support to build CHALIECO's international brand advantage and international competitiveness.

- (4). *Reason for significant change in R&D team structure and its influence on the Company's future development*

Applicable Not applicable

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

5. Cash flow

Applicable Not applicable

In 2022, net cash inflow from operating activities was RMB525 million, down by RMB135 million year-on-year, mainly because the Company actively responded to the call of the country, practiced the central corporate responsibility, and strengthened the construction of social responsibility, vigorously carried out the payment work such as the assistance to small and medium-sized enterprises, and the cash for purchasing goods and accepting labor payment increased year-on-year.

In 2022, net cash outflow from investing activities was RMB4.321 billion, up by net cash outflow of RMB235 million, mainly because the project advance received by the Company during this Period decreased compared with the same period of the previous year.

In 2022, net cash inflow from financing activities was RMB3.867 billion, up by RMB432 million year-on-year. This was mainly due to the increase in investment from government shareholders received by the Miyu Company during the reporting period compared with the same period of the previous year.

(II) Explanation of material changes in profit caused by non-principal business

Applicable Not applicable

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

(III) Analysis of assets and liabilities

Applicable Not applicable

1. Assets and liabilities

(Expressed in RMB'0,000)

Item	Current	Percentage in total assets (%)	Previous	Percentage in total assets (%)	Change (%)	Remarks
Other non-current financial assets	–	–	1,890	0.03	–100	Recovery of ABS inferior assets.
Rights-of-use assets	1,155.19	0.02	1,788.07	0.03	–35.39	Due to the decrease in the Company's rented houses and other assets during the reporting period.
Other non-current assets	123,321.98	2.6	1,369,290.91	22.81	–90.99	Due to disposal of Miyu Company during the reporting period.
Non-current liabilities due within one year	313,736.48	6.62	52,380.62	0.87	498.96	Increase in long-term borrowings due within one year.
Long-term borrowings	525,700	11.09	1,202,220.46	20.03	–56.27	Due to disposal of Miyu Company during the reporting period.

Other explanations

None

2. Details of overseas assets

Applicable Not applicable

3. Details of significant restricted assets as at end of the reporting period

Applicable Not applicable

(Expressed in RMB'0,000)

Item	Closing book value	Reasons for restriction
Monetary funds	81,616.44	Frozen and pledged
Notes receivable	36,195.35	Pledged
Fixed assets	12,669.38	Secured
Total	130,481.16	–

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

4. Other explanations

✓Applicable □Not applicable

(1) Borrowings

Details of interest-bearing liabilities of the Company are set out below:

(Expressed in RMB'0,000)

Item	As at the end of 2022	As at the end of 2021	Change
Borrowings from banks and financial institutions	1,142,858.99	1,762,151.02	-619,292.03
Short-term bonds	-	-	-
Long-term bonds financing plan	115,000.00	40,000.00	75,000.00
Bonds payable due within one year	-	-	-
USD perpetual bonds declared to be redeemed	-	-	-
Total interest-bearing liabilities	1,257,858.99	1,802,151.02	-544,292.03
Less: cash and cash equivalents (excluding restricted capital)	685,736.4	674,641.91	11,094.49
Net interest-bearing liabilities	571,120.08	1,127,509.11	-556,389.03

As of 31 December 2022, the Company had outstanding borrowings of RMB12,578,589,900, down by RMB5,442,920,300 from RMB18,021,510,200 as at 31 December 2021. As at the end of 2022, net interest-bearing liabilities (interest-bearing liabilities less cash and cash equivalents) amounted to RMB5,711,200,800, down by RMB5,563,890,300 from RMB11,275,091,100 as at the end of 2021.

(2) Pledge of assets

As of 31 December 2022, the Group pledged receivables of RMB12,408,600 to obtain short-term loans of RMB5.4086 million and long-term loans of RMB7 million.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

(3) *Contingent liabilities*

As of 31 December 2022, the Group did not have any material contingent liabilities.

(4) *Capital structure*

The Company manages its capital structure on the basis of gearing ratio. The ratio is calculated by dividing net debt by total capital. Net debt is calculated as total borrowings and other liabilities (including borrowings, other non-current liabilities and trade payables and other payables shown in the consolidated balance sheet) less restricted cash, time deposit and cash and cash equivalent. Total capital is calculated on the basis of net equity and debt minus non-controlling equity as shown in the consolidated balance sheet.

The gearing ratio of the Company is listed as follows:

Unit: RMB'000

Item	Closing balance	Opening balance
Total borrowings and other liabilities	36,173,815.02	42,847,421.25
Less: Restricted cash, time deposits and cash and cash equivalent	816,164.37	903,334.32
Net debt	35,357,650.65	41,944,086.94
Total equity attributable to equity owners of the Company	7,529,815.47	7,534,716.24
Total capital	42,887,466.12	49,478,803.18
Gearing ratio	82.44%	84.77%

At the end of the reporting period, the gearing ratio was 82.44%, 2.33% lower than that at the beginning of the year. The slight decrease was mainly due to the transfer of Miyu Company's equity and the reduction of the Company's interest-bearing liabilities. The total amount of borrowings and other liabilities decreased by 15.58% compared with that at the beginning of the year.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

(IV) Completed and uncompleted projects

The number, amount, location and major risks of completed and uncompleted projects for the reporting period are set forth below by business models:

1. Uncompleted

Business modes	Number of uncompleted contracts	Revenue (RMB100 million)	Location
Traditional engineering construction	1,310	134.59	Henan, Shanxi, Sichuan, etc.
EPC	89	11.59	Guangxi, Guizhou, Inner Mongolia, etc.
Investment-finance-building	–	–	
Total	1,399	146.18	

2. Completed

Business modes	Number of completed contracts	Revenue (RMB100 million)	Location
Traditional engineering construction	1,600	38.97	Fujian, Shanxi, Guangxi, Guangdong, etc.
EPC	28	1.41	Inner Mongolia, Yunnan, Guizhou, etc.
Investment-finance-building	6	0.54	Zhejiang, etc.
Total	1,694	40.92	

Completed projects of the Company mainly involves payment risk. Among uncompleted projects, the traditional construction contracting business mainly carries the risks of delayed settlement and delayed payment, the EPC mode mainly involves procurement risk, while the investment-finance building mainly entails financing risk, the risk of the proprietor failing to buy back on schedule and operational risks associated with the operation period.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

(V) Industry Operational Information Analysis

Applicable Not applicable

The Group's main business operations include engineering design and consulting, engineering and construction contracting, equipment manufacturing and trading, and according to the Guidelines for the Industrial Classification of Listed Companies (Revised in 2012) issued by the CSRC and the results of listed companies classification issued by the CSRC, the Group falls in the industry of building and construction. The Group's operating information in the industry is analyzed below:

Analysis of operating information on the construction industry

1. Projects completed and accepted during the reporting period

Applicable Not applicable

(Expressed in RMB'0,000)

Segment	Survey, design and consulting	Industrial projects	Civil buildings	Highways and Municipal works	Equipment manufacturing	Total
Number of projects	3,300	156	135	26	328	3,945
Total amount	176,046.38	806,758.19	347,312.34	29,525.48	109,781.65	1,469,424.04

Applicable Not applicable

(Expressed in RMB'0,000)

Geography	Number of projects	Total amount
Home	3,900	1,428,523.76
Abroad	45	40,900.28
including:		
Asia	9	2,108.06
Africa	25	38,169.24
Americas	9	509.18
Europe	2	113.80
Total	3,945	1,469,424.04

Other explanation

Applicable Not applicable

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

2. Projects in progress during the reporting period

Applicable Not applicable

(Expressed in RMB'0,000)

Segment	Survey Design and Consulting	Industrial projects	Civil buildings	Highways and municipal works	Equipment manufacturing	Total
Number of projects	4,383	619	331	102	607	6,042
Total amount	589,165.85	4,126,212.49	4,216,015.26	3,181,395.73	514,044.28	12,626,833.60

Applicable Not applicable

(Expressed in RMB'0,000)

Geography	Number of projects	Total amount
Home	5,895	11,176,900.27
Abroad	147	1,449,933.33
including:		
Asia	99	1,303,935.84
Africa	38	68,720.53
Americas	5	4,340.56
Europe	5	72,936.40
Total	6,042	12,626,833.60

Other explanation

Applicable Not applicable

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

Suspension, Interruption and Termination

The Company was performing all projects properly during the reporting period, except 49 partially suspended or terminated projects because of default of the investors, among other reasons. The total value of these projects was RMB3,068 million, including 9 construction projects amounting to RMB3,031 million; 40 survey, design and consultancy projects amounting to RMB37 million.

(Expressed in RMB'0,000)

No.	Project	Contract type	Contract value	Contract status	Reason
1	Urban Village Reconstruction Project in the High-speed Railway Area of Xinxiang (高鐵片區域中村改造項目)	Construction	59,000.00	Suspended	Party A's funding problem
2	Loudi Leping Avenue East Extension and Huaxing Road (婁底樂坪大道東延線及華星路(地下管廊)工程)	Construction	89,533.00	Suspended	Party A's land acquisition problem
3	Zhengzhou Airport Lanxi Park Project (鄭州航空港蘭溪園項目)	Construction	40,648.00	Suspended	Adjustment of the owner's construction plan
4	Lanzhou Chajixia Bridge to Port Area Bridge Section Connection Line Project (蘭州市柴家峽大橋至港務區大橋段聯絡線工程)	Construction	95,000.00	Suspended	The funds of Party A are not in place
5	Some municipal projects in the plain demonstration area of Xinxiang City (新鄉市平原示範區部分市政項目)	Construction	14,250.00	Suspended	Party A's funding problem
6	Kunming Gaoxin Golden Garden A2 block foundation pit support project (昆明高鑫金花園A2地塊基坑支護工程)	Construction	3,107.00	Suspended	Change of investors
	Others		5,222.00	Suspended	
	Total	/	306,760.00	/	/

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

3. Major projects under construction

Applicable Not applicable

(Expressed in RMB'0,000)

Item	Business model	Project value	Construction period	Percentage of completion	Revenue	Revenue	Cost	Cost	Cumulative amount	Project progress as expected?	Payment progress as expected?
					recognized in current period	recognized since inception	incurred in current period	incurred since inception	recovered as at the end of current period		
Ningyong project	PPP	411,178	48 months	97.90%	80,552.61	369,127.98	60,277.27	282,351.28	357,190.08	Yes	Yes
Miyu project	General contracting	1,064,763	48 months	65.92%	172,421.04	629,151.27	162,802.78	557,363.61	661,137.99	Yes	Yes
Mempawah Alumina Project, Indonesia	EPC	344,994	31 months	12.23%	17,397.13	42,606.31	16,154.85	36,587.53	45,309.26	Yes	Yes

Other explanation

Applicable Not applicable



SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

4. Cumulative new contract awards during the reporting period

Applicable Not applicable

During the reporting period, 7,517 new contracts were awarded, with a combined value of RMB40.2 billion.

5. Orders on hand as of the end of the reporting period

Applicable Not applicable

As at the end of the reporting period, all orders at hand were worth RMB60,382,000,000. Among the total, the combined value of those contracts that were signed but were yet to commence construction was RMB6,088,000,000, and the portion of CIPs that was yet to be completed was worth RMB54,294,000,000.

Other explanations

Applicable Not applicable

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

6. Other explanations

✓Applicable □Not applicable

(1) Qualifications obtained during the reporting period

A list of 21 qualifications newly obtained in 2022 is provided as follows:

Company	Qualification	Certificate No.	Date of issue	Date of maturity
Ninth Metallurgical Company	Grade B qualification for road works qualification general contracting (公路工程施工總承包二級)	D261303608	2022/10/25	2027/9/29
Ninth Metallurgical Company	Grade B qualification for general construction works (建築工程施工總承包二級)	D261303850	2022/11/14	2027/10/18
Ninth Metallurgical Company	Grade B qualification for municipal public infrastructure engineering and construction general contracting (市政公用工程施工總承包二級)	D261303850	2022/11/14	2027/10/18
Ninth Metallurgical Company	Grade B qualification for electrical engineering construction general contracting (電力工程施工總承包二級)	D261303850	2022/11/14	2027/10/18
Ninth Metallurgical Company	Grade B qualification for hydraulic and hydropower engineering construction general contracting (水利水電工程施工總承包二級)	D261303850	2022/11/14	2027/10/18
Ninth Metallurgical Company	Grade B qualification for highway roadbed engineering professional contracting (公路路基工程專業承包二級)	D261010485	2022/10/25	2023/12/31
Ninth Metallurgical Company	Grade B qualification for highway pavement engineering professional contracting (公路路面工程專業承包二級)	D261010485	2022/10/25	2023/12/31
Ninth Metallurgical Company	Grade A qualification for architectural curtain wall project professional contracting (建築幕牆工程專業承包一級)	D261303608	2022/10/19	2027/9/29
Ninth Metallurgical Company	Grade B qualification for highway traffic mechanical and electrical engineering professional contracting (公路交通機電工程專業承包二級)	D261303850	2022/10/25	2027/10/18
Ninth Metallurgical Company	Grade B qualification for highway traffic safety facilities professional contracting (公路交通安全設施專業承包二級)	D261303850	2022/10/25	2027/10/18
Ninth Metallurgical Company	Grade A qualification for foundation engineering professional contracting (地基基礎工程專業承包一級)	D261303884	2022/10/19	2027/10/18
Ninth Metallurgical Company	Grade B qualification for bridge engineering professional contracting (橋樑工程專業承包二級)	D261010485	2016/3/7 ^{note}	2023/12/31
Ninth Metallurgical Company	Grade A qualification for urban and road lighting project professional contracting (城市及道路照明工程專業承包一級)	D261303608	2022/9/29	2027/9/29
Ninth Metallurgical Company	Grade B qualification for transmission and substation engineering professional contracting (輸變電工程專業承包二級)	D261303608	2022/9/29	2027/9/29
Ninth Metallurgical Company	Grade B qualification for construction of electrical and mechanical installation project professional contracting (建築機電安裝工程專業承包二級)	D261303608	2022/9/29	2027/9/29
Ninth Metallurgical Company	Grade B qualification for electronic and intelligent engineering professional contracting (電子與智能化工程專業承包二級)	D261303608	2022/9/29	2027/9/29
Ninth Metallurgical Company	Grade B qualification for hydraulic and electrical installation projects professional contracting (水利水電機電安裝工程專業承包二級)	D261303608	2022/9/29	2027/9/29
Ninth Metallurgical Company	Grade A qualification for environmental engineering professional contracting (環保工程專業承包一級)	D261303608	2022/9/29	2027/9/29
Ninth Metallurgical Company	Grade A qualification for architectural curtain wall project professional contracting (建築幕牆工程專業承包一級)	D261303632	2022/9/29	2027/9/29
Changkan Institute	Qualification for construction labor professional contracting (施工勞務專業承包)	D343028426	2022/7/18	2024/12/5
CNPT	Grade B qualification for mine project supervision (礦山工程監理乙級資質)	E341008864	2022/9/21	2023/12/31

Note: The qualifications newly obtained is an addition to the original certificate, and no new certificate has been issued.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

- (2) *Analysis of the percentage of construction project revenue in total revenue of the Company for the recent three years*

(Expressed in RMB'0,000)

	2022		2021		2020	
	Amount	Percentage (%)	Amount	Percentage (%)	Amount	Percentage (%)
Engineering contracting	1,871,038.50	78.96	1,975,858.69	82.68	1,939,457.7	78.46
Total	2,369,732.89	100	2,389,872.34	100	2,471,782.33	100

- (3) *Composition analysis of construction project cost for the recent three years*

Major cost components of the construction segment for past three years are set forth below:

(Expressed in RMB'0,000)

Cost composition	2022		2021		2020	
	Amount	Percentage (%)	Amount	Percentage (%)	Amount	Percentage (%)
Subcontracting cost	947,999.06	56.39	967,699.34	56.03	994,974.75	55.74
Material and equipment cost	638,014.35	37.95	646,359.12	37.42	690,454.08	38.68
Labor cost	17,253.80	1.03	25,740.53	1.50	27,218.24	1.52
Others	77,737.62	4.63	87,300.07	5.05	72,429.80	4.06
Total	1,681,004.82	100.00	1,727,099.06	100.00	1,785,076.87	100.00

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

Changes in the cost of the construction and contracting segment of the Company over the past three years:

- ① Subcontracting cost, material and equipment cost accounted for about 94% in aggregate and remained relatively stable. As subcontracting cost, material and equipment cost were highly replaceable with each other, the Company made overall arrangement for contracting based on available resources and profit margin of sub – projects. The Company continuously summarized management experience and strengthened cost management to improve contract income;
- ② Other expenses included machinery usage fees, and accrued production safety fees.

The Company's subcontractors are divided into engineering subcontractors and labor service subcontractors. Depending on specific conditions, the Company may subcontract non-main part of the project to engineering subcontractors or labor service subcontractors. On the one hand, subcontracting improves the Company's ability to undertake large-scale projects and the flexibility in contract performance. On the other hand, the ability to manage subcontractors and control subcontractor costs also affects the Company's ability to perform contracts. The Company usually subcontracts about 50% of business of this segment. All large-scale engineering projects involve subcontractors. The overall gross margin of profit rate of the company's engineering construction projects was 7.96%, 12.59% and 10.16% from 2020 to 2022 respectively.

(4) *Particulars of financing arrangements*

At the end of the reporting period, the balance of financing through debt and equity instruments stood at RMB17.54 billion, including RMB12.58 billion in debt financing and RMB4.96 billion in equity financing. Total financing amount decreased by RMB5.45 billion from that as at the end of 2021, mainly because the Company transferred the equity of Miyu Company in 2022. Miyu Company was no longer included in the Company's consolidation scope, which reduced the Company's financing scale.

In terms of bond financing: the Company redeemed RMB1.5 billion of renewable corporate bonds issued on the SSE at the end of October 2022.

The Company issued debt financing plan in the Beijing Financial Assets Exchange in 2022, raised RMB750 million with a period of three years; In 2022, the Company registered in the Beijing Financial Assets Exchange and raised RMB2.5 billion of perpetual debt financing, including the first amount of RMB1.5 billion with a period of 2+N; and the second amount of RMB1 billion with a period of 3+N.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

(5) *Quality control system, execution standards, control measures, and overall evaluation*

The Company attached great importance to quality work. In 2022, with the Company's quality control system functioning normally and engineering quality generally under control, there was no quality incident all year round and a record number of quality awards were received. The Company strictly implemented the national, industrial and local quality standards at all levels, and continuously improved its quality management through strengthening on-site quality management, promoting the combination of quality management and benefits, launching quality multiplier action, and promoting engineering excellence, to ensure the stability and order of the Company's quality work.

(6) *Operation of workplace safety system*

In 2022, the Company earnestly implemented the strategic plan of the CPC Central Committee on safe production and ecological civilization construction based on the principle of "strengthening the foundation, focusing on key points, and making up for weak links". By carrying out programs such as positive incentives and leadership assurance, the Company implemented list signing and performance evaluation under the principle of "one position with two responsibilities" for safety and environmental protection to effectively take on its responsibilities for workplace safety; the Company continuously facilitated the construction and effective operation of the CAHS system, CAE, and the hierarchical risk management and control system, furthering refined safety management; through comprehensive safety training and stronger safety supervision and inspection, the Company continuously enhanced safety management, personnel capacity building and risk control. In 2022, the Company enjoyed effectively operating workplace safety systems and stable production safety, with no material production safety incidents occurring all year round.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

(V) Investment Analysis

Overall analysis of external equity investments

Applicable Not applicable

As at 31 December 2022, the balance (original value) of long-term equity investment of the Company was RMB798,976,500, up RMB11,147,900 or 1.42% from the beginning of the year. The provision for impairment of long-term equity investment was RMB48,218,600, substantially at the same level with that at the beginning of the year.

1. Major equity investments

Applicable Not applicable

(Expressed in RMB'0,000)

Name of invested company	Principal business	Mainly engaged in investment business?	Investment method	Investment amount	Shareholding percentage	Consolidated?	Statement subject (if applicable)	Sources of funding (if applicable)	Partner (if applicable)	Investment period (if any)	Progress as of balance sheet date	Estimated revenue (if any)	Impact on profit and loss for the current period	Involved in litigation?	Disclosure date (if any)	Disclosure index (if any)
Kunming Nonferrous Metallurgical Design and Research Institute Corporation	Survey, design and engineering construction	Yes	Acquisition	4,713.13	67%	Yes	Self-owned funds				Acquisition completed	11,537.58	No	28 November 2022	No. Temp 2022-073	No. Temp 2022-075
Total	/	/	/	4,713.13	/	/	/	/	/	/	/	11,537.58	/	/	/	/

2. Significant non-equity investments

Applicable Not applicable

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

3. *Financial assets measured at fair value*

Applicable Not applicable

(Expressed in RMB'0,000)

Asset category	Closing balance	Opening balance
Yunnan Huineng Power Sales Co., Ltd.	1,948.92	1,924.35
Guizhou Aerospace Wujiang Electromechanical Equipment Co., Ltd.	1,377.35	1,518.59
Others	2,390.46	4,077.18
Total	5,716.73	7,520.12

Securities Investment

Applicable Not applicable

Private Equity Investment

Applicable Not applicable

Derivatives investment

Applicable Not applicable

4. *Details of the progress of the major asset restructuring and consolidation during the reporting period*

Applicable Not applicable

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

(VI) Disposal of significant assets and equities

Applicable Not applicable

On 28 October 2022, Chalieco held a general meeting to consider and approve the relevant resolutions for Chalieco and its wholly-owned subsidiary Chinalco Southwest Construction to sell their aggregated 52.6% equity interests in Miyu Company to Yunnan Infrastructure Investment. During the reporting period, the 52.6% equity interest in Miyu Company had been changed to the name of Yunnan Infrastructure Investment, and Chalieco and Chinalco Southwest Construction had completed the transfer procedures of the subject assets.

According to the equity transfer agreement and the supplementary agreement to the equity transfer agreement, Yunnan Infrastructure Investment shall pay the equity transfer payment to Chalieco and Chinalco Southwest Construction in three installments, and YCIH paid the capital occupation fee to Chalieco and Chinalco Southwest Construction in three installments, which was paid at the same time as the equity transfer payment. Up to now, Chalieco and Chinalco Southwest Construction have received the amount of the equity transfer price of RMB834 million and the amount of the capital occupation fee of RMB124 million respectively. According to the Equity Transfer Agreement and the Supplementary Agreement to the Equity Transfer Agreement, the third phase of the equity transfer price should be paid before 28 February 2023, and Yunnan Infrastructure Investment will pay the remaining capital occupation fee simultaneously. At present, the Company does not receive the amount of the third phase of the equity transfer price and related payments. Investors are reminded that the listed company has the risk of not being able to receive the amount of the third phase of the equity transfer payment, capital occupation fee and liquidated damages on time.

Details of the aforesaid material asset disposals and their progress are set out in the relevant announcements of the Company disclosed on the website of the SSE on 26 September 2022, 13 October 2022 and 24 December 2022.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

(VII) Analysis of major subsidiaries, associates and joint ventures

Applicable Not applicable

During the reporting period, particulars of the major subsidiaries of the Company are set out below:

(Expressed in RMB'0,000)

Company name	Business scope	Total assets	Net assets	Operating revenue	Net profit
SAMI	Engineering survey and design	146,645.21	64,322.81	125,442.18	9,653.41
GAMI	Engineering survey and design	199,094.58	51,549.53	72,588.37	-3,515.75
CINF	Engineering survey and design	258,944.75	110,511.04	147,950.65	9,106.06
CNPT	Engineering design and equipment manufacturing	219,467.90	59,887.83	95,105.49	1,641.28
Changkan Institute	Engineering survey and design	118,647.96	37,752.18	96,857.09	1,500.67
Kunming Survey and Design Institute	Engineering survey and design	124,809.87	42,230.15	108,338.14	4,180.82
Sixth Metallurgical Company	Building and construction	1,205,708.07	315,089.28	744,717.88	14,778.19
Ninth Metallurgical Company	Building and construction	958,032.77	214,623.90	558,374.38	2,077.07
Twelfth Metallurgical Company	Building and construction	476,282.40	47,648.28	240,377.27	3,690.69
Chalieco (Tianjin) Construction Co., Ltd.	Building and construction	159,986.07	20,711.22	74,820.14	308.94
Shandong Engineering	Building and construction	98,926.02	15,179.94	53,414.92	-12,117.26

(VIII) Particulars of structured entities controlled by the Company

Applicable Not applicable

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

VI. DISCUSSION AND ANALYSIS OF FUTURE DEVELOPMENT OF THE COMPANY

(I) Industry landscape and trend

Applicable Not applicable

1. Non-ferrous metal industry

The development of non-ferrous metals industry is influenced by various factors, the industrial development and the national economic development level are closely related, and Chinese non-ferrous metal industry over many years' development has ranked the first in the world in terms of production scale. However, at present, the small-scale management phenomenon is serious, affecting the market competitiveness of the industry, and as for primary products, high energy consumption makes it difficult to improve economic efficiency.

The "14th Five-Year Plan" period is an important stage for our country to move from a large producing country of non-ferrous metals to a strong producing country of non-ferrous metals. The non-ferrous metal industry will shift from scale and speed growth to high-quality development, actively adjust the product structure, and improve the added value of products. New growth drivers of consumption should be actively cultivated, especially the development of new energy industry, including new energy vehicles, clean energy and information industries, and the demand for non-ferrous metals will increase. It is expected that main consumption of non-ferrous metals in China will maintain a steady growth, but the growth rate will gradually moderate. However, enterprises have insufficient independent innovation capabilities. In particular, key basic materials, advanced basic processes, industrial technology foundations, and core basic components are still the most outstanding shortcomings restricting the development of this industry.

According to the Carbon Peaking Implementation Plan for the Non-ferrous Industry, energy consumption and carbon emission intensity of non-ferrous metal products were further reduced during the "14th Five-Year Plan" period, and the proportion of recycled metal supply reached more than 24%. During the "15th Five-Year Plan" period, the energy consumption structure of the non-ferrous metal industry will be greatly improved, and the proportion of renewable energy in electrolytic aluminum will reach more than 30%. With the advancement of "carbon peaking and carbon neutrality", it will suppress the expansion of traditional non-ferrous metal production capacity and investment in fixed assets, in particular in the aluminum sector.

In the future, the non-ferrous metal industry will move from expansion – centric to optimization of the stock, containment of increase and active downsizing, from input of low – cost resources and elements to innovation-driven quality and efficiency improvement, green growth, intelligent growth and high-quality growth. The ceiling of electrolytic aluminum production capacity and the overseas outsourcing of alumina production capacity have resulted in a sharp shrinking of domestic new projects. Hence, the market of the non-ferrous metal industry will undergo profound changes and the focus will shift from increase to the stock, from new construction to relocation, technical renovation, industrial upgrade and technical services, etc.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

2. Infrastructure industry

The development of China's construction industry passed its heyday during the "13th Five-Year Plan" period, and the overall development began to fluctuate, with changing demand and differentiating industry; there were obvious changes in business models, professional services, and technical requirements etc..

The growth rate of investment in the infrastructure sector is expected to grow steadily, and there is market space for new construction, improvements and upgrades. New infrastructure will become one of the prominent highlights. In the late stage of the COVID-19 pandemic and the early post-pandemic stage, in order to promote economic development, it is expected that there will be more market opportunities in infrastructure construction. There are many sub-sectors in the infrastructure field. In the field of government investment, given local debt and government operation efficiency, it is expected that the integrated model of financing, investment, construction and transportation will become a typical model in the future, and it will occupy a considerable percentage. At the same time, for infrastructure projects in this field, the government needs the contractor to provide more professional services, such as pre-planning and project operation and maintenance, and also partially undertake the functions of the government. Overall, the changes in the infrastructure sector are relatively small, and the space for traditional models in this area is relatively stable.

3. Municipal construction engineering industry

The real estate field develops fast over years, and in 2022, the urbanization rate of China is 65.22%, compliant with the economic structure of China as a developing county. It's anticipated that by 2035, China's urbanization rate will surpass 70%, reaching the average urbanization level of developed countries. In the future mid-long term, the real estate field will steadily advance the urbanization and housing security system construction, with obvious adjustments to prefabricated buildings, full decoration models, and high-tech housing, and will continue to strengthen general contracting of projects, in which case, the traditional housing construction model will shrink. If traditional housing construction companies do not adjust their models, the market space will rapidly narrow.

In China, urban expansion and updating are accelerating in an all-round way. It is expected that in the med-long term, the construction of urban agglomerations integrating infrastructure and real estate will be the main battlefield for the market competition of backbone enterprises in the construction industry. In the development stage of urban agglomerations, cities need to be more closely connected, urban functions need to be redefined and adjusted, and cities need to be more efficient side. All three aspects will generate new demands for engineering construction, including new construction, construction product updating and improvement, industrial development and infrastructure support, TOD construction of high-speed rail and rail transit, construction of urban above-ground and underground space projects.

4. New infrastructure industry

With the continuous evolution and upgrading of social production and living patterns, the original infrastructure can hardly meet the needs of efficient operation of the society, and the demand for the construction of a new generation of infrastructure is growing. The new infrastructure, represented by digital infrastructure, is in its infancy and has a broad space for development.

2022 was a big year for the development of new infrastructure, and the annual growth rate is expected to reach more than 20%, and new infrastructure such as 5G and industrial Internet will accelerate. As an important part of accelerating the construction of a national integrated big data center system, the "East-to-West Computing Resource Transfer" project was officially launched, and each data center project was accelerated, opening up new space for the development of the digital economy.

Every rise of industrial technology is accompanied by the construction of new infrastructure, which will lead to the reconstruction of traditional interest patterns, industrial systems and system culture. Currently, China's traditional population dividend is decreasing, but new infrastructure construction powered by innovation and exploration will lead to a new round of development dividends.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

(II) Corporate development strategy

Applicable Not applicable

1. Vision

Becoming China's first-class, non-ferrous metals engineering company with core competitiveness in the world.

2. Strategic positioning

Leader of non-ferrous metal industry technologies, the main force of non-ferrous engineering construction, the new force of infrastructure and civil engineering construction.

3. Development mindset

Rooted in non-ferrous industry, expand relevant industries, lead the industry with technology and innovation, improve international level, strengthen the business of survey, design and consultancy, improve project general contracting, perform technology industrialization, develop industrial aluminum, develop emerging industries, increase internal synergy and collaboration, embark on the road of intensive development, consolidate the leadership in non-ferrous industry technology and market, and realize the sustainable high-quality growth of the Company.

4. Business pattern

Focus on principal business, implement the company-wide "233" business development strategy, namely: driven by "technology + international", led by technological innovation, improve the international level; build the company-wide "3+3" business structure, strengthen our three core business segments, namely: survey, design and consultancy; non-ferrous metals and industrial projects general contracting; and infrastructure and civil works general contracting. Meanwhile, expand into three new business segments, namely: industrial aluminum; technology industrialization; and emerging industries.

(III) Operational plan

Applicable Not applicable

In 2023, the Company will fully implement the new development concept, focus on "high-quality Party building + stabilising operations, promoting transformation, minimising risks and strengthening reform", and continue to overcome difficulties without changing its development path or reducing efforts, aiming to promote the high-quality development of the Company.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

1. To make continuous efforts to improve quality and efficiency

Adhere to the concept of value creation. The concept of value creation is practised in all aspects of production and operation, and is implemented in the whole process of market expansion, contract signing and project implementation. The Company will lead its enterprises to achieve substantial quality improvement and efficiency enhancement with the fundamental orientation of “all work must be carried out in pursuit of sustainable net cash profit”, the goal of “an enterprise is born to continuously create value” and the assessment standard for value creation of “achieving profit with cash flow”.

Vigorously promote the integration of business and finance. It promoted the sharing of financial and business data, generated personalised analysis reports for business departments, and provided support and guarantee for the Company's scientific decision-making in the middle and back office.

2. To continuously overcome difficulties in technological innovation

Give full play to the role of innovation. We will effectively carry out the top-level design, organisation and coordination of scientific and technological innovation, and develop strategic long-term projects into large-scale projects to improve the quality of innovation. The Company will accelerate its research of major scientific and technological projects such as “Development of Energy-saving and Carbon-reduction Technology for the Whole Process of Electrolytic Aluminum Production (電解鋁生產全流程節能降碳技術開發)”, focus on carbon peaking and carbon neutrality as well as digital intelligence technology, and make further plans for a number of major scientific and technological projects to create an original technology-developing source.

Create a high-quality innovation ecosystem. Relying on the R&D platform to organise the implementation of key projects, the Company will implement independent scientific research and full-process scientific and technological incentives, and establish a scientific and technological innovation evaluation system. The Company will also fully promote the construction of high-end platforms, and cultivate and introduce high-caliber talents such as scientific and technological leaders and national masters.

Effectively implement digital intelligence-based empowerment. The Company will accelerate the formulation of digital delivery standards for non-ferrous metal projects, give full play to the advantages of the industrial chain, and create new advantageous businesses in the field of engineering technology services including digital delivery and intelligent services. The Company will also accelerate the development of digital delivery and intelligent application integration technology, and expand its efficiency-creating business empowered by digital intelligence service.

Strengthen intellectual property management and application. The Company will strengthen intellectual property management and increase its patent application efforts, especially overseas patent application efforts. The Company will effectively transform scientific and technological achievements, and strengthen the transformation and application of core technological achievements.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

3. To continuously overcome difficulties to deepen reform

Optimise management chain. The Company will promote differentiated management and control, precise authorisation and delegation of powers to member companies, and promote member companies to progressively delegate powers to invested companies and project departments to stimulate the vitality of enterprises.

Implement breakthrough reforms. Taking market-oriented reform as the organic driving force, the Company will unleash the vitality of high-quality development with a series of breakthrough reforms. The Company will give full play to the guiding role of assessment, pay equal attention to process and results, match resource input with benefit output, match benefit with income, and implement both incentives and constraints. The Company will endeavour to create differentiated assessment methods to guide enterprises to develop more high-quality businesses. The Company will strengthen its efforts in cultivation and introduction of high-calibre technology talents, compound project talents and overseas comprehensive talents.

Strengthen capacity building. Aiming to establish the Company's core competence, the Company will strengthen capacity building through the following three stages. Firstly, the Company will standardise its comprehensive management capability and build its capability framework required for refined management of enterprises. Secondly, the Company will strengthen its innovation and development capabilities of transformation and upgrading to support enterprises to grow in both strength and scale on the basis of standardisation. Thirdly, the Company will build its dynamic adaptability to rapidly adapt to changes in the environment, make timely response to changes in internal and external environments, and integrate resources.

4. To continuously overcome difficulties in transformation and upgrading

Cultivate high-quality business models. Survey and design enterprises should turn their traditional profit model with design fees as the main income to a new business model of "continuous provision of service and charging"; Focusing on the main business, the Company will tap into the existing market in the industry, and explore the potential and efficiency in green environmental protection, energy conservation and carbon reduction, technical renovation, operation and maintenance, etc.. Construction enterprises should take "specialized and sophisticated"² development model to create refined projects. The Company will set a red line for its business model: no contract value without revenue, no revenue without profit, and cash flow-free profit.

Strengthen domestic marketing coordination. Adhering to the principle of "overall governance, hierarchical accountability, self-operation and collaborative development", the Company will implement six marketing measures to develop comprehensive competitiveness, enhance core competitiveness, create marketing synergy of China Aluminum International, and form the increment of market contracts in a concerted effort.

² Specialized and sophisticated refers to professional, lean, characteristic and new fields.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

“Technology + Internationalism”. The Company will continue to promote the construction of overseas marketing system, vigorously improve the headquarters' competence in “commerce, legal affairs and finance”, strengthen the role of overseas institutions in regional market development, and achieve comprehensive business development of “maintaining light non-ferrous business, expanding heavy non-ferrous business and promoting processing business”³. The Company will pay close attention to the performance of overseas general contracting projects such as alumina projects in Indonesia, electrolytic aluminum projects in Italy and BALCO electrolytic aluminum projects in India to ensure the accomplishment of its anticipated business objectives.

5. To continuously overcome difficulties to strengthen management

Strengthen project management to improve efficiency. The Company will continue to adhere to the key of “providing high-quality services and products and achieving competitive project whole-process management and project cost control”, gradually standardise and unify the professional standards of project management model, continuously improve the quality of project operation and performance efficiency, and promote cost reduction and efficiency of projects.

Focus on IT-based management to improve efficiency. The Company promoted the upgrading of IT-based construction with the core of “talent, finance and projects”. The Company will establish an integrated information platform for construction project management and the big data platform for project cost, develop a quantitative, comparable and matchable big data database for target project operation, thereby empowering the Company's project lean operation and refined management.

Strengthen compliance management to improve efficiency. The Company will formulate a compliance checklist to clarify various compliance management requirements. The Company will also strengthen system construction, accurately identify laws, regulations, regulatory rules and standards applicable to production and operation, and incorporate the same into various rules and regulations of the Company. In addition, the Company will strengthen compliance review, incorporate compliance review as a necessary procedure into the operation and management process and decision-making of major issues, strengthen the construction of compliance management capabilities, and focus on the three key links of “early warning, control and assessment”, thereby gradually transforming compliance management from “external promotion” to “internal demand”.

6. To continuously overcome difficulties in risk prevention and control

Achieve intrinsic safety in production. The Company will focus on the safety management of the project site, strengthen the work of safety production education and training, safety production inspection and hidden danger investigation and rectification, steadily promote the construction of the contractor safety management standardisation system, and promote the deep integration of safety management and professional management.

³ Maintaining light non-ferrous business, expanding heavy non-ferrous business and promoting processing business refers to the transformation of overseas business scope into light non-ferrous, heavy non-ferrous business and metal processing business with comprehensive development and growth.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

Reduce the scale of accounts receivable and inventory. The Company will continue to implement strict constraints on the scale of accounts receivable and inventory, reduce inventory by implementing different policies, and control the increment with a concerted effort.

Achieve comprehensive risk control. The Company will strengthen the clearance of existing cases and scientifically and rationally control the increment of cases. The Company will strengthen contract management, pay attention to prevention in advance and formulate contract demonstration texts. The Company will also carry out regular inspections on potential risks to timely identify and effectively prevent and resolve various risks.

In 2023, the Company will build a new model, cultivate new capabilities, obtain new momentum and endeavour to fully accomplish the annual goals and tasks so as to promote the Company's high-quality development to a new level.

(IV) Potential risks

Applicable Not applicable

The Company is mainly exposed to, inter alia, liquidity risk, debt risk, litigation risk, operating benefit risk, market change and market competition risk in the daily operation.

1. Liquidity risk

The major feature of liquidity risk is high occupation of "receivables and inventory" and slower turnover speed due to the characteristics of the industry, which poses certain pressure on funds.

2. Debt risk

At present, strict national financial supervision has become the norm, the capital market environment has become increasingly complex, and debt explosions of individual industries, large state-owned enterprises and private enterprises have been occurring from time to time, and the Company faces more serious challenges in debt risk control and capital chain security. If the control is improper, it will have a significant adverse impact on the Company. Chalieco will comprehensively strengthen the debt risk identification and control of its subsidiaries at all levels, clearly understand the current situation of debt risk supervision and the changes of internal and external environment, and further balance the financing needs and solvency.

3. Litigation risk

There is a certain number of legal disputes, and the pressure to remove and control the increase of dispute cases continues to exist. The Company continues to focus on "removing the stock and preventing the increase" as a key task to continuously strengthen the anti-risk capability, consolidates the legal, compliance and risk management foundation for internal high-quality development, and promotes the construction of the rule of law, compliance management and risk prevention work to improve the quality.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

4. Operational benefit risk

In recent years, the Company speeds up transformation and upgrading, without established scale benefits in new fields or new markets; the Company and other construction enterprises are impacted by low entry threshold to the construction market, overcapacity of traditional manufacturing industry, shrinking new investments, fierce competition in construction market; the inaccurate pre-bidding cost forecast of some of the Company's engineering project, the weak process cost control and the deviation between the estimated total cost of the project and the actual cost, resulting in inaccurate gross profit margin of the project. The long time span of overseas projects and exchange rate fluctuations also have a certain impact on project profitability.

5. Market changes and market competition risks

The non-ferrous industry is the traditional main business of Chalieceo. Each subsidiary has certain advantages in technology and brand, and has strong market competitiveness, but the contract value of the non-ferrous industry accounts for a relatively small proportion of the Company's total contract value. Moreover, influenced by the "carbon peaking and carbon neutrality" policy, the non-ferrous metal market has shrunk significantly; in civil market, although China's civil construction market size is stable, the concentration is increasing year after year, small and medium construction enterprises see narrowed survival space, and the market competition is fierce.

(V) Others

Applicable Not applicable

VII. OTHER DISCLOSURES

(I) Principal business

The Group is principally engaged in engineering design and consulting, engineering and construction contracting, equipment manufacturing and trading. Details of major subsidiaries, associates and joint ventures of the Company are set out in Note "7. EQUITY IN OTHER ENTITIES".

(II) Business review

A review of the Group's business during the year, potential risks, discussion of future business development and the relationships with employees, customers and suppliers are set out in "Section 3 Management Discussion and Analysis (Directors' Report)", and the Group's financial and operating conditions are also analyzed using key financial indicators. For information on compliance with relevant laws and regulations that have a significant impact on the Group, please refer to "Section 4 Corporate Governance (Corporate Governance Report)" of this report. For the social responsibility and environmental protection matters of the Group during the year, please refer to "Section 6 Environmental and Social Responsibilities" of this report. For details of major events affecting the Group, please refer to "Section 7 Key Matters" of this report.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

(III) Explanation on the major relationship between the Company and its employees, customers, suppliers and other parties with significant influence on the Company

- 1. The Company and its employees.** The Company is always protecting employees' interests, committed to establishing "sunny, sincere, simple, and friendly" relationships with employees, implementing employees care projects, taking care of the living and working conditions of basic workers, offering fair career opportunities and competitive salary system and cozy interpersonal environment for employees. The Company fights against forced labour, harassment and abuse, strictly implements the Labour Law, the Labour Contract Law, the Social Insurance Law, and the Law on the Protection of Women's Rights and Interests, respects the human rights of employees, and prohibits child labour and forced labour. In 2022, there were no major labour disputes or human rights complaints. The Company offers employees fair wages and benefits, and pays social insurance and provident funds for employees in accordance with the law. The Company establishes a corporate annuity system to provide further pension security for retired employees. The Company vigorously protects employees' life and health, actively performs disease controls, and makes employee health examinations, special physical examinations for female employees and special positions. The Company insists on democratic management, and gives full play to the role of corporate democratic management, democratic supervision and democratic decision-making in the basic form of workers' congress. The Company actively carries out rational suggestion activities.

The Company provides a growth platform for employees for their self-development and continuous improvement, and insists on guiding employees with advanced concepts and cultivating employees with excellent work styles. The Company insists on building a management team composed of old, middle-aged and young members, and makes good use of cadres of all ages. The Company selects young cadres from grassroots level, key positions, front-line of reform and development, complex environments, and difficult areas, whose performance are recognized by the majority of cadres and employees, and pays attention to strengthening the training of outstanding young cadres. The Company provides employees with a broad development platform and space, develops a series of employee training programs and performance appraisal methods, specifying the training methods. The Company implements "targeted training" online and offline specific to pain points and difficulties; optimizes the organizational system, curriculum system, support system and evaluation system, to make the entire training work more systematic and structured; takes different teaching modes for different themes and contents, to improve the training effect; strengthens the preclass review, and scientifically standardizes the conditions and scope of trainees according to the training objectives. In 2022, there were totally 28,686 trainees, with total investment amount of RMB7.3819 million, and total length of training time 283,428 hours.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

2. **The Company 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 Company and its suppliers.** The Group insists on the principle of “selecting the best, retaining the excellence and eliminating the inferiors, cooperating for mutual benefits and mutual development” when managing suppliers through an 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 Company, the governments and large enterprises as business partners.** In respect of the development of the domestic business, the Group focuses on the reinforcement of a profound connection with local governments and well-known enterprises. The Group underwent in-depth exchanges with local governments in cities such as Zhengzhou, Changsha, Xianyang, Guiyang, Luoyang, and Kunming on business cooperation, and established strategic partnerships with enterprises including TJAD Group and China Gezhouba Group Company Limited on areas such as transport, municipality and aluminum applications to launch cooperation.

In terms of overseas business development, the Company has strengthened cooperation with world-renowned non-ferrous metal enterprises, and has launched in-depth communication and exchanges with famous foreign enterprises such as Rio Tinto, Eurasian Resources and Vedanta, as well as many domestic enterprises involved in foreign investment, and has promoted a series of technical cooperation.

(IV) The Company's environmental policy and performance

For details, please refer to “Section 6 Environmental and Social Responsibilities” of this report.

(V) Material events after the end of the financial year

None.

(VI) Issue of shares during the reporting period

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

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

(VII) Issue of bonds by the Company during the reporting period

Details of issue of bonds by the Company during the reporting period are set out in "Particulars of financing arrangements" for the section "V. MAIN OPERATIONS WITHIN THE REPORTING PERIOD".

(VIII) Results

The audited results of the Company and its subsidiaries for the year ended 31 December 2022 are set out in the consolidated income statement enclosed hereinafter. The financial positions of the Company and its subsidiaries for the year ended 31 December 2022 are set out in the consolidated balance sheet enclosed hereinafter. The consolidated cash flows of the Company and its subsidiaries for the year ended 31 December 2022 are set out in the consolidated statement of cash flows enclosed hereinafter. Results performance, discussion and analysis of important factors affecting results and financial position of the Group for the year are set out in Section 3 "Management Discussion and Analysis (Directors' Report)" of this annual report.

(IX) Property, plant and equipment

Details of movements in property, plant and equipment of the Company and its subsidiaries for the year are set out in Note 16 "Fixed assets" under "5. Notes to the Consolidated Financial Statements".

(X) Share capital

As of 31 December 2022, the total share capital of the Company amounted to RMB2,959,066,667 shares, which was divided into 2,959,066,667 shares (comprising 399,476,000 H Shares and 2,559,590,667 A Shares), at a par value of RMB1.00 each.

(XI) 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 income statement, 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.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

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/associates operate and generate taxable income. The management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation, and 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.

For the details, please see "5.23 Deferred Income tax assets and deferred Income tax liabilities" of "5. NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS" of this report.

Value-added tax

Sales of goods of the Group are subject to VAT. VAT payable is determined by the taxable sales calculated by applying the applicable tax rates on the taxable revenue arising from sales of goods and provision of service after deducting deductible input VAT of the period. The VAT rate for the sales of goods business of the Group is 13% throughout 2022. The applicable VAT rate for the modern service industry in 2022, including design, is 6%.

According to the Circular on "Comprehensively Promoting the Pilot Program of the Collection of Value-added Tax in Lieu of Business Tax" (Cai Shui [2016] No. 36) jointly released by the Ministry of Finance and the State Administration of Taxation, effective from 1 May 2016, the Group's revenue from providing construction services is subject to a VAT at a tax rate of 9% throughout 2022.

For the details, please see "5.30 Taxes payable" of "5. NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS" of this report.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

(XII) Reserves

The details of movements in reserves of the Group and the Company during the year are set out in the accompanying consolidated financial statements, namely the “CONSOLIDATED STATEMENT OF CHANGES IN EQUITY OF SHAREHOLDERS” and the “STATEMENT OF CHANGES IN EQUITY OF SHAREHOLDERS OF THE PARENT” of this report, respectively. Under the Company Law, after deducting the statutory surplus, the undistributed profit can be used for dividend distribution. As at 31 December 2022, the undistributed profit of the parent company amounted to RMB127,038,527.51.

(XIII) Events after the balance sheet date

There was no other significant subsequent event after 31 December 2022.

(XIV) Profit distribution and proposed dividend

For details, please refer to “XV. Proposal for Profit Distribution or for Converting Capital Reserve into Share Capital” under “Section 4 Corporate Governance (Corporate Governance Report)” of this report.

(XV) Purchase, redemption or sale of listed securities

Save as disclosed in “Section 10 Particulars of Bonds” of this report, neither the Company nor any of its subsidiaries purchased, sold or redeemed any of the Company's listed securities during the year ended 31 December 2022.

(XVI) Use of proceeds

The total amount of proceeds from the Listing of H Shares of the Company was HK\$1.318 billion. As of 31 December 2014, our proceeds had been fully utilized. Such proceeds were primarily used in the industrialization of the Company and overseas engineering projects in compliance with the use of proceeds as disclosed in the Prospectus.

The total amount of proceeds from the Listing of A Shares of the Company was RMB1.021 billion. After deducting various issuance expenses of approximately RMB41 million, the net proceeds were RMB980 million. As of 31 December 2019, our proceeds had been fully utilized. Such proceeds were used to supplement the operating capital of the construction contracting business in compliance with the use of proceeds as disclosed in the Prospectus.

(XVII) Major customers and suppliers

For details, please refer to the analysis as set out in the “Particulars of major customers and major suppliers” under “Section 3 Management Discussion and Analysis (Directors' Report)” of this report.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

(XVIII) Bank borrowings and other borrowings

Details of bank borrowings and other borrowings of the Company and its subsidiaries as at 31 December 2022 are set out in “(XXV) Short-term Borrowings” and “(XXXIV) Long-term Borrowings” under “5. NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS” in the consolidated financial statements.

(XIX) Equity-linked agreements

As of 31 December 2022, the Group did not enter into any equity-linked agreements that would or could result in the issue of Shares by the Company.

(XX) List of Directors, Supervisors and senior management

For details, please refer to “Particulars of Directors, Supervisors and Senior Management” under “Section 4 Corporate Governance (Corporate Governance Report)” of this report.

(XXI) Directors' and Supervisors' service contracts

The Company entered into service contracts with each Director, the details of which mainly consist of: (1) the term from 8 April 2022 to the time of conclusion of the general meeting for electing the directors to the next session of the Board of Directors; and (2) termination subject to the terms of each contract.

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

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

(XXII) Remuneration of Directors, Supervisors and senior management

For details, please refer to “Particulars of Directors, Supervisors and Senior Management” under “Section 4 Corporate Governance (Corporate Governance Report)” of this report.

(XXIII) Material interests of the Directors and Supervisors in contracts, transactions or arrangements

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

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

(XXIV) Directors' interests in competing business

During 2022, none of Directors or their Associates had any competing interest in any business which competes or may compete, directly or indirectly, with the Group's business.

(XXV) Resignation of directors

For details, please refer to "Particulars of Directors, Supervisors and Senior Management" under "Section 4 Corporate Governance (Corporate Governance Report)" of this report.

(XXVI) Director's, Supervisors' and senior management's interests and short positions in Shares, underlying Shares and debentures

As at 31 December 2022, 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 HKEX 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 for Securities Transactions by Directors of Listed Issuers, to be notified to the Company and the HKEX.

(XXVII) Directors' insurance

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

(XXVIII) Permitted indemnity

The Company has arranged sufficient and proper insurance for Directors to better perform their responsibilities and risk aversion pursuant to the provision C.1.8 of the Corporate Governance Code as contained in Appendix 14 to the HKEX Listing Rules. Save for the above, during the financial year of 2022 and as of the date of this annual report, the Company has no other provision of permitted indemnity (as defined in Section 470 of the Companies Ordinance).

(XXIX) 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 bodies corporate, or had exercised any such rights.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

(XXX) 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.

(XXXI) Share incentives acquired by Directors, Supervisors and senior management

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

(XXXII) Substantial Shareholders' interests in Shares

For details, please refer to "PARTICULARS OF SHAREHOLDERS AND EFFECTIVE CONTROLLER" under "Section 8 Changes in Ordinary Shares and Shareholders" of this report.

(XXXIII) Compliance with OFAC undertakings

During the Listing of the Company, an undertaking was made to the HKEX by the Company that the Company would not use any proceeds from the Global Offering and any other fund raised through the HKEX for any country or region (originally Cuba, Sudan, North Korea, Iran, Syria or Myanmar, now updated to: Cuba, Crimea, North Korea, Iran or Syria) subject to broad and comprehensive economic sanctions by the United States or other jurisdictions. During the reporting period, the Company issued the list of relevant sanctioned countries to the 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 strictly complied with the OFAC Undertakings since the time of H shares listing. Since 2 June 2012, there is no application of any such proceed in any of the country or region subject to broad and comprehensive economic sanctions by the United States or other jurisdictions, and the Company will continue to honour OFAC commitments in the its day-to-day operations.

(XXXIV) Management contracts

During 2022, the Company did not sign or enter into any contract in respect of the management and administration of all or any substantial part of its business.

(XXXV) Related (Connected) transactions

For details, please refer to "Significant Related Party (Connected) Transactions" under "Section 7 Key Matters" of this report.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

(XXXVI) Compliance with Non-competition Agreement

For details, please refer to “The influence on the Company, the countermeasures taken, the progress of solution and the subsequent solution plan in event that the controlling shareholder, actual controller or other entity under its control is engaged in the same or similar business as the Company, or in a business competing with the Company, or there is any major change in such competition” under “Section 4 Corporate Governance (Corporate Governance Report)” of this report.

(XXXVII) Directors' and Supervisors' rights to acquire Shares or debentures

As at the end of 2022, no right to acquire shares in or debentures of the Company or any other body corporate were granted to any Directors or Supervisors or their associates by the Company or any of its subsidiaries or were any such rights exercised by them.

(XXXVIII) Retirement and employees benefit scheme

For details, please refer to “Particulars of Employees of the Parent Company and Major Subsidiaries at the End of Reporting Period” under “Section 4 Corporate Governance (Corporate Governance Report)” of this report.

(XXXIX) Compliance with Corporate Governance Codes

For details, please refer to “Company's Compliance with the Corporate Governance Codes” under “Section 4 Corporate Governance (Corporate Governance Report)” of this report.

(XL) Board diversification policy

For details, please refer to “Board of Directors” under “Section 4 Corporate Governance (Corporate Governance Report)” of this report.

(XLI) Compliance with major laws and regulations

For details, please refer to “Compliance with Major Laws and Regulations and Promoting the Construction of Corporate Legal Governance” under “Section 4 Corporate Governance (Corporate Governance Report)” of this report.

(XLII) Promoting the Construction of Corporate Legal Governance

For details, please refer to “Compliance with Major Laws and Regulations and Promoting the Construction of Corporate Legal Governance” under “Section 4 Corporate Governance (Corporate Governance Report)” of this report.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

(XLIII) Revision to the Articles of Association during the Reporting Period

For details, please refer to “Others” under “Section 4 Corporate Governance (Corporate Governance Report)” of this report.

(XLIV) Audit Committee

The audit committee of the Company has reviewed the 2022 annual results and the consolidated financial statements of the Group for the year ended 31 December 2022 prepared in accordance with the China Accounting Standards for Business Enterprises.

(XLV) Auditor's remuneration

For details on the auditor's remuneration, see “Information on Appointment and Removal of the Auditor” under “Section 7 Key Matters” of this report.

(XLVI) Five-year financial summary

For details of the summary of the Group's operating results and assets for the past five financial years, please refer to “Section 12 Five-year Result Summary” of this report.

(XLVII) Taxes on dividends

For details of the Company's cash dividend proposal for the reporting period, please refer to “Proposal for Profit Distribution or for Converting Capital Reserve into Share Capital” under “Section 4 Corporate Governance (Corporate Governance Report)” of this report.

Under the “Corporate Income Tax Law of the People's Republic of China” effective from 1 January 2008, the Company shall withhold corporate income tax at the rate of 10% when distributing cash dividends to non-resident corporate shareholders listed in shareholder register for H shares. Any H shares registered in the name of non-individual shareholders (including HKSCC Nominees Limited, other nominees, agents or trustees, other organizations and groups) are deemed held by non-resident corporate shareholders. Therefore, dividends due to these shareholders are subject to the withholding of corporate income tax. Any H-share shareholder intending to change their shareholder status should inquire about relevant formalities with their agents or trustees.

SECTION 3 MANAGEMENT DISCUSSION AND ANALYSIS (DIRECTORS' REPORT)

The Company will withhold individual income tax at the rate of 10% if an individual shareholder of H shares is a resident of Hong Kong or Macao, or is a resident of other countries that have entered into a 10% tax treaty with the PRC on cash dividends distributed to them. If the individual shareholder of H shares is a resident of a country that has entered into a tax agreement with China with a dividend tax rate of less than 10%, the Company will withhold the individual income tax on dividends at a tax rate of 10%. In respect of this, if any relevant individual shareholder of H shares intends to apply for the refund of excess tax withheld ("excess amount"), the Company may apply for the agreed preferential tax rate on his/her behalf pursuant to the tax treaty, provided that relevant shareholder shall within the specified time period, submit to the H share register of the Company the certificate set forth in the tax treaty notice, and subject to the audit and approval of the competent tax authority, the Company will offer assistance in the refund of the excess amount. If the individual shareholder of H shares is a resident of a country that has entered into a tax treaty with the PRC with a tax rate of more than 10% but less than 20% on dividends, the Company will withhold individual income tax at the actual tax rate specified in the tax treaty. The Company will ultimately withhold individual income tax at 20% if the individual shareholder of H shares is a resident of a country that has entered into a tax treaty with the PRC with a 20% tax rate on dividends, or a resident of a country that has not entered into any tax treaty with the PRC, or in any other circumstance.

According to the Notice on Issues Concerning the Policy of Differentiated Individual Income Taxes on Dividends and Bonuses of Listed Companies (Cai Shui [2015] No. 101) (《關於上市公司股息紅利差別化個人所得稅政策有關問題的通知》(財稅[2015]101號)), where an individual acquired stocks in a listed company on the public offering and transfer market, dividends income of the individual are fully included in his/her taxable income if he/she has held the stocks within one month (inclusive), are 50% included in his/her taxable income on a provisional basis if he/she has held the stocks for longer than one month and up to one year (individual income tax rate is 20% for the above cases), and are exempted from individual income tax if he/she has held the stocks for longer than one year.

VIII. FAILURE TO MAKE DISCLOSURE UNDER THE STANDARDS DUE TO THE INAPPLICABILITY OF THE STANDARDS TO THE COMPANY, STATE SECRETS, TRADE SECRETES AND OTHER SPECIAL REASONS

Applicable Not applicable

LI Yihua (李宜華)
Chairman

Beijing, PRC
7 March 2023

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

I. PARTICULARS IN RELATION TO CORPORATE GOVERNANCE

Applicable Not applicable

During the reporting period, the Company continuously standardized its corporate governance and improved its corporate governance system in strict accordance with the Company Law, the Securities Law, relevant regulations of the CSRC and other regulatory authorities, as well as relevant requirements of the SSE and the HKEX. The general meeting, the Board of Directors and its special committees and Board of Supervisors operated in accordance with laws and regulations and in an effective manner. The Company exercises its authority pursuant to the requirements under Rule A.2.1 of the Corporate Governance Code. The work of information disclosure and investor relations gradually strengthened, and the level of corporate governance further improved. In 2022, the Company's board of supervisors was selected into the "Proactive Award for Board of Supervisors of Listed Companies" (上市公司監事會積極進取榜單) by the China Association for Public Companies, the secretary to the board of directors won the 4A evaluation of the China Association of Listed Companies, and the office of the board of directors won the "Excellent Practise of Board Office of Listed Companies in 2022" (2022上市公司董辦優秀實踐) award from the China Association for Public Companies.

(I) Complete and perfect the corporate governance system

Firstly, the Company formulated the "Administrative Measures for the Authorization of the Board of Directors of China Aluminum International Engineering Corporation Limited", "Implementation Rules of Tracking Dynamic Adjustment for the Authorization of the Board of Directors of China Aluminum International Engineering Corporation Limited", and revised the "President's Working Rules of China Aluminum International Engineering Corporation Limited", which established a closed-loop management mechanism of compliance authorization, tracking supervision and dynamic adjustment from the board of directors to the managers, improved the decision-making efficiency of the board of directors and guaranteed the decision-making quality of authorized matters. Secondly, according to the relevant provisions of the Company Law and the Articles of Association, completed the reelection of the board of directors and the board of supervisors, which improved the Company's standardized operation level and the effectiveness of corporate governance. Thirdly, the Company actively explored and innovated the working mechanism of the board of directors, established a pre-meeting communication mechanism for the board of directors, solidified the supervision mechanism of the board of directors' resolutions, and improved the external director's duty performance service guarantee mechanism.

(II) Strengthen the daily operation of the three meetings

Firstly, the general meetings of shareholders, the Board of Directors and the Board of Supervisors operated in a standardized and effective manner. During the year, the Company organized three general meetings, at which 35 proposals were reviewed and approved; the Board of Directors held 12 board meetings, at which 96 proposals were reviewed and approved; and the Board of Supervisors held seven meetings, at which 30 proposals were reviewed and approved.

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

Secondly, the Board of Directors provided decision-making guarantee for directors to perform their duties. The board of directors further strengthened pre-meeting communication. By holding special communication meetings and other forms, the company's directors were organized to conduct in-depth discussions on some major issues in advance, so as to ensure that major issues were more fully demonstrated and risk analysis was more in-depth. In 2022, a total of 6 special communication meetings were held, involving matters such as major asset sales, daily connected transactions and capital operation.

Third, the special committees of the Board of Directors played their roles to the full. The Strategy Committee, Risk Management Committee, Audit Committee, Remuneration Committee and Nomination Committee of the Board of Directors of the Company carefully studied and considered professional issues and actively provided opinions for the Board of Directors' decision-making.

Fourthly, the implementation of resolutions was strengthened. A mechanism was established to supervise the implementation of the resolutions of the Board of Directors, and the progress of the resolutions of the Board of Directors was summarized on a monthly basis and reported to the Board of Directors by means of the communications of Directors.

(III) make good information disclosure in accordance with laws and regulations

The Company disclosed information in a true, accurate, complete, timely and fair manner in strict accordance with the regulations and requirements of the CSRC, the SSE and the HKEX, and has amended the Company's information disclosure management rules, internal reporting system for material information and administrative measures of insider information in a timely manner in conjunction with new changes in regulatory policies, so as to continuously improve the quality and standard of its disclosure. During the year, 198 announcements were made on the website of the SSE and 209 announcements were made on the website of the HKEX.

(IV) Actively investor relations management

The Company continued to strengthen its investor relations management, established a multi-level positive investor interaction mechanism. Throughout the year, the Company answered 18 questions from investors through the SSE e-interactive platform, with a 100% response rate; completed the on-site investigation and research activities by analysts from Huatai Securities to the Company; convened a total of two performance presentations on the Company's results for the year 2021, the first quarter of 2022 and the half-year of 2022.

Whether the Company's corporate governance deviated materially from relevant CSRC requirements? If any, provide the reason

Applicable Not applicable

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

II. COMPLIANCE WITH THE CORPORATE GOVERNANCE CODE

(I) Company's Compliance with the Corporate Governance Code

The Company adhered to maintain a high standard of corporate governance as a listed company on the HKEX. During the year ended 31 December 2022, the Company has complied with all code provisions set out in the Corporate Governance Code contained in Appendix 14 to the HKEX Listing Rules, and adopted in its best practice proposed therein as appropriate.

(II) Risk Management and Internal Control of the Company

The Company has attached prime importance to internal control. 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 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 and management report for the year, reviews the resources, employees' qualifications and experiences in respect of the accounting, internal audit and financial reporting functions, as well as the adequacy of training courses received by employees and the relevant budget. In 2022, 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 1 internal control walkthrough test in 2022 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 "Implementing Rules of Overall Risk Management of China Aluminum International Engineering Corporation Limited" (《中鋁國際工程股份有限公司全面風險管理實施細則》), the Implementing Rules of "Three Majors and One Significant" Decision-making System" of Chalico (《中鋁國際「三重一大」決策制度實施細則》) 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.

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

In terms of organizational structure, the Company has established the department of legal affairs and compliance which is responsible for legal affairs, comprehensive risk management, evaluation on internal control, internal audit and accountability for non-compliance operation and investment. 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, 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 2022, no material failure or weakness was found in respect of risk monitoring of the Company. The management procedures of financial reports and information disclosure of the Company is in strict compliance with the regulations under the Listing Rules of the SSE and the HKEX. The Board considers that the risk management and internal control of the Company is in effective operation according to its assessment.

Each department of the Company is able to smoothly submit to the Board any data which is needed to be submitted. Being the most senior point of contact to each department, the president of the Company is able to effectively report to the Board in relation to the operation of each department, and to coordinate the demands of each department and carry out relevant mobilization to facilitate reasonable decision making within the Company. Accordingly, any possible significant matter (if disclosure to the market is required) identified by the staff can be reported to the management of the Company in a timely, accurate and effective manner, and the decisions made by the management of the Company can be carried out accurately and timely under supervision.

Through the assessment of the internal control systems of the Group by the Audit Committee and internal control department, the Board was of the view that, in 2022 and as at the date of publication of this report, the Company continues to operate comprehensive internal control and risk management systems including corporate governance, operations, investment, finance and administration and human resources, and such internal control and risk management systems are in full effect.

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

In 2022, the Company adopted the following measures to implement risk management and internal control:

Based on the practical situation in operations, the Company sorted out business and management flows. The Company carried out in-depth analysis on every risk event in the risk event database from the perspectives including policies, organizational responsibilities and human resources, and determined the significant risks of the Company. Corresponding preventive measures against significant risks were formulated by the Company under the regular monthly supervision by the responsible department.

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

The Company conducts one internal control walkthrough test assessment during the year, in which the annual and interim internal control are assessed respectively. The Company selected member entities to carry out internal control and independent reviews, requiring each member entity to develop the rectification measures for any problem found. In 2022, the Board has obtained the confirmation 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 2023, the Board and the Audit Committee have heard and discussed the 2022 internal control assessment report of the Company while the Board and the Risk Management Committee have heard and discussed the report of the overall risk management 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.

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

III. SPECIFIC MEASURES OF THE CONTROLLING SHAREHOLDER OR THE ACTUAL CONTROLLER TO ENSURE THE INDEPENDENCE IN THE COMPANY'S ASSETS, STAFF, FINANCE, ORGANIZATION, OPERATION AND OTHERS, AS WELL AS THE SOLUTIONS, WORK PROGRESS AND SUBSEQUENT WORK PLAN TO AFFECT SUCH INDEPENDENCE

Applicable Not applicable

The influence on the Company, the countermeasures taken, the progress of solution and the subsequent solution plan in event that the controlling shareholder, actual controller or other entity under its control is engaged in the same or similar business as the Company, or in a business competing with the Company, or there is any major change in such competition.

Applicable Not applicable

(I) NON-COMPETITION AGREEMENT IN 2012

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 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 reporting period, the independent non-executive Directors of the Company have reviewed the implementation of the non-competition agreement and confirmed that Chinalco has fully complied with the above-mentioned non-competition agreement without any breach of contract.

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

(II) COMMITMENT LETTERS IN RELATION TO COMPETITIONS FOR 2016, 2017 AND 2022

1. In June 2016, Chinalco submitted the Commitment Letter in Relation to Competitions (《關於同業競爭的承諾函》) (hereinafter referred to as “2016 Commitment Letter”) and has committed, as required by Chalieco, that the businesses of Henan Huahui Nonferrous Engineering Design Co., Ltd. (河南華慧有色工程設計有限公司) and Kunming Survey and Design Institute which are related to Chalieco would be transferred or entrusted to Chalieco or non-related third parties by ways of equity transfer, entrusted management or other appropriate methods within five years from the date of the signing of the commitment letter.
2. In September 2017, the commitment letter (hereinafter referred to as “2017 Commitment Letter”) submitted by Chinalco mainly contains: 1) Henan Huahui Nonferrous Engineering Design Co., Ltd., CHALCO Shanxi Industry Service Co., Ltd. (山西中鋁工業服務有限公司), Henan Zhongzhou Aluminum Construction Co., Ltd. (河南中州鋁建設有限公司), Yuxi Feiya Mining Industry Development Management Co., Ltd. (玉溪飛亞礦業開發管理有限責任公司) and Shanxi Aluminum Plant Design Institute Co., Ltd. (山西鋁廠設計院有限公司) (the “Five Companies”) will complete its business which coincides with the engineering survey, consultancy, design, construction, engineering contracting and relevant equipment manufacturing business engaged by Chalieco and/or its subsidiaries with customers which are third parties outside the organization of Chinalco as soon as possible. From the date of the submission of this commitment letter, the Five Companies will no longer launch new business in respect of the aforementioned aspects with third parties outside the organization of Chinalco, and only provide related services to companies within the organization of Chinalco. 2) The Five Companies will no longer upgrade its existing qualifications related to business which coincides with the engineering survey, consultancy, design, construction, engineering contracting and relevant equipment manufacturing business engaged by Chalieco and/or its subsidiaries. 3) Chinalco will be in strict compliance with the Non-competition Agreement signed by Aluminum Corporation of China and China Aluminum International Engineering Corporation Limited”. 4) If in breach of the aforesaid commitments occurs, Chinalco would accept full responsibility incurred thereunder, and would thereby fully indemnify or compensate all the direct or indirect loss incurred to Chalieco and other Shareholders of Chalieco. If the Five Companies breaches this commitment by executing new business contracts which coincide with the engineering survey, consultancy, design, construction, engineering contracting and relevant equipment manufacturing business engaged by Chalieco and/or its subsidiaries with third parties outside the organization of Chinalco, Chalieco would be entitled, from the date of such business contracts become effective, to reduce the amount equal to the amount of such business contracts from unpaid but payable profit distribution in cash corresponding to Shares of Chalieco held by the Chinalco until the elimination of the event of breach of this commitment.

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3. In September 2022, Chinalco issued a letter of commitment. As the controlling shareholder of Chalieceo, in order to avoid horizontal competition with Chalieceo, Chinalco promised: 1) from 1 January 2020 to date, Chinalco has not been in breach of the aforesaid agreement for avoidance of horizontal competition, the 2016 Commitment Letter and the 2017 Commitment Letter; 2) Upon completion of the Reorganisation, except for Henan Huahui Nonferrous Engineering Design Co., Ltd. (河南華慧有色工程設計有限公司), CHALCO Shanxi Industry Service Co., Ltd. (山西中鋁工業服務有限公司), Yuxi Feiya Mining Industry Development Management Co., Ltd. (玉溪飛亞礦業開發管理有限責任公司) and Shanxi Aluminum Plant Design Institute Co., Ltd. (山西鋁廠設計院有限公司), which are subsidiaries of Chinalco, which will provide relevant services to the enterprises within the system of Chinalco pursuant to the aforesaid agreement on avoidance of horizontal competition and the aforesaid letter of commitments, Chinalco and the enterprises controlled by Chinalco will not directly or indirectly engage in or invest in any business which competes or may compete with the business of Chalieceo and its subsidiaries. Chinalco will supervise the enterprises controlled by Chinalco and under its de facto control and exercise the necessary powers to cause them to comply with this commitments; (3) In the event of any breach of the above commitments, Chinalco is willing to bear all liabilities arising therefrom and fully compensate or make good all direct or indirect losses caused to Chalieceo and other shareholders of Chalieceo as a result. Chinalco will strictly comply with the relevant regulations of the CSRC, the SSE and the relevant provisions of the Articles of Association of the listed company, and will not take advantage of Chinalco 's position as the controlling shareholder of Chalieceo to obtain improper benefits and will not damage the legitimate interests of Chalieceo and other shareholders.

The Company has acquired Kunming Survey and Design Institute in 2017 and included Kunming Survey and Design Institute in the scope of consolidated financial statements of the Company.

Except for Henan Zhongzhou Aluminum Construction Co., Ltd. (河南中州鋁建設有限公司) has been deregistered in 2018, as of now, the remaining 4 companies of the "Five Companies" involved in the above commitment letter have completed its business related with the engineering survey, consultancy, design, construction, engineering contracting and relevant equipment manufacturing business with customers which are third parties outside the organization of Chinalco as described in the relevant commitment letter. Business related with the engineering survey, consultancy, design, construction, engineering contracting and relevant equipment manufacturing business with customers which are third parties outside the organization of Chinalco were not commenced from the date of the issuance of the commitment letter in 2017. The Five Companies above did not conduct new business cooperation with customers which are third parties outside the organization of Chinalco nor upgrade its existing qualifications related to business which coincides with the engineering survey, consultancy, design, construction, engineering contracting and relevant equipment manufacturing business engaged by Chalieceo or its subsidiaries since the date of the issuance of the commitment letter. In addition, Chinalco has fulfilled relevant commitments in a timely and strict manner, and there is no outstanding commitment.

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IV. COMPLIANCE WITH MAJOR LAWS AND REGULATIONS AND PROMOTING THE CONSTRUCTION OF CORPORATE LEGAL GOVERNANCE

(I) Company's Compliance with Major Laws and Regulations

The operation of the Group has always complied with the national and local laws and regulations. It upholds honesty and integrity, and performs its social responsibility. The Company and its staffs have exercised their best endeavors to strictly follow the applicable rules, laws and industry standards. The Directors are not aware of any breach of laws or regulations which have a significant impact on the Group, nor are they aware of any cases of corruption, bribery, extortion, fraud or money laundering involving the Group in 2022.

The Company continues to review its current systems and procedures, emphasizes and strives to comply with the Civil Code of the People's Republic of China (《中華人民共和國民法典》), the Company Law, the Securities Law, the listing rules of the SSE and of the HKEX, the SFO, the applicable Hong Kong Companies Ordinance and other relevant laws and regulations which have a significant impact on the Company. The Company is committed to safeguard the interest of Shareholders, improve its corporate governance and enhance the functions of the Board.

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

(II) Promoting the Construction of Corporate Legal Governance

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

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V. GENERAL MEETING

Session of meeting	Convening date	Websites designated for disclosure of resolutions	Resolutions disclosing date	Resolutions
The first extraordinary general meeting of China Aluminum International Engineering Corporation Limited in 2022	8 April 2022	www.sse.com.cn, www.hkexnews.hk	9 April 2022 (A shares), 8 April 2022 (H shares)	The meeting considered and passed 3 motions in total: the Resolution Regarding the Election of Executive Directors and Non-Executive Directors of the Fourth Session of the Board of the Company; the Resolution Regarding the Election of Independent Non-Executive Directors of the Fourth Session of the Board of the Company; the Resolution Regarding the Election of Shareholder Representative Supervisors of the Fourth Session of the Board of Supervisors of the Company.
The annual general meeting of China Aluminum International Engineering Corporation Limited in 2021	28 June 2022	www.sse.com.cn, www.hkexnews.hk	29 June 2022 (A shares), 28 June 2022 (H shares)	The meeting considered and passed 13 motions in total: the Proposal for Board of Directors' Work Report for 2021; the Proposal for Board of Supervisors' Work Report for 2021; the Proposal for the Financial Report for 2021; the Proposal for the Profits Distribution Plan for 2021; the Proposal for the Provision for Impairment of Assets for 2021; the Proposal for the Provision of Guarantees Among Holding Subsidiaries; the Proposal for the Guarantee Provided by the Holding Subsidiary for Wancheng Shandong Construction Co., Ltd; the Proposal for the Re-Appointment of Auditor; the Proposal for the Remuneration Plans for Directors And Supervisors for 2022; the Proposal for the Purchase of Liability Insurance for Directors, Supervisors And Senior Management; the Proposal for the Capital Expenditure Plan for 2022; the Proposal for the General Mandates to Issue the Onshore And offshore Debt Financing Instruments; the Proposal for the Amendments to the Articles of Association.

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Session of meeting	Convening date	Websites designated for disclosure of resolutions	Resolutions disclosing date	Resolutions
The second extraordinary general meeting of China Aluminum International Engineering Corporation Limited in 2022	28 October 2022	www.sse.com.cn, www.hkexnews.hk	29 October 2022 (A shares), 28 October 2022 (H shares)	The meeting considered and passed a total of 17 motions relating to the Major Asset Disposal of the Miyu Project and 19 motions to the resolution regarding the amendments to the Rules of Procedures for the Board of Directors of China Aluminum International Engineering Corporation Limited, the resolution regarding the amendments to the Working System for Independent Directors of China Aluminum International Engineering Corporation Limited, as detailed in the relevant announcements of the Company.

The holders of preferred shares with restored voting rights request to convene an extraordinary general meeting

Applicable Not applicable

Particulars of the general meeting

Applicable Not applicable

On 8 April 2022, the Company convened the first extraordinary general meeting of 2022, which was convened by the Board of Directors of the Company and chaired by Mr. Li Yihua, Chairman of the Board of Directors of the Company. The convening, holding and voting of the meeting were in compliance with the provisions of the Company Law and other laws and regulations as well as the Articles of Association of the Company.

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On 10 June 2022, Chinalco, a shareholder holding 73.56% of the Company's shares alone, proposed an interim proposal and submitted it in writing to the convenor of the general meeting. The contents of the provisional proposal included four new motions, namely, the Motion on the Review of the Company's Remuneration Plan for Directors and Supervisors for the Year 2022, the Motion on the Purchase of Liability Insurance for Directors, Supervisors and Senior Management of the Company, the Motion on the Review of the Company's Capital Expenditure Plan for the Year 2022 and the Motion on the Amendment to the Articles of Association.

On 28 June 2022, the Company convened its 2021 annual general meeting, which was convened by the Board of Directors of the Company and chaired by Mr. Li Yihua, the Chairman of the Company. The convening, holding and voting of the meeting were in compliance with the provisions of the Company Law and other laws and regulations and the Articles of Association.

On 28 October 2022, the Company convened the second extraordinary general meeting of 2022, which was convened by the Board of Directors of the Company and chaired by Mr. Li Yihua, Chairman of the Board of Directors of the Company. The convening, holding and voting of the meeting were in compliance with the Company Law and other laws and regulations and the Articles of Association.

VI. COMMUNICATIONS WITH SHAREHOLDERS

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

(I) 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 general meeting of the Company provides a good communication opportunity between Shareholders and the Board. In the event of convening an annual general meeting, the convenor shall give a written notice 20 clear business days before the date of the meeting. In the event of convening an extraordinary general meeting, the convenor shall give a written notice 15 days or 10 clear business days before the meeting (whichever is earlier), informing all the registered shareholders of the matters proposed for consideration at the meeting and the date and place of the meeting ("Business Day(s)" refers to the day when the HKEX opens for securities trading).

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

Shareholders individually or jointly holding more than 10% of shares of the Company are entitled to request the Board in writing to convene an extraordinary general meeting. The Board shall, in accordance with the requirements of laws, administrative regulations and the Articles of Association, reply with a written opinion to state whether it agrees or disagrees to convene an extraordinary general meeting within 10 days upon receipt of the request.

If the Board agrees to convene the extraordinary general meeting, it shall issue a notice of convening the general meeting within 5 days upon after the date of the resolution of the Board. Any changes made to the original request in the notice shall be agreed by the relevant shareholders. If the Board disagrees to convene the extraordinary general meeting, or does not reply within 10 days upon receipt of the request, shareholders individually or jointly holding more than 10% of the shares of the Company are entitled to request the Board of Supervisors in writing to convene an extraordinary general meeting.

If the Board of Supervisors agrees to convene the extraordinary general meeting, it shall issue a notice of convening the general meeting within 5 days upon receipt of the request. Any changes made to the original proposals in the notice shall be agreed by the relevant shareholders.

If the Board of Supervisors does not issue the notice of general meeting within the prescribed period, it shall be deemed as the Board of Supervisors not convening and not holding the general meeting. Then the shareholders individually or jointly holding more than 10% of the shares of the Company for more than 90 consecutive days are entitled to convene and hold the meeting by themselves.

(II) Enquiry of Shareholders

In order to maintain channels for effective communication, the Company publishes its address, e-mail address, phone number and fax number in detail on its website and in its regular reports. If any enquiry, the shareholders may contact the Company through the above channels, and the Company will respond to all enquiries on a timely and proper basis.

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

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

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(III) Communication Policy with Shareholders

The Company believes that effective communication with shareholders is crucial to enhancing investors' understanding of the Group's business and performance, and the Company is committed to maintaining continuous dialogue with shareholders. In order to ensure that shareholders and potential investors can obtain information about the Company in an equal and timely manner at any time, the Company has established several communication channels with shareholders as follows:

1. Corporate communications such as annual reports, interim reports, announcements and circulars can be viewed on the website of the SSE, HKEX and the Company;
2. The Company's constitutional documents and the terms of reference of the board committees can also be downloaded from the website of the SSE, HKEX and the Company;
3. The general meeting provide a platform for shareholders to express their views and exchange views. The chairman of the Board attends (and endeavors to ensure that the chairmen of the board committees attend) general meetings to answer shareholders' questions;
4. The Company holds regular results meetings and makes every effort to ensure that the chairman, president, independent directors, chief financial officer and secretary of the Board of Directors and relevant personnel from various departments attend. The Company also endeavours to ensure that the chairman, the president, the independent directors, the chief financial officer, the secretary to the Board of Directors and relevant personnel from various departments attend these meetings to actively interact and communicate with shareholders or potential investors on the Company's operations, financial position and development results.
5. The Company responds to questions raised by shareholders or potential investors in a timely manner through the SSE e-interactive platform, investor hotlines, and dedicated mailboxes.

The Company continues to strengthen investor relations and enhance communication with existing shareholders and potential investors. Suggestions from investors and the public are welcomed. Inquiries to the Board of Directors or the Company may be addressed to the Company Secretary of the Company by post.

The Company reviewed the implementation and effectiveness of the shareholder communication policy for the year ended 31 December 2022 and considered it to be effective.

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VII. THE BOARD OF DIRECTORS

During the reporting period, the Board of Directors of the Company was renewed. The Board of Directors of the Company currently consists of nine directors, including three executive directors, three non-executive directors and three independent non-executive directors. There are five specialised committees under the Board, including the Audit Committee, Nomination Committee, Remuneration Committee, Strategy Committee and Risk Management Committee.

(I) Composition of the Board of Directors

The Company held the first extraordinary general meeting of 2022 on 8 April 2022 for the renewal of the Board of Directors. Prior to 8 April 2022, the third session of the Board of Directors of the Company consisted of six directors: Mr. Li Yihua as a non-executive director, Mr. Liu Jing and Mr. Zhang Jian as executive directors, Mr. Gui Weihua, Mr. Fu Jun and Mr. Cheung Hung Kwong as independent non-executive directors. Mr. Li Yihua is the chairman of the Board of Directors.

On 8 April 2022, the Company convened the first extraordinary general meeting of 2022 to elect directors of the fourth session of the Board of Directors of the Company, of which Mr. Li Yihua, Mr. Liu Jing and Mr. Liu Ruiping were executive directors, Mr. Hu Zhenjie, Mr. Zhou Xinzhe and Mr. Zhang Wenjun were non-executive directors, and Mr. Gui Weihua, Mr. Siu Chi Hung and Mr. Tong Pengfang were independent non-executive directors. On 11 April 2022, the Company held the first meeting of the fourth session of the Board of Directors and elected Mr. Li Yihua as the chairman of the fourth session of the Board of Directors of the Company. The term of office of the fourth session of the Board of Directors of the Company shall be three years from the date of election at the first extraordinary general meeting in 2022. The term of office of the chairman of the fourth session of the Board of Directors of the Company shall commence on the date of election and approval at the first meeting of the fourth session of the Board of Directors and shall expire on the date of expiration of the term of the fourth session of the Board of Directors.

The profile details of the Directors as at the date of this report are set out in “Particulars of Directors, Supervisors and Senior Management” under “Section 4 Corporate Governance (Corporate Governance Report)” of this annual report. There are no financial, business, family or other material or relevant relationship among members of the Board. The structure of the Board is well balanced with each Director possessing sound knowledge, experience and expertise relevant to the business operation and development of the Group. All Directors are deeply aware of their joint and several liabilities to the Shareholders.

The Company has appointed adequate number of duly qualified independent non-executive Directors as per the relative requirements of the SSE Listing Rules and the HKEX Listing Rules. Since the Listing of the Company, the Board has been in compliance with the requirements of the HKEX 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 Rule 3.5.4 of the Guidelines for the Self-Regulatory Supervision of Listed Companies on the Shanghai Stock Exchange No. 1 – Standardized Operation 《上海證券交易所上市公司自律監管指南第1號—規範運作》 and Rules 3.10(1) and (2) of the HKEX Listing Rules. In addition, the Company has received annual confirmations from each independent non-executive Director as to their independence pursuant to Rule 3.13 of the HKEX Listing Rules. The Company, therefore, considered all independent non-executive Directors to be in compliance with the independence requirements as set out in the SSE Listing Rules and the HKEX Listing Rules.

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As of the reporting date, and within the reporting period, the list of members of the Board of Directors is set out in “VIII. Particulars of Directors, Supervisors and Senior Management” under “Section 4 Corporate Governance (Corporate Governance Report)” of this report.

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

(II) Functions and Powers Exercised by the Board of Directors and the Management

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

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

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

(III) 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 not 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 commence from the date when the Company’s general meeting decides to elect him/her as a director of the Company, and expire when the Company convenes the general meeting for the election of directors of the next board of directors, or may be terminated according to the terms of each of the contract.

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

(IV) Corporate Governance Functions of the Board of Directors

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

(V) Board Diversification Policy

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

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

The Nomination Committee will review the board diversity policy and its implementation from time to time. Currently, all of the Company's directors are men. We understand the importance of gender diversity and will therefore strive to increase gender diversity on the Board. In selecting and recommending suitable candidates for Board membership, the Company will seize the opportunity to increase the proportion of female Board members and enhance gender diversity by shareholder expectations and recommended best practices. The Company expects to appoint at least one female director by 31 December 2024. It also plans to promote gender diversity in the recruitment of mid-level and senior staff so that the Company will have more female senior executives and potential successors to the Board.

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VIII. PARTICULARS OF DIRECTORS, SUPERVISORS AND SENIOR MANAGEMENT

(I) Particulars of changes in shareholding and emoluments of existing and resigned directors, supervisors and senior management during the reporting period

✓ Applicable □ Not applicable

Name	Position (Note)	Gender	Age	Starting date of term	Ending date of term	Number of shares held at the beginning of the year	Number of shares held at the end of the year	Change in shares during the year	Reason for change	(Shares)	
										Total emoluments before tax received from the Company within the reporting period (RMB'0,000)	Received compensation from related parties of the Company or not?
Li Yinua	Chairman Executive Director	M	44	2022/2/11 2022/4/8	Re-elected/dismis- sed at Board meeting and at general meeting	0	0	0	N/A	80.47	No
	Non-executive Director			2017/5/23	2022/4/8						
Liu Jing	Executive Director President	M	54	2021/2/25 2021/1/20	Re-elected at general meeting and appointed/dismis- sed at Board meeting	0	0	0	N/A	95.72	No
Liu Ruiping	Executive Director Vice President	M	55	2022/4/8 2018/10/9	Re-elected at general meeting and appointed/dismis- sed at Board meeting	0	0	0	N/A	44.25	No
Hu Zhenjie	Non-executive Director	M	58	2022/4/8	Re-elected/dismis- sed at general meeting	0	0	0	N/A	0	Yes
Zhou Xinzhe	Non-executive Director	M	59	2022/4/8	Re-elected/dismis- sed at general meeting	0	0	0	N/A	0	Yes
Zhang Wenjun	Non-executive Director	M	43	2022/4/8	Re-elected/dismis- sed at general meeting	0	0	0	N/A	0	Yes
Gui Weihua	Independent Non-executive Director	M	72	2018/2/27	Re-elected/dismis- sed at general meeting	0	0	0	N/A	14.29	No
Siu Chi Hung	Independent Non-executive Director	M	52	2022/4/8	Re-elected/dismis- sed at general meeting	0	0	0	N/A	10.71	No
Tong Pengfang	Independent Non-executive Director	M	50	2022/4/8	Re-elected/dismis- sed at general meeting	0	0	0	N/A	10.71	No
Wu Jianqiang	Former Chairman and Executive Director	M	58	2019/4/16	2022/2/11	0	0	0	N/A	7.32	No
Zhang Jian	Former Executive Director Chief Financial Officer Board Secretary	M	51	2017/5/23 2015/5/20 2019/5/31	2022/4/8 Re-elected/dismis- sed at board meeting	0	0	0	N/A	46.13	No
CHEUNG Hung Kwong	Former Independent Non-executive Director	M	55	2017/5/23	2022/4/8	0	0	0	N/A	3.57	No
Fu Jun	Former Independent Non- executive Director	M	51	2017/5/23	2022/4/8	0	0	0	N/A	3.57	No
Fan Guangsheng	Chairman of the Board of Supervisors, Employee Representative Supervisor	M	56	2019/3/26	Elected/dismis- sed by the Board of Supervisors and employee representative meeting	0	0	0	N/A	78.70	No
He Wenjian	Supervisor	M	54	2022/4/8	Re-elected/dismis- sed at general meeting	0	0	0	N/A	0	Yes
Lin Ni	Supervisor	W	49	2022/4/8	Re-elected/dismis- sed at general meeting	0	0	0	N/A	0	Yes
Ou Xiaowu	Former Supervisor	M	58	2017/5/23	2022/4/8	0	0	0	N/A	0	Yes
Li Wei	Former Supervisor	M	52	2017/5/23	2022/4/8	0	0	0	N/A	0	Yes
Wang Yonghong	Vice President	M	59	2018/10/9	Re-elected/dismis- sed at board meeting	0	0	0	N/A	75.11	No
Ma Ning	Vice President	M	59	2021/1/20	Re-elected/dismis- sed at board meeting	0	0	0	N/A	68.05	No
Bi Xiaoge	Vice President	M	55	2018/10/9	Re-elected/dismis- sed at board meeting	0	0	0	N/A	55.84	No
Total	/	/	/	/	/	0	0	0	/	594.44	/

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

Name	Main work experience
LI Yihua	<p>aged 44, is currently chairman, executive Director, Party secretary, member and chairman of Strategy Committee, member and chairman of the Risk Management Committee of the Company. He is an economist with a master's degree in business administration. He worked as the project manager in Yunnan Huawen Hengye Investment Company (雲南華文恒業投資公司) and served as the director of legal affairs and deputy head of investment and development department in Yunnan Sino-platinum Metals Co., Ltd. (雲南貴研鉑業股份有限公司), the deputy director of the corporate development department in Yunnan Tin Group (Holding) Co., Ltd. (雲南錫業集團(控股)有限責任公司), the secretary to board of directors, and the director of the securities department in Yunnan Tin Co., Ltd. (雲南錫業股份有限公司), the vice president of Yunnan Investment Holding Group Co., Ltd. (雲南投資控股集團有限責任公司), the deputy director, director of the legal department, general manager of capital operation department of Chinalco (中鋁集團), general manager, deputy party secretary and director of Chinalco Assets Operation and Management Co., Ltd (中鋁資產經營管理有限公司), chairman of Chinalco Industrial Services Company Limited (中鋁工業服務有限公司), director of China Aluminum Group High-end Manufacturing Co., Ltd. (中國鋁業集團高端製造股份有限公司), director of China Aluminum International Trading Corporation Limited (中鋁國際貿易有限公司) etc.. At present, Mr. LI also acts as director of Aluminum Corporation of China Iron Ore Holdings Limited (中鋁鐵礦控股有限公司).</p>

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

Name	Main work experience
LIU Jing	<p>aged 54, is currently an executive Director, president, deputy Party secretary of the Company and member of Strategy Committee. He is a senior engineer, graduated from the university with a bachelor degree in engineering. He worked as a technician, the deputy director and director of civil construction department, manager of Trinidad and Tobago projects, deputy chief engineer, deputy director of design management department and director of project management department of Shenyang Aluminum & Magnesium Engineering & Research Institute (瀋陽鋁鎂設計研究院); assistant general manager, deputy general manager, executive director, general manager and secretary of party committee of SAMI; deputy leader of the preparation team, chairman, president, secretary of party committee and secretary of the disciplinary committee of Chinalco Overseas Development Co., Ltd. (中鋁海外發展有限公司) etc.. Mr. LIU is also concurrently a director of Aluminum Corporation of China Iron Ore Holdings Limited (中鋁鐵礦控股有限公司), and chairman of CNPT.</p>
LIU Ruiping	<p>aged 55, is currently executive director, vice president, member of Nomination Committee of the Company. He is an senior engineer with a master's degree from Party School of the Central Committee. Mr. LIU served as the chief engineer and deputy director of economic planning division of SAMI; the deputy manager and manager of the Alumina Project of Investment Management Department and manager of the First Division of Chalco (中國鋁業); the senior manager, deputy general manager and general manager of the Investment Management Department of Chalco; and executive director of Shanxi 12th Metallurgical Asset Management Co., Ltd. (山西十二冶資產管理有限公司). Mr. LIU is also chairman and Party secretary of Twelfth Metallurgical Company,</p>

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

Name	Main work experience
HU Zhenjie	<p>aged 58, currently is a non-executive director of the Company and a member of the Risk Management Committee. He is a senior economist and company counsel, and graduated with a PhD degree and a doctorate in law. He was an assistant researcher, department deputy head, head and head of the General Office and deputy chief of the Secretary and Administration Department (Research Office, Human Resources Office) of the Legal Affairs Office of the State Council* (國務院法制辦), a member of the Party Group and the deputy mayor (temporary) of the People's Government of Fuzhou, Fujian Province and the chief legal adviser of Aluminum Corporation of China (中國鋁業公司). Mr. HU is currently the general counsel, chief compliance officer and general manager of the legal compliance department of Chinalco, and currently also a director of Aluminum Corporation of China Overseas Holdings Limited (中鋁海外控股有限公司).</p>
ZHOU Xinzhe	<p>aged 59, currently a non-executive director of the Company, a member of the Remuneration Committee of the board of directors, a senior engineer, a college graduate. He was a technician, engineer, chief engineer, deputy plant operating director, head of Material Equipment Division, deputy chief economist, head of Sales Division, manager of sales company, vice plant manager and secretary of the Party committee of the 107 branch of Fushun Aluminum Factory (撫順鋁廠), the deputy secretary of the Party committee, secretary of the Party committee, chief general manager, the chairman of the labor union, executive Director and supervisor of Fushun Aluminum Co., Ltd. (撫順鋁業有限公司), the chairman, general manager and an executive Director of Fushun Titanium Co., Ltd. (撫順鈦業有限公司), the deputy secretary of the Party committee and the chairman of the labor union of Lanzhou Branch of Aluminum Corporation of China Limited (中國鋁業股份有限公司) and the deputy secretary of the Party committee and the chairman of the labor union of Lanzhou Aluminum Co., Ltd (蘭州鋁業有限公司). Mr. Zhou is currently a full-time director of a subsidiary of Chinalco, and currently also serves as a full-time director of Chalco (Shanghai) Carbon Co., Ltd. and a full-time external director of Ninth Metallurgical Company.</p>

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

Name	Main work experience
ZHANG Wenjun	<p>aged 43, is a Non-executive Director and a member of the Audit Committee of the Board of Directors of the Company. He is a senior accountant, a college graduate with a bachelor in management. He was an accountant of the finance department of China Water & Power Press (中國水利水電出版社), an accountant and the deputy director of the finance department of Peking University Press (北京大學出版社), the business director of budget management division of finance department, a senior business manager of budget assessment division, and the deputy head of accounting and auditing division of Aluminum Corporation of China (中國鋁業公司), the deputy head of accounting and auditing division of finance department, deputy head, head and manager of budget assessment division of Aluminum Corporation of China (中國鋁業集團有限公司) and a supervisor of Chinalco Finance Company Limited (中鋁財務有限責任公司). Mr. Zhang is currently also a full-time external director of Chinalco Finance Company Limited, a full-time external director of Chinalco Capital Holdings Limited (中鋁資本控股有限公司) and a full-time director of Chalco International Trading Group Co., Ltd. (中鋁國際貿易集團有限公司). Mr. Zhang is currently the chief financial officer of Chinalco Aluminum Foil Co., Ltd..</p>
GUI Weihua	<p>aged 72, currently independent Non-executive Director, member and chairman of the Remuneration Committee, member of the Strategy Committee, member of the Nomination Committee of the Board. He holds a master postgraduate qualification. Mr. GUI is the academican of the Chinese Academy of Engineering, an academic leader among the Innovative Research Groups of the National Natural Science Foundation of China (國家自然科學基金創新研究群體), the head of the Nonferrous Metallurgical Automation, the Ministry of Education's Engineering Research Center (有色冶金自動化教育部工程研究中心), the head of the Institute of Information Science and Engineering, Central South University (中南大學信息科學與工程學院控制工程研究所), as well as a professor and instructor of doctorate students of Central South University (中南大學). Mr. GUI currently is an independent non-executive director of China Nerin Engineering Co., Ltd. (中國瑞林工程技術有限公司).</p>

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

Name	Main work experience
Siu Chi Hung	<p>aged 52, currently an independent non-executive director of the Company, member and chairman of the Audit Committee of the Board of Directors. With Chinese (Hong Kong) nationality. He is a college graduate with bachelor degree in business administration, and a certified public accountant in the United States. He currently is a member of the Hong Kong Institute of Certified Public Accountants, a member of the American Institute of Certified Public Accountants and a member of the Hong Kong Independent Non-Executive Director Association. He was a partner of KPMG (Hong Kong), the principal partner of real estate of KPMG (China) and the principal partner of Capital Markets development (Southern China) of KPMG (China), and he was an executive director of LVGEM (China) Real Estate Investment Company Limited and a non-executive director of Roiserv Lifestyle Services Co., Ltd.. Mr. Siu is currently also an independent non-executive Director of China Gas Industry Investment Holdings Co. Ltd., an independent non-executive Director of Dongjiang Environmental Company Limited, an independent non-executive Director of Central China Management Company Limited and an independent non-executive director of MicroPort NeuroTech Limited.</p>
Tong Pengfang	<p>aged 50, is an independent non-executive director of the Company, a member of the Risk Management Committee, member of the Audit Committee, member of the Remuneration Committee, member and chairman of the Nomination Committee of the Board of Directors. He holds a master's degree, a master's degree in law, a lawyer and a certified public accountant. He was an editor of China Financial & Economic Publishing House (中國財政經濟出版社), an independent director of Yunnan Tin Co., Ltd. (雲南錫業股份有限公司), an independent director of Guizhou Xinbang Pharmaceutical Co., Ltd. (貴州信邦製藥股份有限公司) and an independent director of Ningxia Zhongyin Cashmere Co., Ltd. (寧夏中銀絨業股份有限公司). Mr. Tong is currently a senior partner and director of Beijing De Run Law Firm. Mr. Tong is currently also an external director of Yunnan Tin Group Company Limited (雲南錫業集團(控股)有限責任公司), an external director of Shanghai Qinsen Landscape Co., Ltd. (上海秦森園林股份有限公司) and an independent director of China Rare Earth Holdings Limited (中國稀有稀土股份有限公司).</p>

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Name	Main work experience
ZHANG Jian	<p>aged 51, is currently the chief financial officer, the secretary to the Board and the company secretary of the Company. He is an accountant graduating with a master's degree in business administration. Mr. ZHANG served as the deputy section head and head of the cost estimation section of the finance department of Henan Branch of Chalco (中國鋁業河南分公司); the business manager of the general office, deputy manager of the accounting office and deputy manager of the budget analysis office in the finance department of Chalco (中國鋁業); the deputy manager of the finance department (taking charge of the work) of Zhongzhou Branch of Chalco (中國鋁業中州分公司); the deputy manager of the accounting office (taking charge of the work) and the manager of the general management office of the finance department of Chalco (中國鋁業); the chief financial officer of Chalco Hong Kong Limited (中國鋁業香港有限公司), chief legal adviser of the Company, director of Chinalco Finance Co., Ltd. (中鋁財務有限責任公司) etc.. Mr. ZHANG is also executive director of Chinalco International Investment Management (Shanghai) Co., Ltd. (中鋁國際投資管理(上海)有限公司).</p>
FAN Guangsheng	<p>aged 56, is currently chairman of the Board of Supervisors and employee representative Supervisor of the Company, deputy Party secretary, secretary to disciplinary inspection commission, and chairman of labour union. He is a senior engineer with a master's degree in business administration. Mr. FAN served as technician of the design management office, deputy secretary of the Communist Youth League, and deputy director of the Party Committee Office in Qinghai Aluminum Factory (青海鋁廠); director of the Party Committee Office, assistant to general manager, director of the manager office, deputy Party secretary, secretary of disciplinary inspection commission, and chairman of labor union of Qinghai Aluminum Co., Ltd. (青海鋁業有限責任公司); deputy Party secretary, secretary to discipline inspection commission, and chairman of labour union of the Chalco Qinghai Branch (中國鋁業青海分公司); Party secretary, secretary to disciplinary inspection commission, and chairman of labour union of the Northwest Aluminum Processing Branch of Chalco (中國鋁業西北鋁加工分公司); Party secretary, secretary to disciplinary inspection commission, and chairman of labour union of Northwest Aluminum Processing Factory (西北鋁加工廠); Party secretary, chairman of the labour union, general manager, and director of Shanxi Huaxing Aluminum Co., Ltd. (山西華興鋁業有限公司); and member of Shanxi Work Promotion Office of Chalco (中鋁山西工作推進辦公室)., etc.</p>

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

Name	Main work experience
HE Wenjian	<p>aged 54, is currently a supervisor of the Company. He is a senior engineer, a college graduate and a bachelor in Engineering. He was an aluminum electrolysis worker of the 1st electrolysis factory, a technician of the technology division, a deputy director officer of corporate management team of the corporate management division, a deputy section chief of secretarial division of the factory management office, the head of research division, the deputy head of promotional department of the Party committee, the deputy secretary to the Party general branch of material management office of Qinghai Aluminum Plant (青海鋁廠), the deputy head of material management office of the Marketing Center of Qinghai Aluminum Co., Ltd. (青海鋁業有限責任公司), the deputy manager and manager of planning management department of Qinghai branch of Chalco (中國鋁業青海分公司), an assistant to the general manager and the head of plant of Aluminum Carbon Plant, of Qinghai branch of Chalco, a senior manager, deputy manager of corporate management department and a manager of electrolytic aluminum of Aluminum Corporation of China Limited (中國鋁業股份有限公司), a director of Shanxi Huaze Aluminum & Power Co., Ltd. (山西華澤鋁電有限公司), a director of Zunyi Aluminum Co., Ltd. (遵義鋁業股份有限公司), the deputy director of corporate management department of Aluminum Corporation of China (中國鋁業公司), the general manager, deputy secretary of the Party committee and secretary of the Party committee of Liancheng branch of Aluminum Corporation of China Limited (中國鋁業股份有限公司), the chairman of Lanzhou Liancheng Aluminum Co., Ltd. (蘭州連城鋁業有限責任公司) and the person-in-charge of operation optimization department (reform office) of Chinalco. Mr. HE is currently the general manager of operation optimization department (reform office) of Chinalco. He is also a part-time external director of Chinalco Asset Operation Management Co., Ltd. (中鋁資產經營管理有限公司), a director of Gansu Hualu Aluminum Co., Ltd. (甘肅華鷺鋁業有限公司) and a director of China Rare Earth Group Co., Ltd. (中國稀土集團有限公司).</p>

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Name	Main work experience
LIN Ni	<p>aged 49, is currently a supervisor of the Company. Ms. Lin graduated from Shandong Economics University with a bachelor degree in economics majoring in international accounting, a certified public accountant, a registered tax advisor, a registered asset appraiser and a senior auditor. Ms. Lin has extensive experience in the fields of auditing and accounting. She has successively served as the head of the 2nd division and the 1st division of the audit department and the deputy head of the audit department of Chinalco and the deputy general manager (in charge) of the audit department of Chinalco. Ms. Lin is currently the general manager of the audit department of Chinalco. She is also a supervisor of Chalco (中國鋁業股份有限公司), a supervisor of Chinalco Assets Operation and Management Co., Ltd. (中鋁資產經營管理有限公司) and a supervisor of Chinalco Materials Application Research Institute Co., Ltd. (中鋁材料應用研究院有限公司).</p>
WANG Yonghong	<p>aged 59, is currently the vice president and the chief safety officer of the Company. He is a senior engineer with a master's degree in engineering. Mr. WANG served as a technician in Shanxi Wenxi Fertilizer Factory (山西聞喜化肥廠); the officer of the engineering department and Alumina Engineering Supervising Unit of Shanxi Aluminum Plant (山西鋁廠); the deputy head of the engineering division of Alumina Engineering Supervising Unit (氧化鋁工程指揮部) of Shanxi Aluminum Plant (山西鋁廠); the deputy head of the general deployment unit, the head of the mechanical engineering division, and the head of the third Alumina sub-branch of Shanxi Aluminum Plant (山西鋁廠); the deputy general manager, the deputy general manager (taking charge of the work), and general manager of Zhongzhou Branch of Chalco (中國鋁業中州分公司); a member of the tenth session of the Jiaozuo Committee of Communist Party of China; the executive director, general manager, Party secretary, chairman of the labour union of Chinalco Shenyang Non-Ferrous Metals Processing Co., Ltd. (中鋁瀋陽有色金屬加工有限公司); the assistant to president of China Rare Earth Holdings Limited (中國稀有稀土股份有限公司); the ombudsman of aluminum processing division of Chinalco (中鋁集團); and the deputy head of Work Promotion Office of Chinalco Henan; director of Chalco Tendering Company Limited (中鋁招標有限公司) etc.. Mr. WANG is also non-independent director of Zhuzhou Tianqiao Crane Co., Ltd. (株洲天橋起重機股份有限公司).</p>

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

Name	Main work experience
MA Ning	aged 59, is currently the vice president of the Company. He is a professorate senior engineer, graduated from university with a bachelor degree in engineering. He served as an assistant engineer, engineer, team leader, operation manager and deputy director of planning and operation department, deputy director of market development department, director of operation department, director of domestic business department, and the vice president of Shenyang Aluminum & Magnesium Engineering & Research Institute (瀋陽鋁鎂設計研究院); deputy general manager of Shenyang Branch of the Company; deputy general manager of the Company; vice president of the Company; executive director of Beijing Zichen Investment & Development Co., Ltd. (北京紫宸投資發展有限公司); secretary of the party committee and executive director of Sixth Metallurgical Company; general manager of SAMI etc. Mr. MA is also concurrently the party secretary, executive director and general manager of SAMI, and a party secretary and executive director of GAMI; executive director of Guiyang Lvmei Asset Management Co., Ltd. (貴陽鋁鎂資產管理有限公司).
BI Xiaoge	aged 55, is currently the vice president of the Company. He is a senior engineer and graduated from Party School of the Central Committee. He served in various positions in Shandong Aluminum Company (山東鋁業公司), including a technician in quality management department of the Alumina Plant; the deputy director of Alumina Plant Workshop No. 62, the deputy head of quality management department, and the head of Workshop No. 2. He served as the director of quality management department of Shandong Aluminum Holdings Limited (山東鋁業股份有限公司), the deputy head of quality management department of Shandong Aluminum Company (山東鋁業公司), the deputy manager of the production operation department (quality management department), the deputy manager (taking charge of the work) and general manager of planning operation department of Shandong Branch of Chalco (中國鋁業山東分公司), the manager of the investment management department of Chalco Shandong Co., Ltd. (中鋁山東有限公司), a member of the enterprise transformation and upgrading workgroup of Chinalco Zhengzhou (中鋁鄭州); the deputy general manager of Henan Branch of Chalco (中國鋁業河南分公司), a standing member of the Party Committee of China Great Wall Aluminum Corporation Limited (中國長城鋁業有限公司); the deputy general manager of Chinalco Mining Corporation Limited (中鋁礦業有限公司), and executive director of China Aluminum International Yunnan Aluminum Application Engineering Co., Ltd. (中鋁國際雲南鋁應用工程有限公司) (preceded by Beijing Zichen Investment & Development Co., Ltd. (北京紫宸投資發展有限公司)), etc.. Mr. BI is also vice-chairman of CNPT; executive director of China Aluminum Technology; director of Chinalco Tendering Co., Ltd.

Other information

Applicable Not applicable

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

(II) Positions of existing and resigned directors, supervisors and senior management during the reporting period

1. Positions held at the Shareholder

Applicable Not applicable

Position holder's name	Shareholder's name	Position at the Shareholder	Term starting date	Term ending date
Hu Zhenjie	Chinalco	Chief legal adviser	2017.11	-
		Chief compliance officer	2022.11	-
		General manager of legal compliance department	2020.10	-
Zhou Xinzhe	Chinalco	Full-time director of the affiliated company	2021.09	-
Zhang Wenjun	Chinalco	Full-time director of the affiliated company	2021.12	2022.04
		Manager of the budget management division of the financial property rights department	2020.12	2022.05
Wu Jianqiang	Chinalco	Assistant to general manager	2020.03	-
		General manager of strategic investment department (tendering/bidding management supervision office)	2022.01	-
He Wenjian	Chinalco	General manager of operation optimization department (reform office)	2021.07	-
Lin Ni	Chinalco	General manager of the audit department	2022.01	-
Li Wei	Chinalco	Deputy leader of disciplinary inspection team	2019.04	-

Explanation of positions at the shareholder None

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

2. Position held at other entities

Applicable Not applicable

Position holder's name	Other entity's name	Position at other entity	Term starting date	Term ending date
Li Yihua	Aluminum Corporation of China Iron Ore Holdings Limited	Director	2018.10	–
	Chinalco Assets Operation and Management Co., Ltd	General manager, deputy Party secretary	2020.10	2022.01
	Chinalco Assets Operation and Management Co., Ltd	Director	2021.12	2022.01
	Chinalco Industrial Service Co., Ltd.	Chairman	2021.09	2022.01
Liu Jing	Aluminum Corporation of China Iron Ore Holdings Limited	Director	2018.10	–
	CNPT	Chairman	2021.08	–
Liu Ruijing	Twelfth Metallurgical Company	Chairman	2021.12	–
	Twelfth Metallurgical Company	Party secretary	2018.05	–
	Shanxi 12th Metallurgical Asset Management Co., Ltd.	Executive director	2019.01	2022.09
Hu Zhenjie	Aluminum Corporation of China Overseas Holdings Limited	Director	2021.08	–
Zhou Xinzhe	Ninth Metallurgical Company	Full-time external director	2021.12	–
	Chalco (Shanghai) Carbon Co., Ltd.	Full-time director	2021.12	–
Zhang Wenjun	Chinalco Capital Holdings Limited	Full-time external director	2021.12	2022.04
	Chinalco Finance Company Limited	Full-time external director	2021.12	2022.04
	China Aluminum International Trading Group Co., Ltd.	Full-time director	2021.12	2022.05
	Chinalco Aluminum Foil Co., Ltd.	Chief Financial Officer	2022.04	–

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Position holder's name	Other entity's name	Position at other entity	Term starting date	Term ending date
Gui Weihua	China Nerin Engineering Co., Ltd. (中國瑞林工程技術股份有限公司)	Independent non-executive director	2018.05	–
SIU Chi Hung	Roiserv Lifestyle Services Co., Ltd. (榮萬家生活服務股份有限公司)	Independent non-executive director	2021.01	2022.07
	China Gas Industry Investment Holdings Co., Ltd.	Independent non-executive director	2020.12	–
	Dongjiang Environmental Company Limited	Independent non-executive director	2020.12	–
	Central China Management Company Limited	Independent non-executive director	2021.05	–
	MicroPort NeuroTech Limited	Independent non-executive director	2022.07	–
Tong Pengfang	China Rare Earth Holdings Limited	Independent director	2019.04	–
	Yunnan Tin Group (Holding) Co., Ltd. (雲南錫業集團(控股)有限責任公司)	External director	2020.03	–
	Shanghai Taisen Landscape Co., Ltd. (上海泰森園林股份有限公司)	External director	2020.07	–
Wu Jianqiang	Chinalco Tendering Co., Ltd. (中鋁招標有限公司)	Chairman	2022.01	–
Zhang Jian	Chinalco International Investment Management (Shanghai) Co., Ltd. (中鋁國際投資管理(上海)有限公司)	Executive director	2021.05	–
CHEUNG Hung Kwong	Ganglong China Property Group Limited	Vice president	2020.05	–
He Wenjian	Chinalco Assets Operation and Management Co., Ltd.	Part-time external director	2021.12	–
	Gansu Hualu Aluminum Co., Ltd.	Director	2014.05	–

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Position holder's name	Other entity's name	Position at other entity	Term starting date	Term ending date
Lin Ni	Aluminum Corporation of China Limited (中國鋁業股份有限公司)	Supervisor	2021.06	-
	Chinalco Assets Operation and Management Co., Ltd.	Supervisor	2017.11	-
	Chinalco Material Application Research Institute Co., Ltd.	Supervisor	2017.01	-
Ou Xiaowu	Qinghai Yellow River Hydropower Renewable Aluminum Co., Ltd. Chalco Energy Co., Ltd. (中鋁能源有限公司)	Chairman of the Board of Supervisors	2012.10	-
	Aluminum Corporation of China Limited (中國鋁業股份有限公司)	Deputy Party secretary, secretary of the Disciplinary Committee	2020.10	-
	Aluminum Corporation of China Limited (中國鋁業股份有限公司)	Executive director	2021.06	-
Wang Yonghong	Zhuzhou Tianqiao Crane Co., Ltd.	Non-independent director	2019.11	-
Ma Ning	SAMI	Executive director, Party secretary	2019.02	-
	GAMI	Executive director, Party secretary	2021.02	-
	Guiyang Lvmei Asset Management Co., Ltd.	Executive director	2021.12	-
Bi Xiaoge	China Aluminum International Technology Development Co., Ltd. (中鋁國際技術發展有限公司)	Executive director	2018.10	2022.09
	Chinalco Tendering Co., Ltd.	Director	2021.08	-
	China Nonferrous Metals Processing Technology Co., Ltd. (中色科技股份有限公司)	Vice Chairman	2021.05	-

Explanation of positions at other entities None

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

(III) Emoluments of directors, supervisors and senior management

Applicable Not applicable

Decision-making procedures for remuneration of directors, supervisors and senior management

Based on the market level and the compensation strategy of the Company, the Company's human resources department puts forward the compensation package for directors, supervisors and senior management, which is subject to the approval of Remuneration Committee and then to the consideration of the Board. Specifically, the remuneration of senior management is determined by the Board, and the remuneration of Directors and supervisors is subject to the approval of the Board and then to the general meeting for consideration and approval.

Basis for determining the remuneration of directors, supervisors and senior management

Based on the development strategy, corporate culture and remuneration strategy, the Company determines the remuneration of Directors, supervisors and senior management by reference to the remuneration level of identical positions at comparable companies (scale, industry, nature, etc.) and taking into account the Company's annual operating performance, the performance of Directors and supervisors and the performance assessment results of senior management.

Actual payment of remuneration to directors, supervisors and senior management

The Company pays remuneration to directors, supervisors and senior management in full and on time every month based on the remuneration standards for Directors, supervisors and senior management determined by the general meeting and the Board.

Total remuneration actually received by all directors, supervisors and senior management at the end of the reporting period

RMB5,944,400

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

(IV) Changes in directors, supervisors and senior management of the Company

Applicable Not applicable

Name	Position	Change	Reason for change
Wu Jianqiang	Chairman of the Board, Executive Director	Resignation	On 11 February 2022, Mr. Wu Jianqiang submitted his resignation to the Board of Directors to resign from all positions as Chairman and Director of the Company due to the transfer of work.
Li Yihua	Chairman of the Board	Election	1. On 11 February 2022, the Company held the 44th meeting of the Third Session of the Board of Directors. Mr. Li Yihua was elected as the chairman of the third session of the Board of Directors of the Company. 2. On 11 April 2022, the Company held the first meeting of the Fourth Session of the Board of Directors and elected Mr. Li Yihua as the Chairman of the Fourth Session of the Board of Directors.
	Non-executive Director	Resignation	Expiration of the third term of the Board of Directors
	Executive Director	Election	On 8 April 2022, the first extraordinary general meeting of the Company in 2022 elected six non-independent directors (three executive directors and three non-executive directors) and three independent directors on the fourth session of the Board of Directors of the Company.
Liu Jing	Executive Director	Election	
Liu Ruiping	Executive Director	Election	
Hu Zhenjie	Non-executive Director	Election	
Zhou Xinzhe	Non-executive Director	Election	
Zhang Wenjun	Non-executive Director	Election	
Gui Weihua	Independent Non-executive Director	Election	
SIU Chi Hung	Independent Non-executive Director	Election	
Tong Pengfang	Independent Non-executive Director	Election	
Zhang Jian	Executive Director	Resignation	
CHEUNG Hung Kwong	Independent Non-executive Director	Resignation	Expiration of the third term of the Board of Directors
Fu Jun	Independent Non-executive Director	Resignation	Expiration of the third term of the Board of Directors

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Name	Position	Change	Reason for change
He Wenjian	Shareholder Representative Supervisor	Election	On 8 April 2022, the first extraordinary general meeting of the Company in 2022 elected 2 shareholder representative supervisors for the fourth session of the Board of Supervisors of the Company
Lin Ni	Shareholder Representative Supervisor	Election	
Ou Xiaowu	Shareholder Representative Supervisor	Resignation	Expiration of the third term of the Board of Supervisors
Li Wei	Shareholder Representative Supervisor	Resignation	Expiration of the third term of the Board of Supervisors

Notes: in addition to the above changes, the terms of the third session of the Board of Directors and the Board of Supervisors of the Company have expired, and the general election was completed in April 2022, details are as follows:

- On 8 April 2022, the first extraordinary general meeting of the Company in 2022 elected 6 non-independent directors (3 executive directors and 3 non-executive directors) and 3 independent directors of the fourth session of the Board of Directors of the Company, including Mr. Li Yihua, Mr. Liu Jing and Mr. Liu Ruiping as executive directors, Mr. Hu Zhenjie, Mr. Zhou Xinzhe and Mr. Zhang Wenjun as non-executive directors, Mr. Gui Weihua, Mr. SIU Chi Hung and Mr. Tong Pengfang as independent non-executive directors; and elected 2 shareholder representative supervisors, namely Mr. He Wenjian and Ms. Lin Ni. On 11 April 2022, one supervisor, Mr. Fan Guangsheng was elected as the employee representative supervisor of the fourth session of the Board of Supervisors at the second meeting of the third session of the employee representative meeting of the Company.
- On 11 April 2022, the first meeting of the fourth session of the Board of Directors of the Company elected Mr. Li Yihua as the Chairman of the Company, continued to appoint Mr. Liu Jing as the President of the Company, Mr. Wang Yonghong, Mr. Liu Ruiping, Mr. Ma Ning and Mr. Bi XiaoGe as the Vice Presidents of the Company, and Mr. Zhang Jian as the Chief Financial Officer and Secretary of the Board of Directors of the Company.
- On 11 April 2022, Mr. Fan Guangsheng was elected as the Chairman of the Board of Supervisors of the Company at the first meeting of the fourth session of the Board of Supervisors of the Company.

(V) Details on punishments imposed by securities regulatory authorities in last 3 years

Applicable Not applicable

(VI) Others

Applicable Not applicable

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IX. MEETINGS OF THE BOARD OF DIRECTORS HELD WITHIN THE REPORTING PERIOD

Session of meeting	Convening date	Resolutions
The 43rd meeting of the 3rd Session of the Board of Directors of China Aluminum International Engineering Corporation Limited	28 January 2022	The meeting reviewed and passed 3 resolutions including the Resolution to Consider the “14th Five-Year” Development Plan of the Company (《關於審議<公司「十四五」發展規劃>的議案》), as detailed in the relevant announcement of the Company.
The 44th meeting of the 3rd Session of the Board of Directors of China Aluminum International Engineering Corporation Limited	11 February 2022	The meeting reviewed and passed 1 resolution: the Resolution on the Election of the Chairman of the Third Session of the Board of Directors, Members and Chairman of Special Committees of the Company (《關於選舉公司第三屆董事會董事長、專門委員會委員及主席的議案》), as detailed in the relevant announcement of the Company.
The 45th meeting of the 3rd Session of the Board of Directors of China Aluminum International Engineering Corporation Limited	7 March 2022	The meeting reviewed and passed 3 resolutions including the Resolution on the Nomination of Candidates for Non-Independent Directors for the Fourth Session of the Board of Directors of the Company (《關於提名公司第四屆董事會非獨立董事候選人的議案》), as detailed in the relevant announcement of the Company.
The 46th meeting of the 3rd Session of the Board of Directors of China Aluminum International Engineering Corporation Limited	28 March 2022	The meeting reviewed and passed 22 resolutions including the Resolution to Consider the 2021 Annual Results Announcement and Annual Report of the Company (《關於審議公司2021年度業績公告和年度報告的議案》), as detailed in the relevant announcement of the Company.
The 1st meeting of the 4th Session of the Board of Directors of China Aluminum International Engineering Corporation Limited	11 April 2022	The meeting reviewed and passed 5 resolutions including the Resolution on the Election of the Chairman of the Fourth Session of the Board of Directors of the Company (《關於選舉公司第四屆董事會董事長的議案》), as detailed in the relevant announcement of the Company.
The 2nd meeting of the 4th Session of the Board of Directors of China Aluminum International Engineering Corporation Limited	29 April 2022	The meeting reviewed and passed 5 resolutions including the Resolution to Consider the 1Q2022 Report of the Company (《關於審議公司2022年第一季度報告的議案》), as detailed in the relevant announcement of the Company.

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Session of meeting	Convening date	Resolutions
The 3rd meeting of the 4th Session of the Board of Directors of China Aluminum International Engineering Corporation Limited	2 June 2022	The meeting reviewed and passed 4 resolutions including the Resolution to Consider the Capital Expenditure Plan for 2022 of the Company (《關於審議公司2022年度資本性支出計劃的議案》), as detailed in the relevant announcement of the Company.
The 4th meeting of the 4th Session of the Board of Directors of China Aluminum International Engineering Corporation Limited	8 August 2022	The meeting reviewed and passed 4 resolutions including the Resolution to Consider the 1H2022 Report of the Company (《關於審議公司2022年半年度報告的議案》), as detailed in the relevant announcement of the Company.
The 5th meeting of the 4th Session of the Board of Directors of China Aluminum International Engineering Corporation Limited	24 September 2022	The meeting reviewed and passed 28 resolutions including the Resolution Regarding the Company's Compliance with the Conditions for Disposal of Major Assets (《關於公司符合重大資產出售條件的議案》), as detailed in the relevant announcement of the Company.
The 6th meeting of the 4th Session of the Board of Directors of China Aluminum International Engineering Corporation Limited	26 October 2022	The meeting reviewed and passed 4 resolutions including the Resolution to Consider the 3Q2022 Report of the Company (《關於審議公司2022年第三季度報告的議案》), as detailed in the relevant announcement of the Company.
The 7th meeting of the 4th Session of the Board of Directors of China Aluminum International Engineering Corporation Limited	25 November 2022	The meeting reviewed and passed 8 resolutions including the Resolution to Consider the Establishment of Shandong Branch of the Company (《關於審議公司設立山東分公司的議案》), as detailed in the relevant announcement of the Company.
The 8th meeting of the 4th Session of the Board of Directors of China Aluminum International Engineering Corporation Limited	28 December 2022	The meeting reviewed and passed 9 resolutions including the Resolution on the Renewal of Engineering Services Master Agreement and the Adjustment of the Caps of Relevant Related (Connected) Transactions (《關於重新簽署〈工程服務總協議〉並調整相關關聯(連)交易上限的議案》), as detailed in the relevant announcement of the Company.

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X. DUTY PERFORMANCE OF DIRECTORS

(I) Directors attendance at the Board meeting and the general meeting

Director's name	Independent director or not	Number of attendances at the Board meeting of the year	Attendance at the general meeting					Absent for two consecutive times or not	Attendance at the Board meeting
			Number of attendances in person	Number of attendances online	Number of attendances by proxy	Number of absences	Number of attendances at the general meeting		
WU Jianqiang ^{Note 1}	No	1	1	0	0	0	No	Not applicable	
ZHANG Jian ^{Note 2}	No	4	4	0	0	0	No	1	
CHEUNG Hung Kwong ^{Note 2}	Yes	4	4	0	0	0	No	1	
FU Jun ^{Note 2}	Yes	4	4	0	0	0	No	1	
LI Yihua	No	12	12	0	0	0	No	3	
LIU Jing	No	12	11	0	1	0	No	3	
LIU Ruiping	No	8	8	0	0	0	No	2	
HU Zhenjie	No	8	7	0	1	0	No	2	
ZHOU Xinzhe	No	8	8	0	0	0	No	2	
ZHANG Wenjun	No	8	6	0	2	0	Yes	2	
GUI Weihua	Yes	12	11	0	1	0	No	2	
SIU Chi Hung	Yes	8	8	0	0	0	No	1	
TONG Pengfang	Yes	8	7	0	1	0	No	2	

Note 1: Mr. WU Jianqiang has resigned as chairman, director and other positions of the Company due to work transfer. The resignation took effect since 11 February 2022. After resignation, Mr. WU would no longer hold any position in the Company.

Note 2: On 8 April 2022, the Company convened the 2022 first extraordinary general meeting, at which the re-election of the Board of Directors was completed and Mr. ZHANG Jian, Mr. CHEUNG Hung Kwong and Mr. FU Jun ceased to be directors of the Company.

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Explanation of absence from the Board meeting for two consecutive times

Applicable Not applicable

On 24 September 2022, the Company convened the 5th meeting of the 4th Session of the Board of Directors. Mr. ZHANG Wenjun, a non-executive director, was unable to attend the meeting in person due to other official duties and, after reviewing the information on the resolution of the meeting, appointed Mr. ZHOU Xinzhe, a non-executive director, in writing to attend and vote on his behalf.

On 26 October 2022, the Company convened the 6th meeting of the 4th Session of the Board of Directors. Mr. ZHANG Wenjun, a non-executive director, was unable to attend the meeting in person due to other official duties and, after reviewing the information on the resolution of the meeting, appointed Mr. ZHOU Xinzhe, a non-executive director, in writing to attend and vote on his behalf.

Number of Board meetings held during the year	12
Including: number of meetings offline	10
Number of meetings online	2
Number of meetings online + offline	10

(II) Directors' objections to relevant matters

Applicable Not applicable

(III) Other information

Applicable Not applicable

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Directors' training

Within the reporting period, all directors participated in continuous professional development to develop and refresh their knowledge and expertise so as to ensure their continuous contributions to the Board when informed and necessary. The details of training for all directors as at the end of the reporting period are as follows:

Name	Position	Training content
LI Yihua	Executive director	Compliance with listing rules, corporate governance, etc.
LIU Jing	Executive director	Compliance with listing rules, corporate governance, etc.
LIU Ruiping	Executive director	The 2022 Third Initial Training Session for Directors, Supervisors and Senior Management of Listed Companies organised by the Shanghai Stock Exchange
HU Zhenjie	Non-executive director	The 2022 Third Initial Training Session for Directors, Supervisors and Senior Management of Listed Companies organised by the Shanghai Stock Exchange
ZHOU Xinzhe	Non-executive director	The 2022 Third Initial Training Session for Directors, Supervisors and Senior Management of Listed Companies organised by the Shanghai Stock Exchange
ZHANG Wenjun	Non-executive director	The 2022 Third Initial Training Session for Directors, Supervisors and Senior Management of Listed Companies organised by the Shanghai Stock Exchange
GUI Weihua	Independent non-executive director	Compliance with listing rules, corporate governance, etc.
SIU Chi Hung	Independent non-executive director	Compliance with listing rules, corporate governance, etc.
TONG Pengfang	Independent non-executive director	Compliance with listing rules, corporate governance, etc.

XI. CHAIRMAN AND PRESIDENT

The roles of chairman and president (i.e. general manager under relevant provisions of the SSE Listing Rules and chief executive officer under relevant provisions of the HKEX Listing Rules) of the Company are performed by two different persons respectively to ensure their independence and accountability and the balance of power and authorization. The Articles of Association defines the division of responsibilities between the chairman and the president.

As at the reporting date of this report, Mr. LI Yihua is the chairman of the Board of Directors, Mr. LIU Jing is the president of the Company.

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XII. SPECIAL COMMITTEES UNDER THE BOARD OF DIRECTORS

✓ Applicable Not applicable

As at the date of disclosure, the status of the special committees under the Board of Directors of the Company is as follows:

(I) Members of special committees under the Board of Directors

Committee	Members
Audit Committee	Chairman of the committee: SIU Chi Hung (independent non-executive director) Members: ZHANG Wenjun (non-executive director), TONG Pengfang (independent non-executive director)
Nomination Committee	Chairman of the committee: TONG Pengfang (independent non-executive director) Members: LIU Ruiping (executive director), GUI Weihua (independent non-executive director)
Remuneration Committee	Chairman of the committee: GUI Weihua (independent non-executive director) Members: ZHOU Xinzhe (non-executive director), TONG Pengfang (independent non-executive director)
Strategy Committee	Chairman of the committee: LI Yihua (executive director) Members: ZHOU Xinzhe (non-executive director), GUI Weihua (independent non-executive director)
Risk Management Committee	Chairman of the committee: HU Zhenjie (non-executive director) Members: ZHOU Xinzhe (non-executive director), TONG Pengfang (independent non-executive director)

(II) The Audit Committee held 6 meetings within the reporting period

The main duties of the Audit Committee include: to review the Company's internal control system and direct the construction of internal corporate control mechanism; to make recommendations to the Board of Directors in respect of engaging or replacement of intermediaries such as accounting firms as well as their remuneration; to review the Company's financial reports, consider the Company's accounting policies and their changes, and make recommendations to the Board of Directors; to review the Company's financial information and its disclosure; to make recommendations to the Board of Directors 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; and to maintain good communications with the Board of Supervisors as well as internal and external audit firms. The Audit Committee exercises its authority pursuant to the requirements under Rule D.3.3 of the Corporate Governance Code.

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Convening date	Meeting content	Key opinions and suggestions	Other compliance
24 March 2022	The meeting considered and discussed 10 resolutions: the Resolution to Consider the 2021 Annual Results Announcement and Annual Report of the Company (《關於審議公司2021年度業績公告和年度報告的議案》), the Resolution to Consider the 2021 Annual Final Accounting Report of the Company (《關於審議公司2021年度財務決算報告的議案》), the Resolution to Consider 2022 Annual Operational Plan Report of the Company (《關於審議公司2022年度經營計劃報告的議案》), the Resolution to Consider 2021 Annual Profit Distribution Plan of the Company (《關於審議公司2021年度利潤分配方案的議案》), the Resolution to Consider the 2021 Annual Impairment Provision of the Company (《關於審議公司2021年度計提資產減值準備的議案》), the Resolution to Consider Changing the Accounting Policies for Government Grants of the Company (《關於審議變更政府補助會計政策的議案》), the Resolution to Consider the 2021 Annual Internal Control Evaluation Report of the Company (《關於審議公司2021年度內部控制評價報告的議案》), the Resolution to Consider the 2021 Annual Internal Control Auditor's Report of the Company (《關於審議公司2021年度內部控制審計報告的議案》), the Resolution to Consider the 2021 Annual Financial Statements Auditing and Other Costs of the Company (《關於審議公司2021年年度財務報表審計等費用的議案》), and the Resolution to Consider the Re-appointment of Auditor to the Company (《關於審議公司續聘審計師的議案》)	No objection, unanimously passed.	–
27 April 2022	The meeting considered and discussed 1 resolution: the Resolution to Consider the 1Q2022 Report of the Company (《關於審議公司2022年第一季度報告的議案》)	No objection, unanimously passed.	–
5 August 2022	The meeting considered and discussed 1 resolution: the Resolution to Consider the 1H2022 Report of the Company (《關於審議公司2022年半年度報告的議案》)	No objection, unanimously passed.	–
15 September 2022	The meeting considered and discussed 1 resolution: the Resolution to Consider the 2022 Interim Report Review Costs of the Company (《關於審議公司2022年中報審閱費用的議案》)	No objection, unanimously passed.	–
25 October 2022	The meeting considered and discussed 1 resolution: the Resolution to Consider the 3Q2022 Report (《關於審議公司2022年第三季度報告的議案》)	No objection, unanimously passed.	–
24 November 2022	The meeting considered and discussed 5 resolutions: the Resolution on the Renewal of Engineering Services Master Agreement and the Adjustment of the Caps of Relevant Related (Connected) Transactions (《關於重新簽署<工程服務總協議>並調整相關關聯(連)交易上限的議案》), the Resolution on the Renewal of Commodities Sales and Purchases Master Agreement and the Adjustment of the Caps of Relevant Related (Connected) Transactions (《關於重新簽署<商品買賣總協議>並調整相關關聯(連)交易上限的議案》), the Resolution on the Renewal of General Services Master Agreement and the Adjustment of the Caps of Relevant Related (Connected) Transactions (《關於重新簽署<綜合服務總協議>並調整相關關聯(連)交易上限的議案》), the Resolution to Consider the Acquisition of 67% equity interest in Kunming Nonferrous Metallurgical Design and Research Institute Corporation (《關於審議收購昆明有色冶金設計研究院股份公司67%股權的議案》), and the Resolution to Amend the Rules of Procedure for the Audit Committee of the Board of Directors of China Aluminum International Engineering Corporation Limited (《關於修訂<中鋁國際工程股份有限公司董事會審核委員會議事規則>的議案》)	No objection, unanimously passed.	–

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Name	Position	Number of meetings attended/held	Attendance rate
CHEUNG Hung Kwong	Member and chairman of the Audit Committee	1/1	100%
FU Jun	Member of the Audit Committee	1/1	100%
GUI Weihua	Member of the Audit Committee	1/1	100%
SIU Chi Hung	Member and chairman of the Audit Committee	5/5	100%
ZHANG Wenjun	Member of the Audit Committee	5/5	100%
TONG Pengfang	Member of the Audit Committee	5/5	100%

Note 1: On 8 April 2022, the Company convened the 2022 first extraordinary general meeting and completed the re-election of the Board of Directors of the Company. Mr. CHEUNG Hung Kwong, a former independent non-executive director, ceased to be a director, a member and the chairman of the Audit Committee of the Board of the Company, and Mr. FU Jun, a former independent non-executive director, ceased to be a director, a member of the Audit Committee of the Board, a member of the Remuneration Committee of the Board, a member of the Risk Management Committee of the Board, a member and chairman of the Nomination Committee of the Board of the Company.

Note 2: On 11 April 2022, the Company convened the 1st meeting of the 4th Session of the Board of Directors and elected Mr. SIU Chi Hung, an independent non-executive director, as a member and chairman of the Audit Committee of the 4th Session of the Board of Directors, Mr. ZHANG Wenjun, a non-executive director, and Mr. TONG Pengfang, an independent non-executive director, as members of the Audit Committee of the 4th Session of the Board of Directors.

(III) The Nomination Committee held 2 meetings within the reporting period

The main duties of the Nomination Committee include: to review the structure, size and composition (including the skills, knowledge and experience) of the Board of Directors on a regular basis and make recommendations to the Board of Directors regarding any proposed changes; to widely search for 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 of Directors on the election of individuals nominated for directors and the president; to assess the independence of the independent non-executive directors; to examine the selection criteria and procedure for the directors and the president and make recommendations in this regard; to make recommendations to the Board of Directors on matters relating to the appointment or reappointment of directors or the president and succession plans for directors (including the chairman) or the president.

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

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

Convening date	Meeting content	Key opinions and suggestions	Other compliance
11 April 2022	The meeting considered and discussed 1 resolution: the Resolution to Review the Qualifications for Appointment of Senior Management of the Company (《關於審核公司高級管理人員任職資格的議案》)	No objection, unanimously passed.	-
25 October 2022	The meeting considered and discussed 1 resolution: the Resolution to Amend the Rules of Procedure for the Nomination Committee of the Board of Directors of China Aluminum International Engineering Corporation Limited (《關於修訂<中鋁國際工程股份有限公司董事會提名委員會議事規則>的議案》)	No objection, unanimously passed.	-

The attendance record of the meetings is as follows:

Name	Position	Number of meetings attended/held	Attendance rate
LI Yihua	Member of the Nomination Committee	0/0	-
FU Jun	Member and chairman of the Nomination Committee	0/0	-
TONG Pengfang	Member and chairman of the Nomination Committee	2/2	100%
LIU Ruiping	Member of the Nomination Committee	2/2	100%
GUI Weihua	Member of the Nomination Committee	2/2	100%

Note 1: On 11 February 2022, the Company convened the 44th meeting of the 3rd Session of the Board of Directors and elected Mr. LI Yihua, the then non-executive director, as a member of the Nomination Committee of the 3rd Session of the Board of Directors of the Company.

Note 2: On 8 April 2022, the Company convened the 2022 first extraordinary general meeting and completed the re-election of the Board of Directors of the Company. Mr. FU Jun, a former independent non-executive director, ceased to be a director, a member of the Audit Committee of the Board, a member of the Remuneration Committee of the Board, a member of the Risk Management Committee of the Board, a member and chairman of the Nomination Committee of the Board of the Company.

Note 3: On 11 April 2022, the Company convened the first meeting of the 4th Session of the Board of Directors and elected Mr. TONG Pengfang, an independent non-executive director, as a member and chairman of the Nomination Committee of the 4th Session of the Board of Directors, Mr. LIU Ruiping, an executive director, and Mr. GUI Weihua, an independent non-executive director, as members of the Nomination Committee of the 4th Session of the Board of Directors.

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(IV) The Remuneration Committee held 4 meetings within the reporting period

The main duties of the Remuneration Committee include: to study the evaluation criteria for directors and senior management, conduct evaluations and make recommendations; to make recommendations to the Board of Directors 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 of Directors 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 of Directors in respect of the remuneration of non-executive directors; to review and approve performance-based remuneration with reference to corporate objectives as approved by the Board of Directors 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 if not, 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 if not, 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.

Convening date	Meeting content	Key opinions and suggestions	Other compliance
26 April 2022	The meeting considered and discussed 3 resolutions: the Resolution to Consider the 2022 Emolument Plan for Non-Independent Directors of the Company, the Resolution to Consider the 2022 Emolument Plan for Independent Directors of the Company, and the Resolution to Consider the 2022 Emolument Plan for Senior Management of the Company	Except for the interested member who has abstained from voting, no objection, unanimously passed.	-
2 June 2022	The meeting considered and discussed 2 resolutions: the Resolution to Review the Performance Appraisal and Remuneration Management Method for Senior Management of the Company, and the Resolution to Review the Performance Appraisal Plan for Senior Management of the Company for 2022 and Term of Office	No objection, unanimously passed.	-
25 October 2022	The meeting considered and discussed 1 resolution: the Resolution to Amend the Rules of Procedure for the Remuneration Committee of the Board of Directors of China Aluminum International Engineering Corporation Limited	No objection, unanimously passed.	-
24 November 2022	The meeting considered and discussed 1 resolution: the Resolution to Formulæ Regulations on the Management of Total Wages of China Aluminum International Engineering Corporation Limited (for Trial Implementation)	No objection, unanimously passed.	-

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The attendance record of the meetings is as follows:

Name	Position	Number of meetings attended/held	Attendance rate
GUI Weihua	Member and chairman of the Remuneration Committee	4/4	100%
FU Jun	Member of the Remuneration Committee	0/0	–
ZHOU Xinzhe	Member of the Remuneration Committee	4/4	100%
TONG Pengfang	Member of the Remuneration Committee	4/4	100%

Note 1: On 8 April 2022, the Company convened the 2022 first extraordinary general meeting and completed the re-election of the Board of Directors of the Company. Mr. FU Jun, a former independent non-executive director, ceased to be a director, a member of the Audit Committee of the Board, a member of the Remuneration Committee of the Board, a member of the Risk Management Committee of the Board, a member and chairman of the Nomination Committee of the Board of the Company.

Note 2: On 11 April 2022, the Company convened the first meeting of the 4th Session of the Board of Directors and elected Mr. GUI Weihua, an independent non-executive director, as a member and chairman of the Remuneration Committee of the 4th Session of the Board of Directors, Mr. ZHOU Xinzhe, a non-executive director, and Mr. TONG Pengfang, an independent non-executive director, as members of the Remuneration Committee of the 4th Session of the Board of Directors.

(V) The Strategy Committee held 4 meetings within the reporting period

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

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

Convening date	Meeting content	Key opinions and suggestions	Other compliance
24 March 2022	The meeting considered and discussed 1 resolution: the Resolution on the General Mandates to Issue the Onshore and Offshore Debt Financing Instruments of the Company (《關於公司發行境內外債務融資工具一般性授權的議案》)	No objection, unanimously passed.	-
5 August 2022	The meeting considered and discussed 1 resolution: the Resolution to Amend the Rules of Procedure for the Strategy Committee of the Board of Directors of the Company	No objection, unanimously passed.	-
15 September 2022	The meeting considered and discussed 2 resolutions: the Resolution Regarding the Company's Compliance with the Conditions for Disposal of Major Assets (《關於公司符合重大資產出售條件的議案》), and the Resolution Regarding the Major Asset Disposal Plan of the Company (《關於公司本次重大資產出售方案的議案》)	No objection, unanimously passed.	-
24 November 2022	The meeting considered and discussed 1 resolution: the Resolution to Consider the Acquisition of 67% equity interest in Kunming Nonferrous Metallurgical Design and Research Institute Corporation (《關於審議收購昆明有色冶金設計研究院股份公司67%股權的議案》)	No objection, unanimously passed.	-

The attendance record of the meetings is as follows:

Name	Position	Number of meetings attended/held	Attendance rate
WU Jianqiang	Member and chairman of the Strategy Committee	0/0	-
LI Yihua	Member and chairman of the Strategy Committee	4/4	100%
GUI Weihua	Members of the Strategy Committee	4/4	100%
LIU Jing	Members of the Strategy Committee	1/1	100%
ZHOU Xinzhe	Members of the Strategy Committee	2/2	100%

Note 1: Mr. WU Jianqiang has submitted his resignation to the Board due to work transfer and resigned from the positions of chairman, director, member and chairman of the Risk Management Committee of the Board, member of the Nomination Committee of the Board as well as member and chairman of the Strategy Committee of the Board of the Company. The resignation took effect since 11 February 2022. After resignation, Mr. WU Jianqiang no longer held any position in the Company.

Note 2: On 11 February 2022, the Company convened the 44th meeting of the 3rd Session of the Board of Directors and elected Mr. LI Yihua, the then non-executive director, as a member and chairman of the Strategy Committee of the 3rd Session of the Board of Directors of the Company.

Note 3: On 11 April 2022, the Company convened the first meeting of the 4th Session of the Board of Directors and elected Mr. LI Yihua, an executive director, as a member and chairman of the Strategy Committee of the 4th Session of the Board of Directors, Mr. LIU Jing, an executive director, and Mr. GUI Weihua, an independent non-executive director, as members of the Strategy Committee of the 4th Session of the Board of Directors.

Note 4: On 8 August 2022, the Company convened the 4th meeting of the 4th Session of the Board of Directors to adjust the composition of the Strategy Committee of the 4th Session of the Board of Directors, with Mr. LIU Jing, an executive director, ceasing to be a member of the Strategy Committee and Mr. ZHOU Xinzhe, a non-executive director, assuming the role of a member of the Strategy Committee.

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

(VI) The Risk Management Committee held 2 meetings within the reporting period

The main duties of Risk Management Committee include: to consider judgment standard or mechanism for material business decisions, material risks, material events and important 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 of Directors; 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 of Directors; to handle other matters entrusted by the Board of Directors.

Convening date	Meeting content	Key opinions and suggestions	Other compliance
24 March 2022	The meeting considered and discussed 2 resolutions: the Resolution to Consider the 2022 Annual Overall Risk Management Report of the Company (《關於審議公司2022年度全面風險管理報告的議案》), and the Resolution on the Company's Compliance with OFAC Commitments in the Year 2021 (《關於2021年度公司遵守OFAC承諾的議案》)	No objection, unanimously passed.	-
5 August 2022	The meeting considered and discussed 1 resolution: the Resolution to Amend the Rules of Procedure for the Risk Management Committee of the Board of Directors of the Company (《關於修訂<公司董事會風險管理委員會議事規則>的議案》)	No objection, unanimously passed.	-

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

The attendance record of the meetings is as follows:

Name	Position	Number of meetings attended/held	Attendance rate
WU Jianqiang	Member and chairman of the Risk Management Committee	0/0	-
LI Yihua	Member and chairman of the Risk Management Committee	2/2	100%
FU Jun	Member of the Risk Management Committee	1/1	100%
HU Zhenjie	Member and chairman of the Risk Management Committee	1/1	100%
TONG Pengfang	Member of the Risk Management Committee	1/1	100%
ZHOU Xinzhe	Member of the Risk Management Committee	0/0	-

Note 1: Mr. WU Jianqiang has submitted his resignation to the Board due to work transfer and resigned from the positions of chairman, director, member and chairman of the Risk Management Committee of the Board, member of the Nomination Committee of the Board and member and chairman of the Strategy Committee of the Board of the Company. The resignation took effect since 11 February 2022. After resignation, Mr. WU Jianqiang no longer held any position in the Company.

Note 2: On 11 February 2022, the Company convened the 44th meeting of the 3rd Session of the Board of Directors and elected Mr. LI Yihua, the then non-executive director, as the chairman of the Risk Management Committee of the 3rd Session of the Board of Directors of the Company.

Note 3: On 8 April 2022, the Company convened the 2022 first extraordinary general meeting and completed the re-election of the Board of Directors of the Company. Mr. FU Jun, a former independent non-executive director, ceased to be a director, a member of the Audit Committee of the Board, a member of the Remuneration Committee of the Board, a member of the Risk Management Committee of the Board, a member and chairman of the Nomination Committee of the Board of the Company.

Note 4: On 11 April 2022, the Company convened the first meeting of the 4th Session of the Board of Directors and elected Mr. LI Yihua, an executive director, as a member and chairman of the Risk Management Committee of the 4th Session of the Board of Directors, Mr. HU Zhenjie, a non-executive director, and Mr. TONG Pengfang, an independent non-executive director, as members of the Risk Management Committee of the 4th Session of the Board of Directors.

Note 5: On 8 August 2022, the Company convened the 4th meeting of the 4th Session of the Board of Directors to adjust the composition of the Risk Management Committee of the 4th Session of the Board of Directors, with Mr. LI Yihua, an executive director, ceasing to be a member and chairman of the Risk Management Committee, Mr. HU Zhenjie, a non-executive director, assuming the role of chairman of the Risk Management Committee and Mr. ZHOU Xinzhe, a non-executive director, assuming the role of member of the Risk Management Committee.

(VII) Specific objections

Applicable Not applicable

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

XIII. EXPLANATION OF RISKS IDENTIFIED BY THE BOARD OF SUPERVISORS

Applicable Not applicable

The Board of Supervisors had no objection to the supervisory matters within the reporting period.

XIV. PARTICULARS OF EMPLOYEES OF THE PARENT COMPANY AND MAJOR SUBSIDIARIES AT THE END OF REPORTING PERIOD

(I) Employees

Number of existing employees of the parent company	147
Number of existing employees of major subsidiaries	12,072
Total number of existing employees	12,219
Number of resigned and retired employees whose expenses are borne by the parent company and major subsidiaries	6,676

By profession

Profession	Number of employees
Operational management	4,277
Engineering technology	5,939
Production	1,602
Other personnel	401
Total	12,219

By level of education

Level of education	Number of employees (persons)
PhD	28
Master	1,226
Bachelor	6,578
Junior college	2,282
Others	2,105
Total	12,219

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

(II) Remuneration policy

Applicable Not applicable

In the general principle of “salaries rising with profit and salaries falling with profit”, the Company conducted budgetary management of total salaries, allocating more wages to member companies with good economic benefits, better cost control and higher labor productivity. The Company is responsible for managing salaries of the operation management team and controlling total salary of employees of the enterprise, while the operation management team of the enterprise is responsible for corporate internal assessment and salary management of employees. The Company biases total salary allocation towards core and backbone employees, guides enterprises to establish and perfect the backbone employee-biased incentive policy by inclining total amount of salaries towards them, and actively organises enterprises to promote the backbone employee incentive efforts, in order to stimulate the enthusiasm of the core talents, and stabilise the team of backbone employees.

(III) Retirement and employees benefit scheme

Details of the Company’s retirement and employees benefit scheme are set out in note 5.29 “Employee compensation payable” and note 5.37 “Long-term employee compensation payable” 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’ injury compensation insurance for our employees and workers. We also established an employee housing fund according to applicable PRC regulations. In addition to statutory contributions to the above social insurance, the Company provides voluntary benefits for existing employees and retired employees, including supplementary medical insurance and corporate annuity.

(IV) Employee incentive

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

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

(V) Training plan

Applicable Not applicable

The Company has long regarded the employees' education and training as a basic work to continuously improve the overall quality of the employee teams, update the employees' knowledge, and cultivate professional talents with unremitting determination and strict implementation. In the employee education and training, based on the team building condition of the employees and in accordance with the Company's strategy, customers' needs and personal abilities, we aim to improve the employees' political theory level and business performance ability. By adhering to the strategy of "going out and coming in", and insisting on the working concept of organic combination of centralized-training and self-improvement, we invest a large amount of human and financial resources to create a training environment for employees and to implement the measures of employee education and training in an effective manner.

(VI) Outsourced labor

Applicable Not applicable

XV. PROPOSAL FOR PROFIT DISTRIBUTION OR FOR CONVERTING CAPITAL RESERVE INTO SHARE CAPITAL

(I) Formulation, execution and adjustments to cash dividend policy

Applicable Not applicable

1. Basic principles for profit distribution

- (1) The Company should fully consider the return to investors and distribute dividends to shareholders every year at the specified percentage of the profit available for distribution for the year.
- (2) The Company should maintain continuity and stability in its profit distribution policy while taking into account the long-term interests of the Company, the overall interests of all shareholders and the sustainable development of the Company.
- (3) The Company gives priority to profit distribution in cash. In accordance with the procedures stipulated in the Articles of Association, after considering a combination of factors, including characteristics of the industry where it operates, development stage, business model of its own, profitability, as well as whether there is any substantial capital expenditure arrangement, the Company shall put forward differentiated cash dividend distribution policies and determine the percentage of cash dividends in profit distribution for the year. Such percentage should comply with laws, administrative regulations, normative documents and relevant regulations of stock exchanges.

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

2. Specific policies on profit distribution

According to the Articles of Association, the Company may distribute dividends in cash, in shares, or in a combination of both cash and shares, while it gives priority to profit distribution in cash. Subject to the conditions of dividend distribution, the Company shall distribute profits at least once a year, while interim profit distribution may also be made provided that the Company is guaranteed for normal operation and development. The Board of the Company shall put forward differentiated cash dividend distribution policies in accordance with the procedures stipulated in the Articles of Association, after considering a combination of factors, including characteristics of the industry where it operates, development stage, business model of its own, profitability, as well as whether there is any substantial capital expenditure arrangement(s):

- (1) where the Company is at the developed stage with no substantial capital expenditure arrangement, cash dividend shall be not less than 80% of the profit distribution at the time of profit distribution;
- (2) where the Company is at the developed stage with substantial capital expenditure arrangement, cash dividend shall be not less than 40% of the profit distribution at the time of profit distribution;
- (3) where the Company is at the development stage with substantial capital expenditure arrangement, cash dividend shall be not less than 20% of the profit distribution at the time of profit distribution;
- (4) where the Company has difficulty in identifying the development stage but there is substantial capital expenditure arrangement, dividend distribution may be made in accordance with the preceding provision.

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

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

Save for special circumstances, the Company shall give priority to dividend payment in cash out of its post tax profits for the year after the accumulated loss (if any) are made up and legal and discretionary reserves are allocated. The cash distribution shall be no less than 20% of the distributable profits for the year. Actual and reasonable factors such as corporate growth and dilution of net asset value per share should be taken into account when profit is distributed in dividends on shares. The Company may not distribute the cash dividends in the following special circumstances:

- (1) the auditor issues a report other than a standard report without qualified opinion in relation to the annual financial report of the Company.
- (2) the net operating cash flows for the year are negative.
- (3) the Company has major investment plan or significant cash expenditure (except for fund raising projects).

3. Profit distribution proposal for the year 2022

As audited by WUYIGE Certified Public Accountants LLP, as of 31 December 2022, the undistributed profit of the parent company was RMB-127,038,527.51. Taking into account the undistributed profit of the parent company for the year and the future investment needs of the Company's projects, in order to ensure the Company's continuous and stable operation and the long-term interests of all Shareholders, the Company's Board has comprehensively considered the Company's 2023 business plan and capital requirements, and formulated the 2022 profit distribution plan as follows: The Company will not distribute profit, nor convert capital reserve to the share capital.

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

(II) Special explanation of cash dividend policy

Applicable Not applicable

Whether compliant with the Articles of Association or the resolution of general meeting or not Yes No

Whether the dividend standard and proportion are clear and definite Yes No

Whether relevant decision-making procedure and mechanism are complete Yes No

Whether independent directors perform their duties and play their roles due Yes No

Whether minority shareholders have the opportunity to fully express their opinions and demands, whether their legitimate rights and benefits are fully protected Yes No

(III) If the Company has positive profit within the reporting period and the parent has positive profit available for distribution to ordinary shareholders, but the Company does not have a plan for profit distribution in cash to ordinary shares, the Company shall disclose the reasons in detail as well as the purpose and intended use of undistributed profit

Applicable Not applicable

(IV) Profit distribution and conversion of capital reserve into share capital during the reporting period

Applicable Not applicable

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

XVI. STATUS AND IMPACT OF EQUITY INCENTIVE PLANS, EMPLOYEE STOCK OWNERSHIP PLANS OR OTHER EMPLOYEE INCENTIVES

(I) Relevant incentives are already disclosed in temporary announcements and there is no progress or change in subsequent operation

Applicable Not applicable

(II) Relevant incentives are not disclosed in temporary announcements or there is subsequent progress

Equity incentives

Applicable Not applicable

Other information

Applicable Not applicable

Employee stock ownership plans

Applicable Not applicable

Other incentives

Applicable Not applicable

(III) Equity incentives granted to directors and senior management during the reporting period

Applicable Not applicable

(IV) Establishment and execution of assessment mechanism and incentive mechanism for senior management during the reporting period

Applicable Not applicable

Based on the market level and the Company's remuneration strategy, the Company put forward the compensation package for senior management, subject to the approval of Remuneration Committee and then to the approval of the Board. The human resources department finalized KPI and remuneration of senior management based on the Company's operating performance and the performance of senior management for the year.

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

XVII.INTERNAL CONTROL SYSTEM BUILDING AND PERFORMANCE WITHIN THE REPORTING PERIOD

Applicable Not applicable

In order to clarify the management boundaries and the authorities and responsibilities among the various governance entities and operating entities at various levels, a review of the list of key management points was carried out at different levels of the whole Company in 2022. At the Company's own level, key management points were sorted out, such as the "Three Majors and One Significant", the Party Committee's prepositive study and discussion of major operational and management issues, the Board of Directors' delegation to the managerial level for decision-making, and the President's Council's decision making; the Company organised its subsidiaries at all levels (81 in total) to clarify their control models and positioning, and to clarify the respective boundaries of authority and responsibility of the Party Committee (General Branch and Branch Committee), the Board of Directors and the managerial level. We organized the updating of the internal control management manual at the level of the Company, officially released the Internal Control Management Manual of China Aluminum International (2022 Edition), and rectified the problems found in the internal control system. In order to strengthen the construction of internal control systems of overseas enterprises, effectively prevent business risks, a special self-examination of the internal control systems of overseas enterprises was launched. Special inspections were conducted on the construction of internal control systems, system supervision, use of commissions and supervision of overseas projects, overseas financial management and information control of the Company's six overseas enterprises, and the relevant overseas enterprises were organized to complete rectification of the problems in the construction of internal control.

Explanation on material deficiencies in internal control during the reporting period

Applicable Not applicable

XVIII.CONTROL ON SUBSIDIARIES WITHIN THE REPORTING PERIOD

Applicable Not applicable

In order to strengthen the governance structure of subsidiaries, risk control on assets and resources, and increase the Company's overall operating efficiency and risk resistance, the Company has developed the Management Methods on the Authorization of the Board of Directors (《董事會授權管理辦法》), the Implementing Rules of Overall Risk Management (《全面風險管理實施細則》), the Implementing Rules of "Three Majors and One Significant" Decision-making System (《「三重一大」決策制度實施細則》), the Provisional Regulations on Overall Budget Management (《全面預算管理暫行規定》), the Investment Management Methods (《投資管理辦法》), the Management Methods on Engaging External Lawyers (《聘用社會律師管理辦法》), and the Contractual Assets Management Requirements (《合同資產管理規定》), under the Company Law, the Securities Law and the Articles of Association.

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

The Company exercises shareholders' rights to monitor the governance of its subsidiaries mainly through the exercise of voting rights by the board of directors and shareholders' meetings of the subsidiaries, as well as the appointment of senior management to the subsidiaries and the day-to-day supervision of important matters such as operations, finance, major investments, legal affairs and human resources.

In 2022, the Company organised the completion of a list of key management points between the Head Office and member enterprises, clarified the authority and responsibility boundaries of each governance entity, defined the control model and positioning, and launched a special self-examination of the internal control system of overseas enterprises. The Company is in the process of organising an update of the internal control manual to rectify the problems identified in relation to the effectiveness of the internal control system.

XIX. PARTICULARS OF INTERNAL CONTROL AUDIT REPORT

Applicable Not applicable

The Company held the sixth meeting of the Audit Committee of the 4th Session of the Board of Directors on 2 March 2023 and held the ninth meeting of the 4th Session of the Board of Directors on 7 March 2023, which considered and adopted the 2022 Annual Audit Report on Internal Control of China Aluminum International Engineering Corporation Limited (《中鋁國際工程股份有限公司2022年度內部控制審計報告》), pursuant to which our auditor WUYIGE Certified Public Accountants LLP confirmed that the Company has maintained effective internal control over financial reporting in all material aspects. For details, refer to the 2022 Annual Audit Report on Internal Control of China Aluminum International Engineering Corporation Limited disclosed on the website of the SSE (www.sse.com.cn) on the same day as this Annual Report.

Whether the internal control audit report is disclosed: Yes

Type of opinion on the internal control audit report: Standard unqualified opinion

XX. LISTED COMPANY GOVERNANCE SELF-CHECK AND RECTIFICATION

In accordance with the requirements of the Notice on Launching Special Actions on Corporate Governance of Listed Companies (《關於開展上市公司治理專項行動的通知》) issued by the CSRC, the Company conducted a comprehensive and serious self-inspection on its corporate governance in accordance with the Special Self-Inspection Checklist for Corporate Governance of Listed Companies (《上市公司治理專項自查清單》), and found that the Company needs further improvement and strengthening in the following aspects:

- (i) The term of office of the Board of Directors and the Board of Supervisors has been extended for change of session, and current independent directors are holding office for more than 6 years consecutively. The Company has convened the 2022 first extraordinary general meeting on 8 April 2022 to conduct the re-election of the Board of Directors and the Board of Supervisors and completed the re-election of the Board of Directors and the Board of Supervisors.

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

- (II) A few directors, supervisors absent from general meeting, a few executives absent from general meeting, due to other work assignments. All directors, supervisors and executives of the Company attended the general meeting, unless otherwise required by work assignments, in which event, the Company shall disclose the absence of any director, supervisor or executive who is absent from the general meeting. The Company will further strengthen the performance of duties and responsibilities by directors, supervisors and senior management, to ensure their timely attendance and presence at general meeting.

In the future, the Company will continue to follow the requirements of relevant regulatory regulations to further improve the Company's standard operation level and the effectiveness of corporate governance, and promote the Company's sustainable, healthy and stable development.

XXI. OTHER INFORMATION

✓ Applicable Not applicable

(I) Compliance with the Code for Securities Transactions

The Company has adopted the Model Code for Securities Transactions by Directors of Listed Issuers ("Model Code") set out in Appendix 10 to the HKEX Listing Rules as the code of conduct for dealings in the securities of the Company by all of our Directors and Supervisors. Having made specific enquiries with the Directors and Supervisors, all Directors and Supervisors have confirmed that they have strictly complied with the standards stipulated in the Model Code during the reporting period. The Company has also set up guidelines in respect of the dealings by its relevant employees (as defined in the HKEX 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 of Directors 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 HKEX Listing Rules and to safeguard Shareholders' interests.

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

(II) Investor relations

1. Investor relations activities

On 16 May 2022, the chairman, president, independent directors, chief financial officer and secretary to the Board and relevant personnel from various departments of the Company participated in the 2021 and Q1 2022 results briefing to answer investors' questions on the Company's operating results and financial position for 2021 and Q1 2022 through online interaction.

On 29 September 2022, the chairman, president, independent directors, chief financial officer and secretary to the Board and relevant personnel from various departments of the Company participated in the 2022 semi-annual results briefing to have an interactive exchange and communication with investors on specific aspects of the 2022 semi-annual operations, financial position and development results.

In addition, the Company responded to questions raised by investors in a timely manner through SSE e-interaction platform, investor hotline, dedicated email and other means and had sufficient communication with investors.

2. Information disclosure

In 2022, the Company completed the preparation and disclosure of 407 compliance documents, including regular reports and interim announcements. In particular, the Company issued 198 announcements on the website of the SSE and 209 announcements on the website of the HKEX.

(III) Revision to the Articles of Association during the reporting period

In 2022, to further improve and standardise the corporate governance system and to safeguard the legitimate rights and interests of the Company and its shareholders, the Company amended the relevant provisions of the Articles of Association of the Company in accordance with the relevant requirements of the 3-year SOE reform plan of the SASAC and taking into account the relevant requirements of the relevant standardised operation and laws and regulations. For details, please refer to the relevant announcements of the Company published on the website of the SSE on 3 June 2022 and 28 November 2022.

(IV) Company secretary

In order to comply with Rule 3.29 of the HKEX Listing Rules, as of 31 December 2022, Mr. ZHANG Jian, the company secretary, participated in no less than 15 hours of relevant professional training for the year.

SECTION 4 CORPORATE GOVERNANCE (CORPORATE GOVERNANCE REPORT)

(V) Directors' responsibility for the financial statements

The Board of Directors acknowledged its responsibility for preparing the financial statements of the Group for the year ended 31 December 2022.

The Board of Directors is responsible for presenting a clear and understandable assessment of annual and interim reports, price-sensitive information and other disclosures as required under the HKEX 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.

(VI) Dividend policy of the Company

For details, please refer to "Proposal for Profit Distribution or for Converting Capital Reserve into Share Capital" under "Section 4 Corporate Governance (Corporate Governance Report)" of this report.

(VII) Board independence evaluation mechanism

Pursuant to code provision B.1.4 of the Corporate Governance Code in Appendix 14 of the HKEX Listing Rules, the Board should establish mechanism(s) to ensure independent views and input are available to the Board

The Board has adopted the board independence evaluation mechanism (the "**Mechanism**") which sets out the principles and guidelines for the Company to ensure independent view and input are available to the Board.

Through the independent evaluation of the Board, the processes and procedures of the Company's Board and its committees are continually improved and developed, providing a robust and useful feedback mechanism to enhance the Board's effectiveness, maximise its strengths and identify areas for improvement or further development. The evaluation process also identifies actions that the Company needs to take to maintain and improve the performance of the Board, such as addressing the individual training and development needs of each director.

The purpose of the Mechanism is to ensure that the Board of the Company has a strong element of independence to enable the Board to exercise independent judgment effectively to better protect the interests of shareholders.

SECTION 5 REPORT OF THE BOARD OF SUPERVISORS

In 2022, in accordance with the relevant national laws and regulations, regulatory requirements and the relevant provisions of the Articles of Association and the Rules of Procedure for the Board of Supervisors, and based on the principles of compliance with the law, objectivity and fairness, science and effectiveness, the Board of Supervisors of the Company closely integrated with the work plan, made active exploration in improving the corporate governance system, innovative supervision methods and enhancing the quality and effectiveness of supervision, conscientiously performed the duties of the Board of Supervisors, and practically safeguarded the legitimate rights and interests of the Company, its shareholders and employees. The major work of the Board of Supervisors in 2022 is reported as follows:

I. RE-ELECTION OF THE BOARD OF SUPERVISORS

In 2022, the Company promoted the selection and election of the members of the new session of Board of Supervisors in accordance with the procedures, laws and regulations to ensure a smooth transition and efficient operation of the Board of Supervisors of the Company. Currently, the 4th session of the Board of Supervisors of the Company comprises three supervisors, namely Mr. FAN Guangsheng, chairman of the Board of Supervisors, Mr. HE Wenjian, supervisor, and Ms. LIN Ni, supervisor.

II. MAJOR WORK OF THE BOARD OF SUPERVISORS

(I) Insisted on performing its duties in accordance with the law and regulations, and ensured the continuous and effective operation of corporate governance through high quality supervision

In 2022, the Board of Supervisors of the Company held a total of 7 meetings and considered 30 resolutions. The procedures for convening and holding each meeting were in compliance with the provisions of the Company Law, the Articles of Association and the Rules of Procedure for the Board of Supervisors. Details are as follows:

Name of meeting	Convening time	Resolutions considered
25th meeting of the 3rd Session of the Board of Supervisors	7 March 2022	The Resolution to Nominate the Candidates for Shareholder Representative Supervisors to the 4th Session of the Board of Supervisors of the Company (關於提名公司第四屆監事會股東代表監事候選人的議案)
26th meeting of the 3rd Session of the Board of Supervisors	28 March 2022	<p>The Resolution to Consider the 2021 Annual Results Announcement and Annual Report of the Company (關於審議公司2021年度業績公告和年度報告的議案)</p> <p>The Resolution to Consider the 2021 Annual Final Accounting Report of the Company (關於審議公司2021年度財務決算報告的議案)</p> <p>The Resolution to Consider 2022 Annual Operational Plan Report of the Company (關於審議公司2022年度經營計劃報告的議案)</p> <p>The Resolution to Consider 2021 Annual Profit Distribution Plan of the Company (關於審議公司2021年度利潤分配方案的議案)</p> <p>The Resolution on the 2021 Annual Impairment Provision of the Company (關於公司2021年度計提資產減值準備的議案)</p>

SECTION 5 REPORT OF THE BOARD OF SUPERVISORS

Name of meeting	Convening time	Resolutions considered
1st meeting of the 4th Session of the Board of Supervisors	11 April 2022	The Resolution to Consider the 2021 Annual Social Responsibility Report of the Company (關於審議公司2021年度社會責任報告的議案)
		The Resolution to Consider the 2021 Annual Internal Control Evaluation Report of the Company (關於審議公司2021年度內部控制評價報告的議案)
		The Resolution to Change the Accounting Policies for Government Grants of the Company (關於變更政府補助會計政策的議案)
		The Resolution to Consider the Report on the Work of the Board of Supervisors of the Company for 2021 (關於審議公司2021年度監事會工作報告的議案)
		The Resolution on the Election of the Chairman of the Fourth Session of the Board of Supervisors of the Company (關於選舉公司第四屆監事會主席的議案)
2nd meeting of the 4th Session of the Board of Supervisors	29 April 2022	The Resolution to Consider the 1Q2022 Report of the Company (關於審議公司2022年第一季度報告的議案)
3rd meeting of the 4th Session of the Board of Supervisors	8 August 2022	The Resolution to Consider the Interim Report and 2022 Interim Results Announcement of the Company (關於審議公司半年度報告和2022年中期業績公告的議案)
4th meeting of the 4th Session of the Board of Supervisors	24 September 2022	The Resolution Regarding the Company's Compliance with the Conditions for Disposal of Major Assets (關於公司符合重大資產出售條件的議案)
		The Resolution Regarding the Major Asset Disposal Plan of the Company (關於公司本次重大資產出售方案的議案)
		The Resolution Regarding the Reorganization Not Constituting a Related Party Transaction (關於本次重組不構成關聯交易的議案)
		The Resolution Regarding the Report on the Disposal of Material Assets (Draft) of China Aluminum International Engineering Corporation Limited and Its Summary (關於《中鋁國際工程股份有限公司重大資產出售報告書(草案)》及其摘要的議案)
		The Resolution Regarding the Entering into of the Agreement in Relation to the Reorganization (關於簽訂本次重組相關協議的議案)
		The Resolution Regarding the Compliance of the Reorganization of the Company with Article 11 of the Administrative Measures for the Material Asset Reorganizations of Listed Companies (關於公司本次重組符合《上市公司重大資產重組管理辦法》第十一條規定的議案)

SECTION 5 REPORT OF THE BOARD OF SUPERVISORS

Name of meeting	Convening time	Resolutions considered
		<p>The Resolution Regarding the Compliance of the Reorganization of the Company with Article 4 of the Provisions on Issues Concerning Regulating the Material Asset Reorganizations of Listed Companies (關於公司本次重組符合《關於規範上市公司重大資產重組若干問題的規定》第四條規定的議案)</p> <p>The Resolution Regarding the Reorganization of the Company Not Constituting a Reorganization and Listing under Article 13 of the Administrative Measures for the Material Asset Reorganizations of Listed Companies (關於公司本次重組不構成《上市公司重大資產重組管理辦法》第十三條規定的重組上市的議案)</p> <p>The Resolution Regarding the Completeness and Compliance of the Statutory Procedures and the Validity of the Submission of Legal Documents for the Reorganization (關於本次重組履行法定程序的完備性、合規性及提交法律文件的有效性的議案)</p> <p>The Resolution Regarding the Acquisition and Disposal of Assets by the Company within 12 Months Prior to the Reorganization (關於公司本次重組前12個月內購買、出售資產情況的議案)</p> <p>The Resolution Regarding the Approval of the Audit Report, Pro Forma Review Report and Appraisal Report in Relation to the Reorganization (關於批准本次重組相關審計報告、備考審閱報告和評估報告的議案)</p> <p>The Resolution Regarding the Pricing Basis as well as Fairness and Reasonableness of the Reorganization (關於本次重組定價依據及公平合理性的議案)</p> <p>The Resolution Regarding the Independence of the Appraisal Agency, the Reasonableness of the Appraisal Assumptions, the Relevance of the Appraisal Methods and Appraisal Purposes and the Fairness of the Appraisal Pricing (關於評估機構的獨立性、評估假設前提的合理性、評估方法與評估目的的相關性及評估定價的公允性的議案)</p> <p>The Resolution Regarding the Fluctuation of the Share Price of the Company (關於公司股票價格波動情況的議案)</p> <p>The Resolution Regarding the Dilution of Current Returns by the Reorganization and the Remedial Measures Adopted by the Company (關於公司本次重組攤薄即期回報情況及公司採取的填補措施的議案)</p> <p>The Resolution Regarding the Company's Reorganization-Related Entities Do Not Fall Within the Circumstances as Stipulated in Article 13 of the Regulatory Guidelines for Listed Companies No. 7 – Supervision on Abnormal Trading of Shares Related to Material Asset Reorganizations of Listed Companies (關於公司本次重組相關主體不存在《上市公司監管指引第7號—上市公司重大資產重組相關股票異常交易監管》第十三條規定情形的議案)</p>
5th meeting of the 4th Session of the Board of Supervisors	26 October 2022	The Resolution to Consider the 3Q2022 Report of the Company (關於審議公司2022年第三季度報告的議案)

SECTION 5 REPORT OF THE BOARD OF SUPERVISORS

In addition, members of the Board of Supervisors of the Company were actively present at important meetings of the Company. In 2022, they were present at 10 Board meetings and attended 3 shareholders' meetings, and were also present at the daily important meetings of the Company. The Board of Supervisors of the Company has fully studied and deliberated on major issues relating to the Company's major asset restructuring, financial operations, profit distribution, risk management, internal control and compliance, as well as the re-election of the Board of Supervisors, and has expressed objective opinions and recommendations. When present at the meetings of the Board and senior management as well as attending the shareholders' meetings, the Board of Supervisors supervised the decision-making process of the Board and senior management in the study and discussion of major issues, the convening, holding and voting procedures of the relevant meetings as well as the voting procedures of shareholders and shareholders' representatives to ensure standardised procedures and compliant decisions.

(II) Strengthened the supervision of financial, internal control and risk management, and enhanced the quality and effectiveness of supervision through various supervision channels

First, the Board of Supervisors regularly reviewed the annual, semi-annual and quarterly reports, oversaw the preparation and review procedures, legal compliance of content and format of the reports, issued review opinions and made timely disclosure of information. Second, the Board of Supervisors followed up and reviewed the Company's monthly operation in a timely manner, so as to fully grasp the financial indicators, marketing situation, completion of production value and progress of matters resolved by the Board. Third, the Board of Supervisors seriously listened to the audit and review opinions of external auditors on the annual and half-yearly reports, as well as the objective evaluation of the financial indicators, and reviewed the relevant data of the Company's related party (connected) transactions during the reporting period. Four, the Board of Supervisors strengthened the supervision of internal control compliance and risk management through multiple channels and means. Effective supervision of the management of internal control compliance and risk prevention was carried out through deliberation of resolutions, reading of materials and on-site investigation. Five, the Board of Supervisors made focused comments and recommendations on the above matters and received special reports from the management on matters of concern.

(III) Opened up external communication channels to promote continuous improvement in the performance of duties

By attending training sessions held by regulatory bodies, the Board of Supervisors further deepened its knowledge and understanding of the theory and practice of corporate governance and the performance of supervisory functions, and enhanced its ability to perform its duties. The Board of Supervisors kept abreast of regulatory requirements and local regulatory developments, helping it to grasp the focus of its supervisory work.

SECTION 5 REPORT OF THE BOARD OF SUPERVISORS

III. PERFORMANCE OF DUTIES BY MEMBERS OF THE BOARD OF SUPERVISORS

In 2022, members of the Board of Supervisors performed their duties faithfully and diligently in accordance with the regulatory requirements and the relevant provisions of the Articles of Association. They attended or were present at shareholders' meetings, board meetings and supervisory meetings in accordance with the regulations; in particular, the attendance rate of the Board of Supervisors was 100%. Members of the Board of Supervisors fully utilised their professional expertise and experience in the fields of economics, auditing, accounting and management, and performed their duties conscientiously and proactively. The members put forward many constructive views and suggestions on the quality development of the Company, and played an important role in improving the corporate governance and supervision mechanism and enhancing the level of supervision and performance of duties for the Board of Supervisors of the Company.

IV. OPINIONS EXPRESSED BY THE BOARD OF SUPERVISORS ON THE RELEVANT SITUATIONS

(I) The Company's operation in accordance with the law

The Board of Supervisors is of the view that the Company operated in accordance with the Company Law and the Articles of Association and the relevant policies and regulations in 2022 and that the decision-making procedures were lawful and effective. The directors and senior management of the Company were diligent and dedicated to their duties and have not been found to have violated any laws, regulations or the Articles of Association or prejudiced the interests of the shareholders of the Company in the performance of their duties.

(II) Financial information of the Company

During the reporting period, the Board of Supervisors supervised and reviewed the financial position and results of operations of the Company for the year 2022 and considered that the financial statements of the Company were prepared in compliance with the relevant provisions of the Accounting System for Business Enterprises and the Accounting Standards for Business Enterprises, etc. and that the financial reports reflected the financial position and results of operations of the Company in a true, objective and accurate manner. The audit opinion in the standard unqualified audit report issued by WUYIGE Certified Public Accountants LLP was objective and fair.

(III) Acquisitions and disposals of assets

During the reporting period, the disposals of assets by the Company were conducted in a procedurally sound and fairly priced manner and no detriment to shareholders' interests or the interests of the Company was identified.

SECTION 5 REPORT OF THE BOARD OF SUPERVISORS

(IV) Internal controls of the Company

During the reporting period, the Board of Supervisors has reviewed the 2022 Annual Internal Control Evaluation Report of China Aluminum International Engineering Corporation Limited and considered that the report reflected the actual situation of the construction, improvement and operation of the internal control system of the Company in a comprehensive, true and objective manner.

(V) Fulfilment of social responsibilities by the Company

During the reporting period, the Company made outstanding contributions in the areas of greening and environmental protection, caring for employees and rural revitalisation. The Company actively participated in charitable causes and fulfilled its social responsibilities in a conscientious manner, safeguarding the interests of its shareholders, customers and employees.

(VI) Others

During the reporting period, the Board of Supervisors conducted review and supervision of the Company's provision for asset impairment and change of accounting policies. The Company's decision-making procedures in relation to the provision for asset impairment and change of accounting policies were in compliance with the relevant laws and regulations and the Articles of Association, and there were no circumstances under which the interests of the Company and its shareholders were prejudiced.

SECTION 6 ENVIRONMENTAL AND SOCIAL RESPONSIBILITIES

I. ENVIRONMENTAL INFORMATION

Whether an environmental protection mechanism is in place	Yes
Funds invested in environmental protection during the reporting period (expressed in RMB'0,000)	3,423

(I) Environmental protection information of companies and their major subsidiaries on the watch list of key pollutant discharging entities published by the environmental protection authority

Applicable Not applicable

(II) Explanation of environmental protection information of companies not on the watch list of key pollutant discharging entities

Applicable Not applicable

1. Administrative punishments due to environmental problems

Applicable Not applicable

On 9 January 2022, a central environmental inspection team imposed penalties on the lessees of Guizhou Shun'an Electro-mechanical Co., Ltd. about solid waste stacking not meeting the requirements and the penalty amount was RMB100,000. Guizhou Shun'an Electro-mechanical Co., Ltd. has appointed a qualified unit to handle such solid wastes and was recognized by local environmental protection authorities, and the issue was finished processing.

SECTION 6 ENVIRONMENTAL AND SOCIAL RESPONSIBILITIES

2. Other environmental information disclosed by key pollutants discharging entities

Applicable Not applicable

The Company pays high attention to environmental protection as well as pollution prevention and control efforts. During the reporting period, no major environmental incidents, environmental pollution or ecological damage incidents was discovered. The principal businesses of the Company mainly focus on surveying, design and construction. The Company promotes the concept of green development and integrates this concept into the design, strengthens essential environmental protection, strictly abides by national laws and regulations on environmental protection and conducts environmental impact assessments for projects in accordance with the law. According to the national and local requirements for environmental protection as well as pollution prevention and control on the construction site, the construction site should identify environmental factors before a project commences, formulate environmental protection and green construction plans and strictly abide by “Six 100%” during the construction process. Aspects such as dust pollution, noise control and emission of industrial wastes are strictly controlled. The Company prioritizes to select new energy-saving and environmentally friendly techniques and technologies, so as to minimize the impact of construction on the environment and pollutant emissions.

3. Reason why other environmental information are not disclosed

Applicable Not applicable

(III) Information conducive to ecological protection, pollution control, and environmental responsibilities fulfillment

Applicable Not applicable

The Company adhered to the guidance of XI Jinping’s ecological civilization thoughts, thoroughly implemented the new development concept, and strictly abided by the national and local laws and regulations. The Company continued to promote its environmental protection work, discharged various pollutants in compliance with laws and regulations, strengthened the prevention and control of pollution at the front line of production, and earnestly fulfilled the main responsibility for environmental protection among enterprises. In 2022, the Company continued to require all employees to sign the responsibility list under the principle of “one position with two responsibilities” for safety and environmental protection and signed the safety and environmental protection target responsibility letter with each enterprise and each department, so as to enhance the environmental friendly concepts of all employees and promote the fulfillment of their responsibility for carrying out environmental protection work. The Company actively organized the “5 June” Environment Day activities, so as to deeply integrate XI Jinping’s ecological civilization thoughts with the Company’s businesses. The Company continued to promote the research and development and application of environmental protection and energy-saving technologies, so as to promote orderly and healthy development of the environment protection and pollutant emissions.

SECTION 6 ENVIRONMENTAL AND SOCIAL RESPONSIBILITIES

(IV) Measures to reduce carbon emissions during the reporting period and their effects

Whether carbon reduction measures are adopted	Yes
Types of carbon reduction measures (e.g. use of clean energy for electricity generation, use of carbon reduction technologies in the production process, development and production of new products that contribute to carbon reduction, etc.)	Research, development and production of new products that contribute to carbon reduction

Specific description

Applicable Not applicable

Chalieco adheres to the idea of ecological civilization of Xi Jinping, actively responds to the call of national “3060”, firmly follows the road of green and low-carbon development, takes climate change, energy management, waste gas emission, environmental protection technology research and development, biological species diversity protection and other indicators as the main direction of low-carbon development, formulates and improves the resource management system, and increases the implementation of energy-saving measures. We will effectively improve the efficiency of energy use, carry out various environmental publicity and special training activities, actively participate in ecological and environmental public welfare practices, and strive to be the forerunner, advocate and leader of ecological protection, so that the concept of green and low carbon will gain popular support.

Chalieco actively promotes the work related to emission and carbon reduction in engineering and technical services and production fields, speeds up the construction of green technology innovation system, builds an organic whole of green technology research and development, application and promotion and industrial development, strives to overcome the difficulties of low-carbon technology and research and development of key technologies, and speeds up the innovation and promotion and application of energy-saving carbon reduction technology and process equipment. By relying on the technical advantages of the whole industrial chain, the Company committed to the concept of green development into the design and construction of the all-factor process, from the design source to adopt new technology, new equipment, new technology, constantly optimize the design scheme, in essence to achieve energy saving and emission reduction, to provide users with cleaner, more efficient, more green solutions. Adhering to the concept of green construction, the establishment of green construction benchmark, in accordance with the “six 100%⁵” targets for management and control, to maximize the “four savings and one environmental protection⁶”. We will use scientific and technological achievements to further promote carbon reduction and promote green and high-quality development of the non-ferrous industry.

⁵ “six 100%” refers to 100% closed management, 100% road hardening, 100% material coverage, 100% vehicle washing, 100% cleaning and moisturising, and 100% closed transport.

⁶ “four savings and one environmental protection” refers to energy saving, land saving, water saving, material saving, and environmental protection.

SECTION 6 ENVIRONMENTAL AND SOCIAL RESPONSIBILITIES

II. SOCIAL RESPONSIBILITIES FULFILLMENT

(I) Whether a separate social responsibility report, sustainability report or ESG report is disclosed

Applicable Not applicable

Please refer to the 2022 Annual Environmental, Social and Governance Report of China Aluminum International Engineering Corporation Limited disclosed at the SSE website (<http://www.sse.com.cn>) and the website of the HKEX (www.hkex.com.hk) for details of the Company's works of fulfillment of social responsibility.

(II) Specific information on social responsibility work

Applicable Not applicable

External donations and public welfare projects	Quantity/ content	Description
Total input (RMB'0,000)	8.7	
Including: Funds (RMB'0,000)	0.3	Participation in Charity Day donation organized by the local governments
Cash converted from materials (RMB'0,000)	8.4	External donations of epidemic prevention materials and sports equipment

Specific description

Applicable Not applicable

SECTION 6 ENVIRONMENTAL AND SOCIAL RESPONSIBILITIES

III. CONSOLIDATE AND EXPAND THE RURAL REVITALIZATION

Applicable Not applicable

Village revitalisation projects	Quantity/content	Description of the situation
Total input (RMB'0,000)	254.14	Procurement of staff welfare items from designated efforts, designated places and designated villages have paired up to provide assistance; direct investment in industrial assistance, culture and education, medical and health care, infrastructure renovation, and visits to condolences.
Including: Funds (RMB'0,000)	211.29	
Cash converted from materials (RMB'0,000)	42.85	Supply of assistance materials, technical consultation, planning and surveying and other technical support.
Number of beneficiaries (persons)	10,734	
Forms of assistance (e.g. Industrial assistance, employment assistance, education assistance, etc.)	Industrial assistance, employment assistance, consumption assistance and industrial revitalisation	
Specific description		

Applicable Not applicable

SECTION 7 KEY MATTERS

I. PERFORMANCE OF COMMITMENTS

(I) Commitments of the Company, its actual controller, shareholders, related parties, acquirers and other obligors that were made in or continued into the reporting period

✓ Applicable Not applicable

Background of commitment	Type of commitment	The party making commitment	Content of commitment	Time and period of commitment	Whether there is a validity for performance	Strictly performed in a timely manner or not	Specify the reason for failure to perform in time	Specify the next step plan in case of failure to perform in time
Commitments related to Major Asset Restructuring	Restricted shares	Directors, supervisors and senior management of the listed company, Chinalco and its parties acting in concert, Luoyang Institute and Yunnan Aluminum International	Shareholding reduction plan	During the period from the date of the initial disclosure of the Restructuring to the completion of its implementation	Yes	Yes	N/A	N/A
	Others	Directors and senior management of the listed company, Chinalco and its parties acting in concert, Luoyang Institute and Yunnan Aluminum International	Measures to make up for diluted return for the current period	Long term	Yes	Yes	N/A	N/A
	Others	Chinalco and its parties acting in concert, Luoyang Institute and Yunnan Aluminum International	Maintaining the independence of the listed company	Long term	Yes	Yes	N/A	N/A
	Resolving related transactions	Chinalco and its parties acting in concert, Luoyang Institute and Yunnan Aluminum International	Reducing and regulating related transactions	Long term	Yes	Yes	N/A	N/A
	Resolving competition among peers	Chinalco and its parties acting in concert, Luoyang Institute and Yunnan Aluminum International	Avoiding the competition of peers	Long term	Yes	Yes	N/A	N/A

SECTION 7 KEY MATTERS

Background of commitment	Type of commitment	The party making commitment	Content of commitment	Time and period of commitment	Whether there is a validity for performance	Strictly performed in a timely manner or not	Specify the reason for failure to perform in time	Specify the next step plan in case of failure to perform in time
IPO related commitments	Restriction on sales of shares	Chinalco	Commitment on shares lockup and intention to reduce shareholdings	Within 3 years from the date of listing of A shares and within 2 years after the expiration of the lock-up period	Yes	Yes	N/A	N/A
	Restriction on sales of shares	Luoyang Institute	Commitment on shares lockup and intention to reduce shareholdings	Within 3 years from the date of listing of A shares and within 2 years after the expiration of the lock-up period	Yes	Yes	N/A	N/A
	Others	Chinalco, the Company, the Company's non-independent directors and senior management	Share price stabilization plan	Within 3 years from the date of listing of A shares	Yes	Yes	N/A	N/A
	Others	Directors and senior management of the Company	Making up for diluted return for the current period	Long term	Yes	Yes	N/A	N/A
	Resolving competition among peers	Chinalco	Peer competition	Long term	Yes	Yes	N/A	N/A
	Resolving related transactions	Chinalco	Related transaction	Long term	Yes	Yes	N/A	N/A
	Resolving related transactions	Chinalco Finance	Credit facility service provided by related party	Long term	Yes	Yes	N/A	N/A
	Others	Directors, supervisors and senior management of the Company	Qualifications	Long term	Yes	Yes	N/A	N/A
	Others	Chinalco	Land title defect	Long term	Yes	Yes	N/A	N/A
	Others	The Company	Housing related business	Long term	Yes	Yes	N/A	N/A
Others	Chinalco, the Company, the Company's directors, supervisors and senior management, sponsors, accountants, lawyers	Commitment that there are no false records, misleading statements or material omissions in the Prospectus	Long term	Yes	Yes	N/A	N/A	

Note 1: Details of commitments related to Major Asset Restructuring are set out in the Report on Major Asset Disposal (Draft) (《重大資產出售報告書(草案)》) disclosed by the Company on the website of the SSE on 26 September 2022.

Note 2: In order to safeguard the interests of the Company and its shareholders, Contracting Company, a wholly-owned subsidiary of our wholly-owned subsidiary GAMI, shall undertake the Shenzhou Science and Technology Park (Zhizao Mansion) Project by way of real estate development and complete the disposal of project assets as soon as possible. The general meeting of the Company agreed to exempt its commitment regarding the Company's real estate development business set out in the A share initial public offering prospectus in respect of the project. In order to complete the disposal of the assets of the Zhizao Mansion project, Contracting Company entered into the Commodity Property Sale and Purchase Contract with Guiyang Water Group Co. Ltd. and Guiyang BEWG Co., Ltd. respectively to sell all the assets of the Zhizao Mansion project to Guiyang Water Group Co. Ltd. and Guiyang BEWG Co., Ltd.. Up to now, Contracting Company has received the full payment for the purchase of the building from Guiyang Water Group Co. Ltd. and Guiyang BEWG Co., Ltd.. For details, please refer to the relevant announcement disclosed by the Company on the website of the SSE on 4 January 2023.

SECTION 7 KEY MATTERS

(II) If any profit forecast exists for an asset or project of the Company, and the reporting period falls into the forecast period, the Company should specify whether the asset or project meets the profit forecast and provide reasons

Yes No Not applicable

(III) Realization of guaranteed performance and its impact on goodwill impairment test

Applicable Not applicable

II. FUNDS OCCUPIED BY THE CONTROLLING SHAREHOLDER OR ITS RELATED PARTIES FOR NON-OPERATING PURPOSE

Applicable Not applicable

III. GUARANTEES IN VIOLATION OF REQUIRED PROCEDURES

Applicable Not applicable

IV. EXPLANATION OF THE BOARD OF DIRECTORS ON ISSUANCE OF A “NON-STANDARD AUDITING REPORT” BY THE AUDITOR

Applicable Not applicable

V. ANALYSIS OF REASONS OF CHANGES IN ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES OR CORRECTION TO SIGNIFICANT ACCOUNTING ERRORS AND THEIR IMPACT

(I) Analysis of reasons and impact of changes in accounting policies and accounting estimates of the Company

Applicable Not applicable

(II) Analysis of reasons for correction to significant accounting errors and its impact

Applicable Not applicable

(III) Communication with the former auditor

Applicable Not applicable

SECTION 7 KEY MATTERS

(IV) Other descriptions

Applicable Not applicable

VI. APPOINTMENT AND REMOVAL OF AUDITOR

(Expressed in RMB)

Current appointment

Name of domestic auditor	WUYIGE Certified Public Accountants LLP
Remuneration of domestic auditor	4,804,000.00
Years of service of domestic auditor	7
Name of certified public accountants of domestic auditor	/
Continued term of service of certified public accountants of domestic auditor	/
Name of overseas auditor	/
Remuneration of overseas auditor	/
Years of service of overseas auditor	/

	Name	Remuneration
Internal control auditor	WUYIGE Certified Public Accountants LLP	742,000.00
Financial advisor	/	/
Sponsor	/	/

Explanation of appointment and removal of the auditor

Applicable Not applicable

Explanation on change in the auditor during the auditing period

Applicable Not applicable

VII. POTENTIAL RISK OF SUSPENSION OF LISTING

(I) Reasons for the suspension of listing

Applicable Not applicable

(II) Proposed countermeasures of the Company

Applicable Not applicable

(III) Circumstance in which the Company faces de-listing and reasons

Applicable Not applicable

SECTION 7 KEY MATTERS

VIII. BANKRUPTCY AND REORGANIZATION RELATED ISSUES

Applicable Not applicable

IX. MATERIAL LITIGATION AND ARBITRATION

The Company was involved in any material litigation or arbitration during the year The Company was not involved in any material litigation or arbitration during the year

(I) Litigation and arbitration disclosed in provisional announcements and without subsequent development

Applicable Not applicable

Summary and type of the issue

Tianjin Construction, a wholly-owned subsidiary of the Company, vs. Henan Longcheng Venture Development Co., Ltd. (河南省龍城創業發展有限公司) and Henan Longxing Development Co., Ltd. (河南省隆興發展有限公司): Dispute over engineering construction contract

Great Wall Construction, a wholly-owned company of the Company, vs. Hainan Captain Real Estate Development Co. Ltd. (海南船長房地產開發有限公司): Dispute over engineering construction contract

CNPT, a holding subsidiary of the Company, and Henan Jiade Construction Engineering Co., Ltd. (河南省嘉德建築工程有限公司) vs. the Housing and Urban-Rural Construction Department of Jianxi District, Luoyang City: Dispute over engineering construction contract

Changkan Institute, a wholly-owned subsidiary of the Company, vs. Changsha Evergrande Fairyland Tourism Development Co. Ltd. (長沙恒大童世界旅遊開發有限公司), Evergrande Fairyland Group Limited (恒大童世界集團有限公司) and Shenzhen Kunxing Six Investment Partnership (Limited Partnership) (深圳市坤行六號投資合夥企業(有限合夥)): Dispute over engineering construction contract

Reference

For details, please refer to the Announcement No. Temp 2022-070 issued by the Company on the designated media for information disclosure on 17 November 2022

For details, please refer to the Announcement No. Temp 2022-071 and Temp 2023-007 issued by the Company on the designated media for information disclosure on 17 November 2022 and 1 March 2023

For details, please refer to the Announcement No. Temp 2022-065 issued by the Company on the designated media for information disclosure on 19 October 2022

For details, please refer to the Announcement No. Temp 2022-055 issued by the Company on the designated media for information disclosure on 17 August 2022

SECTION 7 KEY MATTERS

Summary and type of the issue

Zhong Ai Culture (中愛文化) vs. Tianjin Construction, a wholly-owned subsidiary of the Company, and Tianjin Xintong Property Co. Ltd. (天津鑫通置業有限公司): Dispute over contract

Chalieco and its wholly-owned subsidiary China Aluminum International Engineering & Equipment Co., Ltd. and China Aluminum International Engineering Corporation Limited Guiyang Branch vs. Qinghai West Hydropower Co., Ltd.: Series of contract disputes

Ninth Metallurgical Company, a holding subsidiary of the Company, vs. Fujian Zhongnuo Anji Car Rental Co., Ltd. (福建中諾安吉租車有限公司): Dispute over engineering construction contract

Twelfth Metallurgical Company, a wholly-owned subsidiary of the Company, vs. Northern Heavy Industries Group Co., Ltd. (北方重工集團有限公司): Dispute over engineering construction contract (confirmation of bankruptcy claims)

Henan Taixing Real Estate Co. Ltd. (河南台興房產有限公司) vs. Sixth Metallurgical Company, a wholly-owned subsidiary of the Company: Dispute over engineering construction contract

Tianjin Construction, a wholly-owned subsidiary of the Company, vs. Tianjin Jizhou Xincheng Construction Investment Co., Ltd. (天津薊州新城建設投資有限公司): Dispute over loan agreements

Reference

For details, please refer to the Announcement No. Temp 2022-053 issued by the Company on the designated media for information disclosure on 16 August 2022

For details, please refer to the Announcement No. Temp 2019-001, Announcement No. Temp 2019-056, Announcement No. Temp 2019-071, Announcement No. Temp 2019-096, Announcement No. Temp 2020-001, Announcement No. Temp 2020-013 and Announcement No. Temp 2022-050 issued by the Company on the designated media for information disclosure on 2 January 2019, 14 August 2019, 16 October 2019, 18 December 2019, 4 January 2020, 10 March 2020 and 21 July 2022 respectively

For details, please refer to the Announcement No. Temp 2022-049 issued by the Company on the designated media for information disclosure on 16 July 2022

For details, please refer to the Announcement No. Temp 2021-025 and Announcement No. Temp 2022-014 issued by the Company on the designated media for information disclosure on 8 May 2021 and 16 March 2022 respectively

For details, please refer to the Announcement No. Temp 2020-051, Announcement No. Temp 2020-069 and Announcement No. Temp 2022-016 issued by the Company on the designated media for information disclosure on 14 August 2020, 31 December 2020 and 16 March 2022 respectively

For details, please refer to the Announcement No. Temp 2022-015 issued by the Company on the designated media for information disclosure on 16 March 2022

SECTION 7 KEY MATTERS

Summary and type of the issue

Twelfth Metallurgical Company, a wholly-owned subsidiary of the Company, vs. China National Aviation Fuel Northern Storage and Transportation Co., Ltd. (中國航油集團北方儲運有限公司): Dispute over engineering construction contract

DING Jie vs. Tianjin Construction, a wholly-owned subsidiary of the Company: Dispute over engineering construction contract

Sixth Metallurgical Company, a wholly-owned subsidiary of the Company, vs. Chaoyang Construction Group Co., Ltd. (朝陽建設集團有限公司): Dispute over engineering construction contract

Sixth Metallurgical Company, a wholly-owned subsidiary of the Company, vs. Xinjiang Kingho Investment Holdings Co., Ltd. (新疆慶華投資控股有限公司): Dispute over engineering construction contract

Henan Jade Construction Co., Ltd. (河南省嘉德建設工程有限公司) vs. CNPT, a holding subsidiary of the Company, and the Housing and Urban-Rural Construction Department of Jianxi District, Luoyang City: Dispute over engineering construction contract

Twelfth Metallurgical Company, a wholly-owned subsidiary of the Company, vs. Pilatus Aircraft Maintenance Engineering (Chongqing) Co., Ltd. (皮拉圖斯飛機維修工程(重慶)有限公司): Dispute over engineering construction contract

Reference

For details, please refer to the Announcement No. Temp 2020-037, Announcement No. Temp 2020-060 and Announcement No. Temp 2022-030 issued by the Company on the designated media for information disclosure on 6 June 2020, 13 October 2020 and 20 April 2022 respectively

For details, please refer to the Announcement No. Temp 2022-015 and Announcement No. Temp 2022-037 issued by the Company on the designated media for information disclosure on 16 March 2022 and 19 May 2022 respectively

For details, please refer to the Announcement No. Temp 2022-038 issued by the Company on the designated media for information disclosure on 21 May 2022

For details, please refer to the Announcement No. Temp 2019-007 and Announcement No. Temp 2022-040 issued by the Company on the designated media for information disclosure on 21 February 2019 and 2 June 2022 respectively

For details, please refer to the Announcement No. Temp 2022-044 and Announcement No. Temp 2022-054 issued by the Company on the designated media for information disclosure on 18 June 2022 and 16 August 2022 respectively

For details, please refer to the Announcement No. Temp 2021-031 and Announcement No. Temp 2022-045 issued by the Company on the designated media for information disclosure on 13 July 2021 and 18 June 2022 respectively

SECTION 7 KEY MATTERS

(II) Particulars of litigation and arbitration events not disclosed in temporary announcements or with subsequent development

Applicable Not applicable

(Expressed in RMB'0,000)

During the reporting period:

Plaintiff (Applicant)	Defendant (Respondent)	Party with several and joint liability	Litigation or arbitration	Basic information of litigation (arbitration)	Amount concerning litigation (arbitration)	Whether estimated liability arose from the litigation (arbitration) and amount	Current status of the litigation (arbitration)	Results of trial of litigation (arbitration) and effects thereof	Enforcement of judgment of litigation (arbitration)
China Nonferrous Metals Industry's 12th Metallurgical Construction Co., Ltd.	Huainan Zhongsheng Real Estate Co., Ltd. (淮南中聖置業有限公司), Zhirongcheng Investment (Beijing) Co., Ltd. (智榮誠投資(北京)有限公司), Beijing Wuzhou Hengyou International Investment Co., Ltd. (北京五洲恒友國際投資有限公司), Ganzhou Hualong Real Estate Development Co., Ltd. (贛州華隆房地產開發有限公司), CHEN Quanhong	None	Litigation	Dispute over contract	75,199.00	No	Judgment handed down	Judgment in favour of Twelfth Metallurgical Company	Enforcement completed
Sixth Metallurgical Construction Company of China Nonferrous Metals Industry	Shougang Jingtang United Co., Ltd. (首鋼京唐聯合有限公司)	None	Litigation	Dispute over engineering construction contract	29,228.00	No	Judgment handed down	Judgment in favour of Sixth Metallurgical Company	Enforcement completed
Challeco (Tianjin) Construction Co., Ltd.	Tianjin Jinghai County Tianzi Yangguang Environmental Protection Co., Ltd. (天津市靜海縣天紫陽光環保有限公司), Tianzi Environmental Protection Investment Holdings Co., Ltd. (天紫環保投資控股有限公司), Tianzi Environmental Protection Equipment Manufacturing (Tianjin) Co., Ltd. (天紫環保裝備製造(天津)有限公司), GAO Weihua	Tianjin Zjinshan Environmental Protection Industry Investment Co., Ltd. (天津紫金山環保產業投資有限公司), Tianjin Wuqing District Tianzi Environmental Protection Co., Ltd. (天津市武清區天紫環保有限公司), Huazhiyuan International Trade (Tianjin) Co., Ltd. (華之源國際貿易(天津)有限公司), Tianzi Environmental Protection Industry Development Co., Ltd. (天紫環保產業開發有限公司)	Litigation	Dispute over construction engineering contract	17,669.55	No	Judgment handed down	Retrial dismissed	Under enforcement

(III) Other description

Applicable Not applicable

SECTION 7 KEY MATTERS

X. PUNISHMENTS UPON THE LISTED COMPANY AND ITS DIRECTORS, SUPERVISORS, SENIOR MANAGEMENT, CONTROLLING SHAREHOLDER, BENEFICIAL OWNER, ACQUIRER AND RECTIFICATIONS

Applicable Not applicable

XI. CREDIBILITY OF THE COMPANY AND ITS CONTROLLING SHAREHOLDER AND BENEFICIAL OWNER DURING THE REPORTING PERIOD

Applicable Not applicable

During the reporting period, the Company, and its controlling shareholder and beneficiary owner were in good credit conditions and did not have any bad credit conditions, such as failure to perform any effective judgments of the court and failure to pay any significant amounts of debts when due.

XII. SIGNIFICANT RELATED PARTY (CONNECTED) TRANSACTIONS

Significant related party (connected) transactions of the Group during the year ended 31 December 2022 are set out in Note “11 RELATED PARTIES AND THEIR TRANSACTIONS” to the financial statements. Some of the above related party (connected) transactions constitute connected transactions under the SSE Listing Rules, and also constitute connected transactions as prescribed in Chapter 14A under the HKEX Listing Rules. The aforementioned related party transactions have complied with the requirements of the SSE Listing Rules and Chapter 14A under the HKEX Listing Rules. Particulars of them are as follow:

(I) Non-exempt one-off connected transaction (disclosed as required by the HKEX Listing Rules)

1. Transfer of 52.6% equity interest in Miyu Company

On 24 September 2022, Chalieco, its wholly-owned subsidiaries and other vendors entered into an equity transfer agreement with the purchaser, Yunnan Infrastructure Investment, to transfer their 54% equity interest in Miyu Company in two installments. The equity transfer was a transfer of 43.6%, 9% and 0.1% equity interest in Miyu Company held by Chalieco and its wholly-owned subsidiaries, Chinalco Southwest Construction and CCCC Second Highway Engineering Co., Ltd., respectively, to Yunnan Infrastructure Investment. As the purchaser, Yunnan Infrastructure Investment, is a substantial shareholder of Miyu Company, it constitutes a connected person of the Company at the subsidiary level and the equity transfer constitutes a connected transaction of the Company at the subsidiary level.

Details of the transaction are set out in the relevant announcements disclosed by the Company on the website of the HKEX on 24 September 2022, 18 October 2022 and 19 October 2022.

SECTION 7 KEY MATTERS

2. Acquisition of 67% equity interest in Kunming Institute

On 27 November 2022, the Company entered into the Acquisition Agreement with Yunnan Metallurgical Group, pursuant to which, the Company agreed to acquire and Yunnan Metallurgical Group agreed to sell 67% equity interest in Kunming Institute held by it at the consideration of RMB47,131,271.55. Upon completion of the Acquisition, Kunming Institute will become a subsidiary of the Company.

Chinalco directly and indirectly holds 77.16% of the existing issued share capital of the Company and is the controlling shareholder of the Company and thus a connected person of the Company. Meanwhile, Chinalco holds 72.92% of the shares in the total issued share capital of China Copper Co., Ltd. and China Copper Co., Ltd. holds 99.99% of the shares in the total issued share capital of Yunnan Metallurgical Group, therefore Chinalco is the controlling shareholder of Yunnan Metallurgical Group. Therefore, for the purpose of Chapter 14A of the HKEX Listing Rules, Yunnan Metallurgical Group is deemed to be a connected person of the Company, as such, the Acquisition constitutes a connected transaction of the Company under Chapter 14A of the HKEX Listing Rules.

Details of the transaction are set out in the relevant announcements disclosed by the Company on the website of the HKEX on 27 November 2022 and 30 November 2022.

(II) Non-exempt continuing connected transactions

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

The annual caps and actual transaction amount of such continuing related party (connected) transactions for 2022 are set out in the following table:

Events of related party (connected) transactions	Related parties (connected persons)	2022	2022
		annual cap (RMB'0,000)	annual actual transaction amount (RMB'0,000)
1. Provision of engineering services by the Group	Chinalco	600,000.00	219,721.04
2. Provision of commodities by the Group	Chinalco	100,000.00	14,650.79
3. Provision of general services by the Group	Chinalco	10,000.00	2,266.72
4. Provision of general services to the Group	Chinalco	16,000.00	6,535.85
5. Provision of commodities to the Group	Chinalco	100,000.00	3,797.69
6. Provision of financial services to the Group – Deposit service	Chinalco Finance	600,000.00	424,382
7. Provision of financial services to the Group – Credit service	Chinalco Finance	800,000.00	347,920
8. Provision of financial services to the Group – Factoring service	Chinalco Finance	200,000.00	0
9. Provision of financial services to the Group – Other financial services	Chinalco Finance	330.00	0
10. Provision of factoring financing services to the Group	Chinalco Commercial	100,000.00	14,000
11. Provision of financial services such as financial leasing to the Group	Chinalco Finance Lease	100,000.00	0

SECTION 7 KEY MATTERS

1. Provision of engineering services by the Group

The Company entered into an engineering service master agreement with Chinalco on 30 October 2019, 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. For further details of the transaction, please refer to the H-share announcement “Announcement on Continuing Connected Transactions Entering Into Commodities Sales and Purchases Master Agreement, General Services Master Agreement and Engineering Services Master Agreement” (《持續關連交易訂立商品買賣總協議、綜合服務總協議及工程服務總協議公告》) issued by the Company on 30 October 2019 and the H-share circular dated 13 December 2019.

The initial term of the engineering service master agreement commenced from 1 January 2020 and shall expire on 31 December 2022, 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 of the listing places, Chinalco and its subsidiaries are the related parties (connected persons) of the Company. During the reporting period, the annual cap of this continuing related party (connected) transaction for 2022 was RMB6,000 million and the actual transaction amount was RMB2,197.2104 million.

2. Provision of commodities by the Group

The Company entered into a general sale and purchase agreement of commodities with Chinalco on 30 October 2019, 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, raw materials and commodities required for the production and operation of Chinalco. For further details of the transaction, please refer to the H-share announcement “Announcement on Continuing Connected Transactions Entering Into Commodities Sales and Purchases Master Agreement, General Services Master Agreement and Engineering Services Master Agreement” (《持續關連交易訂立商品買賣總協議、綜合服務總協議及工程服務總協議公告》) issued by the Company on 30 October 2019 and the H-share circular dated 13 December 2019.

The initial term of the general sale and purchase agreement of commodities commenced from 1 January 2020 and shall expire on 31 December 2022, 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 of the listing places, Chinalco and its subsidiaries are the related parties (connected persons) of the Company. During the reporting period, the annual cap of this continuing related party (connected) transaction for 2022 was RMB1,000 million and the actual transaction amount was RMB146.5079 million.

SECTION 7 KEY MATTERS

3. Provision of general services by the Group

The Company entered into a master agreement of general services with Chinalco on 30 October 2019, pursuant to which, the Company could provide certain categories of services to Chinalco and/or its associates from time to time, mainly including property leasing, warehousing and transportation and provision of operation management, labour services and services related to training. For further details of the transaction, please refer to the H-share announcement “Announcement on Continuing Connected Transactions Entering Into Commodities Sales and Purchases Master Agreement, General Services Master Agreement and Engineering Services Master Agreement” (《持續關連交易訂立商品買賣總協議、綜合服務總協議及工程服務總協議公告》) issued by the Company on 30 October 2019 and the H-share circular dated 13 December 2019.

The initial term of the master agreement of general services commenced from 1 January 2020 and shall expire on 31 December 2022, 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 master agreement of general services.

Chinalco is the controlling shareholder of the Company. Pursuant to the listing rules of the listing places, Chinalco and its subsidiaries are the related parties (connected persons) of the Company. During the reporting period, the annual cap of this continuing related party (connected) transaction for 2022 was RMB100 million and the actual transaction amount was RMB22,667,200.

4. Provision of general services to the Group

The Company entered into a master agreement of general services with Chinalco on 30 October 2019, pursuant to which, Chinalco and/or its associates could provide certain categories of services to the Group from time to time, mainly including warehousing, transportation and property leasing services and provision of technical services, back-up services, labour services and services related to training. For further details of the transaction, please refer to the H-share announcement “Announcement on Continuing Connected Transactions Entering Into Commodities Sales and Purchases Master Agreement, General Services Master Agreement and Engineering Services Master Agreement” (《持續關連交易訂立商品買賣總協議、綜合服務總協議及工程服務總協議公告》) issued by the Company on 30 October 2019 and the H-share circular dated 13 December 2019.

The initial term of the master agreement of general services commenced from 1 January 2020 and shall expire on 31 December 2022, 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 master agreement of general services.

Chinalco is the controlling shareholder of the Company. Pursuant to the listing rules of the listing places, Chinalco and its subsidiaries are the related parties (connected persons) of the Company. During the reporting period, the annual cap of this continuing related party (connected) transaction for 2022 was RMB160 million and the actual transaction amount was RMB65,358,500.

SECTION 7 KEY MATTERS

5. Provision of commodities to the Group

The Company entered into a master agreement of sale and purchase of commodities with Chinalco on 30 October 2019, 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 nonferrous products, manufacturing equipment, cement and engineering equipment and component related to nonferrous industry. For further details of the transaction, please refer to the H-share announcement “Announcement on Continuing Connected Transactions Entering Into Commodities Sales and Purchases Master Agreement, General Services Master Agreement and Engineering Services Master Agreement” (《持續關連交易訂立商品買賣總協議、綜合服務總協議及工程服務總協議公告》) issued by the Company on 30 October 2019 and the H-share circular dated 13 December 2019.

The initial term of the master agreement of sale and purchase of commodities commenced from 1 January 2020 and shall expire on 31 December 2022, 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 of the listing places, Chinalco and its subsidiaries are the related parties (connected persons) of the Company. During the reporting period, the annual cap of this continuing related party (connected) transaction for 2022 was RMB1,000 million and the actual transaction amount was RMB37,976,900.

6. Provision of financial services to the Group

The Company entered into a new financial services agreement with Chinalco Finance on 29 March 2021, effective for three years from the date of approval at the annual general meeting, which would supersede the old agreement.

The general terms are as follow:

Providing financial services to the Group, including deposit services, settlement services, credit services, factoring services and other financial services;

Deposit services:

The Group opens a deposit account with Chinalco Finance and deposits funds into the deposit account with Chinalco Finance based on the principle of freedom of deposit and withdrawal, which may be in form of demand deposit, time deposit, call deposit, agreement deposit, etc.;

The interest rates for deposits on the deposit services provided by Chinalco Finance to the Group 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 member entities for deposits with the same type during the same period;

SECTION 7 KEY MATTERS

Chinalco Finance guarantees the safety of the funds deposited by the Group, and pays them in full and in time on demand of the Group. If Chinalco Finance fails to pay the deposit to the Group on time and in full, the Company has the right to terminate this agreement, and can lawfully offset the deposit payable by Chinalco Finance to the Group against the loan from Chinalco Finance to the Group;

During the effective period of this new financial services agreement, the daily deposit balance (including any interest accrued thereon) of the deposit account of the Group shall not exceed RMB6 billion. During the reporting period, the actual maximum daily deposit balance was RMB4,243,820,000.

Settlement services:

Chinalco Finance provides payment services and collection services to the Group in accordance with the Group's instructions, as well as other auxiliary services related to settlement business;

Chinalco Finance provides the above settlement services for the Group for free;

Chinalco Finance shall ensure the safe operation of the fund settlement network, ensure the safety of funds, control the risk of assets and liabilities, and satisfy the payment requirements of the Group.

Credit services:

Subject to the relevant PRC laws and regulations, Chinalco Finance provides general credit services to the Group according to the operation and development needs of the Group. The Group can use the general credit line provided by Chinalco Finance for loans, bill acceptance, bill discounting, guarantee and other forms of financing business;

Chinalco Finance undertakes to provide the Group with a preferential loan interest rate, which is not higher than the benchmark loan interest rate for similar loans in the same period uniformly issued by the People's Bank of China from time to time, nor higher than the interest rates for similar loans of major domestic commercial banks in China in the same period;

Chinalco Finance shall provide credit to the Group on normal commercial terms without any asset guarantee from the Group;

During the term of the new financial services agreement, the daily loan balance (including accrued interest) provided by Chinalco Finance to the Group shall not exceed RMB8 billion. During the reporting period, the actual maximum daily loan balance was RMB3,479,200,000.

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Factoring services:

Subject to relevant PRC laws and regulations, Chinalco Finance provides accounts receivable factoring services for the Group according to the Group's operation and development needs;

Chinalco Finance undertakes that the cost of providing factoring services to the Group shall not be higher than the similar cost of major domestic factoring companies in China during the same period;

Specific matters related to factoring services shall be separately signed by both parties;

During the term of the new financial services agreement, the limit of the daily factoring business provided by Chinalco Finance to the Group shall not exceed RMB2 billion. During the reporting period, the actual transaction amount was RMB0.

Other financial services:

Chinalco Finance will provide the Group with entrusted loans and other financial services within its business scope according to the Group's instructions and requirements. Before Chinalco Finance provides other financial services to the Group, both parties shall negotiate and enter into a separate agreement;

The fees charged by Chinalco Finance for the provision of other financial services shall comply with the charging standards set by the People's Bank of China or the China Banking Regulatory Commission for such services, and shall not be higher than the fees charged by major domestic commercial banks in China for similar financial services. During the term of the new financial services agreement, the total fees charged by Chinalco Finance for providing other financial services to the Group for three years shall not be higher than RMB10 million. During the reporting period, the actual transaction amount was RMB0.

Subject to this agreement, the Group and Chinalco Finance shall further sign separate contracts/agreements for the provision of relevant specific financial services to agree on specific transaction terms. Such specific contracts/agreements shall follow the principles, terms of this financial service agreement, and relevant legal provisions. For further details of the transaction, please refer to the H-share announcement "Announcement on Connected Transaction and Major Transaction in Relation to Renewal of Financial Services Agreement" (《更新金融服務協議之關聯交易及主要交易公告》) issued by the Company on 29 March 2021 and the H-share circular dated 4 June 2021.

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As at the Latest Practicable Date, Chinalco directly held 73.56% of the existing issued share capital of the Company, was the controlling shareholder of the Company and became a related party (connected person) of the Company. At the same time, Chinalco directly held 85.2388% of Chinalco Finance and was the controlling shareholder of Chinalco Finance. Therefore, Chinalco Finance is regarded as a related party (connected person) of the Company for the purpose of the listing rules of the listing places. Accordingly, the new financial services agreement and the transactions thereunder constitute related party (connected) transactions under the listing rules of the listing places of the Company.

As calculated under the HKEX Listing Rules, the deposit services and their proposed caps and the factoring services and their proposed caps under the new financial services agreement have a maximum applicable percentage of more than 5%, therefore, the deposit services and their proposed caps and the factoring services and their proposed caps under the new financial services agreement are subject to the requirements for announcement, reporting and shareholders' approval under Chapter 14A of the HKEX Listing Rules. As the maximum applicable percentage of the deposit services and their proposed caps under the new financial services agreement is higher than 25% but lower than 75%, the deposit services constitute a major transaction of the Company under Chapter 14 of the HKEX Listing Rules and shall follow the requirements for announcement, reporting and shareholder approval under Chapter 14 of the HKEX Listing Rules.

As Chinalco Finance under the new financial services agreement provides settlement services to the Group free of charge, and each percentage of other financial services (if applicable) complies with the minimum exemption level stipulated in Rule 14A.76 of the HKEX Listing Rules, the settlement services and other financial services may be exempt from the requirements for reporting, announcement and independent shareholders' approval under Rule 14A.76 of the HKEX Listing Rules.

Given that the credit services provided by Chinalco Finance to the Group under the New Financial Services Agreement are on normal commercial terms, no less favourable than the terms on which independent third parties provide similar services to the Company in China, and the Group will not provide credit services in relation to No guarantee, the Credit Services is exempted from the reporting, announcement and independent shareholders' approval requirements pursuant to Rule 14A.90 of the HKEX Listing Rules.

As the maximum applicable percentage of the factoring service and its proposed cap under the new financial services agreement is higher than 5% but lower than 25%, the factoring service constitutes a discloseable transaction of the Company under Chapter 14 of the HKEX Listing Rules, It is also subject to the announcement and reporting requirements under Chapter 14 of the HKEX Listing Rules.

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7. Provision of factoring services to the Group

The Company renewed the factoring agreement with Chinalco Commercial Factoring Co., Ltd. on 27 October 2021. The Group transferred the Account Receivables under the Underlying Transaction Contracts to Chinalco Commercial. Chinalco Commercial agreed to the transfer of the aforesaid Account Receivables and provides the Group with factoring services. According to the anticipated conditions of business development, the Company renewed factoring agreement with Chinalco Commercial Factoring Co., Ltd. to specify an annual cap on factoring facility limit and total amount of the expenses occurred of RMB1 billion for 2022 to 2024. The term of the factoring service agreement shall be effective from the date of consideration and approval of the relevant motion at the general meeting of the Company and shall expire on 31 December 2024. For further details of the transaction, please refer to the H-share announcement “Announcement on the Renewal of the Factoring Agreement and Discloseable Transaction” (《續訂保理協議及須予披露交易公告》) issued by the Company on 27 October 2021 and the H-share circular dated 14 December 2021.

Chinalco is the controlling Shareholder of the Company. Pursuant to the listing rules of the listing places, Chinalco and its subsidiaries are the related parties (connected persons) of the Company. Chinalco Commercial Factoring Co., Ltd. is the subsidiary of Chinalco Capital, the subsidiary of Chinalco, and thus the related parties (connected persons) of the Company. During the reporting period, the annual cap of this continuing related party (connected) transaction for 2022 was RMB1,000 million and the actual transaction amount was RMB140 million.

8. Provision of financial services such as financial leasing to the Group

The Company entered into the finance leasing cooperation framework agreement with Chinalco Finance Lease Co., Ltd. on 30 October 2019, pursuant to which, Chinalco Finance Lease Co., Ltd. will provide the Group with financial services such as finance leasing. According to the agreement, the services provided by Chinalco Finance Lease Co., Ltd. to the Group include the provision of leasing services, investment and financing consulting services, and accounts receivable management services to the Group. The agreement is valid for three years from the date when the ordinary resolution on the entering into of the finance leasing cooperation framework agreement at the general meeting on 30 December 2019 was passed and signed by the parties. During the effective period of the agreement, Chinalco Finance Lease Co., Ltd. and the Group reached the intention of cooperation with a scale of RMB1 billion. Such facility was a revolving facility, that is, at any point in the effective period of the finance leasing cooperation framework agreement, the balance of finance leasing and other financial services (including leasing business, investment and financing consulting services and accounts receivable management) obtained by the Group from Chinalco Finance Lease Co., Ltd. was no more than RMB1 billion. For further details of the transaction, please refer to the H-share announcement “Announcement on Continuing Connected Transaction and Discloseable Transaction in Relation to the Entering into of the Finance Lease Framework Cooperation Agreement” (《訂立融資租賃框架合作協議之持續關連交易及須予披露的交易公告》) issued by the Company on 30 October 2019 and the H-share circular dated 13 December 2019.

SECTION 7 KEY MATTERS

Chinalco is the controlling Shareholder of the Company. Pursuant to the listing rules of the listing places, Chinalco and its subsidiaries are the related parties (connected persons) of the Company. Chinalco Finance Lease Co., Ltd. is a subsidiary of Chinalco Capital Holdings Limited, a subsidiary of Chinalco, and thus the related parties (connected persons) of the Company. During the reporting period, the annual cap of this continuing related party (connected) transaction for 2022 was RMB1,000 million and the actual transaction amount was RMB0.

The independent non-executive directors of the Company had reviewed each of the above continuing related party (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.

For the above related party (connected) transactions, the Directors also confirmed that the Company had complied with the disclosure requirements of the SSE Listing Rules and Chapter 14A of the HKEX Listing Rules.

(III) Connected transactions related to daily operations

1. Events disclosed in temporary announcements and without subsequent development or change in implementation

Applicable Not applicable

2. Events disclosed in temporary announcements but with subsequent development or change in implementation

Applicable Not applicable

3. Events not disclosed in temporary announcements

Applicable Not applicable

SECTION 7 KEY MATTERS

(IV) Connected transactions from acquisition and disposal of assets or equity interests

1. Events disclosed in temporary announcements and without subsequent development or change in implementation

Applicable Not applicable

2. Events disclosed in temporary announcements but with subsequent development or change in implementation

Applicable Not applicable

3. Events not disclosed in temporary announcements

Applicable Not applicable

4. In case of any guaranteed performance, whether the performance is achieved for the reporting period shall be disclosed

Applicable Not applicable

(V) Significant related party transactions in joint external investments

1. Events disclosed in temporary announcements and without subsequent development or change in implementation

Applicable Not applicable

2. Events disclosed in temporary announcements but with subsequent development or change in implementation

Applicable Not applicable

3. Events not disclosed in temporary announcements

Applicable Not applicable

SECTION 7 KEY MATTERS

(VI) Amounts due to or from related parties

1. Events disclosed in temporary announcements and without subsequent development or change in implementation

Applicable Not applicable

2. Events disclosed in temporary announcements but with subsequent development or change in implementation

Applicable Not applicable

3. Events not disclosed in temporary announcements

Applicable Not applicable

(Expressed in RMB'0,000)

Related parties	Connection relation	Provide funds to related parties			Provide funds to listed companies by related parties		
		Opening balance	Amount incurred	Ending balance	Opening balance	Amount incurred	Ending balance
Chinalco Finance Company Limited	Wholly owned subsidiary of parent company				396,100.00	-48,180	347,920
Chinalco Commercial Factoring (Tianjin) Co., Ltd. (中鋁商業保理(天津)有限公司)	Wholly owned subsidiary of parent company				14,000.00	-14,000.00	0
Total					410,100.00	-62,180	347,920
Reasons for the formation of related creditor's rights and debts	Funds provided by related parties to listed companies are finance company's borrowings, factoring borrowing						
The impact of related creditor's rights and debts on the company	No impact						

SECTION 7 KEY MATTERS

(VII) Financial business between the Company and the connected financial company, between the holding financial company and the related party

Applicable Not applicable

1. Deposit business

Applicable Not applicable

(Expressed in RMB'0,000)

Related party	Related party relationship	Daily maximum deposit limit	Range of deposit interest rate	Opening balance	Amount incurred during the period		Closing balance
					Total deposit amount for the period	Total withdrawal amount for the period	
Chinalco Finance	Subsidiary owned by the parent company	600,000	0.525% -1.495%	394,093	30,289		424,382
Total	/	/	/	394,093	30,289		424,382

2. Loan business

Applicable Not applicable

(Expressed in RMB'0,000)

Related party	Related party relationship	Loan facility	Range of loan interest rate	Opening balance	Amount incurred during the period		Closing balance
					Total loan amount for the period	Total repayment amount for the period	
Chinalco Finance	Subsidiary owned by the parent company	800,000	3.15%-4.35%	396,100	518,220	566,400	347,920
Total	/	/	/	396,100		566,400	347,920

SECTION 7 KEY MATTERS

3. Credit business or other financial business

Applicable Not applicable

(Expressed in RMB'0,000)

Related parties	Connection relation	Business type	Total	Actual amount incurred
Chinalco Finance Company Limited	Controlled subsidiary of parent company	Factoring business	200,000.00	0
Chinalco Finance Company Limited	Controlled subsidiary of parent company	Other financial services	330	0
Chinalco Commercial Factoring (Tianjin) Co., Ltd. (中鋁商業保理(天津)有限公司)	Wholly owned subsidiary of parent company	Factoring financing services	100,000.00	14,000
Chinalco Financial Leasing Co., Ltd.	Controlled subsidiary of parent company	General credit services	100,000.00	0

4. Other notes

Applicable Not applicable

(VIII) Other

Applicable Not applicable

XIII. MATERIAL CONTRACTS AND THEIR PERFORMANCE

(I) Custody, contracting and leasing matters

1. Custody

Applicable Not applicable

2. Contracting

Applicable Not applicable

3. Leasing

Applicable Not applicable

SECTION 7 KEY MATTERS

(II) Guarantees

✓ Applicable □ Not applicable

(Expressed in RMB'0,000)

Guarantor	Relation between guarantor and listed company		External guarantees (other than to subsidiaries)										Whether guarantee for related party or not	Connection	
			The guaranteed party	Guaranteed amount	Date of guarantee (date of signing)	Guarantee starting date	Guarantee ending date	Type of guarantee	Collateral (if any)	Guarantee		Overdue amount			Counter guarantee
										performed or not	Overdue or not				
Ninth Metallurgical Construction Co., Ltd. Harzhong Branch (漢中九冶建設有限公司)	Controlled subsidiary	Mian County Urban and Rural Infrastructure Construction Co., Ltd. (勉縣城鄉基礎設施建設有限公司)	4,540.00	2015/10/20	2015/10/20	2027/10/19	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	25,716.00	2019/12/18	2019/12/30	2047/10/30	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	21,430.00	2019/12/18	2020/3/31	2047/10/30	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	21,430.00	2019/12/18	2019/12/18	2047/10/30	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	30,002.00	2019/12/19	2019/12/19	2047/10/30	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	4,286.00	2020/7/2	2020/9/28	2045/9/27	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	8,572.00	2020/7/2	2020/9/28	2045/9/27	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	8,572.00	2020/7/2	2020/9/28	2045/9/27	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	12,858.00	2020/7/2	2021/1/4	2045/11/26	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	4,286.00	2020/7/2	2021/2/2	2045/11/26	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	8,572.00	2020/7/2	2021/2/25	2045/11/26	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	20,701.38	2020/7/2	2021/3/1	2045/11/26	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	12,858.00	2020/7/2	2021/3/31	2045/11/26	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	1,285.80	2020/7/2	2021/6/16	2045/11/26	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	1,800.12	2020/7/2	2021/7/5	2045/11/26	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	33,002.00	2020/7/2	2021/8/23	2045/11/26	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	27,716.00	2020/7/2	2021/8/31	2045/11/26	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	171.00	2021/2/25	2021/2/25	2045/11/26	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	3,986.00	2021/2/25	2021/3/1	2045/11/26	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	4,286.00	2021/2/25	2021/4/6	2045/11/26	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	7,286.00	2021/2/25	2021/7/26	2045/11/26	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	5,700.00	2021/2/25	2021/8/23	2045/11/26	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	17,143.00	2021/2/25	2021/10/12	2045/11/26	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	8,572.00	2021/2/25	2022/1/14	2045/11/26	General guarantee	Nil	No	No	0	Nil	No		

SECTION 7 KEY MATTERS

External guarantees (other than to subsidiaries)															
Guarantor	Relation between		Guaranteed amount	Date of guarantee		Guarantee starting date	Guarantee ending date	Type of guarantee	Collateral (if any)	Guarantee		Overdue amount	Counter guarantee	Whether guarantee for related party or not	Connection
	guarantor and listed company	The guaranteed party		(date of signing)						performed or not	Overdue or not				
Challeco	Headquarters	Ningyong Expressway	4,286.00	2021/2/25	2022/5/31	2045/11/26	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	34,288.90	2021/2/25	2022/5/31	2045/11/26	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	3,472.00	2021/3/17	2021/4/21	2048/3/18	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	4,372.00	2021/3/17	2021/5/26	2048/3/18	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	5,015.00	2021/3/17	2021/8/30	2048/3/18	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	8,572.00	2021/3/17	2021/10/28	2048/3/18	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	10,715.00	2021/3/17	2022/1/6	2048/3/18	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Ningyong Expressway	8,443.00	2021/3/17	2022/1/13	2048/3/18	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linyun Expressway	8,572.00	2019/12/18	2020/6/18	2047/10/30	Joint liability guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linyun Expressway	34,288.00	2019/10/31	2019/10/31	2047/10/30	Joint liability guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linyun Expressway	17,144.00	2019/12/18	2020/8/27	2048/8/26	Joint liability guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linyun Expressway	4,286.00	2020/9/28	2020/9/28	2047/9/27	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linyun Expressway	8,572.00	2020/9/28	2020/10/20	2048/10/19	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linyun Expressway	6,386.00	2020/9/25	2020/9/25	2045/9/25	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linyun Expressway	25,716.00	2020/9/28	2021/1/4	2048/1/3	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linyun Expressway	17,144.00	2021/1/5	2021/1/5	2043/1/4	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linyun Expressway	8,572.00	2021/6/24	2021/6/24	2045/1/4	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linyun Expressway	21,430.00	2021/6/24	2022/1/26	2045/1/4	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linyun Expressway	6,858.00	2021/6/24	2021/12/21	2045/1/4	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linyun Expressway	1,714.00	2021/6/24	2021/12/22	2045/1/4	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linyun Expressway	12,858.00	2021/6/24	2022/1/4	2045/1/4	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linyun Expressway	17,144.00	2021/6/24	2021/7/22	2045/1/4	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linyun Expressway	8,572.00	2021/6/24	2021/7/29	2045/1/4	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linyun Expressway	8,572.00	2021/6/24	2021/8/5	2045/1/4	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linyun Expressway	42,860.00	2021/6/24	2022/1/26	2045/1/4	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linshuang Expressway	3,000.00	2020/5/6	2018/11/23	2047/10/30	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linshuang Expressway	8,572.00	2020/5/6	2018/3/23	2047/10/30	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linshuang Expressway	8,572.00	2020/5/6	2019/2/14	2047/10/30	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linshuang Expressway	2,143.00	2020/5/6	2019/5/23	2047/10/30	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linshuang Expressway	10,715.00	2020/5/6	2019/9/5	2047/10/30	General guarantee	Nil	No	No	0	Nil	No		

SECTION 7 KEY MATTERS

External guarantees (other than to subsidiaries)															
Guarantor	Relation between		Guaranteed amount	Date of guarantee		Guarantee starting date	Guarantee ending date	Type of guarantee	Collateral (if any)	Guarantee		Overdue amount	Counter guarantee	Whether guarantee for related party or not	Connection
	guarantor and listed company	The guaranteed party		(date of signing)						performed or not	Overdue or not				
Challeco	Headquarters	Linshuang Expressway	17,144.00	2020/5/6	2019/11/7	2047/10/30	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linshuang Expressway	21,000.00	2020/5/6	2020/1/7	2047/10/30	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linshuang Expressway	4,286.00	2020/10/12	2020/11/4	2043/11/3	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linshuang Expressway	2,143.00	2021/3/16	2021/3/16	2044/3/15	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linshuang Expressway	4,286.00	2021/4/25	2021/4/25	2046/4/25	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linshuang Expressway	21,430.00	2020/12/22	2021/7/26	2046/4/25	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linshuang Expressway	2,143.00	2020/12/22	2021/3/16	2046/4/25	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linshuang Expressway	429.00	2020/12/22	2021/4/25	2046/4/25	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linshuang Expressway	3,857.00	2020/12/22	2021/6/17	2046/4/25	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linshuang Expressway	4,286.00	2020/12/22	2021/7/14	2046/4/25	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linshuang Expressway	12,558.00	2020/12/22	2021/7/29	2046/4/25	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linshuang Expressway	12,558.00	2020/12/22	2021/8/24	2046/4/25	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linshuang Expressway	8,572.00	2020/12/22	2021/12/8	2046/4/25	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linshuang Expressway	4,286.00	2020/12/22	2022/1/4	2046/4/25	General guarantee	Nil	No	No	0	Nil	No		
Challeco	Headquarters	Linshuang Expressway	33,233.34	2020/12/22	2022/3/28	2046/4/25	General guarantee	Nil	No	No	0	Nil	No		
Total amount of guarantees incurred during the reporting period (excluding guarantees to subsidiaries)														180,972.24	
Total guarantee balance at the end of the reporting period (A) (excluding guarantees to subsidiaries)														809,836.54	
Guarantees by the Company and its subsidiaries to subsidiaries															
Total amount of guarantees to subsidiaries during the reporting period															
Total balance of guarantees to subsidiaries at the end of the reporting period (B)														302,500.00	
The total amount of guarantees provided by the company (including guarantees to subsidiaries)															
Total amount of guarantees (A+B)														1,112,336.54	
The ratio of total guarantees to the company's net assets (%)														147.72	
Including:															
Amount of guarantee provided for shareholders, beneficiary owners and their related parties (C)															
The amount of debt guarantee provided directly or indirectly for the guaranteed entity whose asset-liability ratio exceeds 70% (D)														18,040	
The amount of the total guarantee exceeding 50% of the net assets (E)														1,054,336.54	
Sum of above 3 guarantee amounts (C+D+E)														1,072,376.54	
Unexpired guarantee may bear joint and several liability for repayment														Nil	
Description of guarantees														Nil	

SECTION 7 KEY MATTERS

(III) Particulars of cash under discretionary management

1. Wealth under discretionary management

(1) Overview of wealth under discretionary management

Applicable Not applicable

(2) Details of single case of wealth under discretionary management

Applicable Not applicable

2. Particulars of entrusted loans

(1) Overview of entrusted loans

Applicable Not applicable

Other information

Applicable Not applicable

(2) Details of single case of entrusted loans

Applicable Not applicable

Other information

Applicable Not applicable

(3) Provision for impairment of entrusted loans

Applicable Not applicable

3. Other information

Applicable Not applicable

SECTION 7 KEY MATTERS

(IV) Other material contracts

Applicable Not applicable

XIV. EXPLANATIONS OF OTHER KEY MATTERS THAT HAVE A SIGNIFICANT IMPACT ON INVESTORS' VALUE JUDGMENTS AND INVESTMENT DECISIONS

Applicable Not applicable

SECTION 8 CHANGES IN ORDINARY SHARES AND SHAREHOLDERS

I. CHANGES IN ORDINARY SHARE CAPITAL

(I) Changes in shares

1. Table of changes in shares

There was no change in the total number of shares and the structure of share capital of the Company during the reporting period.

2. Explanation of changes in shares

Applicable Not applicable

3. Impact (if any) of changes in shares on EPS, net assets per share and other financial indicators for the latest year and the latest period

Applicable Not applicable

4. Other information disclosure which the Company deems necessary or is required by the securities regulatory authority

Applicable Not applicable

(II) Particulars of changes in restricted shares

Applicable Not applicable

II. SECURITIES OFFERING AND LISTING

(I) Securities issuing during the reporting period

Applicable Not applicable

Particulars of securities issuing during the reporting period (outstanding bonds with different interest rate requires separate explanation):

Applicable Not applicable

SECTION 8 CHANGES IN ORDINARY SHARES AND SHAREHOLDERS

(II) Changes in total number of shares and shareholding structure of the Company and changes in assets and liabilities structure of the Company

Applicable Not applicable

(III) Existing internal employee shares

Applicable Not applicable

III. PARTICULARS OF SHAREHOLDERS AND BENEFICIARY OWNER

(I) Shareholding structure and public float

1. Shareholding structure

As of 31 December 2022, the Company had a total share capital of RMB2,959,066,667, divided into 2,959,066,667 shares (including 399,476,000 H shares and 2,559,590,667 A shares) at the nominal value of RMB1.00 per share.

2. Public float

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

(II) Total number of shareholders

Total number of ordinary shareholders by the end of reporting period	55,472
Total number of ordinary shareholders at end of the last month immediately preceding the disclosure date of the Annual Report	52,834
Total number of shareholders of preferred shares with voting right reinstated by the end of reporting period	Not applicable
Total number of shareholders of preferred shares with voting right reinstated at end of the last month immediately preceding the disclosure date of the Annual Report	Not applicable

SECTION 8 CHANGES IN ORDINARY SHARES AND SHAREHOLDERS

(III) Table of shareholding by top 10 shareholders and top 10 holders of circulating shares (or unrestricted shareholders) as of the end of the reporting period

(Shares)

Shareholder's name (full name)	Changes in reporting period	Shareholding of top 10 shareholders			Pledged, marked or frozen shares		Nature of shareholder
		Number of shares held at end of the year	%	Number of restricted shares held	Status of shares	Number	
Chinalco	0	2,176,758,534	73.56	0	Nil	0	State-owned legal person
HKSCC Nominees Limited	0	399,476,000	13.50	0	Unknown	/	Other
Luoyang Institute	0	86,925,466	2.94	0	Nil	0	State-owned legal person
Hong Kong Securities Clearing Company Limited	1,525,440	7,278,462	0.25	0	Nil	0	Other
Aladdin Environmental Protection Group Co., Ltd.	5,600,000	5,600,000	0.19	0	Nil	0	Other
Bank of Communications Co., Ltd. – GF CSI Engineering Trading Open Index Securities Investment Fund (交通銀行股份有限公司–廣發中證基建工程交易型開放式指數證券投資基金)	49,300	2,978,700	0.10	0	Nil	0	Other
GU Jing	0	2,567,000	0.09	0	Nil	0	Domestic natural person
LI Haiwen	2,145,177	2,145,177	0.07	0	Nil	0	Domestic natural person
Vanguard Investment Australia Ltd. – Vanguard Emerging Markets Stock Index Fund (Exchange)	0	1,830,300	0.06	0	Nil	0	Other
Huatai Securities Co., Ltd.	1,676,272	1,676,272	0.06	0	Nil	0	Other

SECTION 8 CHANGES IN ORDINARY SHARES AND SHAREHOLDERS

Shareholding of top 10 shareholders not subject to selling restrictions

Name of shareholder	Number of unrestricted shares held	Class and number of shares	
		Class	Number
Chinalco	2,176,758,534	Renminbi ordinary shares	2,176,758,534
HKSCC Nominees Limited ^(Note)	379,981,000	Overseas listed foreign shares	379,981,000
Luoyang Institute	86,925,466	Renminbi ordinary shares	86,925,466
Hong Kong Securities Clearing Company Limited	7,278,462	Renminbi ordinary shares	7,278,462
Aladdin Environmental Protection Group Co., Ltd.	5,600,000	Renminbi ordinary shares	5,600,000
Bank of Communications Co., Ltd. – GF CSI Engineering Trading Open Index Securities Investment Fund(交通銀行股份有限公司—廣發中證基建 工程交易型開放式指數證券投資基金)	2,978,700	Renminbi ordinary shares	2,978,700
GU Jing	2,567,000	Renminbi ordinary shares	2,567,000
LI Haiwen	2,145,177	Renminbi ordinary shares	2,145,177
Vanguard Investment Australia Ltd. – Vanguard Emerging Markets Stock Index Fund (Exchange)	1,830,300	Renminbi ordinary shares	1,830,300
Huatai Securities Co., Ltd.	1,676,272	Renminbi ordinary shares	1,676,272
Description of special account for repurchase of the top ten shareholders	Not applicable		
Explanations on the entrusting voting right, entrusted voting right and abstention of voting right of the above shareholders	Not applicable		

SECTION 8 CHANGES IN ORDINARY SHARES AND SHAREHOLDERS

Shareholding of top 10 shareholders not subject to selling restrictions

Name of shareholder	Number of unrestricted shares held	Class and number of shares	
		Class	Number
Explanation of related relationship or acting in concert in respect of the above shareholders			
Explanation of shareholders of preferred shares with reinstated voting rights and the number of shares held			

Note 1: The number of shares held by Chinalco did not include A shares of the Company indirectly held through its subsidiary Luoyang Institute and H shares of the Company indirectly held through its subsidiary Yunnan Aluminum International. Chinalco and its subsidiaries held a total of 2,283,179,000 shares of the Company, including 2,263,684,000 A shares and 19,495,000 H shares, accounting for 77.16% of the total share capital of the Company.

Note 2: The 19,495,000 H shares of the Company held by Chinalco through its subsidiary Yunnan Aluminum International were held by Hong Kong Securities Clearing Company Nominees Limited on its behalf.

Note 3: The 399,476,000 H shares of the Company held by Hong Kong Securities Clearing Company Nominees Limited included the 19,495,000 H shares held by Chinalco through its subsidiary Yunnan Aluminum International.

Note 4: Except the above, the Company is not aware that the above shareholders have any related relationship or are acting in concert among each other.

Not applicable

Number of shares held by top ten restricted shareholders and restriction conditions

Applicable Not applicable

(IV) Strategic investors or general legal persons who become top 10 shareholders due to rights issue

Applicable Not applicable

SECTION 8 CHANGES IN ORDINARY SHARES AND SHAREHOLDERS

(V) Interests and short positions of substantial shareholders in shares and underlying shares

As at 31 December 2022, so far as known to the directors of the Company, the following persons (other than the directors and senior management of the Company) had interests or short positions in the Shares and underlying Shares of the Company which would fall to be disclosed to the Company pursuant to Divisions 2 and 3 of Part XV of the SFO; or have the records of interests register to be kept under Section 336 of the SFO, or are deemed to carry the right to directly and or indirectly 5% or more in the nominal value of any class of share capital being voted at the general meeting of the Company in any circumstance:

Name of shareholder	Class of shares	Capacity/ nature of interest	Number of shares held (share)	Approximate percentage of shareholding in relevant class of shares (%) (Note 1)	Approximate percentage of shareholding in total share capital (%) (Note 1)
Chinalco (Note 2)	A Share	Beneficial owner	2,176,758,534 (Long position)	85.04	73.56
		Interest of controlled corporation	86,925,466 (Long position)	3.40	2.94
The Seventh Metallurgical Construction Group Co., Ltd.	H Share	Beneficial owner	69,096,000 (Long position)	17.30	2.34
CNMC Trade Company Limited	H Share	Beneficial owner	59,225,000 (Long position)	14.83	2.00
Peaktrade Investments Ltd.	H Share	Beneficial owner	59,210,000 (Long position)	14.82	2.00
Leading Gain Investments Limited (Note 3)	H Share	Nominee of another person (other than passive trustee)	29,612,000 (Long position)	7.41	1.00
China XD Group Co., Ltd.	H Share	Beneficial owner	29,612,000 (Long position)	7.41	1.00
Yunnan Tin (Hong Kong) Yuan Xing Company Limited	H Share	Beneficial owner	29,612,000 (Long position)	7.41	1.00

Note 1: The percentage is calculated by dividing number of relevant class of Shares in issue of the Company as at 31 December 2022 by total number of Shares.

Note 2: Chinalco is interested in 2,263,684,000 A Shares, representing approximately 76.50% of the total share capital of the Company. among which, Chinalco directly held 2,176,758,534 A shares, accounting for 73.56% of the total share capital of the Company. Luoyang Institute is a wholly-owned subsidiary of Chinalco and directly holds 86,925,466 A Shares, representing approximately 2.94% of the total share capital of the Company. Chinalco is therefore also deemed to be interested in the A Shares held by Luoyang Institute under the SFO.

Note 3: Leading Gain Investments Limited is the nominee holder of Beijing Jundao Technology Development Co., Ltd.

SECTION 8 CHANGES IN ORDINARY SHARES AND SHAREHOLDERS

IV. PARTICULARS OF CONTROLLING SHAREHOLDER AND BENEFICIAL OWNER

(I) Controlling shareholder

1 Legal person

Applicable Not applicable

Name	Chinalco
Principal or the legal representative	DUAN Xiangdong
Date of establishment	21 February 2001
Principal businesses	Bauxite mining (limited to the mining of the Maochang bauxite mine of Chalco, which is valid until 30 December 2038); dispatching laborers required for foreign engineering projects that are commensurate with its strength, scale and performance. Operation and management of state-owned assets and state-owned equity; production and sales of aluminum, copper, rare rare earth and related non-ferrous metal mineral products, smelted products, processed products, and carbon products; survey and design, general contracting of engineering construction, construction and installation; equipment manufacturing; technology development, technical services; import and export business. (Enterprises shall independently choose business projects and carry out business activities in accordance with the laws; the projects subject to approval at laws shall be carried out with approval by relevant authorities; it's not allowed to operate the projects prohibited and restricted by local industrial policies.)

SECTION 8 CHANGES IN ORDINARY SHARES AND SHAREHOLDERS

Name	Chinalco
<p>During the reporting period, the equity of other domestic and overseas listed companies controlled and participated by the company</p>	<p>As of 31 December 2022, in addition to the Company, other domestic and overseas listed companies controlled and participated by Chinalco included:</p> <ol style="list-style-type: none"> 1. Chinalco directly held 29.43% shares of Chalco (a company listed on the SSE (stock code: 601600) and the HKEX (stock code: 02600). Chinalco indirectly holds 40.23% shares of Ningxia Yinxing Energy Co., Ltd. (寧夏銀星能源股份有限公司) (a company listed on the SZSE, stock code: 000862) through Chinalco Ningxia Energy Group Co., Ltd. (中鋁寧夏能源集團有限公司), a subsidiary of Chalco. 2. Chinalco indirectly held 31.82% shares of Yunnan Copper Co., Ltd. (雲南銅業股份有限公司) (a company listed on the SZSE, stock code: 000878) through its subsidiary, Yunnan Copper (Group) Co., Ltd. (雲南銅業(集團)有限公司). 3. Chinalco indirectly held 13.00% shares and 29.10% shares of Yunnan Aluminum Co., Ltd. (雲南鋁業股份有限公司) (a company listed on the SZSE, stock code: 000807) through its subsidiaries Yunnan Metallurgical Group and Chinalco, respectively. 4. Chinalco indirectly held 38.19% shares of Yunnan Chihong Zinc and Germanium Co., Ltd. (雲南馳宏鋅鍺股份有限公司) (a company listed on the SSE, stock code: 600497) through its subsidiary, Yunnan Metallurgical Group.
<p>Explanation of other situation</p>	<p>Nil.</p>

2 Natural person

Applicable Not applicable

3 Special explanation in case the Company does not have a controlling shareholder

Applicable Not applicable

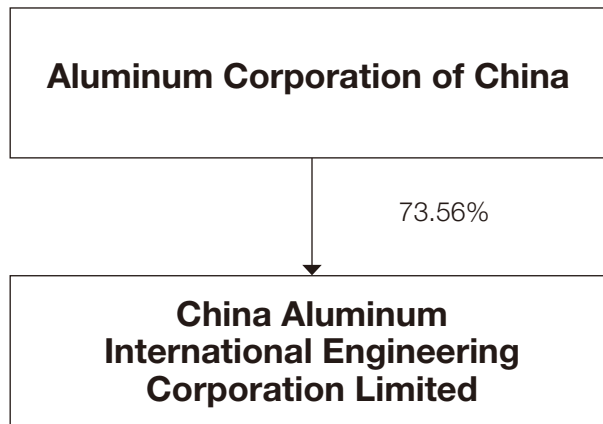
SECTION 8 CHANGES IN ORDINARY SHARES AND SHAREHOLDERS

4 Explanation on the change of controlling shareholder during the reporting period

Applicable Not applicable

5 Chart of property rights and shareholding structure between the Company and its controlling shareholder

Applicable Not applicable



(II) Beneficiary owner

1 Legal person

Applicable Not applicable

The Company's beneficiary owner is the State-owned Assets Supervision and Administration Commission of the State Council (國務院國有資產監督管理委員會).

2 Natural person

Applicable Not applicable

3 Special explanation in case the Company does not have a beneficiary owner

Applicable Not applicable

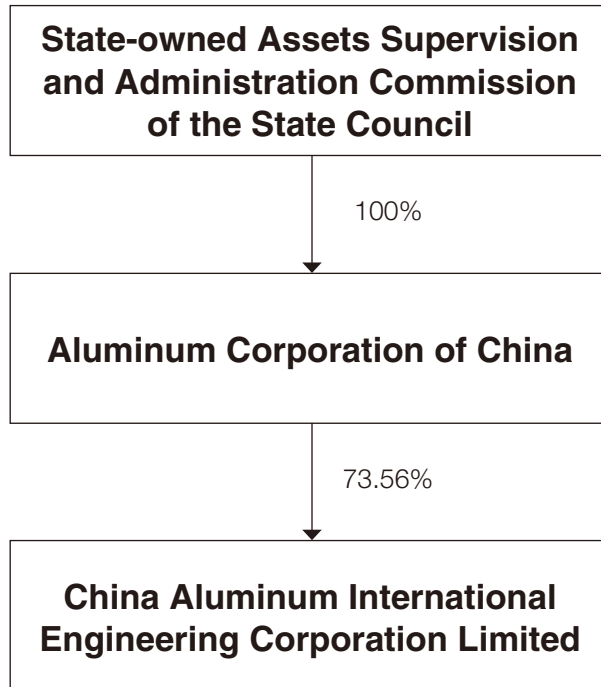
4 Explanation of change of beneficiary owner of the Company during the reporting period

Applicable Not applicable

SECTION 8 CHANGES IN ORDINARY SHARES AND SHAREHOLDERS

5 Chart of property rights and shareholding structure between the Company and its beneficiary owner

Applicable Not applicable



6 Beneficiary owner's control over the Company through trust or other asset management means

Applicable Not applicable

(III) Other information on controlling shareholder and beneficiary owner

Applicable Not applicable

SECTION 8 CHANGES IN ORDINARY SHARES AND SHAREHOLDERS

V. THE CONTROLLING SHAREHOLDER OR THE LARGEST SHAREHOLDER OF THE COMPANY AND ITS PERSONS ACTING IN CONCERT HAVE ACCUMULATIVELY PLEDGED SHARES THAT ACCOUNT FOR MORE THAN 80% OF THE COMPANY'S SHARES HELD BY THEM

Applicable Not applicable

VI. OTHER LEGAL PERSON SHAREHOLDERS HOLDING MORE THAN 10% OF THE SHARES

Applicable Not applicable

VII. DESCRIPTION ON RESTRICTIONS ON REDUCING SHAREHOLDING

Applicable Not applicable

VIII. SPECIFIC IMPLEMENTATION OF SHARE REPURCHASE DURING THE REPORTING PERIOD

Applicable Not applicable

IX. PREEMPTIVE RIGHT, SHARE OPTION ARRANGEMENT

The Company is not required to offer the preemptive right on new shares to existing shareholders of the Company in proportion to their shareholding percentages, under the Articles of Association or the PRC laws.

SECTION 9 PARTICULARS OF PREFERRED SHARES

Applicable Not applicable

SECTION 10 PARTICULARS OF BONDS

I. DEBENTURES, CORPORATE BONDS AND NON-FINANCIAL CORPORATE DEBT FINANCING INSTRUMENTS

Applicable Not applicable

(I) Debentures

Applicable Not applicable

(II) Corporate bonds

Applicable Not applicable

1. Basic information on corporate bonds

(Expressed in RMB)

Bond name	Abbreviation	Code	Date of issuance	Value date	Maturity date	Balance	Rate (%)	Repayment terms	Trading place	Investor suitability arrangements (if any)	Trading mechanism	Whether there is a risk of de-listing?
2019 Yearly Renewable Corporate Bonds	19 ZG Y1	155867	30/10/2019	30/10/2019	29/10/2022	0	5.29%	Interest shall be paid once a year, and the bond shall be redeemed in one lump sum upon maturity	SSE		On-market transaction	No

Countermeasures for the risk of bonds de-listing

Applicable Not applicable

Overdue bonds

Applicable Not applicable

Information on payment of principal of and interest on bonds during the reporting period

Applicable Not applicable

Bond name

Description of interest payment

19 ZG Y1

Interest payment and redemption have been made according to contract

SECTION 10 PARTICULARS OF BONDS

2. Triggering and enforcement of issuer or investor option provisions, investor protection provisions

Applicable Not applicable

3. Intermediaries providing services for bond issuance and duration business

Name of intermediary	Office address	Contact	Telephone
Ping An Securities Co. Ltd	Floor 22-25, Block B, Ping An Financial Center, No. 5023 Yitian Road, Futian Street, Futian District, Shenzhen City	DONG Jingjing	185 1591 8250

Changes in the above-mentioned intermediaries

Applicable Not applicable

4. Use of proceeds from offerings at the end of the reporting period

Applicable Not applicable

(Expressed in RMB100 million)

Bond name	Total amount of proceeds	Amount utilised	Amount unutilised	Operational status of the proceeds special account (if any)	Rectification of non-compliant use of proceeds (if any)	Whether consistent with the purpose, use plan and other agreements contained in the Prospectus?
19 ZG Y1	15	15	0	Nil	Nil	Yes

The progress and operational benefits of proceeds used for construction projects

Applicable Not applicable

Explanation of changes in the use of proceeds from foregoing bonds offering within the reporting period

Applicable Not applicable

Other explanation

Applicable Not applicable

SECTION 10 PARTICULARS OF BONDS

5. Adjustment to credit rating results

Applicable Not applicable

Bond name	Name of credit rater	Rating	Prospective change	Reason for change of rating results
19 ZG Y1	United Credit Ratings Co., Ltd.	Bond issuer changed from 2A+ to 2A	From negative to stable	Loss in 2021

Other explanation

Applicable Not applicable

6. Implementation and changes of guarantees, debt repayment plans and other debt repayment guarantee measures during the reporting period and their impact

Applicable Not applicable

Status quo	Execution	Any change or not?	After change	Reason for change	Whether such change is approved by competent authorities?	The impact of the change on the rights and interests of bond investors
Chinalco provides guarantees	The bond has been redeemed, with the principal and interest repaid normally and the guarantee released	No				

7. Explanation of other situations of corporate bonds

Applicable Not applicable

SECTION 10 PARTICULARS OF BONDS

(III) Non-financial corporate debt financing instruments in the inter-bank bond market

Applicable Not applicable

(IV) The loss in the scope of the consolidated financial statements of the Company during the reporting period exceeded 10% of the net assets at the end of the previous year

Applicable Not applicable

(V) Overdue interest-bearing debts other than bonds at the end of the reporting period

Applicable Not applicable

(VI) The impact of violations of laws and regulations, the Articles of Association, information disclosure affairs management system and the stipulations or commitments in the Prospectus during the reporting period on the rights and interests of bond investors

Applicable Not applicable

SECTION 10 PARTICULARS OF BONDS

(VII) Accounting data and financial indicators of the Company for the past 2 years as of the end of the reporting period

Applicable Not applicable

(Expressed in RMB0'000)

Key indicators	2022	2021	Change for the period as compared with that of the same period of last year (%)	Reason for change
Net profit attributable to shareholders of the listed company net of non-recurring profit and loss	-42,559.17	-115,725.62	N/A	Net profit increase YoY
Current ratio	1.23	1.25	-1.09	-
Quick ratio	1.14	1.16	-2.08	-
Asset-liability ratio (%)	77.94	72.74	Up by 5.2 percentage points	-
EBITDA to total debt ratio	0.062	N/A	-	-
Interest coverage ratio	1.58	N/A	-	-
Cash interest coverage ratio	15.54	14.06	10.49	-
EBITDA interest coverage multiple	2.18	N/A	-	-
Loan repayment rate (%)	100	100	-	-
Interest coverage ratio (%)	100	100	-	-

II. CONVERTIBLE CORPORATE BONDS

Applicable Not applicable

SECTION 11 FINANCIAL REPORT



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網址Internet : www.daxincpa.com.cn

Auditor's Report

DA XIN SHEN ZI [2023] No. 100185

To the Shareholders of China Aluminum International Engineering Corporation Limited,

I. OPINION

We have audited the accompanying financial statements of China Aluminum International Engineering Corporation Limited (hereinafter referred to as the "Company"), which comprise the consolidated and company statements of financial position as at 31 December 2022, and the consolidated and company statements of comprehensive income, the consolidated and company statements of cash flows and the consolidated and company statements of changes in shareholders' equity for 2022, and notes to the financial statements.

In our opinion, the accompanying financial statements, in all material respects, have been prepared in accordance with the requirements of Accounting Standards for Business Enterprises and give a true and fair view of the consolidated and company financial position as at 31 December 2022, and the consolidated and company financial performance and cash flows 2022.

II. BASIS FOR OPINION

We conducted our audit in accordance with the China Certified Public Accountants Auditing Standards. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the Company in accordance with China Code of Ethics for Certified Public Accountants (the "Code"), and we have fulfilled our other ethical responsibilities in accordance with the Code.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

SECTION 11 FINANCIAL REPORT

III. KEY AUDIT MATTERS

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

(I) Revenue and cost recognition on construction contracts

1. Description of the matter

For accounting policies and disclosures related to the revenue and cost on construction contracts, refer to Notes “(26) Revenue” and “(35) Key assumptions and uncertainties in important judgments and accounting estimates made in applying accounting policies” under “3. Significant Accounting Policies and Accounting Estimates”, and (47) Operating Income and Operating Costs” under “5. Notes to Important Items in Consolidated Financial Statements”.

The revenue and profit of the Company mainly are derived from the construction operations. In the Company’s consolidated statement of comprehensive income for 2022, the construction operations accounted for 78.24% of the operating income and 80.57% of the operating cost. The Company recognizes revenue and cost of such business over time by measuring the performance progress if it can be reasonably determined, which involves significant judgments, such as the continuous and reasonable estimation of the expected total contract revenue and total contract cost throughout the contract period. Therefore, we identify it as a key audit matter.

2. Audit response

Our audit procedures for revenue and cost recognition on construction contracts mainly include:

- (1) Understanding, assessing and testing the effectiveness of related key internal control design in relation to construction contracts during the reporting period;
- (2) Sampling construction projects and examining the relevant contract, cost budget, etc. which the expected total contract revenue and total contract cost are based on, to assess whether the estimation made by the management is reasonable and whether the basis is sufficient;

SECTION 11 FINANCIAL REPORT

- (3) Examining the contract costs incurred during the reporting period by tracing to external supporting documentation on a sampling basis;
- (4) Carrying out a cut-off test procedure to check whether related contract costs were recognized in the proper accounting period;
- (5) Analysing gross margin of major construction contracts;
- (6) Sampling construction projects to recalculate their performance progress and focus on the accuracy of accounting data recognized;
- (7) Visiting the selected sites of major construction projects, discussing with the project management department the extent to which the construction work was completed, comparing to the performance progress in record, and making a further examination for unusual deviations if necessary.

(II) Expected credit losses of receivables and contract assets and provision for impairment of inventories

1. Description of the matter

For relevant accounting policies and disclosures, refer to Notes “(11) Determination and accounting treatment of expected credit loss” and “(35) Key assumptions and uncertainties in important judgments and accounting estimates made in exercising accounting policies” under “3. Significant Accounting Policies and Accounting Estimates”, and “5. Notes to Important Items in Consolidated Financial Statements”.

The Company makes provision for bad debts for receivables and contract assets based on expected credit risks, which is measured at the lower of cost and net realizable value and recognizes the provision for impairment of inventories. As at 31 December 2022, the Company had the balance of accounts receivable of RMB18,611.4996 million, other receivables of RMB3,599.5085 million, inventories of RMB3,406.2305 million, contract assets of RMB8,522.7389 million, long-term receivables (including the portion presented in current portion of non-current assets) of RMB2,562.5985 million and long-term contract assets (presented in other non-current assets) of RMB784.2276 million, and the provision for bad debts were RMB3,346.4607 million, RMB1,132.8744 million, RMB551.2763 million, RMB661.1807 million, RMB422.2078 million and RMB5.1372 million respectively. The management continuously evaluated the expected credit losses on these assets based on relevant information available to it. Considering the assumptions and input values which the management used in impairment testing depend on significant judgment, we identify this as a key audit matter.

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2. Audit response

Our audit procedures for provision for bad debts of receivables and contract assets and recognition of provision for impairment of inventories mainly include:

- (1) Understanding, assessing and testing the effectiveness of related key internal control design in relation to the credit approval and expected credit losses testing and provision for impairment of inventories, and testing the operational effectiveness during the Reporting Period;
- (2) Reviewing relevant considerations and objective evidence which the management used in assessing expected credit risk of receivables and contract assets and provision for impairment of inventories, including determination of provision matrix and reasonable expected credit loss rate;
- (3) For receivables and contract assets individually assessed for expected credit losses, reviewing whether the management made appropriate estimation of expected future cash flows by tracing to supporting evidence, such as mortgage and security agreements, third party evaluation report on the pledged assets, the repayment plan;
- (4) Obtaining the relevant documents of the Company in connection with inventories impairment test, checking whether it is implemented in accordance with the Company's relevant accounting policies, and analyzing whether the provision for inventory impairment is sufficient;
- (5) Based on the contracts, settlement data and other information, review the relevant assets for which ECL is treated using a portfolio approach, and whether the age division and provision for bad debts are accurate.

IV. OTHER INFORMATION

The management of the Company (the "management") is responsible for the other information. The other information comprises all of the information included in the Company's annual report for 2022 other than the financial statements and our auditor's report thereon.

Our opinion on the 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 financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the 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.

SECTION 11 FINANCIAL REPORT

V. RESPONSIBILITIES OF THE MANAGEMENT AND THOSE CHARGED WITH GOVERNANCE FOR THE FINANCIAL STATEMENTS

The management of the Company is responsible for the preparation of the financial statements that give a true and fair view in accordance with Accounting Standards for Business Enterprises, and for such internal control as the management determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the management is responsible for assessing the Company'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 management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

VI. AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the 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 Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Auditing Standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- (1) Identify and assess the risks of material misstatement of the 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.
- (2) Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but the purpose is not to issue opinions on the effectiveness of the internal control.
- (3) Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the management.

SECTION 11 FINANCIAL REPORT

- (4) Conclude on the appropriateness of the management's 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 Company'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 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 Company to cease to continue as a going concern.
- (5) Evaluate the overall presentation, structure and content of the financial statements, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance 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 those charged with governance 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 safeguard.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current year 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.

WUYIGE Certified Public Accountants LLP.

China Certified Public Accountant:
(Engagement Partner)

Beijing • China

China Certified Public Accountant:

7 March 2023

SECTION 11 FINANCIAL REPORT

CONSOLIDATED BALANCE SHEET

As at 31 December 2022

Prepared by: China Aluminum International Engineering Corporation Limited

Unit: RMB

Item	Note	At 31 December 2022	At 1 January 2022
Current assets			
Monetary fund	5.1	7,673,528,418.08	7,649,761,265.33
Held-for-trading financial assets			
Derivative financial assets			
Notes receivable	5.2	6,450,051.85	8,232,891.32
Accounts receivable	5.3	15,265,038,841.17	16,087,389,200.87
Factoring of receivables	5.4	690,552,523.80	850,764,672.89
Prepayments	5.5	474,058,301.33	366,118,531.55
Other receivables	5.6	2,477,444,998.48	2,364,992,479.66
Including: Interest receivable		2,685,407.11	540,607.12
Dividends receivable		8,125,422.21	
Inventories	5.7	2,854,954,239.10	2,518,257,189.10
Contract assets	5.8	7,861,558,185.85	7,590,171,690.43
Held-for-sale assets			
Non-current assets due within 1 year	5.9	396,416,681.30	514,100,256.82
Other current assets	5.10	482,277,380.99	540,913,030.05
Total current assets		38,182,279,621.95	38,490,701,208.02
Non-current assets:			
Debt investments			
Other debt investments			
Long-term receivables	5.11	1,743,974,050.77	1,565,014,108.98
Long-term equity investments	5.12	750,757,956.51	739,610,025.01
Other equity instrument investments	5.13	57,167,316.12	75,201,152.89
Other non-current financial assets	5.14		18,900,000.00
Investment properties	5.15	574,943,129.95	570,834,584.04
Fixed assets	5.16	2,313,140,998.19	2,435,419,919.19
Construction in progress	5.17	195,714,635.58	171,343,709.16
Bearer biological assets			
Oil & gas assets			
Rights-of-use assets	5.18	11,551,936.28	17,880,669.22
Intangible assets	5.19	1,263,638,376.97	1,221,362,751.90
Development costs	5.20	3,823,008.84	1,475,176.19
Goodwill	5.21	875,128.92	875,128.92
Long-term unamortized expenses	5.22	43,225,634.12	53,289,871.99
Deferred income tax assets	5.23	1,016,977,021.41	967,939,226.46
Other non-current assets	5.24	1,233,219,776.26	13,692,909,128.57
Total non-current assets		9,209,008,969.92	21,532,055,452.52
Total assets		47,391,288,591.87	60,022,756,660.54

SECTION 11 FINANCIAL REPORT

Item	Note	At 31 December 2022	At 1 January 2022
Current liabilities			
Short-term borrowings	5.25	4,184,225,133.38	5,550,885,676.25
Held-for-trading financial liabilities			
Derivative financial liabilities			
Notes payable	5.26	3,396,337,223.41	2,788,672,102.44
Accounts payable	5.27	12,668,377,946.71	14,220,958,404.37
Prepayments			
Contract liabilities	5.28	3,558,737,947.31	3,284,513,086.37
Employee compensation payable	5.29	210,506,008.36	191,077,389.94
Taxes payable	5.30	216,321,008.98	265,784,044.46
Other payables	5.31	1,878,302,295.81	2,415,412,347.14
Including: Interest payable			
Dividends payable		2,408,891.77	2,408,891.77
Held-for-sale liabilities			
Non-current liabilities due within 1 year	5.32	3,137,364,751.02	523,806,150.84
Other current liabilities	5.33	1,723,137,407.53	1,640,527,324.36
Total current liabilities		30,973,309,722.51	30,881,636,526.17
Non-current liabilities:			
Long-term borrowings	5.34	5,257,000,000.00	12,022,204,583.61
Debentures payable			
Including: Preferred stock			
Perpetual bonds			
Lease liabilities	5.35	8,533,686.59	6,176,716.15
Long-term payables	5.36	1,479,611.80	1,784,426.56
Long-term employee compensation payable	5.37	562,411,000.00	616,620,150.00
Estimated liabilities			
Deferred income	5.38	61,250,000.00	56,000,000.00
Deferred income tax liabilities	5.23	72,247,308.20	73,611,585.93
Other non-current liabilities			
Total non-current liabilities		5,962,921,606.59	12,776,397,462.25
Total liabilities		36,936,231,329.10	43,658,033,988.42

SECTION 11 FINANCIAL REPORT

Item	Note	At 31 December 2022	At 1 January 2022
Shareholders' equity			
Share capital	5.39	2,959,066,667.00	2,959,066,667.00
Other equity instruments	5.40	2,433,684,905.65	2,498,584,905.65
Including: Preferred stock			
Perpetual bonds		2,433,684,905.65	2,498,584,905.65
Capital reserve	5.41	919,256,699.11	976,297,358.53
Less: treasury stock			
Other comprehensive income	5.42	170,070,702.57	101,839,549.57
Special reserve	5.43	219,378,446.60	159,810,487.28
Surplus reserve	5.44	229,735,034.17	224,473,908.75
Undistributed profit	5.45	598,623,010.70	614,643,360.99
Total shareholders' equity attributable to the parent		7,529,815,465.80	7,534,716,237.77
Minority interests		2,925,241,796.97	8,830,006,434.35
Total shareholders' equity		10,455,057,262.77	16,364,722,672.12
Total liabilities and shareholders' equity		47,391,288,591.87	60,022,756,660.54

Legal representative:
LI Yihua

Accounting principal:
ZHANG Jian

Accounting function's principal:
ZHANG Xiuyin

SECTION 11 FINANCIAL REPORT

BALANCE SHEET OF THE PARENT

As at 31 December 2022

Prepared by: China Aluminum International Engineering Corporation Limited

Unit: RMB

Item	Note	At 31 December 2022	At 31 December 2021
Current assets			
Monetary fund		3,093,788,236.93	2,474,632,903.75
Held-for-trading financial assets			
Derivative financial assets			
Notes receivable			
Accounts receivable	15.1	910,785,572.82	1,146,826,637.96
Factoring of receivables		26,490,087.12	10,862,737.73
Prepayments		147,161,887.02	103,986,735.95
Other receivables	15.2	6,707,653,693.23	5,720,729,563.93
Including: Interest receivable		346,630,755.55	335,554,019.42
Dividends receivable		660,029,198.75	573,773,776.54
Inventories		2,401,849.08	12,293,186.35
Contract assets		659,764,712.01	544,629,235.37
Held-for-sale assets			
Non-current assets due within 1 year		395,000,212.11	968,699,529.49
Other current assets		73,763,221.85	64,811,867.32
Total current assets		12,016,809,472.17	11,047,472,397.85
Non-current assets:			
Debt investments			
Other debt investments			
Long-term receivables		567,491,560.72	876,242,248.37
Long-term equity investments	15.3	7,578,994,749.11	7,591,328,036.59
Other equity instrument investments			18,180,000.00
Other non-current financial assets			18,900,000.00
Investment properties			
Fixed assets		68,528,228.13	72,582,883.00
Construction in progress			
Bearer biological assets			
Oil & gas assets			
Rights-of-use assets			
Intangible assets		128,660,058.74	134,554,452.12
Development costs		3,823,008.84	
Goodwill			
Long-term unamortized expenses		373,444.68	130,632.50
Deferred income tax assets		135,805,408.84	154,438,876.21
Other non-current assets			
Total non-current assets		8,483,676,459.06	8,866,357,128.79
Total assets		20,500,485,931.23	19,913,829,526.64

SECTION 11 FINANCIAL REPORT

Item	Note	At 31 December 2022	At 31 December 2021
Current liabilities			
Short-term borrowings		1,901,743,333.34	2,964,860,833.36
Held-for-trading financial liabilities			
Derivative financial liabilities			
Notes payable		367,391,752.71	441,508,727.71
Accounts payable		1,508,926,167.78	1,609,747,579.78
Prepayments			
Contract liabilities		1,165,704,533.58	1,089,998,413.87
Employee compensation payable		3,992,294.76	2,914,045.31
Taxes payable		26,320,606.44	12,400,804.84
Other payables		2,013,186,390.77	1,187,606,523.26
Including: Interest payable			
Dividends payable			
Held-for-sale liabilities			
Non-current liabilities due within 1 year		3,081,948,064.30	5,895,694.42
Other current liabilities		3,317,686.07	33,009,077.81
Total current liabilities		10,072,530,829.75	7,347,941,700.36
Non-current liabilities:			
Long-term borrowings		3,770,100,000.00	5,728,619,329.16
Debentures payable			
Including: Preferred stock			
Perpetual bonds			
Lease liabilities			
Long-term payables			
Long-term employee compensation payable		3,533,000.00	3,620,000.00
Estimated liabilities			
Deferred income			
Deferred income tax liabilities			
Other non-current liabilities			
Total non-current liabilities		3,773,633,000.00	5,732,239,329.16
Total liabilities		13,846,163,829.75	13,080,181,029.52

**SECTION 11 FINANCIAL REPORT**

Item	Note	At 31 December 2022	At 31 December 2021
Shareholders' equity			
Share capital		2,959,066,667.00	2,959,066,667.00
Other equity instruments		2,433,684,905.65	2,498,584,905.65
Including: Preferred stock			
Perpetual bonds		2,433,684,905.65	2,498,584,905.65
Capital reserve		1,146,631,158.59	1,190,696,521.57
Less: treasury stock			
Other comprehensive income		12,210,270.00	12,049,620.00
Special reserve		32,593.58	-23,298.32
Surplus reserve		229,735,034.17	224,473,908.75
Undistributed profit		-127,038,527.51	-51,199,827.53
Total shareholders' equity		6,654,322,101.48	6,833,648,497.12
Total liabilities and shareholders' equity		20,500,485,931.23	19,913,829,526.64

Legal representative:
LI Yihua

Accounting principal:
ZHANG Jian

Accounting function's principal:
ZHANG Xiuyin

SECTION 11 FINANCIAL REPORT

CONSOLIDATED INCOME STATEMENT

For Year 2022

Prepared by: China Aluminum International Engineering Corporation Limited

Unit: RMB

Item	Note	Amount for the current period	Amount for the previous period
I. Operating revenue	5.46	23,697,328,916.22	23,898,723,442.93
Less: operating cost	5.46	20,673,212,130.54	20,798,327,375.06
operating taxes and surcharges	5.47	115,732,702.01	114,765,163.52
Sales expense	5.48	119,272,692.47	98,168,610.08
Administrative expense	5.49	1,069,078,720.94	1,062,814,146.08
R&D expense	5.50	912,066,186.50	785,495,083.63
Finance expense	5.51	287,347,618.25	552,785,288.42
Including: Interest expense		493,886,128.88	544,000,338.69
Interest income		168,585,014.36	124,741,935.44
Add: other gains	5.52	3,665,239.91	2,102,015.58
Gain on investment (“-” for loss)	5.53	163,221,219.90	-49,760,669.72
Including: Share of investment gain on associates and joint ventures		16,152,434.50	12,574,082.25
Gain on de-recognition of financial assets measured at amortized cost		16,531,622.47	-32,316,624.33
Gain on exposure netting (“-” for loss)			
Gain on fair value change (“-” for loss)	5.54		-4,775,780.00
Credit impairment loss (“-” for loss)	5.55	-364,249,998.51	-1,047,446,543.63
Asset impairment loss (“-” for loss)	5.56	-25,537,309.45	-329,133,831.88
Gain on disposal of assets (“-” for loss)	5.57	841,004.95	3,365,964.63
II. Operating profit (“-” for loss)		298,559,022.31	-939,281,068.88
Add: non-operating income	5.58	31,444,433.56	52,764,140.23
Less: non-operating expense	5.59	45,028,853.45	49,902,964.71
III. Total profit (“-” for total loss)		284,974,602.42	-936,419,893.36
Less: income tax expense	5.60	80,097,569.12	106,042,205.22
IV. Net profit (“-” for net loss)		204,877,033.30	-1,042,462,098.58
(1) By business continuity:			
1. Net profit from continuing operations (“-” for net loss)		204,877,033.30	-1,042,462,098.58
2. Net profit from discontinued operations (“-” for net loss)			
(2) By attributable ownership:			
1. Net profit attributable to shareholders of the parent company (“-” for net loss)		112,506,304.80	-1,070,420,931.60
2. Loss or profit attributable to minority interests (“-” for net loss)		92,370,728.50	27,958,833.02

SECTION 11 FINANCIAL REPORT

Item	Note	Amount for the current period	Amount for the previous period
V. Other comprehensive income, net of tax		66,957,296.22	-17,194,970.26
(I) Other comprehensive income attributable to shareholders of the parent, net of tax		68,231,153.00	-19,952,911.77
1. Items that may not be reclassified to profit or loss		-6,264,545.92	1,091,401.18
(1) Change on remeasurement of defined benefit plan		-8,223,942.67	-4,876,071.18
(2) Other comprehensive income under equity method that may not be transferred to profit or loss			
(3) Change in fair value of other equity instrument investment		1,959,396.75	5,967,472.36
(4) Fair value change arising from credit risk of the Company			
2. Items that will be reclassified subsequently to profit or loss		74,495,698.92	-21,044,312.95
(1) Other comprehensive income under equity method that may be transferred to profit or loss			
(2) Change in fair value of other debt investments			
(3) Amount recorded in other comprehensive income upon financial assets reclassification			
(4) Credit impairment provision for other debt investment			
(5) Cash flow hedge reserve			
(6) Currency translation difference		74,495,698.92	-21,044,312.95
(7) Others			
(II) Other comprehensive income attributable to minority interests, net of tax		-1,273,856.78	2,757,941.51
VI.Total comprehensive income		271,834,329.52	-1,059,657,068.84
(I) Total comprehensive income attributable to shareholders of the parent		180,737,457.80	-1,090,373,843.37
(II) Total comprehensive income attributable to minority shareholders		91,096,871.72	30,716,774.53
VII.Earnings per share			
(I) Basic earnings per share		-0.0036	-0.4065
(II) Diluted earnings per share			

Legal representative:
LI Yihua

Accounting principal:
ZHANG Jian

Accounting function's principal:
ZHANG Xiuyin

SECTION 11 FINANCIAL REPORT

INCOME STATEMENT OF THE PARENT

For Year 2022

Prepared by: China Aluminum International Engineering Corporation Limited

Unit: RMB

Item	Note	Amount for the current period	Amount for the previous period
I. Operating revenue	15.4	879,239,602.20	1,093,851,817.14
Less: operating cost	15.4	709,661,457.26	645,450,619.17
Taxes and surcharges		9,452,756.04	3,330,186.61
Sales expense		31,261,674.04	25,726,442.75
Administrative expense		151,652,651.72	147,873,873.78
R&D expense		55,708,792.17	37,437,295.99
Finance expense		109,299,062.69	95,098,094.81
Including: Interest expense		321,128,905.65	308,993,795.96
Interest income		193,882,836.02	250,132,077.96
Add: other gains		602,531.16	371,595.43
Gain on investment (“-” for loss)	15.5	348,401,364.68	282,293,507.93
Including: Share of investment gain on associates and joint ventures		7,686,722.71	7,236,001.68
Gain on de-recognition of financial assets measured at amortized cost		16,531,622.47	-53,219,455.06
Gain on exposure netting (“-” for loss)			
Gain on fair value change (“-” for loss)			-4,080,000.00
Credit impairment loss (“-” for loss)		6,920,260.96	-221,186,706.68
Asset impairment loss (“-” for loss)		-95,373,901.00	-211,394,469.12
Gains on disposal of assets (“-” for loss)		287,769.40	-4,192.78
II. Operating profit (“-” for loss)		73,041,233.48	-15,064,961.19
Add: non-operating income		1,344,947.79	1,541,643.26
Less: non-operating expense		2,811,313.04	4,589,457.44
III. Total profit (“-” for total loss)		71,574,868.23	-18,112,775.37
Less: income tax expense		18,963,614.06	-35,331,937.64
IV. Net profit (“-” for net loss)		52,611,254.17	17,219,162.27
(I) Net profit from continuing operations (“-” for net loss)		52,611,254.17	17,219,162.27
(II) Net profit from discontinued operations (“-” for net loss)			

**SECTION 11 FINANCIAL REPORT**

Item	Note	Amount for the current period	Amount for the previous period
V. Other comprehensive income, net of tax		160,650.00	33,150.00
(I) Items that may not be reclassified to profit or loss		160,650.00	33,150.00
1. Change on remeasurement of defined benefit plan		160,650.00	33,150.00
2. Other comprehensive income under equity method that may not be transferred to profit or loss			
3. Change in fair value of other equity instrument investment			
4. Fair value change arising from credit risk of the Company			
(II) Items that will be reclassified subsequently to profit or loss			
1. Other comprehensive income under equity method that may be transferred to profit or loss			
2. Change in fair value of other debt investments			
3. Amount recorded in other comprehensive income upon financial assets reclassification			
4. Credit impairment provision for other debt investment			
5. Cash flow hedge reserve			
6. Currency translation difference			
7. Others			
VI. Total comprehensive income		52,771,904.17	17,252,312.27
VII. Total comprehensive income			
(I) Basic earnings per share			
(II) Diluted earnings per share			

Legal representative:
LI Yihua

Accounting principal:
ZHANG Jian

Accounting function's principal:
ZHANG Xiuyin

SECTION 11 FINANCIAL REPORT

CONSOLIDATED STATEMENT OF CASH FLOWS

For Year 2022

Prepared by: China Aluminum International Engineering Corporation Limited

Unit: RMB

Item	Note	Amount for the current period	Amount for the previous period
I. Cash flows from operating activities:			
Cash received from sales of goods or rendering of services		22,976,586,876.58	21,625,226,528.13
Tax rebate received		62,300,969.51	38,404,279.25
Other cash received relating to operating activities	5.62	321,466,896.20	264,048,319.08
Subtotal of cash inflows from operating activities		23,360,354,742.29	21,927,679,126.46
II. Cash flows from investing activities:			
Cash paid for purchase of goods or receiving of services		18,531,380,142.17	16,912,706,217.19
Cash paid to and for employees		2,381,395,527.82	2,385,389,293.24
Taxes paid		823,447,413.72	746,180,292.26
Other cash paid relating to operating activities	5.62	1,099,262,444.72	1,223,573,646.41
Subtotal of cash outflows from operating activities		22,835,485,528.43	21,267,849,449.10
Net cash flows from operating activities		524,869,213.86	659,829,677.36
II. Cash flows from investing activities:			
Refund of investments		120,268,182.27	508,291,218.21
Gain on investment received		63,067,357.15	60,194,754.67
Net proceeds from disposal of fixed assets, intangible assets and other long-term assets		1,346,109.45	26,904,289.15
Net proceeds from disposal of a subsidiary and other business unit		19,628,832.02	939,355.29
Other cash received relating to investing activities	5.62	7,648,427.40	
Subtotal of cash inflows from investing activities		211,958,908.29	596,329,617.32
Cash paid for purchase and construction of fixed assets, intangible assets and other long-term assets		4,462,448,033.96	4,678,242,925.33
Payment for investments			
Net cash paid for acquisition of a subsidiary and other business unit		70,556,738.06	4,300,000.00
Other cash paid relating to investing activities			
Subtotal of cash outflows from investing activities		4,533,004,772.02	4,682,542,925.33
Net cash flows from investing activities		-4,321,045,863.73	-4,086,213,308.01

SECTION 11 FINANCIAL REPORT

Item	Note	Amount for the current period	Amount for the previous period
III. Cash flows from financing activities:			
Capital contributions received		2,588,000,000.00	2,002,180,000.00
Including: Capital contributions received by subsidiaries from minority shareholders		2,588,000,000.00	2,002,180,000.00
Borrowings received		11,392,368,787.00	15,733,922,222.22
Other cash received relating to financing activities	5.62	2,500,000,000.00	
Subtotal of cash inflows from financing activities		16,480,368,787.00	17,736,102,222.22
<hr/>			
Cash paid on repayment of debts		9,143,419,329.16	13,383,172,569.91
Distribution of dividends or profit or payment of interest		965,611,247.39	894,602,873.16
Including: dividends or profit paid by subsidiaries to minority shareholders		122,740,054.52	114,266,762.45
Other cash paid relating to financing activities	5.62	2,504,381,122.76	23,537,261.28
Subtotal of cash outflows from financing activities		12,613,411,699.31	14,301,312,704.35
<hr/>			
Net cash flows from financing activities		3,866,957,087.69	3,434,789,517.87
<hr/>			
IV. Impact of exchange rate on cash and cash equivalents		40,164,533.10	-18,299,775.70
<hr/>			
V. Net increase in cash and cash equivalents		110,944,970.92	-9,893,888.48
Add: Cash and cash equivalents at beginning of the period		6,746,419,077.70	6,756,312,966.18
<hr/>			
VI. Cash and cash equivalents at end of the period		6,857,364,048.62	6,746,419,077.70

Legal representative:
LI Yihua

Accounting principal:
ZHANG Jian

Accounting function's principal:
ZHANG Xiuyin

SECTION 11 FINANCIAL REPORT

CASH FLOW STATEMENT OF THE PARENT

For Year 2022

Prepared by: China Aluminum International Engineering Corporation Limited

Unit: RMB

Item	Note	Amount for the current period	Amount for the previous period
I. Cash flows from operating activities:			
Cash received from sales of goods or rendering of services		1,948,832,991.80	2,234,318,285.78
Tax rebate received			
Other cash received relating to operating activities		444,080,785.26	674,013,606.06
Subtotal of cash inflows from operating activities		2,392,913,777.06	2,908,331,891.84
II. Cash flows from investing activities:			
Cash paid for purchase of goods or receiving of services		2,354,077,343.18	2,217,265,583.32
Cash paid to and for employees		254,807,500.91	241,425,005.04
Taxes paid		64,958,990.32	7,871,901.51
Other cash paid relating to operating activities		219,005,910.54	524,306,811.62
Subtotal of cash outflows from operating activities		2,892,849,744.95	2,990,869,301.49
Net cash flows from operating activities		-499,935,967.89	-82,537,409.65
II. Cash flows from investing activities:			
Refund of investments		3,538,877,013.98	4,701,578,500.00
Gain on investment received		172,202,679.88	298,930,549.23
Net proceeds from disposal of fixed assets, intangible assets and other long-term assets		303,856.35	
Net proceeds from disposal of a subsidiary and other business unit		531,841,537.61	
Other cash received relating to investing activities		36,626,736.11	12,698,350.00
Subtotal of cash inflows from investing activities		4,279,851,823.93	5,013,207,399.23
Cash paid for purchase and construction of fixed assets, intangible assets and other long-term assets		371,009.16	448,863.54
Payment for investments		2,974,483,200.00	3,808,841,600.00
Net cash paid for acquisition of a subsidiary and other business unit		547,601,738.06	141,885,000.00
Other cash paid relating to investing activities		550,000,000.00	500,000,000.00
Subtotal of cash outflows from investing activities		4,072,455,947.22	4,451,175,463.54
Net cash flows from investing activities		207,395,876.71	562,031,935.69

SECTION 11 FINANCIAL REPORT

Item	Note	Amount for the current period	Amount for the previous period
III. Cash flows from financing activities			
Cash receipts from absorbing investments			
Cash receipts from borrowings		7,143,120,354.05	8,562,922,222.22
Other cash receipts related to financing activities		2,500,000,000.00	
Subtotal of cash inflows from financing activities		9,643,120,354.05	8,562,922,222.22
<hr/>			
Cash payments for repayment of debts		5,752,499,329.16	7,671,320,338.45
Cash payments for distribution of dividends or profit or repayment of interest		417,226,671.89	444,422,427.46
Other cash paid relating to financing activities		2,514,100,046.80	27,575,964.37
Subtotal of cash outflows from financing activities		8,683,826,047.85	8,143,318,730.28
<hr/>			
Net cash from financing activities		959,294,306.20	419,603,491.94
<hr/>			
IV. Impact of exchange rate on cash and cash equivalents		33,600,709.50	-13,266,555.82
<hr/>			
V. Net increase in cash and cash equivalents		700,354,924.52	885,831,462.16
Add: Cash and cash equivalents at beginning of the period		2,379,403,341.85	1,493,571,879.69
<hr/>			
VI. Cash and cash equivalents at end of the period		3,079,758,266.37	2,379,403,341.85

Legal representative:
LI Yihua

Accounting principal:
ZHANG Jian

Accounting function's principal:
ZHANG Xiuyin

SECTION 11 FINANCIAL REPORT

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For Year 2022

Prepared by: China Aluminum International Engineering Corporation Limited

Unit: RMB

Item	Equity attributable to shareholders of the parent				Current period				Subtotal	Minority interests	Total shareholders' interests
	Share capital	Other equity instrument	Preferred stock	Capital reserve	Less: treasury stock	Other comprehensive income	Special reserve	Surplus reserve			
I. Balance at end of last year	2,950,066,667.00	2,498,584,905.65		875,797,358.53	124,407,809.47	159,810,487.28	224,473,906.75	794,976,623.67	7,637,117,760.35	8,878,064,258.75	16,515,182,019.10
Add: Change in accounting policies											
Correction of prior-year errors											
Business combination under common control											
Others				100,500,000.00	-22,568,259.90			-180,333,262.68	-102,401,522.58	-48,057,824.40	-150,459,346.98
II. Balance at beginning of the year	2,950,066,667.00	2,498,584,905.65		976,297,358.53	101,839,549.57	159,810,487.28	224,473,906.75	614,643,360.99	7,534,716,237.77	8,830,006,434.35	16,364,722,672.12
III. Change in the year ("-" for loss)		-64,900,000.00		-57,040,659.42	68,281,153.00	59,567,953.32	5,261,125.42	-16,020,350.29	-4,900,771.97	-5,994,764,637.38	-5,999,665,409.35
(I) Total comprehensive income					68,281,153.00			112,506,304.80	180,737,457.80	91,096,871.72	271,634,329.52
(II) Increase and decrease in capital contribution from shareholders											
1. Ordinary shares contributed by shareholders		-64,900,000.00		268,307.02					-64,631,692.98	-5,880,232,261.94	-5,944,663,954.92
2. Capital contribution from other equity instrument holders										2,588,000,000.00	2,588,000,000.00
3. Amount included in owners' equity arising from share-based payment											
4. Others											
(III) Profit distribution				268,307.02					268,307.02	10,177,694.69	10,446,001.91
1. Appropriation to surplus reserve							5,261,125.42	-128,226,655.09	-123,265,528.67	-122,722,302.06	-245,987,831.73
2. Distribution to shareholders							5,261,125.42	-5,261,125.42			
3. Others											
(IV) Transfers within shareholders' equity											
1. Capital reserve transferred to share capital											
2. Surplus reserve transferred to share capital											
3. Surplus reserve used to make up loss											
4. Change in DBP transferred to retained earnings											
5. Other comprehensive income transferred into retained earnings											
6. Others											
(V) Special reserve											
1. Appropriation to special reserve for the period						59,567,953.32			59,567,953.32	7,093,054.90	66,661,014.22
2. Use of special reserve						307,615,382.46			307,615,382.46	30,827,624.63	338,243,007.09
Others						-248,047,423.14			-248,047,423.14	-23,534,569.73	-271,581,992.87
(VI) Others											
1. Capital reserve transferred to share capital											
2. Surplus reserve transferred to share capital											
3. Surplus reserve used to make up loss											
4. Change in DBP transferred to retained earnings											
5. Other comprehensive income transferred into retained earnings											
6. Others											
(VII) Balance at end of the year	2,950,066,667.00	2,433,684,905.65		919,256,699.11	170,070,702.57	219,378,446.60	229,735,034.17	588,623,010.70	7,529,815,465.80	2,925,241,796.97	10,455,057,262.77

SECTION 11 FINANCIAL REPORT

Item	Previous period									
	Equity attributable to shareholders of the parent					Unattributed				
	Share capital	Other equity instrument	Capital reserve	Less: treasury stock	Other comprehensive income	Special reserve	Surplus reserve	Unattributed profit	Subtotal	Minority interests
I. Balance at end of last year	2,950,066,667.00	2,498,584,905.65	875,469,924.64	150,437,605.60	147,328,847.45	222,751,992.52	1,879,404,403.40	8,733,074,246.26	6,993,886,437.00	15,636,972,663.26
Add: Change in accounting policies										
Correction of prior-year errors										
Business combination under common control										
Others				-28,645,044.26			-66,773,306.51	5,681,649.23	6,484,310.83	12,165,960.06
II. Balance at beginning of the year	2,950,066,667.00	2,498,584,905.65	975,999,924.64	121,792,461.34	147,328,847.45	222,751,992.52	1,813,231,096.89	8,738,755,895.49	6,910,322,747.83	15,649,076,643.32
III. Change in the year ("-" for loss)			297,433.89	-19,952,911.77	12,481,639.83	1,721,916.23	-1,198,387,735.90	-1,204,039,657.72	1,919,863,666.52	715,644,028.60
(I) Total comprehensive income				-19,952,911.77			-1,198,387,735.90			
(II) Increase and decrease in capital contribution from shareholders										
1. Ordinary shares contributed by shareholders			297,433.89				-1,070,420,891.60	-1,090,373,843.37	30,716,774.53	-1,059,657,068.84
2. Capital contribution from other equity instrument holders										
3. Amount included in owners' equity arising from share-based payment										
4. Others										
(III) Profit distribution										
1. Appropriation to surplus reserve						1,721,916.23	-194,298,106.56			
2. Distribution to shareholders						1,721,916.23	-1,721,916.23			
3. Others										
(IV) Transfers within shareholders' equity										
1. Capital reserve transferred to share capital			297,433.89							
2. Surplus reserve transferred to share capital										
3. Surplus reserve used to make up loss										
4. Change in DBP transferred to retained earnings										
5. Other comprehensive income transferred into retained earnings										
6. Others										
(V) Special reserve										
1. Appropriation to special reserve for the period										
2. Use of special reserve										
(VI) Others							6,131,302.26			
IV. Balance at end of the period	2,950,066,667.00	2,498,584,905.65	976,297,358.53	101,839,549.57	159,810,487.28	224,473,906.75	614,943,360.99	7,534,716,237.77	8,890,006,434.35	16,394,722,672.12

Legal representative:
LI Yihua

Accounting principal:
ZHANG Jian

Accounting function's principal:
ZHANG Xiuyin

SECTION 11 FINANCIAL REPORT

STATEMENT OF CHANGES IN EQUITY OF THE PARENT

For Year 2022

Prepared by: China Aluminum International Engineering Corporation Limited

Unit: RMB

Item	Share capital		Other equity instrument		Capital reserve	Less: treasury stock	Current period comprehensive income	Special reserve	Surplus reserve	Undistributed profit	Total shareholders' interests
	Preferred stock	Others	Perpetual bonds	Others							
I. Balance at end of last year	2,559,066,667.00	-	2,493,584,905.65	-	1,190,696,521.57	-	12,049,620.00	-23,298.32	224,473,908.75	-51,199,827.53	6,833,648,497.12
Add: Change in accounting policies											
Correction of prior-year errors											
Other											
II. Balance at beginning of the year	2,559,066,667.00	-	2,493,584,905.65	-	1,190,696,521.57	-	12,049,620.00	-23,298.32	224,473,908.75	-51,199,827.53	6,833,648,497.12
III. Change in the year ("+" for loss)	-	-	-64,900,000.00	-	-44,065,362.98	-	160,650.00	55,891.90	5,261,125.42	-75,838,699.98	-179,326,395.64
(I) Total comprehensive income							160,650.00			52,611,254.17	52,771,904.17
(II) Increase and decrease in capital contribution from shareholders											
1. Ordinary shares contributed by shareholders											
2. Capital contribution from other equity instrument holders											
3. Amount included in owners' equity arising from share-based payment											
4. Others											
(III) Profit distribution											
1. Appropriation to surplus reserve									5,261,125.42	-128,449,954.15	-123,188,828.73
2. Distribution to shareholders									5,261,125.42	-5,261,125.42	-
3. Others											
(IV) Transfers within shareholders' equity											
1. Capital reserve transferred to share capital											
2. Surplus reserve transferred to share capital											
3. Surplus reserve used to make up loss											
4. Change in DBP transferred to retained earnings											
5. Other comprehensive income transferred into retained earnings											
6. Others											
(V) Special reserve											
1. Appropriation to special reserve for the period								55,891.90			55,891.90
2. Use of special reserve								980,806.50			980,806.50
(VI) Others								-924,914.60			-924,914.60
IV. Balance at end of the year	2,559,066,667.00	-	2,433,684,905.65	-	1,146,631,158.59	-	12,210,270.00	32,593.58	229,735,034.17	-127,038,527.51	6,654,322,101.48

SECTION 11 FINANCIAL REPORT

Item	Share capital			Other equity instrument		Capital reserve	Previous period		Surplus reserve	Unistributed profit	Total shareholders' interests
	Preferred stock	Perpetual bonds	Others	Less: treasury stock	Other comprehensive income		Special reserve	treasury			
I. Balance at end of last year	2,559,066,667.00	2,498,584,905.65	-	1,190,686,521.57	12,016,470.00	871,931.94	222,751,992.52	65,879,116.76	6,949,867,605.44	-	-
Add: Change in accounting policies											
Correction of prior-year errors											
Other											
II. Balance at beginning of the year	2,559,066,667.00	2,498,584,905.65	-	1,190,686,521.57	12,016,470.00	871,931.94	222,751,992.52	65,879,116.76	6,949,867,605.44	-	-
III. Change in the year ("-" for loss)	-	-	-	-	331,500.00	-895,230.26	1,721,916.23	-117,078,944.29	-116,219,108.32	-	-
(I) Total comprehensive income	-	-	-	-	331,500.00	-	-	17,219,162.27	17,232,312.27	-	-
(II) Increase and decrease in capital contribution from shareholders	-	-	-	-	-	-	-	-	-	-	-
1. Ordinary shares contributed by shareholders	-	-	-	-	-	-	-	-	-	-	-
2. Capital contribution from other equity instrument holders	-	-	-	-	-	-	-	-	-	-	-
3. Amount included in owners' equity arising from share-based payment	-	-	-	-	-	-	-	-	-	-	-
4. Others	-	-	-	-	-	-	-	-	-	-	-
(III) Profit distribution	-	-	-	-	-	-	1,721,916.23	-134,298,106.56	-132,576,190.33	-	-
1. Appropriation to surplus reserve	-	-	-	-	-	-	1,721,916.23	-1,721,916.23	-	-	-
2. Distribution to shareholders	-	-	-	-	-	-	-	-	-	-	-
3. Others	-	-	-	-	-	-	-	-	-	-	-
(IV) Transfers within shareholders' equity	-	-	-	-	-	-	-	-	-132,576,190.33	-132,576,190.33	-
1. Capital reserve transferred to share capital	-	-	-	-	-	-	-	-	-	-	-
2. Surplus reserve transferred to share capital	-	-	-	-	-	-	-	-	-	-	-
3. Surplus reserve used to make up loss	-	-	-	-	-	-	-	-	-	-	-
4. Change in DBP transferred to retained earnings	-	-	-	-	-	-	-	-	-	-	-
5. Other comprehensive income transferred into retained earnings	-	-	-	-	-	-	-	-	-	-	-
6. Others	-	-	-	-	-	-	-	-	-895,230.26	-	-895,230.26
(V) Special reserve	-	-	-	-	-	-	-	-	-	-	-
1. Appropriation to special reserve for the period	-	-	-	-	-	-	-	-	1,486,253.35	1,486,253.35	-
2. Use of special reserve	-	-	-	-	-	-	-	-	-2,381,483.61	-2,381,483.61	-
(VI) Others	-	-	-	-	-	-	-	-	-	-	-
IV. Balance at end of the year	2,559,066,667.00	2,498,584,905.65	-	1,190,686,521.57	12,049,620.00	-23,298.32	224,473,908.75	-51,199,827.53	6,833,648,497.12	6,833,648,497.12	-

Legal representative:

LI Yihua

Accounting principal:

ZHANG Jian

Accounting function's principal:

ZHANG Xiuyin

SECTION 11 FINANCIAL REPORT

NOTES TO THE FINANCIAL STATEMENTS

(Amounts expressed in RMB unless otherwise indicated herein)

1. GENERAL INFORMATION

1.1 Place of incorporation, organizational form and head office

China Aluminum International Engineering Corporation Limited (hereinafter referred to as “Chalieco”), formerly known as China Aluminum International Engineering Co., Ltd., was established on 16 December 2003 with a capital contribution of RMB200,000,000.00 from China Aluminum Group Limited (hereinafter referred to as “China Aluminum Group”) and China Aluminum International Trade Co., Ltd. (hereinafter referred to as “China Aluminum International Trade”), with China Aluminum Group and China Aluminum International Trade holding 95% and 5% equity in Chalieco respectively.

In December 2010, China Aluminum International Trade transferred its 5% equity in the Company to China Aluminum Group, whereupon Chalieco became a wholly-owned subsidiary of China Aluminum Group.

Chalieco was reorganized in 2011 and was incorporated as a joint stock company in Beijing in June 2011 with a registered capital of RMB2,300,000,000.00.

In July 2012, Chalieco offered 363,160,000 shares (H shares) to overseas investors on the main board of the Stock Exchange. The stock abbreviation is “Chalieco” and the stock code is “2068”. In H share offering, under relevant approval, China Aluminum Group and Luoyang Institute converted their 36,316,000 state-owned domestic shares, equivalent to 10% of the number of H shares under public offering, into H shares on a 1:1 basis and transferred them to the National Council of Social Security Funds on the day of listing. Upon consummation of the above offering, the total share capital increased to RMB2,663,160,000.00.

As approved by the Approval in Relation to the Initial Public Offering of Shares by China Aluminum International Engineering Corporation Limited (Zheng Jian Xu Ke [2018] No. 934) issued by the China Securities Regulatory Commission, the stock abbreviation is “中鋁國際” and the stock code is “601068”. On 27 August 2018, the Company issued 295,906,667 ordinary shares in Renminbi to the public (at a face value of RMB1 per share), increasing its registered capital by RMB295,906,667.00. The enlarged registered capital is RMB2,959,066,667.00.

Chalieco’s registered address is Building C, No. 99 Xingshikou Road, Haidian District, Beijing, PRC, with a unified social credit code of 911100007109323200.

The ultimate controller of Chalieco is China Aluminum Group Limited.

SECTION 11 FINANCIAL REPORT

1. GENERAL INFORMATION (CONTINUED)

1.2 Business nature and principal operations

The industry in which the Company operates: Construction industry.

Principal business activities: engineering technology, design and consultancy, engineering construction and installation, equipment manufacturing and trading.

1.3 Approver of the financial report and the date of approval

The financial statements were approved by the board of Directors of the Company on 7 March 2023.

1.4 Scope of consolidation of financial statements for the year

Consolidated financial statements for the year covers China Aluminum International Engineering Corporation Limited and its subsidiaries. See Note 7(1) for details.

2. BASIS OF PREPARATION

2.1 Basis of preparation: The financial statements have been prepared on the going concern basis of actual transactions and events in accordance with “the Accounting Standards for Business Enterprises – Basic Standards” and relevant specific standards (together “the Accounting Standards for Business Enterprises”) issued by the Ministry of Finance, and based on the following significant accounting policies and accounting estimates.

2.2 Going concern: The Company has the ability to continue as a going concern at least over the next 12 months from the end of reporting period and there is no material event that may affect the Company’s ability to operate as a going concern.

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES

3.1 Statement of compliance with the Accounting Standards for Business Enterprises

The financial statements prepared by the Company give a true and complete view of financial position of the Company as at 31 December 2022, and operating results and cash flows of the Company for the year of 2022 in accordance with the Accounting Standards for Business Enterprises.

3.2 Financial year

The Company’s financial year is the calendar year, from 1st January to 31st December each year.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.3 Operating cycle

The Company takes a 12-months year as a usual operating cycle, and uses an operating cycle to as the standard to determine the liquidity of assets and liabilities.

3.4 Functional currency

The Company's functional currency is RMB.

3.5 Business combination

1. Business combination under common control

If the acquirer of long-term equity investment arising from business combination under common control pays the consideration of combination by payment of cash, transfer of noncash assets or assumption of debts, the Company records the initial cost of long-term equity investment based on the share of the acquiree's owners' equity in the consolidated financial statements of the ultimate controller on the combination date. If the acquirer pays the consideration of combination by issuance of equity instruments, the total face value of the issued shares is recorded as share capital. The capital reserve is adjusted for the difference between the initial investment cost of long-term equity investment and the carrying value of the consideration of combination (or the total nominal value of issued shares). If the capital reserve is not sufficient, any excess reduces retained earnings.

2. Business combination not under common control

For business combination not under common control, the combination cost is the sum of the fair value of assets, liabilities incurred or assumed and equity securities issued by the acquirer in order to obtain control over the acquiree on the acquisition date. The identifiable assets, liabilities and contingent liabilities of the acquiree that meet the recognition conditions and are acquired in the business combination not under common control are measured at their fair value on the acquisition date. The excess of the acquirer's combination cost over the share of fair value of net identifiable assets of the acquiree obtained in the combination is reflected in the value of goodwill. If the acquirer's combination cost is lower than the share of fair value of net identifiable assets of the acquiree obtained in the combination, and the difference remains after view, then the difference is recorded in non-operating income for the current period.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.6 Method for preparing consolidated financial statements

1. Scope of consolidated financial statements

The Company includes all subsidiaries (including separate entities controlled by the Company) in the scope of consolidated financial statements, including companies controlled by the Company, separable parts of the investee and structured entities.

2. Unifying accounting policies, balance sheet date and accounting period of the parent and subsidiaries

If the accounting policy or accounting period adopted by a subsidiary is inconsistent with that adopted by the Company, the subsidiary's financial statements are adjusted for the Company's accounting policy or accounting period as necessary in preparing the consolidated financial statements.

3. Eliminating inter-company transactions

The Company prepares consolidated financial statements based on the financial statements of the Company and its subsidiaries, having eliminated all transactions between the Company and its subsidiaries and among subsidiaries. The share of owners' equity of a subsidiary not attributable to the Company is recorded as minority interests, and presented in "minority interests" in the consolidated balance sheet. If a subsidiary holds long-term equity investment in the Company, the same is deemed treasury stock of the Company, reduces shareholders' interests and is presented as "less: treasury stock" under shareholders' interests in the consolidated balance sheet.

4. Accounting Treatment of Subsidiaries Acquired through Merger

For a subsidiary acquired through business combination under common control, its assets, liabilities, operating results and cash flows are included in the consolidated financial statements from the beginning of the current period, as if the business combination occurred when the ultimate controller started to control the subsidiary. For a subsidiary acquired through business combination not under common control, for the purpose of preparing the consolidated financial statements, its individual financial statements are adjusted to the fair value of its net identifiable assets on the date of acquisition.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.6 Method for preparing consolidated financial statements (Continued)

5. Accounting Treatment of Disposal of Subsidiaries

The Group partially disposes of the long-term equity investments in subsidiaries without loss of control. In the consolidated financial statements, the difference between the disposal price and disposal of long-term equity investments shall be subject to the share of net assets that the subsidiaries continue to calculate from the date of purchase or the date of combination shall adjust capital reserve (capital premium or equity premium). If the capital reserve is not sufficient for offsetting, the retained earnings shall be adjusted.

When disposing of part of the equity investment and losing control of the entity, the Group shall re-measure the fair value of the remaining equity investment subsequent to the disposal at the date when the Group lost control. When preparing the consolidated financial statements, the sum of the disposal consideration amount and the fair value of the remaining equity investment less the difference between the share of the net assets that the original subsidiary from the acquisition date or the combination date, the difference is recorded in the loss of control investment income in the current period and write down the goodwill. Other comprehensive income related to the equity investment of the original subsidiaries shall be transferred to investment income in the current period when the control was lost.

3.7 Classification of joint arrangements and accounting treatment of joint operations

1. Classification of joint arrangements

Joint venture arrangements are classified as either joint operations or joint ventures. A joint arrangement not reached by a separate entity is classified as a joint operation. Separate entities refer to entities with separately identifiable financial structure, including separate incorporated entities, and unincorporated entities recognized by law. A joint arrangement reached through a separate entity is usually classified as a joint venture. If changes in relevant facts and circumstances lead to changes in the rights and obligations of a joint venture to the joint arrangement, the joint venture should reassess the classification of the joint arrangement.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.7 Classification of joint arrangements and accounting treatment of joint operations (Continued)

2. Accounting for joint operations

As a participant in a joint operation, the Company recognizes the following items in relation to its share of interests in the joint operation, and accounts for the same according to requirements of relevant accounting standards for enterprises: separately held assets or liabilities, share of jointly held assets or liabilities, revenue from sales of the share of output of the joint venture, share of revenue generated from the sales of output of the joint venture, separately incurred expenses, and share of expenses incurred by the joint operation.

As a participant that does not have joint control over the joint operation, the Company accounts for its investment by reference to requirements applicable to a joint venture if it enjoys relevant assets and assumes relevant liabilities of the joint operation, or it accounts for the investment in accordance with requirements of relevant accounting standards for business enterprises.

3. Accounting for joint ventures

The Company, as a joint venture, accounts for its investment in the joint venture in accordance with requirements of the “Accounting Standards for Business Enterprises No.2 – Long-term Equity Investment”. If not a joint venture, the Company accounts for its investment based on degree of its influence on the joint venture.

3.8 Determination of cash and cash equivalents

For the purpose of preparing the statement of cash flows, cash refers to cash on hand and deposits held at all with banks. For the purpose of preparing the statement of cash flows, cash equivalents refer to short-term highly liquid investments that can be readily converted into known amount of cash with insignificant risk of change in value.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.9 Foreign currency transactions and translation of foreign currency financial statements

1. Translation of foreign currency transactions

The Company translates foreign currency transactions into functional currency at the spot exchange rate prevailing on the date of transaction. On the balance sheet date, foreign currency monetary items are converted at the spot exchange rate prevailing on the balance sheet date. Exchange gain or loss arising from the difference between the spot exchange rate prevailing on that date and the spot exchange rate prevailing at the time of initial recognition or the previous balance sheet date is recognized in the profit or loss, except that exchange differences on foreign currency special loans qualified for capitalization are capitalized and included in the cost of related assets during the capitalization period. Foreign currency non-monetary items measured at historical cost are still converted at the spot exchange rate prevailing on the transaction date, and the amount in its functional currency is not changed. Foreign currency non-monetary items measured at fair value are converted at the spot exchange rate prevailing on the date when the fair value is determined. The difference between the converted amount in functional currency and the original amount in functional currency is treated as fair value change (including exchange rate change) and in profit or loss or in other comprehensive income.

2. Translation of foreign currency financial statements

If any subsidiary, joint venture and associate of the Company adopts a functional currency different from that of the Company, its foreign currency financial statements are translated before accounting and preparation of consolidated financial statements. Assets and liabilities items in the balance sheet are translated at the spot exchange rate prevailing on the balance sheet date. Except for “undistributed profit”, other owners’ equity items are translated at the spot exchange rate prevailing at the time of occurrence. Income and expense items in the income statement are translated at the spot exchange rate on the transaction date. The translation difference on foreign currency statements resulting from the translation is shown within other comprehensive income in owners’ equity in the balance sheet. Foreign currency cash flows are translated at the spot exchange rate prevailing on the date when the cash flow occurs. The impact of exchange rate changes on cash is shown separately in the statement of cash flows. When an overseas operation is disposed of, the translation difference on foreign currency statements related to the overseas operation is recorded in profit or loss for the period in which the disposal occurs in whole or at the percentage of overseas operation disposed of.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.10 Financial instruments

1. Recognition and derecognition of financial instruments

The Company recognizes a financial asset, financial liability or equity instrument when it becomes a party to a financial instrument contract.

For the purchase or sale of a financial asset by conventional means, the Company recognizes the asset to be received or the liability to be assumed for this purpose on the transaction day, or derecognize the sold asset on the transaction day recognizes the gain or loss on disposal as well as the receivables due from the buyer.

A financial asset that meets any one of the following conditions is derecognized:

- (1) The contractual right to receive cash flows from the financial asset is terminated.
- (2) The financial asset has been transferred, and the transfer meets the requirements for derecognition of financial assets.

If the present obligation of a financial liability (or part thereof) has been discharged, the Company derecognizes the financial liability (or part thereof).

If the Company (as the borrower) and the lender enters into an agreement to replace the original financial liability by assuming a new financial liability, and the contract terms of the new financial liability deviated materially from the original financial liability, the Company derecognizes the original financial liability and recognizes a new financial liability.

If the Company makes any substantial revision to the contract terms of the original financial liability (or part thereof), the original financial liability is derecognized and a new financial liability is recognized in accordance with the revised terms.

If a financial liability (or part thereof) is derecognized, the Company records the difference between its book value and the consideration paid (including non-cash assets transferred or liabilities assumed) in the profit or loss.

If the Company repurchases part of a financial liability, the book value of the financial liability is allocated between the derecognized portion and the remaining portion in proportion to their respective fair values on the repurchasing date. The difference between the book value allocated to the derecognized portion and the consideration paid (including non-cash assets transferred or liabilities assumed) is included in the profit or loss.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.10 Financial instruments (Continued)

2. Transfer of financial assets

Transfer of a financial asset refers to that the Company (as the transferor) transfers or delivers the financial asset (or its cash flows) to another party (transferee) other than the issuer of the financial asset.

Transfer of a financial asset includes the following two circumstance:

- (1) The Company transfers the contractual right to receive cash flows from the financial asset to another party.
- (2) The Company retains the contractual right to receive cash flows from the financial asset, but undertakes the contractual obligation to pay the received cash flows to one or more ultimate beneficiaries, and the following conditions are satisfied:
 - A. The Company is obliged to pay the ultimate beneficiary only when it receives equivalent cash flows from the financial asset. This condition is deemed satisfied if the Company provides advances but has the right to fully recover the advance and charge interest at the market interest rate.
 - B. Although the transfer contract prohibits the Company from selling or mortgaging the financial asset, the Company can use it as a guarantee of the obligation to pay cash flows to the ultimate beneficiary.
 - C. The Company has the obligation to transfer all cash flows collected on behalf of the ultimate beneficiary to the ultimate beneficiary in a timely manner without any undue delay. The Company has no right to reinvest the cash flows, but this condition is deemed satisfied if the Company invests such cash flows in cash or cash equivalents for the short settlement period between the collection date and the transfer date required by the ultimate beneficiary and pays the gain on such investment to the ultimate beneficiary as agreed in the contract.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.10 Financial instruments (Continued)

2. Transfer of financial assets (Continued)

When a financial asset is transferred, the Company assesses the degree of risks and rewards in retaining the ownership of the financial asset and treats it as follows:

- (1) If the Company has transferred almost all risks and rewards in the ownership of the financial asset, the financial asset is derecognized, and the rights and obligations generated or retained in the transfer are separately recognized as assets or liabilities.
- (2) If the Company has retained almost all risks and rewards in the ownership of the financial asset, it continues to recognize the financial asset.
- (3) If the Company neither transfers nor retains almost all risks and rewards in the ownership of the financial asset, the Company treats it as follows depending on whether it retains control over the financial asset:
 - A. If the Company does not retain control over the financial asset, the financial asset is derecognized, and the rights and obligations arising from or retained in the transfer are separately recognized as assets or liabilities.
 - B. If the Company retains control over the financial asset, it recognizes relevant financial asset to the extent of its continuing involvement in the transferred financial asset and recognizes relevant liabilities accordingly.

3. Classification of financial assets

The Company classifies financial assets into the following three categories depending on its business mode of managing financial assets and the characteristics of contractual cash flows from financial assets:

- (1) Financial assets at amortized cost.
- (2) Financial assets at fair value through other comprehensive income (FVTOCI).
- (3) Financial assets at fair value through profit or loss (FVTPL).

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.10 Financial instruments (Continued)

3. Classification of financial assets (Continued)

Financial assets that meet all of the following conditions are classified as financial assets at amortized cost:

- (1) The Company's business mode of managing the financial asset is to collect the contractual cash flows.
- (2) The contractual terms of the financial asset stipulate that the cash flow generated on a specific date is solely the payment of principal and interest based on the amount of outstanding principal.

Financial assets that meet all of the following conditions are classified as financial assets at FVTOCI:

- (1) The Company's business mode of managing the financial asset aims at both collecting the contractual cash flow and selling the financial asset.
- (2) The contractual terms of the financial asset stipulate that the cash flow generated on a specific date is solely the payment of principal and interest based on the amount of outstanding principal.

The Company classifies all financial assets other than those at amortized cost and those at FVTOCI as financial assets at FVTPL.

On initial recognition, the Company may elect to designate equity instrument investments not for trading purpose as financial assets at FVTOCI, and designation is not cancellable once made.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.10 Financial instruments (Continued)

3. Classification of financial assets (Continued)

If a financial asset or financial liability meets any of the following conditions, it indicates that the Company holds the financial asset or assumes the financial liability for trading purpose:

- (1) The purpose of acquiring relevant financial asset or assuming relevant financial liability is mainly for sale or repurchase in the near future.
- (2) Relevant financial asset or financial liability is part of the identifiable portfolio of financial instruments under centralized management at the time of initial recognition, and there is objective evidence that there is a short-term profit pattern in the near future.
- (3) Relevant financial assets or financial liabilities are derivative instruments. However, derivatives that meet the definition of financial guarantee contracts and derivatives designated as effective hedging instruments are excluded.

On initial recognition, if accounting mismatch can be eliminated or significantly reduced, the Company may elect to designate financial assets as financial assets at FVTPL. The designation is not revocable once made.

4. Classification of financial liabilities

Except for the following items, the Company classifies financial liabilities as financial liabilities at amortized cost:

- (1) Financial liabilities at FVTPL include financial liabilities held for trading (including derivatives that are financial liabilities) and financial liabilities designated at fair value through profit or loss.
- (2) Financial liabilities resulting from the transfer of financial assets that do not meet the conditions for derecognition or from continuing involvement in the transferred financial asset.

If a financial liability arises from contingent consideration recognized by the Company as the acquirer in a business combination not under common control, the financial liability is measured at FVTPL.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.10 Financial instruments (Continued)

4. Classification of financial liabilities (Continued)

In order to provide more relevant accounting information on initial recognition, the Company may elect to designate a financial liability at FVTPL provided that any of the following conditions is satisfied:

- (1) The designation can eliminate or significantly reduce accounting mismatch.
- (2) Pursuant to the Company's risk management or investment strategy set out in an official written document, the management and performance evaluation of the financial liability portfolio or the portfolio of financial assets and financial liabilities are conducted at fair value, and reported to key management within the Company on this basis.

The designation is not revocable once made.

5. Reclassification of financial instruments

When the Company changes its business mode of managing financial assets, it reclassifies all relevant financial assets affected thereby.

The Company does not reclassify any financial liability.

In case of reclassification of financial assets, the Company adopts the prospective method for relevant accounting treatment from the reclassification date, and does not retroactively adjust previously recognized gains, losses (including impairment losses or gains) or interests.

If the Company reclassifies a financial asset at amortized cost to a financial asset at FVTPL, it measures the asset at its fair value on the reclassification date. The difference between the original book value and the fair value is recorded in profit or loss.

If the Company reclassifies a financial asset at amortized cost to a financial asset at FVTOCI, it measures the financial asset at its fair value on the reclassification date. The difference between the original book value and the fair value is recorded in other comprehensive income. The reclassification of this financial asset does not affect the measurement of its effective interest rate and expected credit loss.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.10 Financial instruments (Continued)

5. Reclassification of financial instruments (Continued)

If the Company reclassifies a financial asset at FVTOCI to a financial asset at amortized cost, it reverses the accumulated gains or losses previously recorded in other comprehensive income, adjusts the fair value of the financial asset on the reclassification date and uses the adjusted amount as its new book value, as if the financial asset has been measured at amortized cost from the very beginning. The reclassification of the financial asset does not affect the measurement of its effective interest rate and expected credit loss.

If the Company reclassifies a financial asset at FVTOCI to a financial asset at FVTPL, it continues to measure the financial asset at fair value. Meanwhile, the Company transfers accumulated gains or losses previously recorded in other comprehensive income from other comprehensive income to profit or loss.

If the Company reclassifies a financial asset at FVTPL to a financial asset at amortised cost, it uses the fair value on the reclassification date as the new carrying balance.

If the Company reclassifies a financial asset at FVTPL to a financial asset at FVTOCI, it continues to measure the financial asset at fair value.

6. Measurement of financial instruments

The Company measures financial assets or financial liabilities at fair value on initial recognition. For financial assets and financial liabilities at FVTPL, relevant transaction costs are directly recorded in profit or loss; for other financial assets or financial liabilities, relevant transaction costs are recorded in the initial recognition amount. However, if accounts receivable initially recognized by the Company do not contain significant financing component or if the financing component of a contract for a term not exceeding one year is not considered, the financial asset or financial liability is initially measured at the transaction price.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.10 Financial instruments (Continued)

6. Measurement of financial instruments (Continued)

The amortized cost of a financial asset or financial liability is determined on the basis of its initially recognized amount adjusted as follows:

- (1) Deducting any repaid principal.
- (2) Adding or subtracting the accumulated amortization of the difference between the amount initially recognized and the amount on the maturity date using the effective interest rate method.
- (3) Deducting accumulated allowance for loss (in case of a financial asset).

The Company recognizes interest income using the effective interest rate method. Interest income is calculated and determined by multiplying the carrying balance of a financial asset by the effective interest rate, except for the following:

- (1) For a purchased or originated financial asset that is credit-impaired, the Company calculates and determines its interest income by multiplying the amortized cost of the financial asset by the credit adjusted effective interest rate from the initial recognition.
- (2) For a purchased or originated financial asset that is not credit-impaired but is credit – impaired subsequently, the Company calculates and determines the interest income by multiplying the amortized cost by the effective interest rate in the subsequent period. Where the Company calculates the interest income by applying the effective interest rate method to the amortised cost of a financial asset as aforesaid, if the financial instrument is no longer credit-impaired subsequently due to improvement of its credit risk, and such improvement can be objectively related to an event occurring after the above provisions are applied (such as an upgrade to the debtor's credit rating), the Company then calculates and determines the interest income by multiplying the carrying balance of the financial asset by the effective interest rate.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.10 Financial instruments (Continued)

6. Measurement of financial instruments (Continued)

A financial asset is credit-impaired when one or more events that have adverse impact on expected future cash flows of the financial asset. Evidences that a financial asset is credit – impaired include the following observable information:

- (1) The issuer or debtor has material financial difficulties;
- (2) The debtor violates the contract, such as default or overdue payment of interest or principal, etc.;
- (3) Creditors grant concessions that would not otherwise be granted to the debtor due to economic or contractual considerations related to the debtor’s financial difficulties;
- (4) The debtor is likely to go bankrupt or undergo other financial reorganization;
- (5) An active market for the financial asset disappears as a result of financial difficulties of the issuer or debtor;
- (6) A financial asset is purchased or originated at a substantial discount which reflects the fact that credit loss has occurred.

If the Company revises or renegotiates the contract with the counterparty, which does not result in derecognition of the financial asset but results in a change in cash flows of the contract, the Company recalculates the carrying amount of the financial asset and records relevant gain or loss in profit or loss.

If the Company no longer reasonably expects contractual cash flows of a financial asset to be fully or partially recoverable, the carrying balance of the financial asset is directly written down. Such write-down constitutes derecognition of relevant financial asset.

The Company measures investments in equity instruments and contracts associated with such investments at fair value. However, under limited circumstances, if there is insufficient recent information to determine the fair value or a possible estimate of the fair value covers a wide range, and the cost represents the best estimate of the fair value within the range, then the cost may represent an appropriate estimate of the fair value within the range.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.10 Financial instruments (Continued)

7. Gain and loss

The Company recognises gain or loss on a financial asset or financial liability measured at fair value in profit or loss, unless the financial asset or financial liability fall under any of the following circumstances:

- (1) It is part of qualifying hedge.
- (2) It is an investment in equity instruments not for trading purpose, and the Company has designated it as a financial asset at FVTOCI.
- (3) It is a financial liability designated at FVTPL and changes in its fair value arising from credit risk of the Company are recorded in other comprehensive income.
- (4) It is classified as a financial asset at FVTOCI, and changes in its fair value other than impairment loss or gain and exchange gain or loss are recorded in other comprehensive income.

The Company recognizes dividend income in profit or loss only if all of the following conditions are met:

- (1) The Company's right to receive the dividends has been established;
- (2) Economic benefits related to the dividends are likely to flow into the company; and
- (3) The amount of dividends can be measured reliably.

Gains or losses arising from a financial asset that is measured at amortized cost and is not part of any hedging are recorded in profit or loss on derecognition, reclassification, amortization using the effective interest rate method or recognition of impairment according to the provisions of these standards.

Gains or losses arising from a financial liability that is measured at amortized cost and is not part of any hedging are recorded in profit or loss upon derecognition or upon amortization using the effective interest rate method.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.10 Financial instruments (Continued)

7. Gain and loss (Continued)

Gains or losses arising from a financial liability designated at FVTPL are treated as follows:

- (1) Changes in fair value of the financial liability caused by changes in credit risk of the Company is recorded in other comprehensive income;
- (2) Other changes in fair value of the financial liability are recorded in profit or loss.

If the above treatment of the impact of changes in credit risk of the financial liability would cause or expand accounting mismatch in profit or loss, the Company records all gains or losses on the financial liability (including the impact of changes in credit risk of the Company) in profit or loss.

Upon derecognition of a financial liability, all accumulated gains or losses previously recorded in other comprehensive income are transferred from other comprehensive income to retained earnings.

Upon derecognition of an equity instrument investment not held for trading purpose that is designated at FVTOCI, all accumulated gains or losses previously recorded in other comprehensive income are transferred from other comprehensive income to retained earnings.

All gains or losses (other than impairment loss or gain and exchange gain or loss) on a financial asset classified at FVTOCI, are recorded in other comprehensive income till its derecognition or reclassification. However, interest income from the financial asset calculated using the effective interest rate method is recorded in profit or loss. The amount recorded in profit or loss of each period is equal to the amount recorded in profit or loss of such period assuming the financial asset has been measured at amortised cost. Upon derecognition of the financial asset, all accumulated gains or losses previously recorded in other comprehensive income are transferred from other comprehensive income to profit or loss.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.11 Determination and accounting of expected credit loss

1. Determination of expected credit loss

The Company accounts for impairment and recognizes loss allowance for the following items based on expected credit loss:

- (1) Financial assets at amortized cost and financial assets at FVTOCI.
- (2) Lease receivables.
- (3) Contract assets.

Expected credit loss refers to the average of credit loss on financial instruments weighted by the risk of default.

For financial assets classified at FVTOCI, the Company recognizes loss allowance in other comprehensive income, and records impairment loss or gain in profit or loss without reducing the book value of the financial assets shown in the balance sheet.

The Company's method for measuring expected credit loss on finance instruments reflects the following elements:

- (1) Unbiased probability weighted average determined by evaluating a series of possible results.
- (2) Time value of money.
- (3) Reasonable and reliable information on past events, current situation and future economic forecast that are available on the balance sheet date without unnecessary extra costs or efforts.

2. Purchased or originated financial assets that are credit-impaired

For purchased or originated financial assets that are credit impaired, the Company recognizes accumulated changes in expected credit loss solely for the lifetime since initial recognition as loss allowance on the balance sheet date. On each balance sheet date, the Company takes the change in lifetime expected credit loss as impairment loss or gain and records it in profit or loss. Even if the lifetime expected credit loss determined on the balance sheet date is less than the amount of expected credit loss reflected in estimated cash flow at the time of initial recognition, the Company recognizes favorable changes in expected credit loss as impairment profit.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.11 Determination and accounting of expected credit loss (Continued)

3. Purchased or originated financial assets that are not credit impaired

- (1) For each of the following items, the Company always measures its loss allowance at an amount equivalent to the lifetime expected credit loss:
 - A. Receivables or contract assets arising from transactions under the Accounting Standards for Business Enterprises No.14 – Revenue, whether or not they contain any significant financing component;
 - B. Lease receivables arising from transactions under the Accounting Standards for Business Enterprises No.21 – Lease, including receivables under finance lease and receivables under operating lease.
- (2) For purchased or originated financial assets (such as other receivables) that are not credit impaired other than those under (1) above, the Company evaluates whether the credit risk of relevant financial instruments has increased significantly since initial confirmation on each balance sheet date, and measures their loss allowance and recognizes their expected credit loss and changes thereof as follows:
 - A. If the credit risk of the financial asset has increased significantly since initial confirmation, the Company measures its loss allowance at an amount equivalent to lifetime expected credit loss of the financial asset.
 - B. If the credit risk of the financial asset has not increased significantly since initial confirmation, the Company measures its loss allowance at an amount equivalent to expected credit loss of the financial asset over the next 12 months.

Any increase in or reversal of loss allowance arising on the basis of expected credit loss is recorded in profit or loss as impairment loss or gain.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.11 Determination and accounting of expected credit loss (Continued)

4. Receivables arising from transactions under the Accounting Standards for Business Enterprises No. 14 – Revenue

On the balance sheet date, if expected credit loss can be evaluated for receivables individually significant (a receivable is individually significant if it reaches RMB5 million) and some receivables not individually significant without unnecessary extra costs or efforts, the Company tests them for impairment and recognizes provision for bad debt on an individual basis. For the remaining receivables (excluding those among member companies covered under the consolidated financial statements), expected credit loss is estimated and provision for bad debt is recognized by aging on a collective basis at the following percentages, taking into consideration past experience, current conditions and future forecast:

(1) Accounts receivable

Aging	Accounts receivable proportion (%)
Within 1 year (inclusive)	0.50
Between 1-2 years	10.00
Between 2-3 years	20.00
Between 3-4 years	30.00
Between 4-5 years	50.00
Over 5 years	100.00

(2) Long-term receivables

Aging	Proportion (%)
Before the due date	0.50
Within 1 year past due	10.00
1-2 years past due	20.00
2-3 years past due	30.00
3-4 years past due	50.00
Over 4 years past due	100.00

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.11 Determination and accounting of expected credit loss (Continued)

5. Contract assets arising from transactions under the Accounting Standards for Business Enterprises No. 14 – Revenue

On the balance sheet date, if expected credit loss can be evaluated for contract assets individually significant (a contract asset is individually significant if it reaches RMB5 million) and some contract assets not individually significant without unnecessary extra costs or efforts, the Company tests them for impairment and recognizes provision for bad debt on an individual basis (“the specific identification method”). The remaining contract assets are divided into two groups taking into consideration past experience, current conditions and future forecast, and expected credit loss is estimated and provision for bad debt is recognized as follows respectively:

- (1) Group 1: Contract assets not delivered to customers for use

For these contract assets, the Company recognizes provision for bad debt for contract assets at 0.5% of the balance.

- (2) Group 2: Contract assets delivered to customers for use

The Company recognizes provision for bad debt for the contract assets on the basis of aging analysis. The aging is calculated from the date of delivery and the provision for bad debt percentage is as follows:

Aging	Proportion (%)
Within 1 year (inclusive)	0.50
Between 1-2 years	10.00
Between 2-3 years	20.00
Between 3-4 years	30.00
Between 4-5 years	50.00
Over 5 years	100.00

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.12 Inventory

1. Inventory classification

Inventory refers to finished products or commodities held for sale, work in progress of production, and materials consumed in the process of production or rendering of service in daily activities of the Company. It mainly includes contract assets, raw materials, work in process, commodity stock, revolving materials, spare parts and property development costs, which are measured at the lower of cost and net realizable value. Revolving materials include low-value consumables and packaging materials.

2. Measurement of outgoing inventories

The weighted average method is used to determine the actual cost of outgoing inventories.

3. Provision for impairment of inventories

On the balance sheet date, inventories are measured at the lower of cost and net realizable value, and provision for impairment of inventories is recognized on an individual basis, but provision for impairment of inventories in large quantity and low unit price is made by the category of inventories.

4. Inventory system

The Company adopts the perpetual inventory system.

5. Amortization method for low-value consumables and packaging materials

Low-value consumables and packaging materials are amortized on a one-off basis.

3.13 Contract assets and contract liabilities

1. Contract assets

The Company presents as contract assets the right to receive consideration for goods or services that have been transferred to customers (and this right depends on factors other than the lapse of time). Provision for bad debt for contract assets are recognized based on expected credit loss. See Note 3.11 for details on determination and accounting treatment of expected credit loss on contract assets.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.13 Contract assets and contract liabilities (Continued)

2. Contract liabilities

Contract liabilities refer to the Company's obligation to transfer goods or services to customers for the consideration received or receivable from customers.

Contract assets and contract liabilities under the same contract are shown on a net basis.

3.14 Long-term equity investment

1. Determination of initial investment cost

The initial investment cost of a long-term equity investment, if acquired in business combination under common control, is determined based on the share of book value of owners' equity of the acquiree in the consolidated financial statements of the ultimate controller on the acquisition date, and if acquired in business combination not under common control, is determined based on the combination cost on the acquisition date. The initial investment cost of a long-term equity investment acquired by payment of cash is the acquisition price actually paid; the initial investment cost of a long-term equity investment acquired by issuance of equity securities is the fair value of the equity securities issued; the initial investment cost of a long-term equity investment acquired through debt restructuring is determined according to relevant provisions of the Accounting Standards for Business Enterprises No. 12 – Debt Restructuring; the initial investment cost of a long-term equity investment acquired through non-monetary asset exchange is determined according to relevant provisions of the Accounting Standards for Business Enterprises No. 7 – Nonmonetary Asset Exchange.

2. Subsequent measurement and gain or loss recognition

The Company accounts for long-term equity investments using the cost method if it can exercise control over the investee and accounts for long-term equity investments in associates and joint ventures using the equity method. The Company's equity investments in associates, if indirectly held through venture capital firms, mutual funds, trust companies or similar entities including investment-linked insurance funds, are accounted for according to the Accounting Standards for Business Enterprises No. 22 – Recognition and Measurement of Financial Instruments whether or not the above entities have a significant influence on such investments, and are accounted for using the equity method if otherwise.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.14 Long-term equity investment (Continued)

3. Basis for determining joint control over and significant influence on the investee

Joint control over the investee means that any decision on activities having significant influence on the return of an arrangement is subject to prior unanimous consent of participants sharing the control, including the sales and purchase of goods or services, the management of financial assets, the acquisition and disposal of assets, research and development activities and financing activities. Significant influence on the investee means holding 20% to 50% voting capital of the investee, or (if holding less than 20% voting capital of the investee) falling into any of the following circumstances: being represented in the board of directors or similar authority of the investee; participating in policy-making of the investee; sending management personnel to the investee; being relied on by the investee for technology or technical data; occurrence of material transactions with the investee.

3.15 Investment property

The Company's investment properties are classified into land use rights for lease, buildings for lease, and land use rights held for transfer after appreciation. Investment property is initially measured at cost, and subsequent measured using the cost model.

Among investment property of the Company, buildings for lease are depreciated on a straight line basis, details of which are the same as those for fixed assets. Among investment property of the Company, buildings for lease, and land use rights held for transfer after appreciation are depreciated on a straight-line basis, details of which are the same as those for intangible assets.

3.16 Fixed assets

1. Determination of fixed assets

Fixed assets refer to tangible assets held for the sake of production of goods, rendering of services, lease or business management, with a service life of more than one financial year. A fixed asset is recognized when economic benefits related to the fixed asset are likely to flow into the Company and the cost of this fixed asset can be measured reliably.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.16 Fixed assets (Continued)

2. Classification and depreciation of fixed assets

The Company's fixed assets are mainly classified into houses and buildings, machinery and equipment, electronic equipment, and transportation equipment. Fixed assets are depreciated on a straight-line basis. Service life and estimated net residual value of fixed assets are determined based on the nature and usage of fixed assets, determine the. The service life, estimated net residual value and depreciation method of the fixed assets are reviewed at the end of each year, and adjusted accordingly if there is any difference from original estimates. The Company depreciates all fixed assets, except fixed assets that have been fully depreciated but are still in use and the land that is separately measured and recorded.

Asset category	Estimated service life (year)	Estimated net residual value rate (%)	Annual depreciation rate (%)
Housing and buildings			
General housing and buildings	8–45	3.00, 5.00	2.11–12.13
Temporary facilities	2–3		33.33–50.00
Machinery and equipment	8–20	3.00, 5.00	4.75–12.13
Transportation equipment	5–14	3.00, 5.00	6.79–19.40
Office equipment and others	4–10	3.00, 5.00	9.50–24.25

3.17 Construction in progress

The Company's construction in progress is divided into projects under construction by the proprietor and projects under construction by the contractor. Construction in progress is transferred to fixed assets when the construction is completed and the conditions for intended use are reached. Reaching the conditions for intended use means any of the following circumstances: the substantial construction (including installation) has been finished completely or substantially; the result of trial production or operation shows that the asset can run normally or produce quality products stably or that the asset can function or operate normally; the fixed asset under construction incurs very little or essentially no further capital expenditure; the fixed asset purchased or built has reached or basically reached the designed or contractual requirements.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.18 Borrowing costs

1. Principles for capitalisation of borrowing costs

Borrowing costs incurred by the Company, which are directly attributable to the purchase, construction or production of qualifying assets, are capitalized into the cost of relevant assets; other borrowing costs are expensed when incurred. Qualifying refer to fixed assets, investment properties, inventories and other assets that require purchase, construction or production activities over a very long period to reach the conditions for intended use.

2. Calculation of capitalised amount

Capitalization period refers to the period from the time point when borrowing costs start capitalization to the time point when capitalization stops, excluding the period during which capitalization of borrowing costs is suspended. The capitalization of borrowing costs are suspended if purchase, construction or production activities are interrupted abnormally for more than 3 consecutive months.

Interest on specific-purpose borrowings is determined based on actual interest expenses incurred for the specific-purpose loan for the current period, minus interest income from depositing the unused portion with the bank or gain on temporary investment. If any general purpose borrowing is used, interest is determined by multiplying the weighted average excess of accumulated asset expenditures over the amount of specific-purpose borrowing by the capitalization rate of utilized general-purpose borrowings. The capitalization rate is the weighted average interest rate of general-purpose borrowings. In case of discount or premium on the borrowing, the discount or premium is amortised during each financial period using the effective interest rate method and the interest amount for each amount is adjusted accordingly.

The effective interest rate method is a method to calculate the amortized discount or premium or interest expense at the effective interest rate of the loan. The effective interest rate is the rate that is used to discount expected future cash flows of the loan over its life to current book value of the loan.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.19 Intangible assets

1. Measurement of intangible assets

Intangible assets are initially measured at cost. For purchased intangible assets, the actual cost is the actually paid price and related expenses. For intangible assets injected by investors, the actual cost is determined at the value agreed in the investment contract or agreement, or if the value agreed in the contract or agreement is unfair, at the fair value. The cost of intangible assets developed by the Company is the total expenditure incurred before reaching the conditions for intended use.

Subsequent measurement of intangible assets: The Company amortises intangible assets with a limited service life using the straight-line method, reviews the service life and amortization method of intangible assets at the end of each year, and makes adjustments if there is any difference from the original estimate. The Company does not amortise intangible assets with an indefinite service life, but review the service life at the end of each year, and estimates its service life and amortize it on a straight-line basis if there is conclusive evidence that the service life is limited.

2. Basis for determining an indefinite service life

If the period over which an intangible asset will bring economic benefits to the Company is not foreseeable, or the service life is indefinite for an intangible asset, the Company determines that the intangible asset has an indefinite service life. Basis for determining an indefinite service life: the intangible asset comes from contractual rights or other legitimate rights, but there is no definite service life stipulated in the contract or the law; It is still impossible to determine the time period over which the intangible assets can bring economic benefits to the Company based on peer conditions or relevant expert opinions.

At the end of each year, the service life of intangible assets with an indefinite service life is reviewed mainly on a bottom-up basis, with the department using the intangible asset to perform basic review for any change in the basis for determining its indefinite service life.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.19 Intangible assets (Continued)

3. Specific criteria for defining research stage and development stage of in-house research and development projects, and specific criteria for development stage costs eligible for capitalization

Specific criteria for defining research stage and development stage of in-house research and development projects:

Research stage costs of in-house research and development projects are expensed when incurred.

Development stage costs satisfying all of the following conditions are recognized as intangible assets:

- (1) It is feasible technically to prepare the intangible asset for use or sale;
- (2) Management has the intention to finish the intangible asset for use or sale;
- (3) It can be proved how the intangible asset will generate economic benefits;
- (4) The Company has sufficient technical, financial and other resources to complete development of the intangible asset and has the ability to use or sell the intangible asset;
- (5) Development stage costs attributable to the intangible asset can be reliably measured.

Development stage costs not satisfying the above conditions are expensed when incurred. Development costs expensed in prior period will not be recognized as an asset in subsequent period. Capitalised development stage costs are shown as development costs in the balance sheet and transferred to intangible asset from the date on which it reaches the conditions for intended use.

Specific criteria for dividing research stage and development stage of in-house research and development projects: the development stage is defined as the planned study phase for acquiring new technologies and knowledge, which is characterized by planning and exploration. The development stage is defined as the stage before commercial production or use during which research results or other knowledge are applied to a certain plan or design to produce new or substantially improved materials, devices and products, and is characterized by and other stages, which are identified as the development stage. This stage has the characteristics of pertinence and greater possibility of generating results.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.20 Long-term asset impairment

Long-term equity investments, investment properties measured using the cost model, fixed assets, construction in progress, productive biological assets measured using the cost model, oil and gas assets, intangible assets and other long-term assets are tested for impairment if they show signs of impairment on the balance sheet date. If the result of impairment test shows that the recoverable amount of the asset is lower than its book value, the Company recognizes impairment provisions and impairment loss based on the difference.

The recoverable amount is the higher of the fair value of the asset net of disposal expenses and the present value of estimated future cash flows of the asset. Asset impairment provision is calculated and recognized on an asset-by-asset basis. If it is difficult to estimate the recoverable amount of a single asset, the Company estimate the recoverable amount of the asset group to which the asset belongs. An asset group is the smallest group of assets that can generate cash inflow independently.

Goodwill separately shown in the financial statements is tested for impairment at least annually, regardless of whether there is sign of impairment. In the impairment test, the book value of goodwill is allocated to the asset group or asset group combination expected to benefit from the synergy effect of business combination. If the test results show that the recoverable amount of the asset group or the asset group combination containing the allocated goodwill is lower than its book value, impairment loss is recognized accordingly. The amount of impairment loss is firstly offset against the book value of goodwill allocated to the asset group or asset group combination, and then offset against the book value of other assets other than goodwill in the asset group or asset group combination in proportion to their book value.

Once recognized, impairment loss on the above assets cannot be reversed to the extent that the value is recovered in future period.

3.21 Long-term unamortized expenses

Long-term unamortized expenses refer to expenses that have been paid but have a benefiting period longer than one year (one year exclusive). Long-term unamortized expenses are amortized over the period benefiting from the expenses. If the long-term prepaid expense cannot benefit subsequent financial period, the amortized value of the item is fully charged to profit or loss.

3.22 Employee remuneration

Employee remuneration refers refer to all kinds of remuneration or compensation paid by the Company for services provided by employees or for separation of employment. Employee benefits mainly include short-term compensation, post-service benefits, separation benefits and other long-term employee benefits.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.22 Employee remuneration (Continued)

1. Short-term compensation

Over the financial period when employees provide services, the Company recognizes actually incurred short-term compensation as a liability and charge it to profit or loss, except where the same is included in the cost of an asset as required or permitted by the Accounting Standards for Business Enterprises. Actual employee benefits are charged to profit or loss or included in the cost of relevant asset when incurred. Non-monetary benefits are measured at fair value. Contribution to social security schemes including medical insurance, work injury insurance, and maternity insurance and housing provident fund for employees, as well as appropriation to trade union funds and employee education funds are calculated on required basis and at required percentage, recognized as relevant liability and charged to profit or loss or included in the cost of relevant asset over the period when employees provide services.

2. Post-service benefits

Over the financial period when employees provide services, the Company recognizes a liability based on the amount payable under the defined contribution plan and record it in profit or loss or in the cost of related asset. Benefit obligations arising under the defined benefit plan are attributed to the period over which employees provide services using the project unit credit method, and recorded in profit or loss or in the cost of related asset.

3. Separation benefits

When providing separation benefits to employees, the Company recognizes employee benefits payable arising from separation benefits and charges it to profit loss on the earlier of the following: When the Company cannot unilaterally withdraw separation benefits provided on the separation plan or the reduction proposal; When the Company recognizes the costs or expenses of reorganization involving the payment of separation benefits.

4. Other long-term employee benefits

Other long-term employee benefits provided by the Company for employees that meet the conditions for defined contribution plan are treated in accordance with relevant regulations on defined contribution plan. In addition, net liabilities or net assets of other long-term employee benefits are recognized and measured according to relevant regulations on defined benefit plans.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.23 Estimated liabilities

When the Company assumes a present obligation related to a contingency, the performance of the obligation is likely to result in outflow of economic benefits, and the amount of the obligation can be measured reliably, the obligation is recognized as an estimated liability. The Company makes initial measurement based on best estimate of the amount required to perform relevant present obligation. If there is a continuous range of the amount and all results within the range carry the same probability, the median of the range is determined as the best estimate. If multiple items are involved, the best estimate is calculated and determined based on all possible results and relevant probabilities.

The book value of estimated liabilities is reviewed on the balance sheet date. If there is conclusive evidence that the book value cannot truly reflect the currently best estimate, the book value is adjusted to the currently best estimate.

3.24 Share-based payment

Share-based payment includes equity-settled share-based payment and cash-settled share-based payment. Equity-settled share-based payments in exchange for services provided by employees, are measured at the fair value of equity instruments granted to employees. If there is an active market, the fair value is determined on the basis quotations in the active market; If there is no active market, the fair value is determined using valuation techniques shall be used to determine, including reference to the prices in recent market transactions between knowledgeable and willing parties, reference to the current fair values of other substantially identical financial instruments, discounted cash flow method, and option pricing model.

On each balance sheet date, based on latest information on changes in the number of vesting employees and the achievement of performance indicators, the Company revises the estimated number of exercisable stock options and then determine the amount of expenses allocable to each period. Option expenses that span over multiple financial periods are generally be allocated at the proportion of the length of the waiting period in a certain financial period to the length of the entire waiting period of the option.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.25 Preferred stock, perpetual bonds and other financial instruments

1. Division of financial liabilities and equity instruments

Preferred shares, perpetual bonds (such as long-term option-embedded MTNs), stock options and convertible corporate bonds issued by the Company are classified as financial liabilities or equity instruments on the following principles:

- (1) Settlement through delivery of cash or other financial assets or exchange of financial assets or financial liabilities. If the Company cannot unconditionally avoid performing a contractual obligation by delivering cash or other financial assets, the contractual obligation satisfies the definition of a financial liability.
- (2) Settlement through its own equity instruments. If the financial instrument issued must be settled with or may be settled with equity instrument of the Company as a substitute for cash or other financial assets, the instrument constitutes a financial liability of the Company. The instrument is of the Company's equity instrument if it is intended to enable the holder of the instrument to enjoy residual interests in of the Company's assets net of all liabilities.
- (3) Distinguish between derivative instruments and non-derivative instruments for the classification of financial instruments that need to be settled with or may be settled with equity instruments of the Company in the future. For a non-derivative instrument, if the Company is not obligated to deliver a variable number of its own equity instruments for settlement in the future, the non-derivative instrument is an equity instrument; otherwise, the non-derivative instrument is a financial liability. For a derivative instrument, if the Company can only settle it delivering a fixed number of its own equity instruments in exchange for a fixed amount of cash or other financial assets, the derivative instrument is an equity instrument; If the Company exchanges a fixed amount of its own equity instruments for a variable amount of cash or other financial assets, or exchanges a variable amount of its own equity instruments for a fixed amount of cash or other financial assets, or exchanges a variable amount of its own equity instruments for a variable amount of cash or other financial assets with the conversion price fixed, the derivative instrument is recognized as a financial liability or financial asset.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.25 Preferred stock, perpetual bonds and other financial instruments (Continued)

2. Accounting treatment of preferred stock and permanent bond

The Company accounts for financial instruments classified as financial liabilities in “debentures payable”, accruing interest and adjusting interest adjustment on the book over the life of the instrument, and conducting accounting treatment during the existence of such instrument in accordance with the provisions on the subsequent measurement of financial liabilities at amortized cost in the Financial Instruments Recognition and Measurement Standards. The Company accounts for financial instruments classified as equity instruments in “other equity instruments” and dividends (including interest on instruments classified as equity instruments) distributed over its life are treated as profit distribution.

3.26 Revenue

1. Recognition of revenue

The Company recognizes revenue when it has performed its contractual obligation, i.e. when the customer obtains control over relevant goods or services (hereinafter referred to as “goods”). Obtaining control over relevant goods means being able to dominate the use of the goods and obtain almost all the economic benefits therefrom. Contractual obligation refers to the Company’s commitment to transfer clearly distinguishable goods to the customer in the contract.

If the contract between the Company and the customer meets all of the following conditions at the same time, the Company recognizes revenue when the customer obtains the control over relevant goods:

- (1) Parties to the contract have approved the contract and promised to perform their respective obligations;
- (2) The contract specifies the rights and obligations of the parties related to the goods transferred or services rendered (hereinafter referred to as “goods transferred”);
- (3) The contract has clear payment terms related to the goods transferred;
- (4) The contract has commercial substance, that is, the performance of the contract will change the risk, time distribution or amount of the future cash flow of the Company;
- (5) The consideration that the Company is entitled to due to the transfer of goods to customers is likely to be recovered.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.26 Revenue (Continued)

1. Recognition of revenue (Continued)

For contracts that do not conform to the aforesaid conditions on the contract commencement date, the Company will continuously evaluate them and make accounting treatment when they satisfy the conditions.

For contracts that do not conform to the above conditions, the Company recognizes the consideration received as revenue only when it no longer has the residual obligation to transfer goods to the customer and the consideration received from the customers does not need to be returned. Otherwise, the consideration received is accounted for as a liability. No revenue is recognized on non-monetary asset exchange without commercial substance.

Two or more contracts entered into by the Company and the same customer (or related parties to the customer) at the same time or successively at similar times are consolidated into one contract for accounting treatment in any of the following circumstances:

- (1) The two or more contracts are concluded for the same commercial purpose and constitute a package deal.
- (2) The amount of consideration under either of the two or more contracts depends on the pricing or performance of the other contracts.
- (3) The goods under the two or more contracts (or some goods under each contract) constitute a separate contractual obligation.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.26 Revenue (Continued)

1. Recognition of revenue (Continued)

The Company accounts for contract changes by the following three circumstances:

- (1) If clearly distinguishable goods and contract price are added, and the additional contract price reflects separate selling price of the additional goods, the contract change is treated as a separate contract.
- (2) If the contract change does not fall under circumstances (1), and the goods or services already transferred (hereinafter referred to as “transferred goods”) and the goods or services not transferred (hereinafter referred to as “untransferred goods”) can be clearly distinguished on the date of contract change, the original contract is deemed to be terminated, and the unperformed part of the original contract and the contract change are merged into a new contract for the purpose of accounting treatment.
- (3) If the contract change does not fall under circumstances (1), and the transferred goods and the untransferred goods cannot be clearly distinguished on the date of contract change, and there is no clear distinction between the transferred goods and the non-transferred goods on the contract change date, the contract change is treated as an integral part of the original contract, and the revenue is adjusted for the impact of the contract change on the contract change date.

In any of the following circumstances, the contractual obligation is one performed within a certain period of time; or, it is a contractual obligation performed at a certain point in time:

- (1) While the Company performs the contractual obligation, the customer obtains and consumes economic benefits therefrom at the same time.
- (2) The customer can control the goods in progress while the Company performs the contractual obligation.
- (3) The goods produced by the Company in the performance of the contract have irreplaceable purposes, and the Company is entitled to payment for the portion performed to date over the entire term of the contract.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.26 Revenue (Continued)

1. Recognition of revenue (Continued)

For a contractual obligation performed within a certain period of time, the Company recognizes revenue by the progress in performance over that period of time, except where the progress cannot be reasonably determined. Given the nature of goods, the Company adopts the output method or the input method to determine the progress in performance.

If the progress in performance cannot be reasonably determined, but the incurred costs are expected to be compensated, revenue is recognized on the basis of the incurred costs till the progress in performance can be reasonably determined.

For a contractual obligation performed at a certain point in time, the Company recognizes revenue when the customer obtains control over relevant goods. In determining whether the customer has obtained control over the goods, the Company considers the following signs:

- (1) The Company has the present right to receive payment for the goods, that is, the customer has the present obligation to pay for the goods.
- (2) The Company has transferred the legal ownership of the goods to the customer, that is, the customer has obtained the legal ownership of the goods.
- (3) The Company has physically transferred the goods to the customer, that is, the customer has physically taken possession of the goods.
- (4) The Company has transferred major risks and rewards in ownership of the goods to the customer, that is, the customer has obtained major risks and rewards in ownership of the goods.
- (5) The customer has accepted the goods.
- (6) Other signs indicating that the customer has obtained control over the goods.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.26 Revenue (Continued)

2. Measurement of revenue

The Company measures revenue based on the transaction price allocated to each individual contractual obligation.

Transaction price refers to the amount of consideration that the Company is expected to be entitled to for the transfer of goods to customers. Sums collected by the Company on behalf of third parties and sums expected to be returned to customers by the Company are treated as liabilities and are not included in the transaction price.

The Company determines the transaction price according to contract terms and taking into consideration past practices. In determining the transaction price, the Company takes into account the influence of variable consideration, significant financing component in the contract, non-cash consideration, consideration payable to customers and other factors.

If there is variable consideration under the contract, the Company determines the best estimate of variable consideration on the basis of the expected value or the most likely amount, but the transaction price including variable consideration should not exceed the accumulated recognized revenue that is highly probable not to be significantly reversed when relevant uncertainties are eliminated. The Company considers the possibility of revenue reversal and its proportion when evaluating whether it is highly probable that the accumulated recognized income will not be significantly reversed. On each balance sheet date, the Company should re-estimate the variable consideration amount to be included in the transaction price.

If there is a significant financing component in the contract, the Company determines the transaction price on the basis of the amount payable by the customer assuming that it makes payment in cash upon obtaining control over the goods. The difference between the transaction price and the contractual consideration is amortized using the effective interest rate method over the contract term.

The major financing components in the contract is not considered if on the commencement date of the contract, the Company expects the customer to payment within one year after it obtains control over the goods.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.26 Revenue (Continued)

2. Measurement of revenue (Continued)

If the customer pays non-cash consideration, the Company determines the transaction price at the fair value of non-cash consideration. If the fair value of non-cash consideration cannot be reasonably estimated, the Company indirectly determines the transaction price by reference to the separate selling price at which it promises to transfer the goods to the customer. Any change in the fair value of non-cash consideration due to reasons other than the form of the consideration is treated as variable consideration.

If the Company needs to pay consideration to the customer (or a third party that purchases the goods of the Company from the customer), the transaction price is reduced by the consideration payables, and the revenue for the current period is also reduced by the consideration payable when relevant revenue is recognized or when the Company pays (or undertakes to pay) the consideration, whichever is later, except where the consideration is payable to the customer for obtaining other clearly distinguishable goods from the customer.

If the contract contains two or more contractual obligations, the Company on the commencement date of the Contract, allocates the transaction price to each single contractual obligation in proportion to its separate selling price promised by the Company.

Contractual discount is allocated to each single contractual obligation in proportion. If there is conclusive evidence that the contractual discount is related solely to one or more (but not all) contractual obligations, the Company allocates the contractual discount solely to such one or more contractual obligations.

For variable consideration and its subsequent changes, the Company allocate it to one or more relevant contractual obligations, or to one or more items among a series of clearly distinguishable goods that constitutes a single contractual obligation. For a contractual obligation that has been performed, revenue for the current period is adjusted by the amount of subsequent change in the variable consideration allocated to the contractual obligation.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.26 Revenue (Continued)

3. Application of gross basis and net basis

The Company judges whether it is acting as the principal or the agent when engaged in the transaction by whether it has control over the goods before transferring it to the customer. If the Company is able to control the goods before transferring it to the customer, the Company is the principal and recognizes the total amount of consideration received or receivable as the revenue; Otherwise, the Company acts as an agent and recognizes as revenue the amount of commissions or service fees that the Company is entitled to, which is determined by the amount of total consideration received or receivable net of the price payable to other relevant parties, or by the prescribed amount of percentage of commission.

The Company has control over the goods before transferring them to the customer in the following circumstances:

- (1) The Company obtains the control over the goods or other assets from a third party before transferring it to the customer.
- (2) The Company can dominate a third party to provide services to the customer on behalf of the Company.
- (3) After the control over the goods from a third party, the Company combines the goods with other goods into a combination output by providing significant service and transfers it to the customer.

In determining whether the Company has control over the goods before transferring it to the customer, the Company take into overall account of all relevant facts and circumstances, including:

- (1) The Company bears the main responsibility for transferring goods to the customer.
- (2) The Company assumes inventory risk of the goods before or after the transfer of the goods.
- (3) The Company has the discretion to set the price of the goods.
- (4) Other relevant facts and circumstances.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.26 Revenue (Continued)

4. Specific revenue recognition policies for different types of engineering business

The Company's engineering and construction contracting business covers metallurgical industry, housing construction, highways, municipal works and other fields, and adopts multiple business modes including EPC, EP, PC, BT (Build Transfer) and PPP. For different business modes, the Company formulates rationalised revenue recognition policies for different business modes in accordance with requirements of the Accounting Standards for Business Enterprises No. 14 – Revenue.

Under EPC, EP and PC business modes, if the customer invites bids for E (Engineering), P (Procurement) and C (Construction) separately, and the tendering result of one project is completely independent of other projects, the Company identifies each of E, P and C as a separate contractual obligation respectively. In other cases, the Company regards all of E, P and C as one contractual obligation.

Under BT mode, the Company deems that the contractual obligation contains a significant financing component.

Under PPP mode, the Company undertakes two contractual obligations, i.e. construction and operation, and allocates the contractual consideration in proportion to their fair value.

Under different business modes, for the contractual obligation of construction or an integrated contractual obligation containing construction, since the customer can control the goods in progress during the Company's performance, the Company regards it as a contractual obligations performed within a certain period of time, and uses the input method to determine the progress in performance at the percentage of accumulated actual contract cost in the total estimated contract cost.

In the engineering and construction contracting industry, it is a preferred choice to determine the progress in performance at the percentage of accumulated actual contract cost in the total estimated contract cost. The Company's method of determining the progress in performance is consistent with industry practice.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.26 Revenue (Continued)

4. Specific revenue recognition policies for different types of engineering business (Continued)

Determining the progress in performance requires a lot of estimates and judgments from the Company, including estimating total revenue, total cost, quantities of work, material or equipment consumption and unit price. In order to collect basic data for these estimates and judgments, the Company has been committed to establishing and maintaining a series of effective internal control systems, such as accounting methods, accounting practice standards, and financial management methods for projects, so as to strike a balance between ensuring quality of accounting information and reducing uncertainties in estimates and judgments and maintaining reasonable maintenance costs.

The contracts or agreements signed between the Company and the proprietor/customer, the confirmation by the proprietor/customer's representative and supervisor of the quantities of work and settlement amount, and the project settlement data between the Company and subcontractors are all important external evidences for the Company to determine the percentage of completion.

Determination of estimated total revenue: after the contract or agreement is signed, the financial department works operation departments to determine the initial estimated total revenue based on the amount agreed in the contract or agreement. Total contract revenue is adjusted for contract changes, claims and awards in execution of the project based on documents or supplementary agreements issued by the proprietor.

Determination of the estimated total cost: The Company's contract costs include direct labor, equipment or materials, subcontractor costs and machinery usage costs. At the beginning of bidding for the project, the Company estimates the estimated total cost of the project and evaluate its profit prospects by reference to tendering documents and past experience. After the contract or agreement is signed, the financial department works with the procurement department to review and confirm the estimated total cost based on information including the subcontracting contract or agreement, engineering or equipment design drawings, equipment or material suppliers' quotations and labor cost budget and submit it for approval step by step. In the construction process, the engineering control department, in conjunction with the financial department, the procurement department, the construction department and the manufacturing department, revises the detailed cost items as appropriate based on the confirmation of engineering or equipment changes, makes adjustments to the estimated total cost by reference to the recent price changes, and then submit it for approval step by step according to corresponding procedures.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.26 Revenue (Continued)

4. Specific revenue recognition policies for different types of engineering business (Continued)

Collection of actual contract costs: the procurement department, together with the financial department, determines qualified suppliers and subcontractors through tendering for major outsourced cost items for construction of the project or equipment. Procurement staff signs contracts or orders with qualified suppliers according to the approved procurement plan. The warehousing department organizes the acceptance of physical items and the user department confirms the actual use of outsourced labor services. The construction department and manufacturing department applies for materials or equipment according to the approved production plan. The engineering control department and other departments settle accounts with subcontractors regularly or at important nodes to determine subcontractor cost for the current period. The project administration department prepares the labor cost budget according to the Company's remuneration policy, which subject to approval, is used as the standard for daily salary and bonus payment. The financial department, together with the warehousing department, the construction department and the manufacturing department, takes inventory of all kinds of materials on site on a regular basis. After reviewing relevant original vouchers, the financial department records actual contract costs incurred in the current period.

Calculation of progress in progress and revenue and cost: At the end of each month, the financial department calculates progress in performance based on the reviewed estimated total revenue, estimated total cost and actual contract cost, prepares the revenue and cost calculation table, and after it is duly approved, recognize revenue and cost for the month. Under special circumstances where the progress in performance cannot be reasonably determined, the financial department, in conjunction with relevant departments, prudently assess whether the incurred costs are expected to be compensated. After the assessment result is duly approved according to the corresponding procedures, the financial department recognizes revenue and cost for the current month accordingly.

The Company believes that its current internal control system and accounting system are reasonably designed and operate effectively, and combined with important external evidence that are available, can ensure that the Company determines the progress in performance in a prudent and reasonable manner.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.27 Contract cost

The cost incurred by the Company in performing the contract, which does not fall under other accounting standards for business enterprises other than “the Accounting Standards for Business Enterprises No. 14 – Revenue” and meets all of the following conditions, is treated as contract performance cost and recognized as an asset:

1. The cost is directly related to a current or expected contract, including direct labor, direct materials, manufacturing expenses (or similar expenses), costs definitely borne by the customer and other costs incurred solely as a result of the contract;
2. The cost increases the Company’s resources for performing its contractual obligations in the future;
3. The cost is expected to be recovered.

Incremental cost incurred by the Company in obtaining the contract, if expected to be recovered, are is treated as contract acquisition cost and recognized as an asset. However, if the amortization period of the asset does not exceed one year, it is expensed when incurred.

Assets related to the contract cost are amortized on the same basis on which revenue from goods related to the asset is recognized, and charged to profit or loss.

The excess of the book value of the asset related to the contract cost over the difference between the following two items, is recognized as asset impairment loss and impairment provision is also recognized accordingly:

1. The remaining consideration that the Company is expected to obtain due to the transfer of goods related to the asset;
2. Estimated costs to be incurred for the transfer of the relevant goods.

If due to subsequent changes in factors leading to impairment in prior period, the difference between (1) and (2) above is higher than the book value of the asset, the accrued asset impairment provision is reserved and recorded in profit or loss, provided that the book value after reversal does not exceed the book value of the asset on the reversal date assuming that no impairment provision is accrued.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.27 Contract cost (Continued)

In determining impairment loss of the asset related to the contract cost, the Company first determines the impairment loss of other assets related to the contract recognized in accordance with other relevant accounting standards for business enterprises other than the Accounting Standards for Business Enterprises No. 14 – Revenue, and then determines the impairment loss of the asset related to the contract cost following the aforesaid method.

3.28 Government subsidies

Government subsidies represent monetary assets or non-monetary assets obtained by the Company free of charge from the government, including tax rebates, financial subsidies, etc, but excluding capital injected by the government as an owner.

Government subsidies are recognized when the Company can satisfy the conditions attached and can receive them. If the government subsidies are related to monetary assets, it shall be measured at the amount received or receivable. If the government subsidies are related to non-monetary assets, it shall be measured at its fair value; if the fair value cannot be obtained reliably, it shall be measured at its nominal amount.

Government subsidies related to assets represent government subsidies obtained by the Company for purchasing, constructing or otherwise forming long-term assets.

Government subsidies related to income represent Government subsidies other than Government subsidies related to assets.

Government subsidies related to income are used to compensate for related costs or losses in subsequent periods, and are recognized as deferred income, and are used to write down related costs during the period in which the related costs or losses are recognized; if they are used to compensate for related costs or losses that have occurred, directly write down the relevant costs.

Government subsidies related to assets are used to write down the book value of related assets.

The Company adopts the same presentation method for similar Government subsidies.

Government subsidies related to daily activities are included in operating profit, and government subsidies not related to daily activities are included in non-operating income and expense.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.29 Deferred income tax assets and deferred income tax liabilities

1. Based on the difference between the book value of assets and liabilities and their tax basis (if tax basis of items not recognized as assets or liabilities can be determined according to the tax law, the tax basis is determined as the difference), deferred income tax assets or deferred income tax liabilities are calculated and recognized at the tax rate applicable to the period during which the assets or liabilities are expected to be recovered or settled.
2. Deferred income tax assets is recognized to the extent that taxable income is likely to be available to offset against deductible temporary differences. On the balance sheet date, deferred income tax assets not recognized in prior period are recognized if there is conclusive evidence that sufficient taxable income is likely to be obtained in the future period to offset against deductible temporary differences. If it is likely that sufficient taxable income will not be available to utilize against deferred income tax assets in the future period, the book value of the deferred income tax assets is written down.
3. Deferred income tax liabilities are recognized for taxable temporary differences related to investments in subsidiaries and associates, unless the Company can control the timing of reversal of temporary differences and the temporary differences are unlikely to be reversed in the foreseeable future. Deferred income tax assets are recognized for deductible temporary differences related to investments in subsidiaries and associates when the temporary differences are likely to be reversed in the foreseeable future and taxable income is likely to be available in future to offset against the deductible temporary differences.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.30 Lease

1. The accounting treatment of the Company as lessee

On the lease commencement date, the Company recognizes the right of use asset and lease liabilities for the lease, except for short-term leases and low-value asset leases subject to simplified treatment.

- (1) The right of use assets is initially measured at cost. The cost includes:
 - A. Initial measured amount of the lease liabilities;
 - B. In case of any lease incentive for lease payment made on or before the lease commencement date, the amount of lease incentive is deducted;
 - C. Initial direct expenses incurred by the lessee;
 - D. Costs expected to be incurred by the lessee for dismantling and removing the leased asset, restoring the premise where the leased asset is located to its original conditions or restoring the leased asset to the conditions agreed upon in the lease terms.

After the lease commencement date, the Company depreciates the right of use assets in accordance with regulations on depreciation specified in Note 3.16.

In accordance with provisions of the “Accounting Standards for Business Enterprises No.8 – Asset Impairment”, the Company determines whether the right of use asset is impaired, and accounts for any impairment loss identified.

- (2) Lease liabilities is initially measured at the present value of lease payments unpaid on the lease commencement date.

In calculating the present value of the lease payment, the Company adopts the interest rate on incremental loan as the discount rate.

The Company calculates interest expense of the lease liabilities for each period in the lease term at the above discount rate, and charges it to profit or loss.

- (3) The Company elects not to recognize right of use assets and lease liabilities for short – term lease and low-value asset lease.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.30 Lease (Continued)

2. The accounting treatment of the Company as lessor

(1) Lessor's accounting for finance lease

On the lease commencement date, the Company recognizes a receivable under finance and derecognizes the asset under finance lease.

The Company initially measures the receivable under finance lease at the net lease investment.

The net rental investment is the sum of the unsecured residual value and the present value of the lease receipts that have not yet been received on the lease commencement date discounted at the interest rate implicit in lease.

The Company calculates and recognizes interest income for each period in the lease term at the above discount rate.

(2) Lessor's accounting for operating lease

Over each period in the lease term, the Company recognizes lease receipts from operating leases as rental income using the straight-line method or other systematic and reasonable methods.

Initial direct expenses incurred by the Company in connection with operating leases are capitalized and allocated and expensed over the lease term on the same basis that rental income is recognized, and charges it to current profit or loss in stages.

The Company depreciates fixed assets under operating lease following depreciation policies for similar assets, and depreciates assets under operating lease in a systematic and reasonable manner according to accounting standards applicable to such assets.

The Company determines whether the asset under operating lease is impaired and accounts for the impairment according to provisions of the Accounting Standards for Business Enterprises No. 8 – Asset Impairment”.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.31 Segment information

The Company determines business segments based on its internal organizational structure, management requirements and internal reporting system, and determines reporting segments and discloses segment information on the basis of business segments.

An operating segment refer to a component of the Company that meets all of the following conditions:

- (1) This component can generate income and incur expenses in daily activities;
- (2) Management can regularly evaluate operating results of this component, so as to decide to allocate resources to it and evaluate its performance;
- (3) Financial conditions, operating results, cash flows and other relevant accounting information of the component are available.

If two or more business segments share similar economic characteristics and meet certain conditions, they are combined into one business segment.

3.32 Special reserve

According to provisions of the Notice on Printing and Issuing the Measures for Management of Appropriation to and Use of Production Safety Fund of Enterprises issued by the Ministry of Finance and the State Administration of Work Safety, the Company makes appropriation to production safety fee which is ear marked for improving production safety conditions of the Company.

According to relevant national regulations, the Company makes appropriation to production safety fee and other fees of similar nature, which is separately shown within “special reserve” between “less: treasury stock” and “surplus reserve” in owners’ equity. Production safety fee is included in the cost of related products or charged to profit or loss when incurred, and special reserves is increased accordingly. When the Company uses production safety fee, expensed items directly reduces the special reserves, while capitalized items are collected in construction in progress and recognized as fixed asset when the safety project is completed reaches the conditions for intended use. Meanwhile, the special reserve is reduced by the capitalized amount of production safety fee and depreciation is recognized in the same amount. The fixed asset will not be depreciated in future periods.

3.33 Non-monetary asset exchange

Non-monetary asset change are measured on the basis of fair value if the exchange has commercial substance and the fair value of incoming assets or outgoing assets can be measured reliably. The difference between the consideration obtained upon derecognition of the outgoing asset and its book value is recorded in profit of loss.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.33 Non-monetary asset exchange (Continued)

Non-monetary asset exchange not satisfying conditions for measurement on the basis of fair value are measured at book value. Incoming assets are initially measured at the book value of outgoing assets and plus relevant taxes payable. No gain or loss is recognized on derecognition of outgoing assets.

3.34 Held-for-sale and discontinued operation

The Company classifies non-current assets or disposal groups that meet all of the following conditions as held-for-sale: First, they are ready for sale in current conditions based on the practice of selling such assets or disposal groups in similar transaction; Secondly, the disposal is very likely to happen, that is, the Company has already made resolution on a disposal plan and has obtained a definite purchase promise, and the disposal is expected to be completed within one year. If relevant regulations require prior approval from relevant authority or regulator of the disposal, such disposal should have been obtained.

Upon initial measurement or re-measurement of a held-for-sale non-current asset or disposal group, if its book value is higher than its fair value net of disposal expenses, the book value is written down to the fair value net of disposal expenses, and the write-down amount is charged to profit or loss, and impairment provision is recognized for the held-for-sale asset.

Non-current assets held for sale or assets in the disposal group held for sale are shown as held – for-sale assets in the balance sheet, and liabilities in the disposal group held for sale are shown as held-for-sale liabilities.

A discontinued operation is a separately distinguishable component that meets any one of the following conditions and has been disposed of or classified as held for sale by the Company:

1. This component represents an independent major business or a separate major business region;
2. This component is part of an associated plan to dispose of an independent major business or a separate major business region;
3. This component is a subsidiary acquired specifically for resale.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.35 Key assumptions and uncertainties used in important judgements and accounting estimates made in applying accounting policies

In applying the accounting policies described in Note 3, the Company needs to make judgements, estimates and assumptions in relation to the book value of financial statement items that cannot be accurately measured. These judgments, estimates and assumptions are based on management's past experience and other relevant factors. The actual results may deviate from the Company's estimates. Key assumptions and uncertainties in the Company's accounting estimates that are likely to lead to significant adjustments to the book value of assets and liabilities in future period are set out below:

1. Revenue recognition on engineering construction contract work

The Company recognized revenue from engineering construction in proportion to the progress in performance, while the progress in performance is determined by the accumulative actual contract cost to the total estimated contract cost. Determining the estimated total revenue and estimated total cost of these contracts requires a lot of estimates and judgments from management, including estimating the transaction price adjustment caused by contract changes, estimating the work of quantities to occur, and estimating consumption and unit price of materials or equipment. In executing the contract, management revises their estimates of estimated total revenue and the estimated total cost from time to time based on the latest available information. Adjustments to these estimates may result in an increase or decrease in revenue or costs for the current and future periods and be reflected in the income statement for the corresponding periods.

2. Receivable and contract asset impairment provision

The Company accounts for impairment of and makes provision for bad debt for receivables and contract assets based on expected credit risks. When they are assessed for impairment loss on a collective basis, the amount of provision is determined based on historical loss pattern of assets with similar credit risk characteristics, observable data reflecting current conditions and reasonable prediction of the future. The Company regularly reviews the methods and assumptions used to estimate the amount and timing of future cash flows of related assets and continuously revises the estimation of expected credit risks. If there are unexpected material changes in credit status of important debtors or customers, it may have a significant impact on operating performance for the relevant period in the future.

SECTION 11 FINANCIAL REPORT

3. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (CONTINUED)

3.35 Key assumptions and uncertainties used in important judgements and accounting estimates made in applying accounting policies (Continued)

3. Income tax

The Company's determination of income tax involves judgment on future tax treatment of certain transactions. In view of the fact that the Company pays corporate income tax in many regions, the Company will prudently assess the tax impact of various transactions and make provision for income tax. The Company regularly reevaluates the tax impact of these transactions in accordance with updated tax regulations. The recognition of deferred tax assets requires the Company to judge the possibility of obtaining future taxable income. The Company continuously reviews its judgment on deferred tax, and recognizes deferred tax assets on deductible temporary differences and deductible tax losses only if it expects that it is likely to obtain utilisable taxable income in future. Nevertheless, there remains the risk of significant differences between the ultimate tax impact and management's judgment.

4. Retirement and early retirement benefits liabilities

Retirement and retirement benefit plans recognized by the Company as liabilities are measured based on various assumptions, including expected life, discount rate, wage growth rate post early retirement, medical expense growth rate and other factors. Management continuously maintains the rationality of these assumptions by engaging professional actuarial institutions and other methods, but it is still possible to make significant adjustments to these assumptions as external economic situation changes, thus affecting the balance of liabilities, profits and other comprehensive income for the relevant period.

3.36 Description of changes in major accounting policies and accounting estimates

None

SECTION 11 FINANCIAL REPORT

4 TAXES

4.1 Major taxes and tax rates

Tax	Tax basis	Tax rate
Value added tax	Taxable value-added amount (taxable amount is calculated by multiplying the taxable sales by the applicable tax rate and deducting the input tax deductible for the current period)	3%, 5%, 6%, 9%, 13%
Consumption tax	The sum of VAT actually paid	1%, 5%, 7%
Urban maintenance and construction tax	The sum of VAT actually paid	3%, 2%
Corporate income tax	Taxable income	2.65% (Indonesia), 16.50% (HK), 25% (except preferential treatments as set out in Note 4.2)

Taxpayers of the Company subject to different corporate income taxes and their applicable income tax rates are set out below:

Taxpayer	Income tax rate
China Aluminum International Engineering Corporation Ltd.	15.00%
China Nonferrous Metals Processing Technology Co., Ltd.	15.00%
Luoyang Jincheng Construction Supervision Co., Ltd.	10.00%
Luoyang Foyang Decoration Engineering Co., Ltd.	25.00%
Luoyang Kaiying Technology Co., Ltd.	25.00%
Suzhou Nonferrous Metal Materials Deyuan Environmental Protection Co., Ltd.	25.00%
Sixth Metallurgical Construction Company of China Nonferrous Metals Industry	15.00%
Sixth Metallurgical Luoyang Construction Co., Ltd.	25.00%
Sixth Metallurgical Luoyang Mechanical and Electrical Installation Co., Ltd.	25.00%
Sixth Metallurgical (Zhengzhou) Technology Heavy Industry Co., Ltd.	15.00%
Henan Sixth Metallurgical Trading Co., Ltd.	25.00%
Panzhou Haohong Project Management Co., Ltd.	25.00%
Tongchuan Hao Tong Construction Co., Ltd.	25.00%
China Aluminum Great Wall Construction Co., Ltd.	25.00%
Huaian Tong Yun Construction Co., Ltd.	25.00%
Sixth Metallurgical Xinjiang Construction Co., Ltd. (六冶新疆建設有限公司)	25.00%

SECTION 11 FINANCIAL REPORT

4 TAXES (CONTINUED)

4.1 Major taxes and tax rates (Continued)

Taxpayer	Income tax rate
Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy	15.00%
Changsha Clinqsoft Info Tech Co., Ltd.	15.00%
Hunan Huachu Project Management Co., Ltd.	20.00%
Hunan Changye Construction Drawing Examination Co., Ltd.	25.00%
Huachu High-Tech (Hunan) Co., Ltd.	25.00%
China Aluminum International South Engineering Co., Ltd.	25.00%
Wenzhou Tongrun Construction Co., Ltd.	25.00%
Wenzhou Tonghui Construction Co., Ltd.	25.00%
Ninth Metallurgical Construction Co., Ltd.	15.00%
Henan Ninth Metallurgical Construction Co., Ltd.	25.00%
Zhengzhou Ninth Metallurgical Sanwei Chemical Machinery Co., Ltd.	15.00%
Hanzhong Ninth Metallurgical Construction Co., Ltd.	25.00%
Ankang Ninth Metallurgical Changjiali Concrete Co., Ltd.	25.00%
Xinjiang Ninth Metallurgical Construction Co., Ltd.	25.00%
Ninth Metallurgical Steel Structure Co., Ltd.	25.00%
Mian County Ninth Metallurgical Kindergarten	25.00%
Ninth Metallurgical Hanzhong Construction Design Institute Co., Ltd.	20.00%
Shaanxi Zhong Mian Investment Company Limited	25.00%
Shenyang Aluminum & Magnesium Design Institute Co., Ltd.	15.00%
Shenyang Boyu Technology Co., Ltd.	15.00%
Shenyang Aluminum & Magnesium Technology Co., Ltd.	15.00%
Shenyang Shengxin Construction Engineering Project Management Co., Ltd.	25.00%
Beijing Huayu Aerospace Control High-Tech Co., Ltd.	15.00%
China Nonferrous Metals Industry's Twelfth Metallurgical Construction Co., Ltd.	15.00%
China Nonferrous Metals Industry's Twelfth Metallurgical Chongqing Energy Savings Technology Co., Ltd.	20.00%
China Aluminum International 12MCC Construction Co., Ltd.	25.00%
China Nonferrous Metals Industry's 12th Metallurgical (Indonesia) Co., Ltd.	2.65%
China Nonferrous Metals Changsha Investigation and Design Research Institute Co., Ltd.	15.00%
Shenzhen Changkan Survey and Design Co., Ltd.	15.00%
Changsha Tongxiang Construction Co., Ltd.	25.00%
China Aluminum International Engineering & Equipment Co., Ltd.	25.00%
China Aluminum International Shandong Chemical Industry Co., Ltd.	25.00%

SECTION 11 FINANCIAL REPORT

4 TAXES (CONTINUED)

4.1 Major taxes and tax rates (Continued)

Taxpayer	Income tax rate
Shanghai China Aluminum International Supply Chain Management Co., Ltd.	25.00%
Chalieco Hong Kong Corporation Limited	16.50%
Chalieco Malaysia Sdn. Bhd.	25.00%
Shanghai Chalieco Fengyuan Equity Investment Fund Partnership (Limited Partner)	25.00%
China Aluminum International Investment Management (Shanghai) Co., Ltd.	25.00%
Chalieco (Tianjin) Construction Co., Ltd.	25.00%
China Aluminum International Technology Development Co., Ltd.	15.00%
China Aluminum International Engineering (India) Private Limited	30.00%
China Aluminum International Yunnan Aluminum Application Engineering Co., Ltd.	25.00%
Duyun Development Zone Tongda Construction Co., Ltd.	25.00%
Guiyang Aluminum and Magnesium Design Institute Co., Ltd.	15.00%
Guiyang Aluminum and Magnesium Design Institute Construction Contracting Co., Ltd	25.00%
Guiyang Zhenxing Aluminum & Magnesium Technological Development Co., Ltd.	15.00%
Guizhou Light Metal Innovation Research and Equipment Process Co., Ltd.	15.00%
Guiyang Xinyu Construction Supervision Co., Ltd.	10.00%
Guizhou Yundu Properties Company Limited	25.00%
Guizhou Shunan Mechanical and Electric Equipment Co., Ltd.	15.00%
Guangxi Tongrui Investment Construction Co., Ltd.	25.00%
China Aluminum International Aluminum Application Engineering Co., Ltd.	25.00%
Shanxi Nonferrous Metal Twelfth Metallurgical Advanced Materials Co., Ltd.	10.00%
Qingdao Xinfu Gongchuang Asset Management Company Limited	25.00%
Chalco Shandong Engineering Technology Co., Ltd.	15.00%
Chalco Wancheng Shandong Construction Co., Ltd.	25.00%
Kunming Survey and Design institute Co., Ltd. of China Nonferrous Metals industry	15.00%
Kunming Technology Development Co., Ltd.	10.00%
Africa Congo-Kinshasa Company of Kunming Survey and Design Institute of Chinalco Southwest Construction Investment Co., Ltd.	15.00%
Kunming Non-ferrous Metallurgical Design and Research Institute Corporation	15.00%
Kunming Kehui Electric Co., Ltd.	25.00%
China Nonferrous Metals Industry Huakun Engineering Construction Co., Ltd.	25.00%
Yunnan Jinji'an Construction Consulting Supervision Co., Ltd.	20.00%

SECTION 11 FINANCIAL REPORT

4 TAXES (CONTINUED)

4.2 Important tax preferences and approval documents

1. Tax preferences applicable to high-tech companies

- (1) China Aluminum International Engineering Corporation Limited received the High-tech Enterprise Certificate on 18 October 2022 (Certificate number: GR202211000726, valid for three years), which complies with Article 93 of the Regulations on Application of the Income Tax Law of the People's Republic of China, and as a High-tech Enterprise vigorously supported by the State, the Company is entitled to a preferential corporate income tax at 15% for 2022.
- (2) Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy received the High-tech Enterprise Certificate on 18 September 2021 (Certificate number: GR202143000730, valid for three years), which complies with Article 93 of the Regulations on Application of the Income Tax Law of the People's Republic of China, and as a High-tech Enterprise vigorously supported by the State, the Company is entitled to a preferential corporate income tax at 15% for 2021 and 2022.
- (3) Changsha Clinqsoft Info Tech Co., Ltd. (formerly known as "Changsha Hua Heng Yuan Info Tech Co., Ltd.", formalities for renaming completed on 21 November 2019) received the High-tech Enterprise Certificate on 15 December 2021 (Certificate number: GR202143004434, valid for three years), which complies with Article 93 of the Regulations on Application of the Income Tax Law of the People's Republic of China, and as a High-tech Enterprise vigorously supported by the State, the Company is entitled to a preferential corporate income tax at 15% for 2021 and 2022.
- (4) China Nonferrous Metals Processing Technology Co., Ltd. received the High-tech Enterprise Certificate on 4 December 2020 (Certificate number: GR202041002031, valid for three years), which complies with Article 93 of the Regulations on Application of the Income Tax Law of the People's Republic of China, and as a High-tech Enterprise vigorously supported by the State, the Company is entitled to a preferential corporate income tax at 15% for 2022.

SECTION 11 FINANCIAL REPORT

4 TAXES (CONTINUED)

4.2 Important tax preferences and approval documents (Continued)

1. Tax preferences applicable to high-tech companies (Continued)

- (5) Guiyang Aluminum and Magnesium Design Institute Co., Ltd., as a High-tech Enterprise vigorously supported by the State, received the High-tech Enterprise Certificate on 19 December 2022 (Certificate number: GR202252000612, valid for three years), which complies with Article 93 of the Regulations on Application of the Income Tax Law of the People's Republic of China, and as a High-tech Enterprise vigorously supported by the State, the Company is entitled to a preferential corporate income tax at 15% for 2022.
- (6) Guizhou Shunan Mechanical and Electric Equipment Co., Ltd. received the High-tech Enterprise Certificate on 15 November 2021 (Certificate number: GR202152000344, valid for three years), which complies with Article 93 of the Regulations on Application of the Income Tax Law of the People's Republic of China, and as a High-tech Enterprise vigorously supported by the State, the Company is entitled to a preferential corporate income tax at 15% for 2021 and 2022.
- (7) Guiyang Zhenxing Aluminum & Magnesium Technological Development Co., Ltd. received the High-tech Enterprise Certificate on 15 November 2021 (Certificate number: GR202152000132, valid for three years), which complies with Article 93 of the Regulations on Application of the Income Tax Law of the People's Republic of China, and as a High-tech Enterprise vigorously supported by the State, the Company is entitled to a preferential corporate income tax at 15% for 2021 and 2022.
- (8) Guizhou Light Metal Innovation Research and Equipment Process Co., Ltd. received the High-tech Enterprise Certificate on 15 November 2021 (Certificate number: GR202152000554, valid for three years), which complies with Article 93 of the Regulations on Application of the Income Tax Law of the People's Republic of China, and as a High-tech Enterprise vigorously supported by the State, the Company is entitled to a preferential corporate income tax at 15% for 2021 and 2022.
- (9) Shenyang Aluminum & Magnesium Design Institute Co., Ltd. received the High-tech Enterprise Certificate on 15 September 2020 (Certificate number: GR202021000737, valid for three years), which complies with Article 93 of the Regulations on Application of the Income Tax Law of the People's Republic of China, and as a High-tech Enterprise vigorously supported by the State, the Company is entitled to a preferential corporate income tax at 15% for 2022.

SECTION 11 FINANCIAL REPORT

4 TAXES (CONTINUED)

4.2 Important tax preferences and approval documents (Continued)

1. Tax preferences applicable to high-tech companies (Continued)

- (10) Shenyang Boyu Technology Co., Ltd. received the High-tech Enterprise Certificate on 24 September 2021 (Certificate number: GR202121000538, valid for three years), which complies with Article 93 of the Regulations on Application of the Income Tax Law of the People's Republic of China, and as a High-tech Enterprise vigorously supported by the State, the Company is entitled to a preferential corporate income tax at 15% for 2021 and 2022.
- (11) Shenyang Aluminum & Magnesium Technology Co., Ltd. received the High-tech Enterprise Certificate on 10 November 2020 (Certificate number: GR202021001202, valid for three years), which complies with Article 93 of the Regulations on Application of the Income Tax Law of the People's Republic of China, and as a High-tech Enterprise vigorously supported by the State, the Company is entitled to a preferential corporate income tax at 15% for 2021 and 2022.
- (12) Beijing Huayu Aerospace Control High-Tech Co., Ltd. received the High-tech Enterprise Certificate on 1 December 2022 (Certificate number: GR202211004572, valid for three years), which complies with Article 93 of the Regulations on Application of the Income Tax Law of the People's Republic of China, and as a High-tech Enterprise vigorously supported by the State, the Company is entitled to a preferential corporate income tax at 15% for 2022.
- (13) China Nonferrous Metals Changsha Investigation and Design Research Institute Co., Ltd. received the High-tech Enterprise Certificate on 15 December 2021 (Certificate number: GR202143004458, valid for three years), which complies with Article 93 of the Regulations on Application of the Income Tax Law of the People's Republic of China, and as a High-tech Enterprise vigorously supported by the State, the Company is entitled to a preferential corporate income tax at 15% for 2021 and 2022.
- (14) Shenzhen Changkan Survey and Design Co., Ltd. received the High-tech Enterprise Certificate on 11 December 2020 (Certificate number: GR202044204582, valid for three years), which complies with Article 93 of the Regulations on Application of the Income Tax Law of the People's Republic of China, and as a High-tech Enterprise vigorously supported by the State, the Company is entitled to a preferential corporate income tax at 15% for 2020 and 2021.

SECTION 11 FINANCIAL REPORT

4 TAXES (CONTINUED)

4.2 Important tax preferences and approval documents (Continued)

1. Tax preferences applicable to high-tech companies (Continued)

- (15) Sixth Metallurgical Construction Company of China Nonferrous Metals Industry received the High-tech Enterprise Certificate on 1 December 2022 (Certificate number: GR202241001733, valid for three years), which complies with Article 93 of the Regulations on Application of the Income Tax Law of the People's Republic of China, and as a High-tech Enterprise vigorously supported by the State, the Company is entitled to a preferential corporate income tax at 15% for 2022.
- (16) Sixth Metallurgical (Zhengzhou) Technology Heavy Industry Co. Ltd. received the High-tech Enterprise Certificate on 28 October 2021 (Certificate number: GR202141002396, valid for three years), which complies with Article 93 of the Regulations on Application of the Income Tax Law of the People's Republic of China, and as a High-tech Enterprise vigorously supported by the State, the Company is entitled to a preferential corporate income tax at 15% for 2021 and 2022.
- (17) According to the "Notice on Publicizing the List of the First Batch of High-tech Enterprises to be Recognised in Shaanxi Province in 2022 (Shaanxi Gaoqi banfa [2022] No. 12) published by the Technological Working Committee of Shaanxi Provincial Committee of the Chinese Communist Party and the Science and Technology Department of Shaanxi Province on 6 July 2022, Ninth Metallurgical Construction Co., Ltd. was recognised as a high and new technology enterprise which would be valid for a term of 3 years from 2022 to 2024.
- (18) Zhengzhou Ninth Metallurgical Sanwei Chemical Machinery Co., Ltd. received the Hightech Enterprise Certificate on 9 September 2020 (Certificate number: GR202041000407, valid for three years), which complies with Article 93 of the Regulations on Application of the Income Tax Law of the People's Republic of China. As a high-tech enterprise vigorously supported by the State, it is entitled to a preferential corporate income tax at 15% for 2021 and 2022.
- (19) China Nonferrous Metals Industry's Twelfth Metallurgical Construction Co., Ltd. received the High-tech Enterprise Certificate on 12 December 2022 (Certificate number: GR202214001133, valid for three years), which complies with Article 93 of the Regulations on Application of the Income Tax Law of the People's Republic of China, and as a High-tech Enterprise vigorously supported by the State, the Company is entitled to a preferential corporate income tax at 15% for 2022.

SECTION 11 FINANCIAL REPORT

4 TAXES (CONTINUED)

4.2 Important tax preferences and approval documents (Continued)

1. Tax preferences applicable to high-tech companies (Continued)

- (20) Kunming Survey and Design institute Co., Ltd. of China Nonferrous Metals industry received the High-tech Enterprise Certificate on 3 December 2021 (Certificate number: GR202153000314, valid for three years), which complies with Article 93 of the Regulations on Application of the Income Tax Law of the People's Republic of China, and as a High-tech Enterprise vigorously supported by the State, the Company is entitled to a preferential corporate income tax at 15% for 2021 and 2022.
- (21) Chalco Shandong Engineering Technology Co., Ltd. received the High-tech Enterprise Certificate on 7 December 2021 (Certificate number: GR202137002601, valid for three years), which complies with Article 93 of the Regulations on Application of the Income Tax Law of the People's Republic of China, and as a High-tech Enterprise vigorously supported by the State, the Company is entitled to a preferential corporate income tax at 15% for 2021 and 2022.
- (22) China Aluminum International Technology Development Co., Ltd. received the High-tech Enterprise Certificate on 2 December 2020 (Certificate number: GR202011009148, valid for three years), which complies with Article 93 of the Regulations on Application of the Income Tax Law of the People's Republic of China, and as a High-tech Enterprise vigorously supported by the State, the Company is entitled to a preferential corporate income tax at 15% for 2021 and 2022.
- (23) Kunming Non-ferrous Metallurgical Design and Research Institute Corporation received the High-tech Enterprise Certificate on 18 November 2022 (Certificate number: GR202253001003, valid for three years), which complies with Article 93 of the Regulations on Application of the Income Tax Law of the People's Republic of China, and as a High-tech Enterprise vigorously supported by the State, the Company is entitled to a preferential corporate income tax at 15% for 2022.

SECTION 11 FINANCIAL REPORT

4 TAXES (CONTINUED)

4.2 Important tax preferences and approval documents (Continued)

2. Value added tax

- (1) Pursuant to Notice of the Ministry of Finance and the State Administration of Taxation on Bringing Railway Transportation and Postal Service into the Pilot Program of Business Tax-to-Value Added Tax (Cai Shui [2013] No. 106), China Aluminum International Engineering Corporation Ltd. is exempted from VAT on revenue from technology transfer.
- (2) Pursuant to Notice of the Ministry of Finance and the State Administration of Taxation on Bringing Railway Transportation and Postal Service into the Pilot Program of Changing Business Tax to VAT ([2013] No. 106), China Nonferrous Metals Processing Technology Co., Ltd. is exempted from VAT on revenue from technology transfer.
- (3) Pursuant to Notice on VAT Policies for Software Products issued by the Ministry of Finance and the State Administration of Taxation (Cai Shui [2011] No. 100), Guiyang Zhenxing Aluminum & Magnesium Technological Development Co., Ltd. is entitled to the preferential VAT policy of refund upon levy in respect of the portion of VAT levied after actual tax burden on sales of software produced by itself reaches 3%.
- (4) Pursuant to Notice on VAT Policies for Software Products issued by the Ministry of Finance and the State Administration of Taxation (Cai Shui [2011] No. 100), Guizhou Light Metal Innovation Research and Equipment Process Co., Ltd. is entitled to the preferential VAT policy of refund upon levy in respect of the portion of VAT levied after actual tax burden on sales of software produced by itself reaches 3%.
- (5) China Nonferrous Metals Industry's Twelfth Metallurgical Construction Co., Ltd. completed the formalities for registration of simplified taxation for general VAT payers on 1 May 2016. Pursuant to the Notice of the Ministry of Finance and the State Administration of Taxation on Fully Pushing Forward the Pilot Program of Changing Business Tax to VAT (Cai Shui [2016] No. 36), as of 1 May 2016, it may elect to apply the preferential policy of simplified taxation for construction services for projects with materials supplied by Party A, engineering construction service provided for old projects and sales of real estate obtained prior to 30 April 2016.
- (6) China Nonferrous Metals Industry's Twelfth Metallurgical Construction Co., Ltd. completed the formalities for registration for tax exemption for cross border taxable activities of general VAT payers in May 2017. Pursuant to the Notice of the Ministry of Finance and the State Administration of Taxation on Fully Pushing Forward the Pilot Program of Changing Business Tax to VAT (Cai Shui [2016] No. 36), domestic entities and individuals are exempted from VAT in rendering construction services overseas.

SECTION 11 FINANCIAL REPORT

4 TAXES (CONTINUED)

4.2 Important tax preferences and approval documents (Continued)

3. Tax preferences for small and micro enterprises

- (1) China Nonferrous Metals Industry's Twelfth Metallurgical Chongqing Energy Savings Technology Co., Ltd. complies with the provisions of the Cai Shui [2021] No. 12, pursuant to which for the period from 1 January 2021 to 31 December 2022, for small and micro enterprises, the portion of the annual taxable income of small and low-profit enterprises not exceeding RMB1 million, in addition to the preferential policies stipulated in Article 2 of the Notice on Applying Inclusive Tax Relief Policies to Small and Micro Enterprises (Cai Shui [2019] No. 13), the enterprise income tax shall be levied by half.
- (2) Shanxi Nonferrous Metal Twelfth Metallurgical Advanced Materials Co., Ltd. Complies with the provisions of the Notice on Applying Inclusive Tax Relief Policies to Small and Micro Enterprises (Cai Shui [2019] No. 13), pursuant to which for the period from 1 January 2019 to 31 December 2021, for small and micro enterprises, the portion of annual taxable income not exceeding RMB1 million is subject to a corporate tax rate of 20% on the basis of 25% of this portion of its taxable income, and the portion of annual taxable income exceeding RMB1 million but not exceeding RMB3 million is subject to corporate tax rate of 20% on the basis of 50% of this portion of its taxable income.

Shanxi Nonferrous Metal Twelfth Metallurgical Advanced Materials Co., Ltd. complies with the provisions of the Cai Shui [2021] No. 12, pursuant to which for the period from 1 January 2021 to 31 December 2022, for small and micro enterprises, the portion of the annual taxable income of small and low-profit enterprises not exceeding RMB1 million, in addition to the preferential policies stipulated in Article 2 of the Notice on Applying Inclusive Tax Relief Policies to Small and Micro Enterprises (Cai Shui [2019] No. 13), the enterprise income tax shall be levied by half.

SECTION 11 FINANCIAL REPORT

4 TAXES (CONTINUED)

4.2 Important tax preferences and approval documents (Continued)

3. Tax preferences for small and micro enterprises (Continued)

- (3) Guiyang Xinyu Construction Supervision Co., Ltd. complies with the provisions of the Notice on Applying Inclusive Tax Relief Policies to Small and Micro Enterprises (Cai Shui [2019] No. 13), pursuant to which for the period from 1 January 2019 to 31 December 2021, for small and micro enterprises, the portion of annual taxable income not exceeding RMB1 million is subject to a corporate tax rate of 20% on the basis of 25% of this portion of its taxable income, and the portion of annual taxable income exceeding RMB1 million but not exceeding RMB3 million is subject to corporate tax rate of 20% on the basis of 50% of this portion of its taxable income.

Guiyang Xinyu Construction Supervision Co., Ltd. complies with the provisions of the Cai Shui [2021] No. 12, pursuant to which for the period from 1 January 2021 to 31 December 2022, for small and micro enterprises, the portion of the annual taxable income of small and low-profit enterprises not exceeding RMB1 million, in addition to the preferential policies stipulated in Article 2 of the Notice on Applying Inclusive Tax Relief Policies to Small and Micro Enterprises (Cai Shui [2019] No. 13), the enterprise income tax shall be levied by half.

- (4) Kunming Technology Development Co., Ltd. complies with the provisions of the Notice on Applying Inclusive Tax Relief Policies to Small and Micro Enterprises (Cai Shui [2019] No. 13), pursuant to which for the period from 1 January 2019 to 31 December 2021, for small and micro enterprises, the portion of annual taxable income not exceeding RMB1 million is subject to a corporate tax rate of 20% on the basis of 25% of this portion of its taxable income, and the portion of annual taxable income exceeding RMB1 million but not exceeding RMB3 million is subject to corporate tax rate of 20% on the basis of 50% of this portion of its taxable income.

Kunming Technology Development Co., Ltd. complies with the provisions of the Cai Shui [2021] No. 12, pursuant to which for the period from 1 January 2021 to 31 December 2022, for small and micro enterprises, the portion of the annual taxable income of small and low-profit enterprises not exceeding RMB1 million, in addition to the preferential policies stipulated in Article 2 of the Notice on Applying Inclusive Tax Relief Policies to Small and Micro Enterprises (Cai Shui [2019] No. 13), the enterprise income tax shall be levied by half.

SECTION 11 FINANCIAL REPORT

4 TAXES (CONTINUED)

4.2 Important tax preferences and approval documents (Continued)

3. Tax preferences for small and micro enterprises (Continued)

- (5) Luoyang Jincheng Construction Supervision Co., Ltd. complies with the provisions of the Notice on Applying Inclusive Tax Relief Policies to Small and Micro Enterprises (Cai Shui [2019] No. 13), pursuant to which for the period from 1 January 2019 to 31 December 2021, for small and micro enterprises, the portion of annual taxable income not exceeding RMB1 million is subject to a corporate tax rate of 20% on the basis of 25% of this portion of its taxable income, and the portion of annual taxable income exceeding RMB1 million but not exceeding RMB3 million is subject to corporate tax rate of 20% on the basis of 50% of this portion of its taxable income.

Luoyang Jincheng Construction Supervision Co., Ltd. complies with the provisions of the Cai Shui [2021] No. 12, pursuant to which for the period from 1 January 2021 to 31 December 2022, for small and micro enterprises, the portion of the annual taxable income of small and low-profit enterprises not exceeding RMB1 million, in addition to the preferential policies stipulated in Article 2 of the Notice on Applying Inclusive Tax Relief Policies to Small and Micro Enterprises (Cai Shui [2019] No. 13), the enterprise income tax shall be levied by half.

- (6) Hunan Huachu Project Management Co., Ltd. complies with the provisions of the Notice on Applying Inclusive Tax Relief Policies to Small and Micro Enterprises (Cai Shui [2019] No. 13), pursuant to which for the period from 1 January 2019 to 31 December 2021, for small and micro enterprises, the portion of annual taxable income not exceeding RMB1 million is subject to a corporate tax rate of 20% on the basis of 25% of this portion of its taxable income, and the portion of annual taxable income exceeding RMB1 million but not exceeding RMB3 million is subject to corporate tax rate of 20% on the basis of 50% of this portion of its taxable income.

Hunan Huachu Project Management Co., Ltd. complies with the provisions of the Cai Shui [2021] No. 12, pursuant to which for the period from 1 January 2021 to 31 December 2022, for small and micro enterprises, the portion of the annual taxable income of small and low-profit enterprises not exceeding RMB1 million, in addition to the preferential policies stipulated in Article 2 of the Notice on Applying Inclusive Tax Relief Policies to Small and Micro Enterprises (Cai Shui [2019] No. 13), the enterprise income tax shall be levied by half.

SECTION 11 FINANCIAL REPORT

4 TAXES (CONTINUED)

4.2 Important tax preferences and approval documents (Continued)

3. Tax preferences for small and micro enterprises (Continued)

- (7) Ninth Metallurgical Hanzhong Construction Design Institute Co., Ltd. complies with the provisions of the Notice on Applying Inclusive Tax Relief Policies to Small and Micro Enterprises (Cai Shui [2019] No. 13), pursuant to which for the period from 1 January 2019 to 31 December 2021, for small and micro enterprises, the portion of annual taxable income not exceeding RMB1 million is subject to a corporate tax rate of 20% on the basis of 25% of this portion of its taxable income, and the portion of annual taxable income exceeding RMB1 million but not exceeding RMB3 million is subject to corporate tax rate of 20% on the basis of 50% of this portion of its taxable income.

Ninth Metallurgical Hanzhong Construction Design Institute Co., Ltd. complies with the provisions of the Cai Shui [2021] No. 12, pursuant to which for the period from 1 January 2021 to 31 December 2022, for small and micro enterprises, the portion of the annual taxable income of small and low-profit enterprises not exceeding RMB1 million, in addition to the preferential policies stipulated in Article 2 of the Notice on Applying Inclusive Tax Relief Policies to Small and Micro Enterprises (Cai Shui [2019] No. 13), the enterprise income tax shall be levied by half.

- (8) Yunnan Jinji'an Construction Consulting Supervision Co., Ltd. complies with the provisions of the Notice on Applying Inclusive Tax Relief Policies to Small and Micro Enterprises (Cai Shui [2019] No. 13), pursuant to which for the period from 1 January 2019 to 31 December 2021, for small and micro enterprises, the portion of annual taxable income not exceeding RMB1 million is subject to a corporate tax rate of 20% on the basis of 25% of this portion of its taxable income, and the portion of annual taxable income exceeding RMB1 million but not exceeding RMB3 million is subject to corporate tax rate of 20% on the basis of 50% of this portion of its taxable income.

Yunnan Jinji'an Construction Consulting Supervision Co., Ltd. complies with the provisions of the Cai Shui [2021] No. 12, pursuant to which for the period from 1 January 2021 to 31 December 2022, for small and micro enterprises, the portion of the annual taxable income of small and low-profit enterprises not exceeding RMB1 million, in addition to the preferential policies stipulated in Article 2 of the Notice on Applying Inclusive Tax Relief Policies to Small and Micro Enterprises (Cai Shui [2019] No. 13), the enterprise income tax shall be levied by half.

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

5.1 Monetary fund

Category	Closing balance	Opening balance
Cash on hand	4,050,614.86	738,796.17
Bank deposits	6,891,872,032.97	6,772,651,824.40
Other monetary fund	777,605,770.25	876,370,644.76
Total	7,673,528,418.08	7,649,761,265.33
Including: total amount deposited abroad	115,590,165.18	69,651,916.65

Notes:

- As at 31 December 2022, monetary funds included restricted cash of RMB816,164,369.46, including bank deposits secured for bank guarantees and acceptance bills and frozen deposits;
- As at 31 December 2022, the Company a total of RMB4,243,818,831.69 deposited with Chinalco Finance Company Limited ("Chinalco Finance"), a related non-banking financial institution under common control of China Aluminum Group.

5.2 Notes receivable

Category	Closing balance	Opening balance
Bank's acceptance bills	6,450,051.85	8,232,891.32
Commercial acceptance bills		
Less: Provision for bad debt		
Total	6,450,051.85	8,232,891.32

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.3 Accounts receivable

1. Disclosure by aging

Aging	Closing balance	Opening balance
Within 1 year	8,438,721,092.24	8,752,482,428.67
Between 1-2 years	4,020,152,947.60	5,726,270,764.88
Between 2-3 years	2,843,201,904.59	1,651,615,668.85
Between 3-4 years	906,801,501.19	1,246,026,796.31
Between 4-5 years	900,732,766.30	434,311,442.77
Over 5 years	1,501,889,357.46	1,404,013,657.20
Sub-total	18,611,499,569.38	19,214,720,758.68
Less: Provision for bad debt	3,346,460,728.21	3,127,331,557.81
Total	15,265,038,841.17	16,087,389,200.87

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.3 Accounts receivable (Continued)

2. Accounts receivable disclosed by the bad debt provision method

Category	Carrying balance		Closing balance	
	Amount	Percentage (%)	Amount	Percentage (%)
Accounts receivable tested for provision for bad debt on an individual basis	1,877,771,691.94	10.09	1,175,076,535.43	62.58
Accounts receivable tested for provision for bad debt on a collective basis	16,733,727,877.44	89.91	2,171,384,192.78	12.98
Including, Group 1: Expected credit loss group	16,733,727,877.44	89.91	2,171,384,192.78	12.98
Subtotal	16,733,727,877.44	89.91	2,171,384,192.78	12.98
Total	18,611,499,569.38	100.00	3,346,460,728.21	17.98

Category	Carrying balance		Opening balance	
	Amount	Percentage (%)	Amount	Percentage (%)
Accounts receivable tested for provision for bad debt on an individual basis	1,707,619,055.72	8.89	1,033,919,009.49	60.55
Accounts receivable tested for provision for bad debt on a collective basis	17,507,101,702.96	91.11	2,093,412,548.32	11.96
Including, Group 1: Expected credit loss group	17,507,101,702.96	91.11	2,093,412,548.32	11.96
Subtotal	17,507,101,702.96	91.11	2,093,412,548.32	11.96
Total	19,214,720,758.68	100.00	3,127,331,557.81	16.28

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.3 Accounts receivable (Continued)

2. Accounts receivable disclosed by the bad debt provision method (Continued)

- (1) Accounts receivable tested for impairment on an individual basis as at the end of the period

Entity	Carrying balance	Provision for bad debt	Expected credit loss rate (%)	Reason for the provision
Debtor 1	481,762,713.12	289,057,627.88	60.00	The Company made provisions for credit losses based on the recoverability of the amount.
Debtor 2	236,668,344.63	142,001,006.78	60.00	The Company made provisions for credit losses based on the recoverability of the amount.
Debtor 3	212,855,167.01	78,641,751.75	36.95	The Company made provisions for credit losses based on the recoverability of the amount.
Debtor 4	162,443,184.19	81,221,592.10	50.00	The Company made provisions for credit losses based on the recoverability of the amount.
Debtor 5	107,906,698.20	107,906,698.20	100.00	The Company made provisions for credit losses based on the recoverability of the amount.
Others	676,135,584.79	476,247,858.72	70.44	The Company made provisions for credit losses based on the recoverability of the amount.
Total	1,877,771,691.94	1,175,076,535.43	62.58	

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.3 Accounts receivable (Continued)

2. Accounts receivable disclosed by the bad debt provision method (Continued)

(2) Accounts receivable tested for provision for bad debts on a collective basis

① Group 1: Expected credit loss group

Aging	Closing balance			Opening balance		
	Carrying balance	Expected credit loss rate (%)	Provision for bad debt	Carrying balance	Expected credit loss rate (%)	Provision for bad debt
Within 1 year	8,359,566,514.07	0.50	41,796,895.57	8,604,171,130.37	0.50	43,020,856.37
Between						
1-2 years	3,731,829,676.46	10.00	373,182,967.85	5,278,464,559.40	10.00	527,846,456.28
Between						
2-3 years	2,604,586,229.78	20.00	520,917,245.90	1,478,329,360.63	20.00	295,673,907.01
Between						
3-4 years	790,943,596.06	30.00	237,283,078.90	1,056,015,429.22	30.00	316,820,852.35
Between						
4-5 years	497,195,713.68	50.00	248,597,857.17	360,141,494.59	50.00	180,070,747.56
Over 5 years	749,606,147.39	100.00	749,606,147.39	729,979,728.75	100.00	729,979,728.75
Total	16,733,727,877.44	-	2,171,384,192.78	17,507,101,702.96	-	2,093,412,548.32

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.3 Accounts receivable (Continued)

3. Addition to or recovery or reversal of provision for bad debt

Category	Opening balance	Movement during the period Recovery or				Closing balance
		Provision	Reversal	Written off	Other changes	
Portfolio which items are tested for provision on an individual basis	1,033,919,009.49	225,238,950.31	-97,337,457.16	-197,628,160.55	210,884,193.34	1,175,076,535.43
Expected credit loss group	2,093,412,548.32	328,550,888.94		-42,540,490.82	-208,038,753.66	2,171,384,192.78
Total	3,127,331,557.81	553,789,839.25	-97,337,457.16	-240,168,651.37	2,845,439.68	3,346,460,728.21

Significant recovered or reversed provision for bad debt for the period:

Entity	Amount reversed or recovered	Recovery method
Debtor 1	24,378,464.00	The outstanding amount has been recovered
Debtor 2	19,445,106.27	The outstanding amount has been recovered
Debtor 3	18,335,545.68	The outstanding amount has been recovered
Debtor 4	12,783,177.96	The outstanding amount has been recovered
Debtor 5	3,351,987.87	The outstanding amount has been recovered
Debtor 6	3,000,000.00	The outstanding amount has been recovered
Total	81,294,281.78	–

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.3 Accounts receivable (Continued)

4. Accounts receivables actually written off in the current period

Accounts receivables actually written off in the current period amounted to RMB240,168,651.37.

Of which: Significant accounts receivables actually written off in the current period

Entity	Nature	Amount written-off	Reason for write-off	Write-off procedures	Arising from Connected transaction or not
Debtor 1	Construction payment and sales payment	154,591,832.37	Unrecoverable	To be approved at meeting convened by general manager of the Company	No
Debtor 2	Equipment payment and design consultation fee	30,988,930.68	Unrecoverable	To be approved at meeting convened by general manager of the Company	No
Debtor 3	Survey and design fee	7,917,160.12	Unrecoverable	To be approved at meeting convened by general manager of the Company	No
Debtor 4	Construction payment and sales payment	4,909,518.64	Unrecoverable	To be approved at meeting convened by general manager of the Company	No
Debtor 5	Survey and design fee	4,500,000.00	Unrecoverable	To be approved at meeting convened by general manager of the Company	No
Debtor 6	Survey and design fee	3,704,000.00	Unrecoverable	To be approved at meeting convened by general manager of the Company	No
Debtor 7	Survey and design fee	3,690,800.00	Unrecoverable	To be approved at meeting convened by general manager of the Company	No
Total	–	210,302,241.81	–	–	–

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.3 Accounts receivable (Continued)

5. Top five debtors of accounts receivable as at the end of the period

Entity	Closing balance	Percentage in total accounts receivable (%)	Closing balance of provision for bad debt
No. 1	548,608,681.95	2.95	62,538,349.25
No. 2	481,762,713.12	2.59	289,057,627.88
No. 3	388,012,539.00	2.08	1,940,062.70
No. 4	333,704,077.38	1.79	33,911,524.34
No. 5	276,069,666.30	1.48	37,502,512.15
Total	2,028,157,677.75	10.90	424,950,076.32

5.4 Receivables financing

Items	Closing balance	Opening balance
Notes receivable	690,552,523.80	850,764,672.89
Accounts receivable		
Total	690,552,523.80	850,764,672.89

Notes:

- For 2022, the Company's business model for managing notes receivable includes both collection of contractual cash flow as the target and sales as the target. Therefore, the Company's notes receivable measured at fair value and financial assets where changes are included in other comprehensive income shall be included in the receivables financing;
- As of 31 December 2022, the Company had no accounts receivable transferred from notes receivable due to drawer's failure to perform the obligation;
- As of 31 December 2022, bank's acceptance bills pledged but not yet due amounted to RMB179,617,398.22;
- As of 31 December 2022, bank's acceptance bills discounted but not yet due amounted to RMB1,043,707,942.42;
- As of 31 December 2022, bank's acceptance bills endorsed but not yet due amounted to RMB2,071,819,225.87.

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.5 Prepayments

1. Prepayments presented by aging

Aging	Closing balance		Opening balance	
	Amount	Percentage (%)	Amount	Percentage (%)
Within 1 year	438,457,496.21	92.49	331,815,184.95	90.63
Between 1-2 years	11,042,919.82	2.33	18,513,465.94	5.06
Between 2-3 years	11,259,829.76	2.38	5,747,004.66	1.57
Above 3 years	13,298,055.54	2.81	10,042,876.00	2.74
Total	474,058,301.33	100.00	366,118,531.55	100.00

Significant prepayments aged over 1 year

Creditor	Debtor	Closing balance	Aging	Reason for unsettlement
Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy	Supplier 1	4,636,690.80	Within 1 year, 1-2 years	Settlement conditions were not met
Huachu High-Tech (Hunan) Co., Ltd.	Supplier 2	3,787,508.94	4-5 years	Settlement conditions were not met
Ninth Metallurgical Construction Co., Ltd.	Supplier 3	3,000,000.00	2-3 years	Settlement conditions were not met
Ninth Metallurgical Construction Co., Ltd.	Supplier 4	3,000,000.00	2-3 years	Settlement conditions were not met
Total	-	14,424,199.74	-	-

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.5 Prepayments (Continued)

2. Top 5 entities in terms of prepayments

Entity	Closing balance	Percentage of closing balance of total prepayments (%)
No. 1	40,923,882.82	8.63
No. 2	26,993,597.80	5.69
No. 3	21,605,626.32	4.56
No. 4	19,091,886.00	4.03
No. 5	17,492,818.30	3.69
Total	126,107,811.24	–

5.6 Other receivables

Items	Closing balance	Opening balance
Interest receivable	2,685,407.11	540,607.12
Dividends receivable	8,125,422.21	–
Other receivables	3,599,508,545.10	3,693,403,153.48
Less: Provision for bad debt	1,132,874,375.94	1,328,951,280.94
Total	2,477,444,998.48	2,364,992,479.66

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.6 Other receivables (Continued)

1. Interest receivable

(1) Classification of interests receivable

Items	Closing balance	Opening balance
Time deposits		
Entrusted loans		
Others	2,685,407.11	540,607.12
Total	2,685,407.11	540,607.12

2. Dividend receivable

Items	Closing balance	Opening balance	Reason for non-collection	Impairment or not and basis of determination
Chalco Tendering Company Limited	8,125,422.21		Not yet paid	No
Total	8,125,422.21	-	-	-

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.6 Other receivables (Continued)

3. Other receivables

(1) Other receivables by nature

Nature	Closing balance	Opening balance
Financing provided to Party A and its related parties	185,581,666.38	607,106,080.19
Retention funds or deposits	1,223,822,925.89	1,215,947,746.60
Advance	1,325,984,970.31	1,639,987,173.92
Equity transfer payment	768,945,960.00	
Reserve fund	25,869,889.25	70,069,300.86
Others	69,303,133.27	160,292,851.91
Less: Provision for bad debt	1,132,874,375.94	1,328,951,280.94
Total	2,466,634,169.16	2,364,451,872.54

Note: In order to actively expand the market and share a win-win result with proprietors, the Company signs a capital arrangement agreement with some proprietors of the engineering contracting projects. In addition to general engineering construction services, the Company also provide the proprietors with a certain amount of financing in support of their completion of designated construction projects. Meanwhile, the Company charges a financing fee at agreed interest rate. As of 31 December 2022, the Company had failed to collect the financing fee or principal due on several capital arrangement agreements, and is actively negotiating with the proprietors and relevant parties. The Company has made judgment based on current progress of relevant construction contracting projects, guarantees provided by the proprietors and relevant parties, as well as negotiations between the Company and the proprietors and relevant parties, and has accrued provision for bad debt for relevant receivables. The Company believes that, based on the information currently available, the provision for bad debts against such claims is sufficient to cover the risk of recovery.

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.6 Other receivables (Continued)

3. Other receivables (Continued)

(2) Aging analysis of other receivables

Aging	Closing balance		Opening balance	
	Carrying balance	Percentage (%)	Carrying balance	Percentage (%)
Within 1 year	1,722,972,855.54	47.87	1,723,193,889.52	46.66
Between 1-2 years	630,019,308.30	17.50	533,112,575.16	14.43
Between 2-3 years	397,719,066.99	11.05	358,927,113.01	9.72
Between 3-4 years	272,842,918.18	7.58	309,183,868.96	8.37
Between 4-5 years	206,305,227.61	5.73	397,259,574.29	10.76
Over 5 years	369,649,168.48	10.27	371,726,132.54	10.06
Total	3,599,508,545.10	100.00	3,693,403,153.48	100.00

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.6 Other receivables (Continued)

3. Other receivables (Continued)

(3) Provision for bad debt

Provision for bad debt	Stage 1	Stage 2	Stage 3		Total
	Expected credit loss in the next 12 months	Expected credit loss for the entire duration of the life (no credit impairment)	Expected credit loss for the entire duration of the life (credit-impaired)	Expected credit loss for the entire duration of the life (credit-impaired)	
Balance as at 1 January 2022	6,981,382.13	80,286,338.59	1,241,683,560.22	1,328,951,280.94	
Balance as at 1 January 2022 in the period	6,981,382.13	80,286,338.59	1,241,683,560.22	1,328,951,280.94	
- transfers to stage 2	-1,589,786.55	1,589,786.55			-
- transfers to stage 3		-34,286,377.48	34,286,377.48		-
- transfers back to stage 2					
- transfers back to stage 1					
Provision for the period	2,991,665.77	14,149,457.02	122,462,014.40	139,603,137.19	
Reversal for the period			305,497,496.81	305,497,496.81	
Write off for the period			24,502,407.61	24,502,407.61	
Other changes			-5,680,137.77	-5,680,137.77	
Balance as at 31 December 2022	8,383,261.35	61,739,204.68	1,062,751,909.91	1,132,874,375.94	

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.6 Other receivables (Continued)

3. Other receivables (Continued)

(3) Provision for bad debt (Continued)

Provision for bad debt in stage 3:

Entity	Carrying balance	Balance of provision for bad debt	Percentage of expected credit loss (%)	Reasons for categorization
Debtor 1	212,158,416.63	198,158,416.63	93.40	Based on the recoverability and the actual aging
Debtor 2	204,550,301.55	190,754,173.96	93.26	Based on the recoverability and the actual aging
Debtor 3	173,127,014.46	92,436,625.91	53.39	Based on the recoverability and the actual aging
Debtor 4	119,066,217.97	108,539,728.87	91.16	Based on the recoverability and the actual aging
Debtor 5	45,854,246.25	7,855,130.58	17.13	Based on the recoverability and the actual aging
Others	700,515,666.38	465,007,833.96	66.38	Based on the recoverability and the actual aging
Total	1,455,271,863.24	1,062,751,909.91	73.03	

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.6 Other receivables (Continued)

3. Other receivables (Continued)

- (4) Significant provision for bad debts provided, recovered or reversed for the period

The amount of provision for bad debts provided for 2022 was RMB139,603,137.19; and the amount of provision for bad debts recovered or reversed for the period was RMB305,497,496.81.

Important bad debt provisions recovered or reversed during the reporting period:

Entity	Amount reversed or recovered	Recovery method
Debtor 1	295,732,027.35	Repayment in kind
Debtor 2	7,000,000.00	Relevant amount recovered
Debtor 3	1,637,125.46	Relevant amount recovered
Total	304,369,152.81	–

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.6 Other receivables (Continued)

3. Other receivables (Continued)

- (5) Other receivables actually written off during the current period

The amount of other receivables actually written off during the current period was RMB24,502,407.61.

Among them, the amount of other receivables actually written off during the reporting period is significant:

Entity	Nature	Amount written-off	Reason for write-off	Write-off procedures	Arising from connected transaction or not
Debtor 1	Advance	22,902,878.23	Unrecoverable	GM regular meeting	No
Debtor 2	performance bond	650,000.00	Unrecoverable	GM regular meeting	No
Debtor 3	performance bond	522,592.53	Unrecoverable	GM regular meeting	No
Debtor 4	performance bond	10,611.00	Unrecoverable	GM regular meeting	No
Total	-	24,086,081.76			

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.6 Other receivables (Continued)

3. Other receivables (Continued)

(6) Top five debtors of other receivables as at the end of the period

Entity	Nature	Closing balance	Aging	Percentage in total other receivable (%)	Closing balance of provision for bad debt
No. 1	Equity transfer payment	768,945,960.00	1 year	21.36	3,844,729.80
No. 2	Security deposit and deposit	237,011,517.12	Within 1 year, 1-2 years	6.58	9,735,057.59
No. 3	advance payment	212,158,416.63	Within 1 year, 1-2 years	5.89	198,158,416.63
No. 4	advance payment	204,550,301.55	Within 1 year, 2-3 years	5.68	190,754,173.96
No. 5	Use funds of Party A and its related parties	173,127,014.46	Over 5 years	4.81	92,436,625.91
Total	–	1,595,793,209.76	–	44.33	494,929,003.89

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.7 Inventories

1. Classification of inventories

Item	Carrying balance	Closing balance		Carrying balance	Opening balance	
		Impairment provision for inventory/impairment provision for contract performance costs	Book Value		Impairment provision for inventory/impairment provision for contract performance costs	Book Value
Raw materials	284,539,603.82	3,496,620.36	281,042,983.46	244,894,886.41	4,544,449.42	240,350,436.99
Work-in-process	1,331,029,580.97	110,781,371.34	1,220,248,209.63	1,291,725,450.82	81,526,449.92	1,210,199,000.90
Inventories	1,485,891,130.75	431,998,317.59	1,053,892,813.16	1,191,617,675.38	432,183,824.39	759,433,850.99
Revolving materials and spare parts	13,013,331.79		13,013,331.79	19,475,594.88		19,475,594.88
Real estate development cost	291,756,901.06	5,000,000.00	286,756,901.06	288,798,305.34		288,798,305.34
Total	3,406,230,548.39	551,276,309.29	2,854,954,239.10	3,036,511,912.83	518,254,723.73	2,518,257,189.10

2. Additions and reductions to provision for impairment of inventories and contract performance cost

Item	Opening balance	Additions for the period		Reduction for the period		Closing balance
		Provision	Others	Reversal	Write-off	
Raw materials	4,544,449.42	-1,047,829.06				3,496,620.36
Work-in-process	81,526,449.92	29,254,921.42				110,781,371.34
Inventories	432,183,824.39	24,362,585.71		14,404,321.93	10,143,770.58	431,998,317.59
Real estate development cost		5,000,000.00				5,000,000.00
Total	518,254,723.73	57,569,678.07		14,404,321.93	10,143,770.58	551,276,309.29

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.8 Contract assets

1. Contract assets category

Item	Closing balance			Opening balance		
	Carrying balance	Provisions for impairment	Book Value	Carrying balance	Provisions for impairment	Book Value
Contract assets tested for provision for impairment on an individual basis	1,613,361,437.02	526,331,001.17	1,087,030,435.85	1,523,233,227.46	556,832,061.44	966,401,166.02
Contract assets tested for provision for impairment on a collective basis	6,909,377,482.88	134,849,732.88	6,774,527,750.00	6,747,730,834.49	123,960,310.08	6,623,770,524.41
Group 1: contract assets not delivered to customers for use	6,554,183,800.08	32,752,593.29	6,521,431,206.79	6,024,273,955.39	30,168,289.33	5,994,105,666.06
Group 2: contract assets delivered to customers for use	355,193,682.80	102,097,139.59	253,096,543.21	723,456,879.10	93,792,020.75	629,664,858.35
Total	8,522,738,919.90	661,180,734.05	7,861,558,185.85	8,270,964,061.95	680,792,371.52	7,590,171,690.43

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.8 Contract assets (Continued)

2. Provision for impairment for contract assets

- (1) Contract assets tested for provision for impairment on an individual basis as at the end of the period

Item	Carrying balance	Provisions for impairment	Expected credit loss rate (%)	Reason for the provision
Item 1	297,212,206.75	20,253,340.24	6.81	Impairment of assets was made based on project implementation and expected settlement
Item 2	168,772,241.81	151,895,017.63	90.00	Impairment of assets was made based on project implementation and expected settlement
Item 3	164,653,047.76	164,653,047.76	100.00	Impairment of assets was made based on project implementation and expected settlement
Item 4	54,922,751.76	5,492,275.18	10.00	Impairment of assets was made based on project implementation and expected settlement
Item 5	45,703,825.47	4,570,382.55	10.00	Impairment of assets was made based on project implementation and expected settlement
Other items	882,097,363.47	179,466,937.81	20.35	Impairment of assets was made based on project implementation and expected settlement
Total	1,613,361,437.02	526,331,001.17	32.62	

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.8 Contract assets (Continued)

2. Provision for impairment for contract assets (Continued)

(2) Contract assets tested for provision for impairment on a collective basis

Item	Closing balance			Opening balance		
	Carrying balance	Expected credit loss rate (%)	Provisions for impairment	Carrying balance	Expected credit loss rate (%)	Provisions for impairment
Group 1: contract assets not delivered to customers for use	6,554,183,800.08	0.50	32,752,593.29	6,024,273,955.39	0.50	30,168,289.33
Group 2: contract assets delivered to customers for use	355,193,682.80	28.74	102,097,139.59	723,456,879.10	12.96	93,792,020.75
Total	6,909,377,482.88	1.95	134,849,732.88	6,747,730,834.49	1.84	123,960,310.08

(3) Provision for impairment of contract assets

Item	Opening balance	Movement during the period			Closing balance
		Provision	Reversal	Written off	
Contract assets tested for provision for impairment on an individual basis	556,832,061.44	-30,501,060.27			526,331,001.17
Contract assets tested for provision for impairment on a collective basis	123,960,310.08	10,889,422.80			134,849,732.88
Group 1: Contract assets not delivered to customers for use	30,168,289.33	2,584,303.96			32,752,593.29
Group 2: Contract assets delivered to customers for use	93,792,020.75	8,305,118.84			102,097,139.59
Total	680,792,371.52	-19,611,637.47			661,180,734.05

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.8 Contract assets (Continued)

3. Reclassification of contract assets

Item	As at the end of the period	As at the beginning of the year
Provision for impairment of contract assets	666,317,908.96	685,612,189.11
Less: Reclassification to other non-current assets	5,137,174.91	4,819,817.59
Closing balance	661,180,734.05	680,792,371.52

5.9 Non-current assets due within a year

Item	Closing balance	Opening balance
Long-term receivables due within a year	463,594,819.37	571,394,600.59
Less: Provision for bad debt	67,178,138.07	57,294,343.77
Total	396,416,681.30	514,100,256.82

5.10 Other current-assets

Item	Closing balance	Opening balance
Deductible VAT input	436,769,795.17	464,135,643.44
Prepaid income tax	39,630,373.45	73,518,799.26
Others	5,877,212.37	3,258,587.35
Total	482,277,380.99	540,913,030.05

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.11 Long-term receivables

1. Particulars of long-term receivables

Item	Closing balance			Opening balance			Discount rate range
	Book balance	Bad debt provision	Book value	Book balance	Bad debt provision	Book value	
Repurchase payment under BT contract	226,930,235.95	57,299,096.34	169,631,139.61	226,930,235.95	57,299,096.34	169,631,139.61	87.00-100.00
Long-term receivables from customers	2,335,668,278.13	364,908,685.67	1,970,759,592.46	2,225,674,815.82	316,191,589.63	1,909,483,226.19	87.00-100.00
Total	2,562,598,514.08	422,207,782.01	2,140,390,732.07	2,452,605,051.77	373,490,685.97	2,079,114,365.80	-
Including: Current portion of long-term receivables due within one year	463,594,819.37	67,178,138.07	396,416,681.30	571,394,600.59	57,294,343.77	514,100,256.82	87.00-100.00
Presented in long-term receivables	2,099,003,694.71	355,029,643.94	1,743,974,050.77	1,881,210,451.18	316,196,342.20	1,565,014,108.98	-

Note: Pursuant to the engineering project contracting agreement or financing agreement signed between the Group and the proprietor or its related parties, the Company, in addition to general engineering construction service, provides a certain amount of financing to the proprietor and its related parties in support of their preliminary expenditures of designated construction projects. The above-mentioned financing will be repaid within a certain period of time.

2. Accrual of provision for bad debt of long-term receivables

Item	Closing balance	Opening balance
Opening balance	373,490,685.97	291,336,421.05
Provision for the year	81,191,757.26	82,354,264.92
Reversal for the year	-7,499,781.22	-200,000.00
Write-off for the year	-24,974,880.00	
Other changes		
Closing balance	422,207,782.01	373,490,685.97

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.12 Long-term equity investment

Investee	Investment costs	Opening balance	Increase in investment	Decrease in investment	Investment gain or loss recognized under equity method	Increase/decrease					Provision for impairment Closing balance	
						Adjustments to other comprehensive income	Other equity changes	Cash dividends or profit declared	Provision for impairment	Others		
I. Joint ventures												
Shanghai Fergong Equity Investment Fund Partnership (Limited Partner)	67,905,600.00	62,289,062.41			3,404,288.57	-	58,781.21	-2,673,463.91	-	-205,144.45	62,883,524.83	
Zhongji Sunward Technology Co., Ltd.	40,000,000.00	8,868,700.85			-27,415.80	-	-	-	-	-	8,862,285.05	
China Aluminum International Energy Saving Technology (Beijing) Co., Ltd.	26,905,600.00	53,173,069.79			4,022,770.24	-	-501,136.94	-2,673,463.91	-	-	54,021,239.78	
	1,000,000.00	236,291.77			-591,064.87	-	559,917.55	-	-	-205,144.45	-	

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.12 Long-term equity investment (Continued)

Investee	Investment costs	Opening balance	Increase in investment	Decrease in investment	Investment gain or loss recognized under equity method	Increase/decrease				Provision for impairment	Closing balance	Provision for impairment	Closing balance
						Adjustments to other comprehensive income	Other equity changes	Cash dividends or profit declared	Provision for impairment				
II. Associates	737,781,723.29	725,629,538.13	1,470,361.57	-	12,748,144.89	-	209,525.81	-12,180,763.23	-	8,326,200.00	736,093,007.21	48,218,575.63	
Zhuzhou Tierqiao Crane Co., Ltd.	171,835,516.27	173,202,455.01			1,335,913.22						174,538,368.23		
China Aluminum South Aluminum (Fujian) Aluminum Structure Technology Co., Ltd.	50,000,000.00	54,463,451.15			301,503.55			-1,675,000.00			53,089,954.70		
Yunnan Ningyong Highway Co., Ltd.	30,000,000.00	30,000,000.00			-5,037,343.78						24,962,656.22		
Yunnan Linyun Highway Co., Ltd.	30,000,000.00	30,004,036.87			4,608,939.69						34,612,976.56		
Luoyang Hua Zhong Aluminum Co., Ltd.	28,200,000.00	27,844,436.04			-						27,844,436.04		27,844,436.04
Sichuan Chuanmen Rail Transit Operation Co., Ltd.	28,000,000.00	30,746,526.95			1,497,009.83						32,245,536.78		
Jiangsu Nonferrous Metal Reably Industrial Co., Ltd	25,015,000.00	12,001,815.11									12,001,815.11		12,001,815.11
Chaco-Steering Intelligent Technology Co., Ltd.	18,000,000.00	3,655,201.34			-2,136,556.95						1,518,644.39		
Galzhou Tongye Construction Development Co., Ltd.	13,500,000.00	19,268,402.09			-938,217.89						18,330,184.20		
Shaanxi Zhonghang Construction and Installation Co., Ltd.	7,137,337.06	6,755,270.75			4,089.60						6,759,360.35		
Others	336,033,869.96	337,565,342.82	1,470,361.57	-	13,110,807.66	-	209,525.81	-10,515,763.23	-	8,326,200.00	350,187,074.63	8,372,324.38	
Total	805,687,323.29	787,828,600.54	1,470,361.57	-	16,152,434.50	-	268,307.02	-14,864,227.14	-	8,121,055.55	798,976,532.04	48,218,575.63	

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.13 Other equity instrument investments

Item	Closing balance	Opening balance	Dividend income recognized in the current period	Accumulated gains	Accumulated losses	Amount transferred from other comprehensive income to retained earnings	Reasons for items designated to be measured at fair value through other comprehensive income	Reasons for transferred from other comprehensive income to Retained earnings
Yunnan Huineng Power Sales Co., Ltd.	19,489,158.61	19,243,544.74		4,489,158.61			According to management intention and contract cash flow	
Guizhou Aerospace Wujiang Electromechanical Equipment Co., Ltd.	13,773,501.85	15,185,887.93		3,800,841.85			According to management intention and contract cash flow	
Shandong Yixing Carbon New Materials Co., Ltd.	7,204,381.50	3,624,018.68			10,795,618.50		According to management intention and contract cash flow	
Yunnan Zhonghui Energy Co., Ltd.	4,489,620.16	4,454,545.34		196,320.16			According to management intention and contract cash flow	
Others	12,210,654.00	32,693,156.20	567,208.12	118,299.67	43,930,645.67	127,852.93	According to management intention and contract cash flow	Disposal
Total	57,167,316.12	75,201,152.89	567,208.12	8,604,620.29	54,726,264.17	127,852.93		

5.14 Other non-current financial assets

Category	Closing balance	Opening balance
Subordinated shares in China Securities – CHALIECO 2019 Accounts Receivable ABS Plan		18,900,000.00
Total		18,900,000.00

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.15 Investment property

1. Investment property measured at cost

Item	Housings and buildings	Land use right	Total
I. Original value			
1. Opening balance	538,031,542.27	182,351,148.79	720,382,691.06
2. Additions for the period	27,789,374.17		27,789,374.17
(1) Outsourcing			
(2) Transferred from inventories, fixed assets or CIP	139,501.17		139,501.17
(3) Other additions	27,649,873.00		27,649,873.00
3. Reductions for the period	687,749.00		687,749.00
(1) Disposal			
(2) Transferred out	687,749.00		687,749.00
4. Closing balance	565,133,167.44	182,351,148.79	747,484,316.23
II. Accumulated depreciation and accumulated amortization			
1. Opening balance	114,303,247.88	35,244,859.14	149,548,107.02
2. Additions for the period	18,549,308.92	4,460,104.38	23,009,413.30
(1) Provision or amortization	18,549,308.92	4,460,104.38	23,009,413.30
3. Reductions for the period	16,334.04		16,334.04
(1) Disposal			
(2) Transferred out	16,334.04		16,334.04
4. Closing balance	132,836,222.76	39,704,963.52	172,541,186.28
III. Provision for impairment			
1. Opening balance			
2. Additions for the period			
3. Reductions for the period			
4. Closing balance			
IV. Book value			
1. As at end of the period	432,296,944.68	142,646,185.27	574,943,129.95
2. As at beginning of the period	423,728,294.39	147,106,289.65	570,834,584.04

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.16 Fixed assets

Category	Closing balance	Opening balance
Fixed assets	2,313,140,998.19	2,435,419,919.19
Fixed assets pending disposal		
Total	2,313,140,998.19	2,435,419,919.19

1. Fixed assets

(1) Particulars of fixed assets

Item	Housings and buildings	Machinery equipment	Transportation vehicles	Office equipment and others	Total
i. Original value					
1. Opening balance	2,791,239,993.56	841,751,815.99	277,719,658.91	415,931,108.91	4,326,642,577.37
2. Additions for the period	1,173,390.07	20,063,859.30	2,389,829.94	22,532,578.18	46,159,657.49
(1) Additions	980,729.52	11,363,859.30	2,389,829.94	20,358,705.39	35,093,124.15
(2) Transferred from CIP	192,660.55	8,700,000.00			8,892,660.55
(3) Other additions				2,173,872.79	2,173,872.79
3. Reductions for the period	18,993,482.35	13,331,650.11	11,639,806.51	10,540,956.20	54,505,895.17
(1) Disposal or scraping	17,239,500.64	11,939,616.93	8,940,395.38	8,116,995.79	46,236,508.74
(2) Disposal of Subsidiaries			2,580,341.43	1,528,646.34	4,108,987.77
(3) Other	1,753,981.71	1,392,033.18	119,069.70	895,314.07	4,160,398.66
4. Closing balance	2,773,419,901.28	848,484,025.18	268,469,682.34	427,922,730.89	4,318,296,339.69

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.16 Fixed assets (Continued)

1. Fixed assets (Continued)

(1) Particulars of fixed assets (Continued)

Item	Housings and buildings	Machinery equipment	Transportation vehicles	Office equipment and others	Total
II. Accumulated depreciation					
1. Opening balance	742,781,072.07	625,766,681.86	215,173,040.22	303,956,709.81	1,887,677,503.96
2. Additions for the period	83,535,400.30	34,746,012.63	6,668,894.67	33,754,565.93	158,704,873.53
(1) Provision	83,535,400.30	34,746,012.63	6,668,894.67	33,488,192.51	158,438,500.11
(2) Other additions				266,373.42	266,373.42
3. Reductions for the period	15,850,432.62	10,706,084.23	9,174,573.59	9,528,133.23	45,259,223.67
(1) Disposal or scraping	15,657,587.49	10,585,663.41	7,683,246.24	7,677,140.30	41,603,637.44
(2) Disposal of Subsidiaries			1,055,661.78	1,027,234.37	2,082,896.15
(3) Other	192,845.13	120,420.82	435,665.57	823,758.56	1,572,690.08
4. Closing balance	810,466,039.75	649,806,610.26	212,667,361.30	328,183,142.51	2,001,123,153.82
III. Provision for impairment					
1. Opening balance	3,345,832.81	8,929.28	161,350.00	29,042.13	3,545,154.22
2. Additions for the period				487,033.46	487,033.46
(1) Provision				487,033.46	487,033.46
3. Reductions for the period					
(1) Disposal or scraping					
4. Closing balance	3,345,832.81	8,929.28	161,350.00	516,075.59	4,032,187.68
IV. Book value					
1. As at end of the period	1,959,608,028.72	198,668,485.64	55,640,971.04	99,223,512.79	2,313,140,998.19
2. As at beginning of the period	2,045,113,088.68	215,976,204.85	62,385,268.69	111,945,356.97	2,435,419,919.19

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.16 Fixed assets (Continued)

1. Fixed assets (Continued)

(2) As of December 31, 2022, temporarily idle fixed assets

Category	Original value	Accumulated depreciation	Provision for impairment	Book value	Remarks
Housings and buildings	2,999.00	2,849.05		149.95	
Machinery equipment	3,738,042.42	2,883,595.65		854,446.77	
Transportation vehicles	1,069,589.00	1,016,109.55		53,479.45	
Office equipment and others	165,905.10	153,145.97		12,759.13	
Total	4,976,535.52	4,055,700.22		920,835.30	

(3) Fixed assets fully depreciated but still in use

Category	Original value	Accumulated depreciation	Provision for impairment	Book value
Housings and buildings	106,248,138.74	96,319,290.18	601,094.02	9,327,754.54
Machinery equipment	358,153,535.02	342,174,216.93		15,979,318.09
Transportation vehicles	117,604,585.61	111,488,447.21		6,116,138.40
Office equipment and others	151,506,940.85	140,856,598.05	28,167.89	10,622,174.91
Total	733,513,200.22	690,838,552.37	629,261.91	42,045,385.94

5.17 Construction in progress

Category	Closing balance	Opening balance
CIP items	196,594,065.00	172,223,138.58
Construction materials		
Less: Provision for impairment	879,429.42	879,429.42
Total	195,714,635.58	171,343,709.16

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.17 Construction in progress (Continued)

1. CIP items

(1) Basic information of CIP items

Item	Closing balance			Opening balance		
	Carrying balance	Provision for impairment	Book value	Carrying balance	Provision for impairment	Book value
Yue Liang Wan Health Project	148,982,279.41		148,982,279.41	131,207,116.60		131,207,116.60
Office renovation for Sixth Metallurgical Company	9,092,666.75		9,092,666.75	1,194,830.73		1,194,830.73
Others	38,519,118.84	879,429.42	37,639,689.42	39,821,191.25	879,429.42	38,941,761.83
Total	196,594,065.00	879,429.42	195,714,635.58	172,223,138.58	879,429.42	171,343,709.16

(2) Significant changes in CIP

Item	Item Budget	Opening balance	Transferred			Closing balance
			Additions	to fixed assets	Other reductions	
Yue Liang Wan Health Project	498,000,000.00	131,207,116.60	17,775,162.81			148,982,279.41
Office renovation for Sixth Metallurgical Company	10,000,000.00	1,194,830.73	7,897,836.02			9,092,666.75
Total	508,000,000.00	132,401,947.33	25,672,998.83			158,074,946.16

Item	Percentage of project investment to budget (%)	Project progress (%)	Accumulated capitalized interest	Including: interest capitalized for the period	Capitalization rate of interest for the period (%)	Source of funds
Yue Liang Wan Health Project	87.04	87.04	23,218,112.61	3,793,105.24	5.64	Funded by the Company
Office renovation for Sixth Metallurgical Company	90.93	90.93				Funded by the Company
Total	-	-	23,218,112.61	3,793,105.24	-	-

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.18 Right-of-use assets

Item	Housings and buildings	Machinery equipment	Total
I. Original value			
1. Opening balance	44,134,883.29	516,320.50	44,651,203.79
2. Additions for the period	6,770,521.09		6,770,521.09
(1) New lease	6,770,521.09		6,770,521.09
3. Reductions for the period	8,726,517.11		8,726,517.11
(1) Disposal	8,726,517.11		8,726,517.11
4. Closing balance	42,178,887.27	516,320.50	42,695,207.77
II. Accumulated depreciation			
1. Opening balance	26,332,467.52	438,067.05	26,770,534.57
2. Additions for the period	12,873,287.38		12,873,287.38
(1) Provision	12,873,287.38		12,873,287.38
3. Reductions for the period	8,500,550.46		8,500,550.46
(1) Disposal	8,500,550.46		8,500,550.46
4. Closing balance	30,705,204.44	438,067.05	31,143,271.49
III. Provision for impairment			
1. Opening balance			
2. Additions for the period			
3. Reductions for the period			
4. Closing balance			
IV. Book value			
1. As at end of the period	11,473,682.83	78,253.45	11,551,936.28
2. As at beginning of the period	17,802,415.77	78,253.45	17,880,669.22

Note: The Company charged short-term lease expense and low-value asset lease expense totaling RMB33,196,639.55 to profit or loss.

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.19 Intangible assets

1. Particulars of intangible assets

Item	Land use right	Patent Right	Software	Others	Total
I. Original value					
1. Opening balance	833,706,875.81	257,593,094.41	162,271,428.69	558,945,312.00	1,812,516,710.91
2. Additions for the period	578,834.99	43,913.93	7,771,450.44	63,094,270.38	71,488,469.74
(1) Additions	578,834.99	43,913.93	7,771,450.44		8,394,199.36
(2) Other additions				63,094,270.38	63,094,270.38
3. Reductions for the period			22,404.82		22,404.82
(1) Other reductions			22,404.82		22,404.82
4. Closing balance	834,285,710.80	257,637,008.34	170,020,474.31	622,039,582.38	1,883,982,775.83
II. Accumulated amortization					
1. Opening balance	212,642,411.59	252,846,122.15	125,336,807.55	328,617.72	591,153,959.01
2. Additions for the period	19,499,273.73	1,516,625.07	8,162,975.00	33,858.36	29,212,732.16
(1) Provision	19,499,273.73	1,516,625.07	8,136,937.52	33,858.36	29,186,694.68
(2) Other additions			26,037.48		26,037.48
3. Reductions for the period			22,292.31		22,292.31
(1) Other reductions			22,292.31		22,292.31
4. Closing balance	232,141,685.32	254,362,747.22	133,477,490.24	362,476.08	620,344,398.86
III. Provision for impairment					
1. Opening balance					
2. Additions for the period					
3. Reductions for the period					
4. Closing balance					
IV. Book value					
1. As at end of the period	602,144,025.48	3,274,261.12	36,542,984.07	621,677,106.30	1,263,638,376.97
2. As at beginning of the period	621,064,464.22	4,746,972.26	36,934,621.14	558,616,694.28	1,221,362,751.90

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.20 Development cost

Item	Opening balance	Additions for the period		Reductions for the period		Closing balance
		In-house development cost	Others	Charged to profit or loss	Recognized as intangible assets	
Integrated management and control platform			3,823,008.84			3,823,008.84
Technology development platform	1,475,176.19			1,475,176.19		
Total	1,475,176.19		3,823,008.84	1,475,176.19		3,823,008.84

5.21 Goodwill

1. Original book value of goodwill

Item	Opening balance	Additions for the period		Reductions for the period		Closing balance
		Arising from business combination	Disposal	
Kunming Kehui Electric Co., Ltd.	579,407.09					579,407.09
Huakun Engineering Construction Co., Ltd. of Kunming Survey and Design Institute Co., Ltd. Of China Nonferrous Metals Industry	295,721.83					295,721.83
Total	875,128.92					875,128.92

5.22 Long-term unamortized expenses

Item	Opening balance	Additions for the period	Amortization for the period	Other Reductions	Closing balance
Rental cost of the underground garage of Twelfth Metallurgical Company	9,249,177.91		249,977.76		8,999,200.15
Site renovation costs	6,177,402.50	1,135,435.52	2,480,848.51		4,831,989.51
Others	37,863,291.58	61,665,931.81	70,134,778.93		29,394,444.46
Total	53,289,871.99	62,801,367.33	72,865,605.20		43,225,634.12

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.23 Deferred Income tax assets and deferred Income tax liabilities

1. Deferred income tax assets and deferred income tax liabilities, not on a netting basis

Item	Closing balance		Opening balance	
	Deferred Income Tax Assets/ Liabilities	Deductible/ taxable temporary differences	Deferred Income Tax Assets/ Liabilities	Deductible/ taxable temporary differences
Deferred income tax assets:				
Retirement and termination benefits	95,641,445.00	492,690,138.64	104,366,400.00	548,017,150.00
Asset impairment provisions	825,050,568.14	4,240,079,399.76	784,998,190.93	4,133,254,963.48
Deductible loss	112,207,354.57	645,473,209.83	97,313,047.61	564,808,900.17
Changes in fair value of other equity instrument investment	3,317,390.37	19,639,470.17	3,513,464.22	23,423,094.85
Changes in the fair value of trading financial instruments and derivative financial instruments	2,868,857.14	19,125,714.27	2,868,857.14	19,125,714.27
Others	16,175,230.10	90,642,947.58	15,621,950.19	87,732,521.85
Subtotal	1,055,260,845.32	5,507,650,880.25	1,008,681,910.09	5,376,362,344.62
Deferred income tax liabilities:				
Appreciation on asset evaluation	60,285,625.60	295,148,101.20	63,896,905.13	318,303,670.84
Changes in fair value of other equity instrument investment	570,126.28	3,800,841.87	781,984.20	5,213,228.00
Others	49,675,380.23	496,753,802.30	49,675,380.23	496,753,802.30
Subtotal	110,531,132.11	795,702,745.37	114,354,269.56	820,270,701.14

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.23 Deferred Income tax assets and deferred Income tax liabilities (Continued)

2. Deferred income tax assets and deferred income tax liabilities, on a netting basis

Item	Netting of deferred income tax assets or liabilities as at end of the period	Deferred income tax assets or liabilities as at end of the period, on a netting basis	Netting of deferred income tax assets or liabilities as at beginning of the period	Deferred income tax assets or liabilities as at beginning of the period, on a netting basis
Deferred income tax assets	38,283,823.91	1,016,977,021.41	40,742,683.63	967,939,226.46
Deferred income tax liabilities	38,283,823.91	72,247,308.20	40,742,683.63	73,611,585.93

3. Breakdown of unrecognized deferred income tax assets

Item	Closing balance	Opening balance
Deductible temporary difference	1,082,624,543.00	1,078,161,346.76
Deductible loss	4,856,511,794.21	4,468,742,818.99
Total	5,939,136,337.21	5,546,904,165.75

4. Deductible loss on unrecognized deferred income tax assets will be due in:

Year	Closing balance	Opening balance	Remarks
2022		10,011,202.67	
2023	129,789,642.95	144,325,537.62	
2024	615,387,534.35	632,535,457.62	
2025	1,780,922,358.23	1,809,469,624.63	
2026	1,790,622,266.72	1,872,400,996.45	
2027	539,789,991.96		
Total	4,856,511,794.21	4,468,742,818.99	

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.24 Other non-current assets

Item	Closing balance	Opening balance
Investment in construction of Highway PPP project		11,734,754,908.18
Prepayment for property purchase	54,591,720.00	54,581,060.00
Revolving materials	361,073,744.74	355,312,165.35
Assets pending disposal	38,394,846.72	37,801,673.20
VAT input deductible one year later		773,422,815.30
Others	69,001.11	82,299.85
Long-term contract asset	784,227,638.60	741,774,024.28
Less: provision for bad debt	5,137,174.91	4,819,817.59
Subtotal	1,233,219,776.26	13,692,909,128.57
Including: amount due within one year		
Total	1,233,219,776.26	13,692,909,128.57

Notes:

- As of 31 December 2022, the Company had made prepayment for property purchase of RMB54,581,060.00 to Shandong Qianhong Industrial Park Development Co., Ltd.

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.25 Short-term loans

Terms of Loan	Closing balance	Opening balance
Pledge loans	5,408,564.43	157,689,365.10
Mortgage loans		
Guarantee loans	45,000,000.00	188,000,000.00
Credit loans	4,133,816,568.95	5,205,196,311.15
Total	4,184,225,133.38	5,550,885,676.25

Notes:

- As of 31 December 2022, guarantee loans from banks amounted to RMB45,000,000.00, for which the Company and its subsidiaries have provided joint liability guarantee;
- The Company received pledged loan of RMB481,448.61 from Shenzhen Bailinhui Commercial Factoring Co., Ltd. (a non-bank financial institution), with pledge over accounts receivable of RMB481,448.61; pledged loan of RMB2,294,024.33 from Shenzhen Qianhai Yifang Commercial Factoring Co., Ltd. (a non-bank financial institution), with pledge over accounts receivable of RMB2,294,024.33; pledged loan of RMB1,707,772.65 from Poly Financial Leasing Company Limited, with pledge over accounts receivable of RMB1,707,772.65; pledged loan of RMB925,318.84 from Shenzhen Qianhai Lianjie Commercial Factoring Co., Ltd. (a non-bank financial institution), with pledge over accounts receivable of RMB925,318.84.

5.26 Notes receivable

Item	Closing balance	Opening balance
Bank's acceptance bill	3,028,768,727.02	2,590,868,982.11
Commercial acceptance bill	367,568,496.39	197,803,120.33
Total	3,396,337,223.41	2,788,672,102.44

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.27 Accounts payable

1. By aging

Item	Closing balance	Opening balance
Within 1 year (inclusive)	9,290,048,810.06	9,804,760,511.91
Over 1 year	3,378,329,136.65	4,416,197,892.46
Total	12,668,377,946.71	14,220,958,404.37

2. Significant accounts payable aged over 1 year

Creditor	Closing balance	Reason of non-payment
Creditor 1	111,718,180.50	Payment conditions not satisfied yet
Creditor 2	40,992,158.09	Payment conditions not satisfied yet
Creditor 3	25,708,136.98	Payment conditions not satisfied yet
Creditor 4	25,224,254.75	Payment conditions not satisfied yet
Creditor 5	22,417,547.85	Payment conditions not satisfied yet
Total	226,060,278.17	–

5.28 Contract liabilities

Item	Closing balance	Opening balance
Within 1 year (inclusive)	3,141,367,349.94	2,946,493,055.95
Over 1 year	417,370,597.37	338,020,030.42
Total	3,558,737,947.31	3,284,513,086.37

Note: The income of RMB1,414,196,141.17 recognized for the period was included in the book value of contract liabilities at the beginning of the period.

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.29 Employee compensation payable

1. Employee compensation payable by category

Item	Opening balance	Additions for the period	Reduction for the period	Closing balance
Short-term compensation	117,058,029.62	2,102,995,557.61	2,089,916,900.55	130,136,686.68
Post-employment benefits				
defined contribution plans	9,638,360.32	285,902,752.51	281,679,791.15	13,861,321.68
Termination benefits	64,381,000.00	70,987,579.96	76,119,579.96	59,249,000.00
Other benefits due within one year		7,411,300.03	152,300.03	7,259,000.00
Total	191,077,389.94	2,467,297,190.11	2,447,868,571.69	210,506,008.36

2. Short-term employee compensation

Item	Opening balance	Additions for the period	Reductions for the period	Closing balance
Salary, bonus, allowance and subsidy	77,206,754.18	1,557,368,926.97	1,547,882,805.81	86,692,875.34
Employee welfare		58,039,759.90	58,039,759.90	
Contribution to social security funds	5,405,402.86	153,238,704.46	154,667,069.10	3,977,038.22
Including: Medical insurance fund	4,662,664.72	139,630,916.09	140,983,886.86	3,309,693.95
Work injury insurance fund	351,415.84	11,367,626.07	11,280,887.69	438,154.22
Maternity insurance fund	391,322.30	2,240,162.30	2,402,294.55	229,190.05
Housing provident fund	5,276,002.39	162,478,644.07	162,359,770.95	5,394,875.51
Trade union fee and employee education fee	25,844,061.16	38,697,133.77	34,936,494.66	29,604,700.27
Non-monetary benefits		52,677,341.71	52,677,341.71	
Other short-term compensation	3,325,809.03	80,495,046.73	79,353,658.42	4,467,197.34
Total	117,058,029.62	2,102,995,557.61	2,089,916,900.55	130,136,686.68

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.29 Employee compensation payable (Continued)

3. Defined contribution plan

Item	Opening balance	Additions for the period	Reductions for the period	Closing balance
Basic pension fund	8,331,373.94	224,204,162.88	225,151,913.23	7,383,623.59
Unemployment insurance fund	913,077.62	8,486,376.85	8,383,081.36	1,016,373.11
Corporate annuity plan	393,908.76	53,212,212.78	48,144,796.56	5,461,324.98
Total	9,638,360.32	285,902,752.51	281,679,791.15	13,861,321.68

5.30 Taxes payable

Item	Closing balance	Opening balance
VAT	102,518,753.48	103,348,110.39
Resource tax	3,000.00	20,000.00
Corporate income tax	79,142,185.89	125,688,211.80
House property tax	1,172,143.35	1,681,335.99
Land use tax	1,135,716.65	1,877,189.55
Land appreciation tax	36,113.18	1,790,214.91
Individual income tax	15,855,807.28	10,799,671.74
Urban maintenance and construction tax	7,926,577.90	7,853,406.46
Educational surcharges	5,427,262.38	5,098,540.27
Others	3,103,448.87	7,627,363.35
Total	216,321,008.98	265,784,044.46

5.31 Other payables

Item	Closing balance	Opening balance
Interest payables		
Dividends payables	2,408,891.77	2,408,891.77
Other payables	1,875,893,404.04	2,413,003,455.37
Total	1,878,302,295.81	2,415,412,347.14

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.31 Other payables (Continued)

1. Dividend payable

Item	Closing balance	Opening balance
Ordinary share dividend	2,408,891.77	2,408,891.77
Total	2,408,891.77	2,408,891.77

2. Other payables

(1) Payables by nature

Nature	Closing balance	Opening balance
Retention funds and deposits payable	1,126,516,589.65	1,344,670,835.34
Current payment	330,813,276.15	290,682,230.51
Temporary payment	210,734,583.32	656,801,456.02
Others	207,828,954.92	120,848,933.50
Total	1,875,893,404.04	2,413,003,455.37

(2) Description of significant other payables aged over 1 year

Entity	Closing balance	Reason for outstanding balance
Creditor 1	43,868,468.76	Payment conditions not satisfied yet
Creditor 2	33,987,500.00	Payment conditions not satisfied yet
Creditor 3	11,554,000.00	Payment conditions not satisfied yet
Creditor 4	9,550,414.13	Payment conditions not satisfied yet
Creditor 5	8,931,801.32	Payment conditions not satisfied yet
Total	107,892,184.21	–

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.32 Non-current liabilities due within one year

Item	Closing balance	Opening balance
Long-term borrowings due within one year	3,113,882,129.15	499,443,085.46
Interest expense unpaid but accrued on long-term loans due within one year	14,269,789.10	7,092,438.07
Debentures payable due within one year		
Lease obligations due within one year	9,212,832.77	17,270,627.31
Total	3,137,364,751.02	523,806,150.84

5.33 Other current liabilities

Item	Closing balance	Opening balance
Pending VAT output	1,723,137,407.53	1,621,627,324.36
Short-term debentures payable		
Liabilities on continuing involvement in ABS		18,900,000.00
Total	1,723,137,407.53	1,640,527,324.36

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.34 Long-term borrowings

1. Long-term borrowings by category

Terms of Loan	Closing balance	Opening balance
Pledge loans		
Mortgage loans		
Guarantee loans	405,300,000.00	421,800,000.00
Credit loans	6,760,700,000.00	11,336,304,583.61
Subtotal	7,166,000,000.00	11,758,104,583.61
Loans from non-bank financial institutions	1,204,882,129.15	763,543,085.46
inter-company loan		
Less: Long-term borrowings due within one year	3,113,882,129.15	499,443,085.46
Total	5,257,000,000.00	12,022,204,583.61

Notes:

- As of 31 December 2022, guarantee loans from banks amounted to RMB405,300,000.00, for which the Company and its subsidiaries have provided joint liability guarantee;
- As of 31 December 2022, the pledged loan of RMB7,000,000.00 from Horizon Commercial Factoring (Tianjin) Co., Ltd. (遠宏商業保理(天津)有限公司) (a non-bank financial institution), with pledge over accounts receivable of RMB7,000,000.00.

2. Payment term of long-term borrowings due over 1 year

Payment term	Closing balance	Opening balance
Between 1 to 2 years	2,233,920,000.00	3,914,019,329.16
Between 2 to 5 years	2,450,780,000.00	2,196,200,000.00
Over 5 years	572,300,000.00	5,911,985,254.45
Total	5,257,000,000.00	12,022,204,583.61

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.35 Lease liabilities

Item	Closing balance	Opening balance
Lease payment	20,333,468.51	26,464,960.85
Less: unrecognized financing expense	2,586,949.15	3,017,617.39
Less: Lease obligations due within one year	9,212,832.77	17,270,627.31
Total	8,533,686.59	6,176,716.15

5.36 Long-term payables

Nature	Closing balance	Opening balance
Long-term payables		
Special payables	1,479,611.80	1,784,426.56
Total	1,479,611.80	1,784,426.56

Including: special payables

Item	Opening balance	Additions for the period	Reduction for the period	Closing balance	Reasons for the amount incurred
Research funding for research and development of prototype of furnace-building robot for aluminum electrolysis cell lining	1,046,302.95			1,046,302.95	
Others	738,123.61	298,056.53	602,871.29	433,308.85	
Total	1,784,426.56	298,056.53	602,871.29	1,479,611.80	

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.37 Long-term employee compensation payable

1. Long-term employee compensation payable

Item	Closing balance	Opening balance
Post-employment benefits – net liabilities under defined benefit plan	583,558,200.00	620,770,200.00
Termination benefits	45,360,800.00	60,230,950.00
Other long-term employee compensation payable		
Subtotal	628,919,000.00	681,001,150.00
Less: portion due within one year	66,508,000.00	64,381,000.00
Total	562,411,000.00	616,620,150.00

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.37 Long-term employee compensation payable (continued)

2. Changes in defined benefit plan

① Present value of obligations of DBP

Item	Amount incurred for the current period	Amount incurred for the previous period
I. Opening balance	681,001,150.00	727,741,100.00
II. Defined benefit cost included in current profit and loss	21,429,847.51	25,439,449.68
1. Current service cost	3,047,000.00	2,734,549.68
2. Previous service cost	50,000.00	3,121,000.00
3. Net interest	19,039,847.51	23,110,900.00
4. Gains excluded from other comprehensive income (Losses are represented by “-”)	-707,000.00	-3,527,000.00
III. Defined benefit costs included in other comprehensive income	10,497,100.00	6,056,000.00
1. Actuarial gain (Losses are represented by “-”)	10,497,100.00	6,056,000.00
IV. Other changes	-84,009,097.51	-78,235,399.68
1. Benefits paid	-84,009,097.51	-78,235,399.68
V. Closing balance	628,919,000.00	681,001,150.00

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.37 Long-term employee compensation payable (continued)

2. Changes in defined benefit plan (continued)

② DBP net liabilities (net assets)

Item	Amount incurred for the current period	Amount incurred for the previous period
I. Opening balance	681,001,150.00	727,741,100.00
II. Net interest	19,039,847.51	23,110,900.00
III. Benefits paid	-84,009,097.51	-78,235,399.68
IV. Actuarial loss (gain)	9,790,100.00	2,529,000.00
V. Previous service cost	50,000.00	3,121,000.00
VI. Current service cost	3,047,000.00	2,734,549.68
VII. Closing balance	628,919,000.00	681,001,150.00

Note: The above obligations were determined based on actuarial valuations performed by an independent qualified actuarial firm, Towers Watson Consulting Company Limited, using the projected unit credit actuarial cost method.

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

(i) Discount rate adopted (per annum)

Item	31 December 2022	31 December 2021
Discount rate	2.75%	2.75%

(ii) Mortality: Average life expectancy of residents in the PRC

(iii) Average medical expense increase rate: 8%

(iv) Annual growth rate of pension benefits for beneficiaries: 4.5%

(v) Medical costs paid to early retirees are assumed to continue until the death of the retirees.

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.38 Deferred income

1. Deferred income presented by category

Item	Opening balance	Additions for the period	Reduction for the period	Closing balance	Reasons for the amount incurred
Government subsidy	56,000,000.00	5,250,000.00		61,250,000.00	Benefiting period has not expired
Total	56,000,000.00	5,250,000.00		61,250,000.00	–

2. Particulars of government subsidies

Item	Opening balance	Additional subsidies for the period	Amount included in profit and loss for the period	Other changes	Closing balance	Related to assets/income
Urban roads in Tongchuan New District + Comprehensive packaged PPP project of underground comprehensive pipelines	40,000,000.00	4,900,000.00			44,900,000.00	Related to assets
Government subsidy for overall relocation of Shandong project	16,000,000.00				16,000,000.00	Related to assets
Others		350,000.00			350,000.00	
Total	56,000,000.00	5,250,000.00			61,250,000.00	–

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.39 Share capital

Item	Opening balance	New shares issued	Increase/Decrease (+, -)			Subtotal	Closing balance
			Bonus shares	Shares converted from provident fund	Others		
Total number of shares	2,959,066,667.00						2,959,066,667.00
China Aluminum Group Limited	2,176,758,534.00						2,176,758,534.00
Luoyang Engineering & Research Institute for Nonferrous Metals Processing	86,925,466.00						86,925,466.00
National Council for Social Security Fund, PRC	36,316,000.00						36,316,000.00
Holders of overseas listed H shares	363,160,000.00						363,160,000.00
Public ordinary shareholders	295,906,667.00						295,906,667.00

5.40 Other equity instruments

Outstanding financial instruments	Opening balance		Additions for the period		Reductions for the period		As at the end of the period	
	Number	Book value	Number	Book value	Number	Book value	Number	Book value
19 Zhong Gong Y1 Renewable Corporate Bond	15,000,000.00	1,498,584,905.65			15,000,000.00	1,498,584,905.65		
Industrial Bank Renewable Trust Loan	1,000,000,000.00	1,000,000,000.00	2,500,000,000.00	2,433,684,905.65	1,000,000,000.00	1,000,000,000.00	2,500,000,000.00	2,433,684,905.65
Total	1,015,000,000.00	2,498,584,905.65	2,500,000,000.00	2,433,684,905.65	1,015,000,000.00	2,498,584,905.65	2,500,000,000.00	2,433,684,905.65

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.41 Capital reserve

Item	Opening balance	Additions for the period	Reduction for the period	Closing balance
I. Capital premium	957,180,337.89		47,131,271.55	910,049,066.34
II. Other capital reserve	19,117,020.64	268,307.02	10,177,694.89	9,207,632.77
Total	976,297,358.53	268,307.02	57,308,966.44	919,256,699.11

Notes:

- Other decrease of RMB47,131,271.55 in the capital premium of the capital reserve in the current period are due to the impact of the merger of Kunming Institute, of which: ① the decrease of RMB100,500,000.00 formed at the beginning of the business combination under common control; ② the decrease of the difference between the acquisition consideration and the net assets of Kunming Institute by RMB75,990,549.66; ③ Retained earnings transferred to Kunming Institute before the merger – RMB129,360,981.94.
- The decrease of the capital reserve – other capital reserve – other for the period of RMB10,177,694.89 are due to the impact of changes in the proportion of shares in non-wholly owned subsidiaries, of which: ① the decrease of RMB10,238,164.22 is due to the impact of the increase of shareholding as a result of the capital contribution to China Nonferrous Metals Processing Technology Co., Ltd.; ② the increase of RMB60,469.33 is due to the impact of the increase of shareholding as a result of the capital contribution to Ninth Metallurgical Construction Co., Ltd..
- The increase of current capital reserve – other capital reserve of RMB268,307.02 was due to the impact of recognizing the changes in other interests of the joint venture, of which: ① the increase of RMB559,917.55 was due to the recognition of the changes in other interests of a joint venture China Aluminum International Energy Saving Technology (Beijing) Co., Ltd.; ② the increase of RMB209,525.81 was due to the recognition of the changes in other interests of an associate Chinalco Environmental Protection and Ecological Technology (Hunan) Co., Ltd.; ③ the decrease of RMB501,136.34 was due to the recognition of the changes in other interests of a joint venture Zhongji Sunward Technology Co., Ltd..

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.42 Other comprehensive income

Item	Opening balance	Amount before income tax incurred for the period	Amount incurred for the current period				Amount after tax attributable to minority shareholders	Closing balance
			Less: recorded in OCI in earlier period but transferred to P&L for the period	Less: recorded in OCI in earlier period but transferred to retained earnings	Less: income tax expense	Amount after tax attributable to the parent company		
I. OCI not to be reclassified to P&L	62,030,176.58	-8,186,833.84	-	127,852.93	-776,284.07	-6,264,545.92	-1,273,856.78	55,765,630.66
Including: Change on DBP remeasurement	93,170,796.87	-10,497,100.00			-760,500.00	-8,223,942.67	-1,512,657.33	84,946,854.20
OCI not to be transferred to P&L under equity method								
Changes in fair value of other equity instrument investment	-31,140,620.29	2,310,266.16		127,852.93	-15,784.07	1,959,396.75	238,800.55	-29,181,223.54
II. OCI to be reclassified into P&L	39,809,372.99	74,495,698.92	-	-	-	74,495,698.92	-	114,305,071.91
Income	39,809,372.99	74,495,698.92				74,495,698.92		114,305,071.91
Foreign currency translation difference								
Total OCI	101,839,549.57	66,308,865.08		127,852.93	-776,284.07	68,231,153.00	-1,273,856.78	170,070,702.57

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.43 Special reserve

Category	Opening balance	Additions for the period	Reduction for the period	Closing balance	Reason for Change
Production safety fee	159,810,487.28	307,615,382.46	248,047,423.14	219,378,446.60	
Total	159,810,487.28	307,615,382.46	248,047,423.14	219,378,446.60	

5.44 Surplus reserve

Item	Opening balance	Additions for the period	Reduction for the period	Closing balance
Statutory surplus reserve	224,473,908.75	5,261,125.42		229,735,034.17
Total	224,473,908.75	5,261,125.42		229,735,034.17

5.45 Undistributed profit

Item	Amount for the period	Amount for the previous period
Amount at the beginning of the previous year	794,976,623.67	1,879,404,403.40
Adjusted amount at the beginning of the period	-180,333,262.68	-66,173,306.51
Opening balance for the period	614,643,360.99	1,813,231,096.89
Additions for the period	112,506,304.80	-1,064,289,629.34
Of which: Transferred from net profit for the period	112,506,304.80	-1,070,420,931.60
Other additions		6,131,302.26
Reduction for the period	128,526,655.09	134,298,106.56
Of which: withdrawal of surplus reserve for the period	5,261,125.42	1,721,916.23
Dividends payable to perpetual bond holders	123,188,828.73	132,576,190.33
Other reductions	76,700.94	
Closing balance for the period	598,623,010.70	614,643,360.99

Notes:

- An increase of RMB-180,333,262.68 in undistributed profit at the beginning of the period due to the change in the scope of consolidation resulting from the consolidation of businesses under common control.
- Other decrease of RMB76,700.94 represents the effect of disposal of investment in other equity instruments and transfer of other comprehensive income to retained earnings.

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.46 Operating revenue and operating cost

1. Operating revenue and operating cost by major segments

Item	Amount incurred for the current period		Amount incurred for the previous period	
	Revenue	Cost	Revenue	Cost
I. Subtotal of principal business	23,421,699,025.95	20,469,622,358.49	23,622,786,783.22	20,610,167,760.29
Engineering contracting	18,540,289,063.20	16,655,964,860.85	19,546,027,371.94	17,118,999,714.87
Engineering design and consultancy	2,618,018,266.55	1,857,299,052.18	2,409,820,403.13	1,842,428,435.04
Equipment manufacturing	2,401,123,258.64	2,100,628,781.33	1,513,808,935.23	1,395,540,090.75
Trading and sales			325,793,709.21	430,036,944.28
Less: inter-segment elimination	137,731,562.44	144,270,335.87	172,663,636.29	176,837,424.65
II. Subtotal of other business	275,629,890.27	203,589,772.05	275,936,659.71	188,159,614.77
Material sales	124,013,797.96	98,410,717.81	123,181,524.56	96,301,721.04
Lease	60,670,486.03	30,499,947.31	63,866,841.28	23,432,135.84
Others	102,153,062.47	77,697,789.70	99,957,978.95	72,334,987.49
Less: inter-segment elimination	11,207,456.19	3,018,682.77	11,069,685.08	3,909,229.60
Total	23,697,328,916.22	20,673,212,130.54	23,898,723,442.93	20,798,327,375.06

2. Operating revenue for the period by revenue recognition time

Revenue recognition time	Engineering contracting	Engineering survey and design	Equipment manufacturing	Engineering consultation
At a point in time			568,652,025.97	158,727,911.71
Over a period of time	18,689,237,439.45	2,492,864,565.48	1,876,115,506.21	
Total	18,689,237,439.45	2,492,864,565.48	2,444,767,532.18	158,727,911.71

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.46 Operating revenue and operating cost (continued)

3. Operating revenue for the period by reporting segment

Category of revenue	Revenue from contracts with clients	Lease income	Total
Engineering design and consultancy	2,651,592,477.19	35,210,955.82	2,686,803,433.01
Engineering contracting	18,689,237,439.45	21,147,603.61	18,710,385,043.06
Equipment manufacturing	2,444,767,532.18	4,311,926.60	2,449,079,458.78
Trading and sales			
Inter-segment elimination	-148,939,018.63		-148,939,018.63
Total	23,636,658,430.19	60,670,486.03	23,697,328,916.22

4. Details of operating revenue

Item	Amount incurred for the current period	Amount incurred for the previous period
Operating revenue	23,697,328,916.22	23,898,723,442.93
Less: Business revenue not related to principal business	184,684,283.99	187,048,365.84
Income from sales of waste materials	124,013,797.96	123,181,524.56
Income from Real estate rental	60,670,486.03	63,866,841.28
Less: Income lacking commercial substance		
Operating revenue net of business revenue not related to principal business and income lacking commercial substance	23,512,644,632.23	23,711,675,077.09

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.47 Taxes and surcharges

Item	Amount incurred for the current period	Amount incurred for the previous period
Urban maintenance and construction tax	31,271,879.69	27,424,242.41
Educational surcharge	24,393,394.92	20,827,707.30
Others	60,067,427.40	66,513,213.81
Total	115,732,702.01	114,765,163.52

5.48 Sales expense

Item	Amount incurred for the current period	Amount incurred for the previous period
Employee compensation	87,814,911.10	66,543,349.60
Travel expense	7,894,586.20	8,344,176.72
Warehousing and logistics	1,240,349.80	504,962.06
Business expense	5,397,795.42	6,042,950.74
Others	16,925,049.95	16,733,170.96
Total	119,272,692.47	98,168,610.08

5.49 Administrative expense

Item	Amount incurred for the current period	Amount incurred for the previous period
Employee compensation	700,635,061.36	719,183,888.29
Depreciation and amortization	99,927,565.84	104,308,171.39
Office expense	127,651,643.09	129,336,611.99
Travel expense	22,603,901.40	27,442,543.90
Intermediary expense	16,956,290.69	14,337,180.14
Business expense	13,122,996.01	13,133,153.57
Party development expense	1,332,601.19	3,154,341.27
Others	86,848,661.36	51,918,255.53
Total	1,069,078,720.94	1,062,814,146.08

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.50 R&D expense

Item	Amount incurred for the current period	Amount incurred for the previous period
Employee compensation	377,865,710.29	310,972,827.22
Raw materials and main materials	454,180,809.58	412,765,641.06
Fuel and power	1,112,914.04	1,523,840.17
Depreciation and amortization	8,561,263.19	10,196,092.55
Outsourced R&D expense	24,452,085.57	20,627,722.90
Auxiliary expense	2,836,391.81	4,707,276.39
Other expenses	43,057,012.02	24,701,683.34
Total	912,066,186.50	785,495,083.63

5.51 Financial expense

Item	Amount incurred for the current period	Amount incurred for the previous period
Interest expense	511,290,128.88	559,972,338.69
Less: interest income	168,585,014.36	124,741,935.44
Exchange loss	611,295,352.98	600,181,424.27
Less: exchange gain	714,938,136.11	539,841,502.23
Handling charges	34,433,840.19	49,606,661.93
Other expenses	13,851,446.67	7,608,301.20
Total	287,347,618.25	552,785,288.42

5.52 Other gains

Item	Amount incurred for the current period	Amount incurred for the previous period	Related to assets/income
Income related	3,665,239.91	2,102,015.58	Related to income
Asset related			Related to assets
Total	3,665,239.91	2,102,015.58	–

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.53 Gain on investment

Item	Amount incurred for the current period	Amount incurred for the previous period
Gain on long-term equity investment accounted for using equity method	16,152,434.50	12,574,082.25
Gain on investment from disposal of long-term equity investments	121,356,892.24	723,591.41
Gain on holding other equity instrument investment	567,208.12	1,535,349.81
Gain or loss on derecognition of financial assets at amortized cost	16,531,622.47	-32,316,624.33
Gains or losses on debt restructuring	8,613,062.57	-32,277,068.86
Total	163,221,219.90	-49,760,669.72

5.54 Gain on change in fair value

Source of gain on change in fair value	Amount incurred for the current period	Amount incurred for the previous period
Derivative instruments		-4,775,780.00
Total		-4,775,780.00

5.55 Credit impairment loss

Item	Amount incurred for the current period	Amount incurred for the previous period
Credit impairment loss on accounts receivable	-456,452,382.09	-652,780,874.75
Credit impairment loss on other receivables	165,894,359.62	-314,724,420.20
Credit impairment loss on long-term receivables	-73,691,976.04	-79,941,248.68
Total	-364,249,998.51	-1,047,446,543.63

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.56 Asset impairment loss

Item	Amount incurred for the current period	Amount incurred for the previous period
Inventory impairment loss	-43,165,356.14	-328,928,351.40
Contract asset impairment loss	19,294,280.15	5,068,199.37
Long-term equity investment impairment loss		
Fixed asset impairment loss	-487,033.46	-3,114,079.85
Other impairment losses	-1,179,200.00	-2,159,600.00
Total	-25,537,309.45	-329,133,831.88

5.57 Gain on asset disposal

Item	Amount incurred for the current period	Amount incurred for the previous period
Gain on disposal of fixed assets	841,004.95	3,365,964.63
Total	841,004.95	3,365,964.63

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.58 Non-operating income

1. Breakdown of non-operating income

Item	Amount incurred for the current period	Amount incurred for the previous period	Amount included in non-recurring gain or loss for the period
Income from liquidated damages	3,230,600.70	5,596,913.42	3,230,600.70
Approved payables impossible to be paid	22,103,890.73	37,218,189.42	22,103,890.73
Others	6,109,942.13	9,949,037.39	6,109,942.13
Total	31,444,433.56	52,764,140.23	31,444,433.56

5.59 Non-operating expense

Item	Amount incurred for the current period	Amount incurred for the previous period	Amount included in non-recurring gain or loss for the period
Compensation expense	453,598.16	27,025,431.92	453,598.16
Penalty expenses	34,665,677.85	168,726.82	34,665,677.85
Others	9,909,577.44	22,708,805.97	9,909,577.44
Total	45,028,853.45	49,902,964.71	45,028,853.45

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.60 Income tax expense

1. Breakdown of income tax expense

Item	Amount incurred for the current period	Amount incurred for the previous period
Income tax expense for the year calculated according to the tax law and relevant regulations	129,798,567.62	163,920,278.04
Deferred income tax expense	-49,700,998.50	-57,878,072.82
Total	80,097,569.12	106,042,205.22

2. Reconciliation of accounting profit and income tax expense

Item	Amount
Total profit	284,974,602.42
Income tax expense calculated at statutory/applicable tax rate	42,746,190.36
Impact of subsidiaries applying different tax rates	-46,688,530.42
Impact of adjustments to income tax for prior period	-5,463,710.05
Impact of non-taxable income	-5,466,739.14
Impact of non-deductible cost, expense and loss	69,237,340.56
Impact of utilizing deductible temporary difference or deductible loss on which no deferred tax asset was recognized in prior period	-21,301,472.11
Impact of deductible temporary difference or deductible loss on which no deferred tax asset is recognized in current period	93,527,738.03
Income tax impact of interest on perpetual bonds recorded in equity	-18,156,468.75
Others	-28,336,779.36
Income tax expense	80,097,569.12

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.61 Expenses by nature

Item	Amount incurred for the current period	Amount incurred for the previous period
Raw materials consumed	458,130,115.43	418,996,757.62
Movements in inventory of finished products and products in progress		
Employee compensation	1,166,315,682.75	1,096,700,065.11
Depreciation and amortization expenses	108,488,829.03	114,504,263.94
Credit impairment loss	364,249,998.51	1,047,446,543.63
Asset impairment loss	25,537,309.45	329,133,831.88
Finance expense	287,347,618.29	552,785,288.42
Others	367,482,972.70	316,276,753.12
Total	2,777,552,526.16	3,875,843,503.72

5.62 Statement of cash flows

1. Other cash received related to operating activities

Item	Amount incurred for the current period	Amount incurred for the previous period
Other cash received related to operating activities	321,466,896.20	264,048,319.08
Including: Cash received for payment on behalf	54,233,659.59	103,885,491.49
Interest on demand deposits received	73,894,781.61	52,718,895.77
Deposits and security deposits recovered		
Government subsidy related to income received	50,654,983.09	46,528,194.57
Government subsidy related to assets received		
Decrease in restricted cash	87,177,818.17	

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.62 Statement of cash flows (continued)

2. Other cash paid related to operating activities

Item	Amount incurred for the current period	Amount incurred for the previous period
Other cash received related to operating activities	1,099,262,444.72	1,223,573,646.41
Including: Office expense paid	149,522,741.16	144,275,871.17
Deposits and security deposits paid	451,980,259.29	594,765,092.16
Other changes in restricted cash		167,236,109.00
R&D expense and intermediary fee paid	198,799,463.32	77,935,103.76
Travel expense paid	68,577,154.76	55,333,565.02
Bank handling fees paid	70,619,175.05	88,887,876.21
Hospitality expense paid	18,061,393.00	16,214,144.75
Litigation loss paid	8,302,710.72	5,379,453.90

3. Other cash received related to investing activities

Item	Amount incurred for the current period	Amount incurred for the previous period
Other cash received related to investing activities		
Including: Withdrawal of margin on futures		
Difference of cash paid for acquisition of a subsidiary below cash held by the subsidiary on acquisition date		
Other	7,648,427.40	
Total	7,648,427.40	

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.62 Statement of cash flows (continued)

4. Other cash received related to financing activities

Item	Amount incurred for the current period	Amount incurred for the previous period
Other cash paid related to financing activities		
Cash received from issuing bonds	2,500,000,000.00	
Total	2,500,000,000.00	

5. Other cash paid related to financing activities

Item	Amount incurred for the current period	Amount incurred for the previous period
Other cash paid related to financing activities Item		
Payment of principal and interest of lease obligation	1,483,120.00	3,135,039.06
Bond and perpetual bond issuance cost	2,502,898,002.76	1,282,222.22
OCBC Bank forward foreign exchange settlement and liquidation		19,120,000.00
Total	2,504,381,122.76	23,537,261.28

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.63 Supplementary details for cash flow statement

1. Supplementary details for cash flow statement

Item	Amount incurred for the current period	Amount incurred for the previous period
1. Reconciliation of net profit to cash flows from operating activities	—	—
Net profit	204,877,033.30	-1,042,462,098.58
Add: Asset impairment provision	25,537,309.45	329,133,831.88
Credit impairment loss	364,249,998.51	1,047,446,543.63
Depreciation of fixed assets, depreciation of right-of-use assets and depreciation of investment properties	181,447,913.41	196,298,199.37
Depreciation of right-of-use assets	12,873,287.38	5,413,731.66
Amortization of intangible assets	29,186,694.68	29,172,572.38
Amortization of long-term unamortized expenses	72,865,605.20	56,248,212.68
Loss on disposal of fixed assets, intangible assets and other long-term assets ("—" for gain)	-841,004.95	-3,365,964.63
Loss on scraping of fixed assets ("—" for gain)	1,103,243.37	-971,465.61
Loss on fair value change ("—" for gain)	466,008,828.22	4,775,780.00
Finance expense ("—" for income)	466,008,828.22	381,965,633.55
Investment loss ("—" for gain)	-163,221,219.90	49,760,669.72
Decrease in deferred tax assets ("—" for increase)	-49,037,794.95	-57,196,500.89
Increase in deferred tax liabilities ("—" for decrease)	1,364,277.73	1,074,049.01
Decrease in inventories ("—" for increase)	-336,697,050.00	863,278,375.96
Decrease in contract assets ("—" for increase)	-271,386,495.43	-249,481,677.30
Decrease in operating receivables ("—" for increase)	1,032,836,911.36	-1,958,841,149.27
Increase in operating payables ("—" for decrease)	-1,046,298,323.52	1,007,580,933.80
Others		
Net cash flow from operating activities	524,869,213.86	659,829,677.36

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.63 Supplementary details for cash flow statement (continued)

1. Supplementary details for cash flow statement (continued)

Item	Amount incurred for the current period	Amount incurred for the previous period
2. Significant investing and financing activities not involving cash payment or receipt		
Conversion from debt to capital	—	—
Convertible corporate bonds due within one year		
Fixed asset under finance lease		
3. Net change in cash and cash equivalents	—	—
Cash at end of the period	6,857,364,048.62	6,746,419,077.70
Less: cash at beginning of period	6,746,419,077.70	6,756,312,966.18
Add: cash equivalents at end of the period		
Less: cash equivalents at beginning of the period		
Net increase in cash and cash equivalents	110,944,970.92	-9,893,888.48

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.63 Supplementary details for cash flow statement (continued)

2. Net cash received from the acquisition of the subsidiaries and the disposal of the subsidiaries during the year

Item	Amount
1. Cash or cash equivalents paid for business combinations that occurred in the current period:	47,131,271.54
Less: the cash and cash equivalents held by the subsidiary on the acquisition date	–
Plus: cash or cash equivalents paid in the current period for business combinations that occurred in the previous period	23,425,466.52
Net cash paid to acquire subsidiary	70,556,738.06
2. Cash or cash equivalents received from the disposal of subsidiaries in the current period	633,290,368.45
Less: cash and cash equivalents held by the subsidiary on the day when control is lost	613,902,649.34
Plus: cash or cash equivalents received in the current period from the disposal of the subsidiary in the previous period	
Net cash received from disposal of subsidiaries	19,387,719.11

3. Cash and cash equivalents

Item	Closing balance	Opening balance
I. Cash	6,857,364,048.62	6,746,419,077.70
Including: cash on hand	4,050,614.86	738,796.17
Cash at bank	6,891,872,032.97	6,772,651,824.40
Other monetary fund	777,605,770.25	876,370,644.76
Less: time deposits with maturities over three months		
Restricted cash	816,164,369.46	903,342,187.63
II. Cash equivalents		
Including: time deposit maturing within three months		
III. Cash and cash equivalents at end of the period	6,857,364,048.62	6,746,419,077.70

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.64 “Others” in the statement of changes in owners’ equity

1. “Others” in the statement of changes in owners’ equity for the current period

Capital reserve:

- (1) Other decrease of RMB47,131,271.55 in capital surplus for the period was due to the effect of the consolidation of Kunming Institute, of which: ① the decrease of RMB100,500,000.00 formed at the beginning of the period of business combination under common control; ② the decrease of the difference of RMB75,990,549.66 between the acquisition consideration and the net assets of Kunming Institute; ③ a transfer to the retained earnings realized by Kunming Institute before the merger – RMB129,360,981.94.
- (2) The decrease of RMB10,177,694.89 in capital surplus – other capital surplus for the period was due to the effect of the change in the shareholding ratio of non-wholly owned subsidiaries, of which: ① the decrease of RMB10,238,164.22 was due to the increase in the shareholding ratio of the capital increase in China Nonferrous Metals Processing Technology Co., Ltd.; ② the increase of RMB60,469.33 was due to the effect of the increase in the shareholding percentage of Ninth Metallurgical Construction Co., Ltd..
- (3) The increase of current capital reserve – other capital reserve of RMB268,307.02 was due to the impact of recognizing the changes in other interests of the joint venture, of which: ① the increase of RMB559,917.55 was due to the recognition of the changes in other interests of a joint venture China Aluminum International Energy Saving Technology (Beijing) Co., Ltd.; ② the increase of RMB209,525.81 was due to the recognition of the changes in other interests of an associate Chinalco Environmental Protection and Ecological Technology (Hunan) Co., Ltd.; ③ the decrease of RMB501,136.34 was due to the recognition of the changes in other interests of a joint venture Zhongji Sunward Technology Co., Ltd..

Undistributed profit:

- (1) Other decreases of RMB123,188,828.73 are the impact of paying the interest of other equity instruments, of which: ① RMB79,428,967.52 is the impact of paying the interest of ZG Y1; ② RMB43,759,861.23 is the impact of paying the interest on the permanent debt of the Industrial Bank.
- (2) Other decrease of RMB76,700.94 is the impact of the transfer of other comprehensive income into retained earnings due to the disposal of other equity instrument investments.

SECTION 11 FINANCIAL REPORT

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5.65 Assets with restricted ownership or use rights

Item	Book value as at the end of the period	Reason for restriction
Monetary fund	816,164,369.46	Frozen, pledged
Factoring of receivables	361,953,451.63	Pledged
Fixed assets	126,693,768.48	Mortgaged
Total	1,304,811,589.57	–

5.66 FCY monetary items

1. FCY monetary items

Item	Closing balance in FCY	Exchange rate	Closing balance in RMB
Monetary fund	–	–	412,489,385.37
Including: USD	53,086,999.16	6.9646	369,729,714.36
VND	10,990,235,254.00	0.0003	3,242,119.41
INR	59,588,815.52	0.0838	4,990,563.30
IDR	81,058,017,600.00	0.0004	32,423,207.04
MYR	1,064,390.16	1.5744	1,675,722.65
SAR	23,820.97	1.8500	44,068.79
EUR	4,700.01	7.4229	34,887.70
HKD	357,740.05	0.8933	319,558.45
SGD	5,700.00	5.1831	29,543.67
Accounts receivable	–	–	1,162,402,232.47
Including: USD	153,733,052.86	6.9646	1,070,689,219.95
VND	141,830,430,103.00	0.0003	41,839,977.01
INR	27,312,379.58	0.0838	2,287,411.79
IDR	11,683,410,750.00	0.0004	4,673,364.30
MYR	27,257,127.97	1.5744	42,912,259.42
Accounts receivable	–	–	109,695,745.88
Including: USD	11,037,536.70	6.9646	76,872,028.10
VND	62,095,409,969.00	0.0003	18,318,146.00
INR	1,057,947.00	0.0838	88,603.06
IDR	35,402,196,675.00	0.0004	14,160,878.67
EUR	34,500.00	7.4229	256,090.05

SECTION 11 FINANCIAL REPORT

6. CHANGE IN SCOPE OF CONSOLIDATION

6.1 Business combination not under common control during the period: Nil.

6.2 Business combination under common control during the period

1. Business combination under common control during the period

Acquiree	Percentage of equity obtained (%)	Basis for business combination under common control	Combination date	Basis for determining the combination date	Revenue of the acquiree from the beginning of the period to the combination date	Net profit of the acquiree from the beginning of the combination period to the combination date	Revenue of the acquiree for the comparison period	Net profit of the acquiree for the comparison period
Kunming Nonferrous Metallurgical Design and Research Institute Corporation	67%	Controlled by the same ultimate controlling party before and after the combination	31 December 2022	Time of the transaction contract and property rights are completed	287,376,576.65	115,375,806.42	550,527,134.84	-180,859,218.49

2. Combination cost

Combination cost	Kunming Nonferrous Metallurgical Design and Research Institute Corporation
Cash	47,131,271.55

SECTION 11 FINANCIAL REPORT

6. CHANGE IN SCOPE OF CONSOLIDATION (CONTINUED)

6.2 Business combination under common control during the period (Continued)

3. Book value of the acquiree's assets and liabilities on the combination date

	Kunming Nonferrous Metallurgical Design and Research Institute Corporation	
	Combination date	As at the end of previous period
Assets:	511,234,124.96	1,194,721,344.29
Money fund	292,663,303.07	132,964,906.08
Receivables	133,218,886.50	934,735,433.82
Inventory	499,969.04	987,824.50
Contract asset	5,362,771.68	20,125,414.88
Other equity instrument investments	32,603,887.44	33,751,658.14
Investment properties	25,339,453.90	27,036,017.96
Fixed assets	1,910,604.80	2,478,630.84
Intangible asset	953,279.94	760,471.18
Other assets	18,681,968.59	41,880,986.89
Liabilities:	551,522,691.08	1,345,180,691.27
Accounts payable	444,020,991.81	1,211,815,607.13
Other liabilities	107,501,699.27	133,365,084.14
Net assets:	-40,288,566.12	-150,459,346.98
Less: minority interests	2,787,526.33	2,378,746.43
Net assets acquired	-43,076,092.45	-152,838,093.41

SECTION 11 FINANCIAL REPORT

6. CHANGE IN SCOPE OF CONSOLIDATION (CONTINUED)

6.3 Reverse purchase during the period: Nil.

6.4 Disposal of equity in subsidiaries during the period

1. Losing control of a subsidiary through disposal in a single transaction

Subsidiary	Disposal price	Percentage of equity disposed of (%)	Way of disposal	Time point of losing control	Basis for determining the point when the control is lost
Yunnan Miyu Expressway Investment and Development Co., Ltd.	1,280,876,600.00	52.60	Transfer by agreement	31 December 2022	Completion time of contract and property rights

Subsidiary	Proportion of the remaining equity on the date of loss of control (%)	Book value of the remaining equity on the date of loss of control	Fair value of the remaining equity on the date of loss of control	Gain or loss on remeasurement of remaining equity at fair value	Methodology and key assumptions for determining the fair value of the remaining equity interest at the date of loss of control	Amount transferred from other comprehensive income related to equity investments in former subsidiaries to investment income or loss
Yunnan Miyu Expressway Investment and Development Co., Ltd.	1.20	8,400,000.00	8,400,000.00		N/A	

SECTION 11 FINANCIAL REPORT

6. CHANGE IN SCOPE OF CONSOLIDATION (CONTINUED)

6.5 Other reasons for changes in the scope of consolidation of financial statements

(1) Increase in scope of combination

Name	Method of increase
China Nonferrous Metals Industry's 12th Metallurgical (Indonesia) Co., Ltd.	New
Yunnan Jinji'an Construction Consulting Supervision Co., Ltd.	Business Combination
Kunming Kehui Electric Co., Ltd.	Business Combination
China Nonferrous Metal Industry Huakun Engineering Construction Co., Ltd. (中國有色金屬工業華昆工程建設有限公司)	Business Combination

(2) Decrease in scope of combination

Name	Method of decrease
China Aluminum International Logistic (Tianjin) Co., Ltd.	Cancellation
Hunan Tongdu Investment and Development Co., Ltd.	Cancellation
Shanxi Nonferrous Metal Twelfth Metallurgical Supplies Co., Ltd.	Bankruptcy liquidation

SECTION 11 FINANCIAL REPORT

7 EQUITY IN OTHER ENTITIES

7.1 Equity in subsidiaries

1. Composition of Group

Subsidiary	Business type	Place of incorporation	Registered capital	Principal place of business	Business scope	Shareholding percentage (%)		Means of acquisition
						Direct	Indirect	
China Nonferrous Metals Processing Technology Co., Ltd.	1	High-tech Zone, Luoyang City	16,415.00	Luoyang, Henan	Technical development and equipment sales	92.35		2
Luoyang Jincheng Construction Supervision Co., Ltd.	1	Jianxi District, Luoyang City	500.00	Luoyang, Henan	Construction supervision		100	2
Luoyang Foyang Decoration Engineering Co., Ltd.	1	High-tech Zone, Luoyang City	2,050.00	Luoyang, Henan	Other construction and installation industry		51.22	2
Luoyang Kaijing Technology Co., Ltd.	1	Luolong District, Luoyang City	20,000.00	Luoyang, Henan	IT consultancy service		100	2
Suzhou Nonferrous Metal Materials Deyuan Environmental Protection Co., Ltd.	1	Suzhou High-tech Zone	2,500.00	Suzhou, Jiangsu	Environmental protection technology development and sales		62.5	1
Sixth Metallurgical Construction Company of China Nonferrous Metals Industry	1	Huaihe Road, Zhengzhou City	250,000.00	Zhengzhou, Henan	Construction projects	100		2
Sixth Metallurgical Luoyang Construction Co., Ltd.	1	Jianxi District, Luoyang City	1,659.80	Luoyang, Henan	Construction projects		100	1
Sixth Metallurgical Luoyang Mechanical and Electrical Installation Co., Ltd.	1	Jianxi District, Luoyang City	1,117.33	Luoyang, Henan	Construction projects		100	1
Sixth Metallurgical (Zhengzhou) Technology Heavy Industry Co., Ltd.	1	Industrial Agglomeration Area, Xinmi City	10,043.00	Zhengzhou, Henan	Engineering machinery manufacturing		100	1
Henan Sixth Metallurgical Trading Co., Ltd.	1	Zhengzhou Economic and Technological Development Zone	3,000.00	Zhengzhou, Henan	Trading business		100	1

SECTION 11 FINANCIAL REPORT

7 EQUITY IN OTHER ENTITIES (CONTINUED)

7.1 Equity in subsidiaries (continued)

1. Composition of Group (continued)

Subsidiary	Business type	Place of incorporation	Registered capital	Principal place of business	Business scope	Shareholding percentage (%)		Means of acquisition
						Direct	Indirect	
Parzhou Haohong Project Management Co., Ltd.	1	Liupanshui City, Guizhou Province	1,000.00	Guiyang, Guizhou	Construction projects		30	1
Tongchuan Hao Tong Construction Co., Ltd.	1	Tongchuan City, Shaanxi Province	12,000.00	Tongchuan, Shaanxi	Construction projects		80	1
China Aluminum Great Wall Construction Co., Ltd.	1	Shangjie District, Zhengzhou City	26,853.63	Henan	Engineering and construction contracting		100	2
Huaian Tong Yun Construction Co., Ltd.	1	Huaiyin District, Huai'an City	10,077.73	Jiangsu	Construction projects		100	1
Sixth Metallurgical Xinjiang Construction Co., Ltd.	1	Alar, Xinjiang	1,000.00	Xinjiang	Construction projects		100	1
Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy	1	Furong District, Changsha City	72,468.87	Changsha, Hunan	Survey and design	100		2
Changsha Clingsoft Info Tech Co., Ltd.	1	Changsha High-tech Industrial Development Zone	2,000.00	Changsha	Software development and technical service		100	2
Hunan Huachu Project Management Co., Ltd.	1	Furong District, Changsha City	600.02	Hunan	Consultancy and supervision service		51	2
Hunan Changye Construction Drawing Examination Co., Ltd.	1	Furong District, Changsha City	329.99	Hunan	Construction drawing examination		100	2
Huachu High-Tech (Hunan) Co., Ltd.	1	Jiuhua Demonstration Zone, Xiangtan	3,500.00	Xiangtan	Equipment sales		100	1

SECTION 11 FINANCIAL REPORT

7 EQUITY IN OTHER ENTITIES (CONTINUED)

7.1 Equity in subsidiaries (continued)

1. Composition of Group (continued)

Subsidiary	Business type	Place of incorporation	Registered capital	Principal place of business	Business scope	Shareholding percentage (%)		Means of acquisition
						Direct	Indirect	
China Aluminum International South Engineering Co., Ltd.	1	Nanding Town, Zangdian, Zibo	15,290.00	Shandong	Construction and installation		100	2
Wenzhou Tongrun Construction Co., Ltd.	1	Lucheng District, Wenzhou City	3,000.00	Wenzhou	Construction projects	60	40	1
Wenzhou Tonghui Construction Co., Ltd.	1	Longwan District, Wenzhou City	3,000.00	Wenzhou	Construction projects	90	10	1
Ninth Metallurgical Construction Co., Ltd.	1	Weicheng District, Xiangyang City, Shaanxi Province	33,295.00	Xiangyang	Engineering construction	73.17		3
Henan Ninth Metallurgical Construction Co., Ltd.	1	Zhengzhou City, Henan Province	5,000.00	Zhengzhou	Engineering construction		100	3
Zhengzhou Ninth Metallurgical Sanwei Chemical Machinery Co., Ltd.	1	Zhengzhou City, Henan Province	10,000.00	Zhengzhou	Equipment manufacturing		100	3
Hanzhong Ninth Metallurgical Construction Co., Ltd.	1	Mian County, Shaanxi Province	12,000.00	Hanzhong, Shaanxi	Engineering construction		100	3
Ankang Ninth Metallurgical Changjiali Concrete Co., Ltd.	1	Ankang City, Shaanxi Province	1,000.00	Ankang City, Shaanxi Province	Concrete production		100	3
Xinjiang Ninth Metallurgical Construction Co., Ltd.	1	Changji Prefecture, Xinjiang	6,000.00	Xinjiang	Engineering construction		100	3
Ninth Metallurgical Steel Structure Co., Ltd.	1	Xiangyang City, Shaanxi province	660	Xiangyang	Equipment manufacturing		100	3

SECTION 11 FINANCIAL REPORT

7 EQUITY IN OTHER ENTITIES (CONTINUED)

7.1 Equity in subsidiaries (continued)

1. Composition of Group (continued)

Subsidiary	Business type	Place of incorporation	Registered capital	Principal place of business	Business scope	Shareholding percentage (%)		Means of acquisition
						Direct	Indirect	
Mian County Ninth Metallurgical Kindergarten	1	Mian County, Shaanxi Province	50	Mian County, Shaanxi	Pre-school education		100	3
Ninth Metallurgical Hanzhong Construction Design Institute Co., Ltd.	1	Mian County, Shaanxi Province	50	Hanzhong, Shaanxi	Survey and design		100	3
Shaanxi Zhong Mian Investment Company Limited	1	Mian County, Shaanxi Province	10,000.00	Shaanxi	Hot spring project development and operations management		51	1
Shenyang Aluminum & Magnesium Design Institute Co., Ltd.	1	Heping District, Shenyang City	49,074.32	Shenyang	Engineering survey and design	100		1
Shenyang Boyu Technology Co., Ltd.	1	Sujiatun District, Shenyang City	7,000.00	Liaoning	Industrial manufacturing		100	1
Shenyang Aluminum & Magnesium Technology Co., Ltd.	1	Heping District, Shenyang City	1,050.00	Liaoning	Technical service		100	1
Shenyang Aluminum & Magnesium Engineering & Research Institute Construction Supervision Co., Ltd.	1	Heping District, Shenyang City	411.8	Liaoning	Construction supervision		100	1
Beijing Huayu Aerospace Control High-Tech Co., Ltd.	1	Haidian District, Beijing	1,750.00	Beijing	Technology research and development		60	1

SECTION 11 FINANCIAL REPORT

7 EQUITY IN OTHER ENTITIES (CONTINUED)

7.1 Equity in subsidiaries (continued)

1. Composition of Group (continued)

Subsidiary	Business type	Place of incorporation	Registered capital	Principal place of business	Business scope	Shareholding percentage (%)		Means of acquisition
						Direct	Indirect	
China Nonferrous Metals Industry's Twelfth Metallurgical Construction Co., Ltd.	1	Xinghualing District, Taiyuan City	53,341.94	Shanxi	Construction projects	100		2
China Nonferrous Metals Industry's Twelfth Metallurgical Chongqing Energy Savings Technology Co., Ltd.	1	Nanan District, Chongqing City	1,200.00	Chongqing	Contract energy management		100	1
China Aluminum International 12MCC Construction Co., Ltd.	3	Incheon, South Korea	351.12	Incheon, South Korea	Construction and installation industry		80	1
China Nonferrous Metals Industry's 12th Metallurgical (Indonesia) Co., Ltd.	3	Jakarta, Indonesia	2,280.87	Jakarta, Indonesia	Construction installation		67	1
China Nonferrous Metals Changsha Investigation and Design Research Institute Co., Ltd.	1	Furong District, Changsha City	18,373.00	Hunan	Survey and design	100		2
Shenzhen Changkan Survey and Design Co., Ltd.	1	Shennan East Road, Shenzhen City	1,502.00	Guangdong	Technical service		100	2
Changsha Tongxiang Construction Co., Ltd.	1	Yuelu District, Changsha City	2,500.00	Changsha	Construction projects	40	60	1
China Aluminum International Engineering & Equipment Co., Ltd.	1	Haidian District, Beijing	20,000.00	Beijing	Equipment sales	100		1
China Aluminum International Shandong Chemical Industry Co., Ltd.	1	Zibo High-tech Zone	5,000.00	Shandong	Equipment sales		100	1

SECTION 11 FINANCIAL REPORT

7 EQUITY IN OTHER ENTITIES (CONTINUED)

7.1 Equity in subsidiaries (continued)

1. Composition of Group (continued)

Subsidiary	Business type	Place of incorporation	Registered capital	Principal place of business	Business scope	Shareholding percentage (%)		Means of acquisition
						Direct	Indirect	
Shanghai China Aluminum International Supply Chain Management Co., Ltd.	1	Pudong New Area, Shanghai	2,100.00	Pudong New Area, Shanghai	Trading	100	100	1
Chaleco Hong Kong Corporation Limited	3	Queen's Road East, Wan Chai	6,557.20	Hong Kong	Investment	100		1
Chaleco Malaysia Sdn. Bhd.	3	Other overseas regions	157.92	Malaysia	Engineering survey and design	100	100	1
Shanghai Chaleco Fengyuan Equity Investment Fund Partnership (Limited Partner)	1	China (Shanghai) Pilot Free Trade Zone	45,930.58	Shanghai	Trading	100	99.95	1
China Aluminum International Investment Management (Shanghai) Co., Ltd.	1	China (Shanghai) Pilot Free Trade Zone	49,400.00	Shanghai	Trading	100		1
Chaleco (Tianjin) Construction Co., Ltd.	1	Tianjin Airport Economic Area	27,115.00	Tianjin	Engineering construction	100		2
China Aluminum International Technology Development Co., Ltd.	1	Haidian District, Beijing	6,000.00	Beijing	Technology research and development	100		1
China Aluminum International Engineering (India) Private Limited	3	West Bengal, India	594.24	India	Construction projects	99.99	0.01	1
China Aluminum International Yunnan Aluminum Application Engineering Co., Ltd.	1	Haidian District, Beijing	7,800.00	Beijing	Investment consultancy	100		1
Duyun Development Zone Tongda Construction Co., Ltd.	1	Duyun Economic Development Zone	1,000.00	Guizhou	Engineering construction	50	50	1

SECTION 11 FINANCIAL REPORT

7 EQUITY IN OTHER ENTITIES (CONTINUED)

7.1 Equity in subsidiaries (continued)

1. Composition of Group (continued)

Subsidiary	Business type	Place of incorporation	Registered capital	Principal place of business	Business scope	Shareholding percentage (%)		Means of acquisition
						Direct	Indirect	
Guiyang Aluminum and Magnesium Design Institute Co., Ltd.	1	Guanshanhu District, Guiyang City	75,320.75	Guizhou	Design consultancy	100		1
Guiyang Aluminum and Magnesium Design Institute Construction Contracting Co., Ltd	1	Guanshanhu District, Guiyang City	4,500.00	Guizhou	Engineering construction		100	1
Guiyang Zhenxing Aluminum & Magnesium Technological Development Co., Ltd.	1	Guiyang High-Tech Business Incubator	3,000.00	Guizhou	Technology development and software design		100	1
Guizhou Light Metal Innovation Research and Equipment Process Co., Ltd.	1	Guiyang National High-tech Industrial Development Zone	2,000.00	Guizhou	Technology development and software design		100	1
Guiyang Xinyu Construction Supervision Co., Ltd.	1	Jinyang New District, Guiyang City, Guizhou Province	1,341.95	Guizhou	Engineering supervision and consultancy		100	1
Guizhou Yundu Properties Company Limited	1	Duyun Economic Development Zone	12,800.00	Guizhou	Real estate development and engineering construction		100	1
Guizhou Shunan Mechanical and Electric Equipment Co., Ltd.	1	Pingba County, Anshun City	6,198.00	Guizhou	Equipment manufacturing		100	3
Guangxi Tongrui Investment Construction Co., Ltd.	1	Liangqing District, Nanning City	25,000.00	Guangxi	Building construction	100		1
China Aluminum International Aluminum Application Engineering Co., Ltd.	1	Haidian District, Beijing	14,450.00	Beijing	Trading and technical service	100		1
Shanxi Nonferrous Metal Twelfth Metallurgical Advanced Materials Co., Ltd.	1	Jiancaoping District, Taiyuan City	3,000.00	Shanxi	Scientific research and technical service industry		66	1

SECTION 11 FINANCIAL REPORT

7 EQUITY IN OTHER ENTITIES (CONTINUED)

7.1 Equity in subsidiaries (continued)

1. Composition of Group (continued)

Subsidiary	Business type	Place of incorporation	Registered capital	Principal place of business	Business scope	Shareholding percentage (%)		Means of acquisition
						Direct	Indirect	
Qingdao Xintu Gongchuang Asset Management Company Limited	1	Shinan District, Qingdao City	1,000.00	Shandong	Commercial development and operations	90		3
Chalco Shandong Engineering Technology Co., Ltd.	1	Zhangdian District, Zibo City	27,460.71	Shandong	Other construction and installation industry	60		2
Chalco Wancheng Shandong Construction Co., Ltd.	1	Zhangdian District, Zibo City	6,381.00	Shandong	Other construction and installation industry		96.57	2
Kunming Survey and Design Institute Co., Ltd. of China Nonferrous Metals industry	1	Panlong District, Kunming City	10,850.00	Kunming	Engineering survey and design	100		2
Kunming Technology Development Co., Ltd.	1	Panlong District, Kunming City	200	Kunming	Other construction and installation industry		100	2
Africa Congo-Kinshasa Company of Kunming Survey and Design Institute of	3	The Democratic Republic of the Congo	6.84	The Democratic Republic of the Congo	Technological services for geological survey		100	1
Chinalco Southwest Construction Investment Co., Ltd.	1	Xishan District, Kunming City	21,302.00	Kunming	Project investments	100		1
Kunming Nonferrous Metallurgical Design and Research Institute Corporation	1	Panlong District, Kunming City	15,000.00	Kunming	Engineering survey and design	67		2
Kunming Kehui Electric Co., Ltd.	1	Wuhua District, Kunming City	1,000.00	Kunming	Electrical equipment business		100	2
China Nonferrous Metal Industry Huakun Engineering Construction Co., Ltd. (中國有色金屬工業華昆工程建設有限公司)	1	Panlong District, Kunming City	1,383.82	Kunming	Engineering contracting services		100	2
Yunnan Jijian Construction Consulting Supervision Co., Ltd. (雲南吉安建設諮詢監理有限公司)	1	Panlong District, Kunming City	500	Kunming	Engineering supervision service		56.26	2

SECTION 11 FINANCIAL REPORT

7 EQUITY IN OTHER ENTITIES (CONTINUED)

7.1 Equity in subsidiaries (continued)

1. Composition of Group (continued)

Notes:

- (1) Business type: 1. Domestic non-financial subsidiaries, 2. Domestic financial subsidiaries, 3. Overseas subsidiaries, 4 public institutions, and 5 infrastructure units.
- (2) Means of acquisition: 1. Incorporation; 2. Business combination under common control, 3. Business combination not under common control, 4. Others.
- (3) China Aluminum International Engineering (India) Private Limited, a subsidiary incorporated in India, needs to follow local foreign exchange management policies, pursuant to which these subsidiaries must obtain prior approval from the local foreign exchange administration to pay cash dividends to the Company and other investors.
- (4) China Aluminum International Aluminum Technological Development Co., Ltd., a wholly-owned subsidiary of the Company, was renamed as China Aluminum International Aluminum Application Engineering Co., Ltd..
- (5) Beijing Zichen Investment Development Corporation Limited, a wholly-owned subsidiary of the Company, was renamed as China Aluminum International Yunnan Aluminum Application Engineering Co., Ltd..
- (6) Panzhou Haohong Project Management Co., Ltd. (hereinafter referred to as "Panxian Haohong") was jointly established by Sixth Metallurgical Construction Co., Ltd. (hereinafter referred to as "Sixth Metallurgical Company"), a wholly-owned subsidiary of the Company, and another shareholder, Panxian Panzhou Ancient City Development and Management Co., Ltd. (hereinafter referred to as "Panzhou Ancient City Development"), which was held as to 30% and 70% by Sixth Metallurgical Company and Panzhou Ancient City Development, respectively. The articles of association of Panxian Haohong stipulates that the resolutions of the shareholders meeting to amend the articles of association, the increase or decrease in the registered capital, and merging, splitting, dissolving or changing of the form of the company must be approved by shareholders representing more than two-thirds of the voting rights. For resolutions regarding other matters, they must be approved by shareholders representing more than half of the voting rights. Sixth Metallurgical Company has 70% of the voting rights in the shareholders' meeting, and Panzhou Ancient City Development has 30% of the voting rights. Resolutions of the board of directors must be passed by more than two-thirds of all directors. Panxian Haohong has 3 board members, including 2 directors appointed by Sixth Metallurgical Company and 1 director appointed by Panzhou Ancient City Development. Therefore, the Company can control Panxian Haohong, and it was consolidated into the Company's financial statements.

SECTION 11 FINANCIAL REPORT

7 EQUITY IN OTHER ENTITIES (CONTINUED)

7.1 Equity in subsidiaries (continued)

2. Particulars of important partially-owned subsidiaries

No.	Subsidiary name	Shareholding of minority shareholders (%)	P&L attributable to minority shareholders for the period	Declared dividends to minority shareholders for the period	Minority interest at the end of the period
1	China Nonferrous Metals Processing Technology Co., Ltd.	7.65	1,313,447.38		2,471,058.44
2	Ninth Metallurgical Construction Co., Ltd.	26.83	4,689,318.07		305,269,346.96
3	Chalco Shandong Engineering Technology Co., Ltd.	40.00	-46,793,651.17		61,979,951.03

3. Summarized financial information of significant partially-owned subsidiaries (except those classified as held for sale)

Subsidiary	Current assets	Non-current assets	Closing balance			
			Total assets	Current liabilities	Non-current liabilities	Total liabilities
China Nonferrous Metals Processing Technology Co., Ltd.	1,104,736,981.59	1,089,942,038.62	2,194,679,020.21	1,526,556,701.22	69,244,040.49	1,595,800,741.71
Ninth Metallurgical Construction Co., Ltd.	8,467,088,300.73	1,173,144,197.38	9,640,232,498.11	7,181,415,725.52	261,658,718.50	7,443,074,444.02
Chalco Shandong Engineering Technology Co., Ltd.	841,011,764.71	148,248,409.62	989,260,174.33	821,460,775.09	16,000,000.00	837,460,775.09

No.	Subsidiary	Current assets	Non-current assets	Opening balance			
				Total assets	Current liabilities	Non-current liabilities	Total liabilities
1	China Nonferrous Metals Processing Technology Co., Ltd.	821,860,608.02	1,104,026,278.20	1,925,886,886.22	1,473,566,063.38	420,089,160.02	1,893,655,223.40
2	Ninth Metallurgical Construction Co., Ltd.	8,363,267,135.22	1,128,409,658.90	9,491,676,794.12	6,963,923,960.16	336,718,669.38	7,300,642,629.54
3	Chalco Shandong Engineering Technology Co., Ltd.	992,105,696.74	151,634,313.05	1,143,740,009.79	856,431,630.11	16,000,000.00	872,431,630.11

SECTION 11 FINANCIAL REPORT

7 EQUITY IN OTHER ENTITIES (CONTINUED)

7.1 Equity in subsidiaries (continued)

3. Summarized financial information of significant partially-owned subsidiaries (except those classified as held for sale) (continued)

Subsidiary	Operating revenue	Amount incurred for the current period		Cash flow from operating activities
		Net profit	Total comprehensive income	
China Nonferrous Metals Processing Technology Co., Ltd.	951,054,930.40	16,412,806.15	15,952,106.15	92,187,549.28
Ninth Metallurgical Construction Co., Ltd.	5,583,743,825.28	13,290,948.96	14,546,362.57	202,836,808.89
Chalco Shandong Engineering Technology Co., Ltd.	534,149,217.05	-121,172,614.97	-121,172,614.97	40,378,035.78

No.	Subsidiary	Operating revenue	Amount incurred for the previous period		Cash flow from operating activities
			Net profit	Total comprehensive income	
1	China Nonferrous Metals Processing Technology Co., Ltd.	707,826,215.42	-65,897,989.10	-66,834,689.10	43,542,072.29
2	Ninth Metallurgical Construction Co., Ltd.	5,241,879,108.69	94,054,552.38	94,055,402.38	32,125,517.85
3	Chalco Shandong Engineering Technology Co., Ltd.	527,093,403.14	-77,493,587.71	-77,493,587.71	11,195,856.96

SECTION 11 FINANCIAL REPORT

7 EQUITY IN OTHER ENTITIES (CONTINUED)

7.2 Interests in joint ventures and associates

1. Particulars of significant joint ventures and associates

Subsidiary name	Principal place of business	Place of incorporation	Business scope	Shareholding percentage (%)		Accounting treatment method
				Direct	Indirect	
Shanghai Fengtong Equity Investment Fund Partnership (Limited Partnership)	Shanghai	Shanghai	Investment company	40.00		Equity method
Zhongji Sunward Technology Co., Ltd.	Hunan	Hunan	Metallurgical equipment manufacturing		49.00	Equity method

2. Particulars of significant associates

Subsidiary name	Principal place of business	Place of incorporation	Business scope	Shareholding percentage (%)		Accounting treatment method
				Direct	Indirect	
China Aluminum South Aluminum (Fujian) Aluminum Structure Technology Co., Ltd.	Jiangsu	Yancheng city	Research and experimental development		33.50	Equity method
Sichuan Chuannan Rail Transit Operation Co., Ltd.	Sichuan	Yibin city	Road transport industry		10.00	Equity method
Guizhou Tongye Construction Development Co., Ltd.	Guizhou	Guiyang city	Construction and installation industry		45.00	Equity method

SECTION 11 FINANCIAL REPORT

7 EQUITY IN OTHER ENTITIES (CONTINUED)

7.2 Interests in joint ventures and associates (continued)

3. Summarised financial information of significant joint ventures (except those classified as held for sale)

Item	Closing balance/Amount incurred for the current period		Opening balance/Amount incurred for the previous period	
	Shanghai Fengtong Equity Investment Fund Partnership (Limited Partnership)	Zhongji Sunward Technology Co., Ltd.	Shanghai Fengtong Equity Investment Fund Partnership (Limited Partnership)	Zhongji Sunward Technology Co., Ltd.
Current assets	70,244,559.10	269,774,396.93	70,127,636.85	257,539,780.74
Including: cash and cash equivalents	19,078,422.14	75,234,104.44	2,461,499.89	66,085,512.66
Non-current assets	465.97	11,533,791.05	465.97	13,719,159.62
Total assets	70,245,025.07	281,308,187.98	70,128,102.82	271,258,940.36
Current liabilities	11,511,035.51	171,060,686.40	10,238,401.97	162,742,471.40
Non-current liabilities				
Total liabilities	11,511,035.51	171,060,686.40	10,238,401.97	162,742,471.40
Minority interests				
Equity attributable to shareholders of the parent	58,733,989.56	110,247,501.58	58,889,700.85	108,516,468.96
Share in net assets at shareholding percentage	8,862,285.05	54,021,275.77	8,889,700.85	53,173,069.79
Adjustments		-36.00		
Including: Goodwill				
Unrealized profit on inter-company				
Others				
Book value of equity interests in associates	8,862,285.05	54,021,239.78	8,889,700.85	53,173,069.79
Fair value of equity interests in associates with public quotations				
Operating revenue		294,095,047.77		227,375,100.72
Finance expense	-7,938.16	626,265.56	-8,839.09	-276,089.83
Income tax expense		-1,638,295.73		
Net profit	102,199.63	8,209,735.18	-43,649.16	6,062,276.44
Net profit on discontinued operations				
Other comprehensive income				
Total comprehensive income	102,199.63	8,209,735.18	-43,649.16	6,062,276.44
Dividends paid by associates during the period				

SECTION 11 FINANCIAL REPORT

7 EQUITY IN OTHER ENTITIES (CONTINUED)

7.2 Interests in joint ventures and associates (continued)

4. Summarised financial information of significant associates

Item	Closing balance/Amount incurred for the current period			Opening balance/Amount incurred for the previous period		
	China Aluminum South Aluminum (Fujian) Aluminum Structure Technology Co., Ltd.	Sichuan Chuannan Rail Transit Operation Co., Ltd.	Guizhou Tongye Construction Development Co., Ltd.	China Aluminum South Aluminum (Fujian) Aluminum Structure Technology Co., Ltd.	Sichuan Chuannan Rail Transit Operation Co., Ltd.	Guizhou Tongye Construction Development Co., Ltd.
Current assets	325,605,836.40	278,176,960.74	1,215,151,267.79	184,407,256.67	240,642,640.05	1,224,686,269.57
Including: cash and cash equivalents	4,027,146.60	10,488,608.21	98,350.10	13,093,261.40	12,121,675.22	2,661,192.07
Non-current assets	12,294,455.13	717,809,051.74	77,487.85	124,334,737.92	670,813,509.02	211,941.01
Total assets	337,900,291.53	995,986,012.48	1,215,228,755.64	308,741,994.59	911,456,149.07	1,224,898,210.58
Current liabilities	168,869,485.08	132,678,079.61	111,991,109.94	146,164,528.47	110,497,171.18	117,580,080.68
Non-current liabilities	10,546,673.69	540,852,565.10	1,062,499,458.59		485,313,285.10	1,064,499,458.59
Total liabilities	179,416,158.77	673,530,644.71	1,174,490,568.53	146,164,528.47	595,810,456.28	1,182,079,539.27
Minority interests						
Equity attributable to shareholders of the parent	158,484,132.76	322,455,367.77	40,738,187.11	162,577,466.12	315,645,692.79	42,818,671.31
Share in net assets at shareholding percentage	53,089,954.70	32,245,536.78	18,332,184.20	54,463,451.15	31,564,569.28	19,268,402.09
Adjustments						
Including: Goodwill						
Unrealized profit on inter-company Others					-816,042.33	
Book value of equity interests in associates	53,089,954.70	32,245,536.78	18,332,184.20	54,463,451.15	30,748,526.95	19,268,402.09
Fair value of equity interests in associates with public quotations						
Operating revenue	127,755,718.27	125,016,397.82	-53,086,540.00	193,729,473.16	115,979,510.13	-52,540,240.00
Finance expense	3,268,089.50	32,335,400.84		2,384,949.39	27,753,532.38	
Income tax expense	-248,909.33	3,053,267.83		508,544.04	1,967,395.75	
Net profit	784,049.38	21,244,351.93	-2,080,484.21	3,743,213.31	14,561,822.66	9,310,149.70
Net profit on discontinued operations						
Other comprehensive income						
Total comprehensive income	784,049.38	21,244,351.93	-2,080,484.21	3,743,213.31	14,561,822.66	9,310,149.70
Dividends paid by associates during the period						

SECTION 11 FINANCIAL REPORT

7 EQUITY IN OTHER ENTITIES (CONTINUED)

7.2 Interests in joint ventures and associates (continued)

5. Summarized financial information of insignificant joint ventures and associates

Item	Closing balance/ Amount incurred for the current period	Opening balance/ Amount incurred for the previous period
I. Joint ventures		
Aggregate of book value of investments		236,291.77
Aggregate of proportional shares in:		
Net profit	-591,064.87	-203,790.68
Other comprehensive income		
Total comprehensive income	-591,064.87	-203,790.68
II. Associates		
Aggregate of book value of investments	584,206,755.99	572,830,582.41
Aggregate of proportional shares in:		
Net profit	11,885,849.43	9,357,627.16
Other comprehensive income		
Total comprehensive income	11,885,849.43	9,357,627.16

SECTION 11 FINANCIAL REPORT

8 FINANCIAL INSTRUMENT RELATED RISKS

The Company's major financial instruments include various equity investments, debt investments, derivative financial instruments, long-term and short-term borrowings, receivables and payables. See relevant sections of this report for details on financial instruments. Risks associated with the above financial instruments and risk management policies adopted by the Company to reduce these risks are set out below. Management manages and monitors these risk exposures to ensure that the above risks are controlled within the prescribed range.

1. Credit risk

Main risks associated with the Company's financial instruments include credit risk, liquidity risk and market risk. Management has reviewed and approved policies intended to manage these risks, which are summarized as follows:

Credit risk refers to the risk that one party to a financial instrument fails to perform its obligation, causing financial losses to the other party. The Company's credit risk mainly involves receivables. Specific measures to control this risk are as follows:

The Company's accounts receivable are mainly generated from the engineering construction business. The Company's internal control system requires that the Company perform credit assessment on each client before submitting a bid and if the construction lasts over one year, reperform the credit assessment on a regular basis. Based on its contract review system, the project management department, the financial department, the legal department and other departments jointly review the contract to determine reasonable payment terms so as to minimize our advance risk. Operating cash flows linked performance indicators are in place to urge subsidiaries to speed up collection of receivables. The Company reviews the collection of receivables on an individual basis on the balance sheet date and requires additional guarantee in respect of key accounts associated with potential structural risks to ensure adequate provision for bad debt for unrecoverable receivables. See section "3.11" above for our expected credit loss policies.

2. Liquidity risk

Liquidity risk refers to the risk that the Company is short of funds when performing its settlement obligations by delivery of cash or other financial assets.

SECTION 11 FINANCIAL REPORT

8 FINANCIAL INSTRUMENT RELATED RISKS (CONTINUED)

2. Liquidity risk (Continued)

The financial department continuously monitors the Company's short-term and long-term fund requirements to maintain adequate cash reserve. The Company utilizes multiple financing means including notes, bank borrowings and entrusted loans to maintain the balance between sustainability and flexibility of financing. The Company has obtained credit lines from several commercial banks with higher credit ratings to meet its demand for working capital and capital expenditure. Management monitors the use of bank borrowings and ensures compliance with loan agreements.

The following table analyses the Company's non-derivative financial liabilities to be paid on a net basis by relevant maturity groups during the remaining period from the balance sheet date to the contract maturity date. The amount disclosed in the table is the undiscounted contract cash flow. As the impact of discounting is not significant, the balance due within twelve months is equal to its carrying balance.

Unit: RMB'000

Item	Closing balance				Total
	Within one year	One to two years	Two to five years	Above five years	
Borrowings	7,312,377.05	2,233,920.00	2,450,780.00	572,300.00	12,569,377.05
Trade and other payables (excluding non-financial liabilities)	23,441,213.83	1,479.61			23,442,693.44
Dividend payables					
Maximum amount guaranteed by the issued financial guarantee	4,500.00			487,695.20	492,195.20

Item	Opening balance				Total
	Within one year	One to two years	Two to five years	Above five years	
Borrowings	6,057,421.20	3,914,019.33	2,196,200.00	5,905,106.00	18,072,746.52
Trade and other payables (excluding non-financial liabilities)	24,615,867.31	1,784.43			23,398,040.70
Dividend payables					
Maximum amount guaranteed by the issued financial guarantee	7,500.00	2,000.00		662,862.84	672,362.84

SECTION 11 FINANCIAL REPORT

8 FINANCIAL INSTRUMENT RELATED RISKS (CONTINUED)

3. Market risk

Market risk refers to the risk that the fair value or future cash flow of financial instruments fluctuate as market prices changes, including exchange rate risk, interest rate risk and other price risks.

- (1) Exchange rate risk refers to the risk that the fair value or future cash flow of financial instruments fluctuate due to changes in foreign exchange rates. The Company's exchange rate risk mainly comes from financial instruments denominated in foreign currencies other than the functional currency.
- (2) Interest rate risk refers to the risk that the fair value or future cash flow of financial instruments fluctuate due to changes in market interest rates. The Company's interest rate risk mainly comes from recognized interest-bearing financial instruments.
- (3) Other price risks refer to the risk of fluctuations caused by changes in market prices other than exchange rate risks and interest rate risks, whether arising from factors related to a single financial instrument or its issuer, or from factors related to all similar financial instruments traded on the market.

SECTION 11 FINANCIAL REPORT

9 CAPITAL MANAGEMENT

The capital management policies of the Company are made to ensure the continuous operation of the Company, in order to provide returns to shareholders and benefits to other stakeholders and to maintain the optimum capital structure for minimizing capital costs.

In order to maintain or adjust the capital structure, the Company may adjust dividends paid to shareholders, return capital to shareholders, issue new shares or dispose of assets to reduce its debts.

The Company manages its 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 and 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 debt less non-controlling interest.

The Company monitors capital management by using the gearing ratio which is shown as follows:

Unit: RMB'000

Item	Closing balance	Opening balance
Total borrowings and other liabilities	36,173,815.02	42,847,421.25
Less: Restricted cash, time deposits and cash and cash equivalent	816,164.37	903,334.32
Net debts	35,357,650.65	41,944,086.94
Total equity attributable to equity owners of the Company	7,529,815.47	7,534,716.24
Total capital	42,887,466.12	49,478,803.18
Gearing ratio	82.44%	84.77%

SECTION 11 FINANCIAL REPORT

10 FAIR VALUE

10.1 Analysis of assets and liabilities measured at fair value by the level of fair value

Item	Level 1 fair value measurement	Level 2 fair value measurement	Level 3 fair value measurement	Closing balance
I. Continuous fair value measurement		690,552,523.80	57,167,316.12	747,719,839.92
(I) Financial assets classified FVTPL for the year				
(1) Debt instrument investment				
(2) Equity instrument investment				
(II) Financial assets classified FVTOCI		690,552,523.80	57,167,316.12	747,719,839.92
(1) Debt instrument investment		690,552,523.80		690,552,523.80
(2) Equity instrument investment			57,167,316.12	57,167,316.12
(III) Financial liabilities classified FVTPL				
(1) Derivative financial liabilities				
II. Non-continuous fair value measurement				
(I) Held-for-sale assets				

10.2 At the end of the reporting period, the Company's financial instruments measured at fair value were its subordinated shares in ABS and equity investments in small-scale entities, which do not have observable market quotations. The Company valuate such investments based on their future cash inflows. Under limited circumstances, if insufficient recent information is available to determine the fair value, or possible estimated amount of the fair value is widely distributed, and the cost represents the best estimate of the fair value within the range of distribution, the cost may represent an appropriate estimate of the fair value within the distribution range.

SECTION 11 FINANCIAL REPORT

11 RELATED PARTIES AND THEIR TRANSACTIONS

11.1 Parent of the Company

Name of the parent company	Place of incorporation	Business scope	Registered capital (RMB)	Percentage of shareholding in the Company (%)	Percentage of voting right in the Company (%)
China Aluminum Group Limited	PRC	Mineral resources (excluding oil and natural gas) development, nonferrous metal smelting and processing, related trading and engineering and technical services	25,200,000,000.00	76.50	76.50

Note: The ultimate controlling party of the Company is Chinalco (which is owned and controlled by SASAC). On 31 December 2020, Chinalco directly held 73.56% equity interest in the Company and indirectly held 2.94% equity interest in the Company through its subsidiary, Luoyang Institute. Chinalco held in aggregate a 76.50% equity interest in the Company.

11.2 Particulars of subsidiaries of the Company

For details, see Note “7. Interests in Other Entities”.

11.3 Particulars of joint ventures and associates of the Company

For details of important joint ventures or associates of the Company, see Note “7. Interests in Other Entities”.

SECTION 11 FINANCIAL REPORT

11 RELATED PARTIES AND THEIR TRANSACTIONS (CONTINUED)

11.4 Particulars of other parties related to the Company

Other related party	Relationship with the Company
China Aluminum Group Limited	Ultimate controlling parent
Luoyang Engineering & Research Institute for Nonferrous Metals Processing	Our shareholder, ultimately controlled by the same parent
Chinalco Material Application Research Institute Co., Ltd.	Ultimately controlled by the same parent
Chinalco Innovation Development Investment Co., Ltd.	Ultimately controlled by the same parent
Chinalco Overseas Development Co., Ltd.	Ultimately controlled by the same parent
Beijing Lvneng Clean Environment Technology Co., Ltd.	Ultimately controlled by the same parent
Chinalco Environmental Protection and Energy Saving Group Co., Ltd.	Ultimately controlled by the same parent
Henan Jiuli Technology Co., Ltd.	Ultimately controlled by the same parent
Chinalco Intelligent Technology Development Co., Ltd.	Ultimately controlled by the same parent
Aluminum Corporation of China Limited	Ultimately controlled by the same parent
Baotou Aluminum Co., Ltd.	Ultimately controlled by the same parent
Chibi Great Wall Carbon Products Co., Ltd.	Ultimately controlled by the same parent
Fushun Aluminum Co., Ltd.	Ultimately controlled by the same parent
Gansu Hualu Aluminum Co., Ltd.	Ultimately controlled by the same parent
Guangxi Huasheng Advanced Materials Co., Ltd.	Ultimately controlled by the same parent
Guizhou Huajin Aluminum Co., Ltd.	Ultimately controlled by the same parent
Guizhou Huaren Advanced Materials Co., Ltd.	Ultimately controlled by the same parent
Henan Huahui Nonferrous Engineering Design Co., Ltd.	Ultimately controlled by the same parent
Lanzhou Aluminum Co., Ltd.	Ultimately controlled by the same parent
Inner Mongolia Huayun New Materials Co., Ltd.	Ultimately controlled by the same parent
Shandong Yixing Carbon New Material Co., Ltd.	Ultimately controlled by the same parent
Shanxi Huaxing Aluminum Co., Ltd.	Ultimately controlled by the same parent
Shanxi Chinalco Resources Co., Ltd.	Ultimately controlled by the same parent
Chalco Hong Kong Limited	Ultimately controlled by the same parent
China Aluminum International Trading Corporation Limited	Ultimately controlled by the same parent
Chinalco Group Shanxi Jiaokou Xinghua Science and Technology Co., Ltd.	Ultimately controlled by the same parent
Chinalco Mining Corporation Limited	Ultimately controlled by the same parent
Chinalco Ningxia Energy Group Co., Ltd.	Ultimately controlled by the same parent
Chinalco Qingdao Light Metal Co., Ltd.	Ultimately controlled by the same parent
Chinalco Shandong Advanced Materials Co., Ltd.	Ultimately controlled by the same parent
Chalco Shandong Co., Ltd.	Ultimately controlled by the same parent
Chinalco Shanxi Advanced Materials Co., Ltd.	Ultimately controlled by the same parent

SECTION 11 FINANCIAL REPORT

11 RELATED PARTIES AND THEIR TRANSACTIONS (CONTINUED)

11.4 Particulars of other parties related to the Company (continued)

Other related party	Relationship with the Company
Chinalco Logistics Group Southeast Asia Land Port Co., Ltd	Ultimately controlled by the same parent
Chinalco Logistics Group Co., Ltd.	Ultimately controlled by the same parent
Chinalco Logistics Group Central Land Port Co., Ltd.	Ultimately controlled by the same parent
Chinalco Material Supply and Marketing Co., Ltd.	Ultimately controlled by the same parent
Chinalco Materials Co., Ltd.	Ultimately controlled by the same parent
Chinalco Zhengzhou Nonferrous Metals Research Institute Co., Ltd.	Ultimately controlled by the same parent
Chinalco Zhongzhou Mining Co., Ltd.	Ultimately controlled by the same parent
Chinalco Zhongzhou Aluminum Co., Ltd.	Ultimately controlled by the same parent
Chinalco Zhongzhou Advanced Materials Technology Co., Ltd.	Ultimately controlled by the same parent
Zunyi Aluminum Co., Ltd.	Ultimately controlled by the same parent
Northeast Light Alloy Co., Ltd.	Ultimately controlled by the same parent
Harbin Dongqing Special Materials Co., Ltd.	Ultimately controlled by the same parent
Northwest Aluminum Co., Ltd	Ultimately controlled by the same parent
Southwest Aluminum (Group) Co., Ltd.	Ultimately controlled by the same parent
Chongqing Southwest Aluminum Mechanical and Electrical Equipment Engineering Co., Ltd.	Ultimately controlled by the same parent
Chinalco Henan Luoyang Aluminum Foil Co., Ltd.	Ultimately controlled by the same parent
Chinalco Henan Luoyang Aluminum Processing Co., Ltd.	Ultimately controlled by the same parent
Longxi Northwest Aluminum Foil Co., Ltd.	Ultimately controlled by the same parent
Chinalco Ruimin Co., Ltd.	Ultimately controlled by the same parent
Chinalco Sapa Special Aluminum (Chongqing) Co., Ltd.	Ultimately controlled by the same parent
Chinalco Shenyang Nonferrous Metal Processing Co., Ltd.	Ultimately controlled by the same parent
Chinalco Southwest Aluminum Strip Co., Ltd.	Ultimately controlled by the same parent
Chifeng Yuntong Nonferrous Metals Co., Ltd.	Ultimately controlled by the same parent
Chuxiong Dianzhong Nonferrous Metals Co., Ltd.	Ultimately controlled by the same parent
Heqing Yixin Aluminum Co., Ltd.	Ultimately controlled by the same parent
Honghe Yuntong Real Estate Development Co., Ltd.	Ultimately controlled by the same parent
Hulun Buir Chihong Mining Co., Ltd.	Ultimately controlled by the same parent
Liangshan Mining Co., Ltd.	Ultimately controlled by the same parent
Qinghai Hongxin Mining Co., Ltd.	Ultimately controlled by the same parent
Qujing Yunlv Ganxin Aluminum Co., Ltd	Ultimately controlled by the same parent
Shangri-la Dingli Mining Co., Ltd.	Ultimately controlled by the same parent

SECTION 11 FINANCIAL REPORT

11 RELATED PARTIES AND THEIR TRANSACTIONS (CONTINUED)

11.4 Particulars of other parties related to the Company (continued)

Other related party	Relationship with the Company
Yimen Copper Co., Ltd.	Ultimately controlled by the same parent
Yuxi Mining Co., Ltd	Ultimately controlled by the same parent
Yunnan Chihong Zinc Germanium Co., Ltd.	Ultimately controlled by the same parent
Yunnan Chihong Resources Comprehensive Utilization Co., Ltd.	Ultimately controlled by the same parent
Yunnan Chuxiong Mining and Metallurgy Co., Ltd.	Ultimately controlled by the same parent
Yunnan Diqing Mining Development Co., Ltd.	Ultimately controlled by the same parent
Yunnan Diqing Nonferrous Metals Co., Ltd.	Ultimately controlled by the same parent
Yunnan Haoxin Aluminum Foil Co., Ltd.	Ultimately controlled by the same parent
Yunnan Jinding Zinc Industry Co., Ltd.	Ultimately controlled by the same parent
Yunnan Aluminum Co., Ltd.	Ultimately controlled by the same parent
Yunnan Copper (Group) Co., Ltd.	Ultimately controlled by the same parent
Yunnan Copper Real Estate Development Co., Ltd.	Ultimately controlled by the same parent
Yunnan Copper Co., Ltd.	Ultimately controlled by the same parent
Yunnan Copper Mineral Resources Exploration and Development Co., Ltd.	Ultimately controlled by the same parent
Yunnan Wenshan Aluminum Co., Ltd.	Ultimately controlled by the same parent
Yunnan Metallurgical Kunming Heavy Industry Co., Ltd.	Ultimately controlled by the same parent
Yunnan Yunlv Haixin Aluminum Co., Ltd.	Ultimately controlled by the same parent
Yunnan Yunlv Huixin Trade Co., Ltd.	Ultimately controlled by the same parent
Yunnan Yunlv Yongxin Aluminum Co., Ltd.	Ultimately controlled by the same parent
Yunnan Yunlv Zexin Aluminum Co., Ltd.	Ultimately controlled by the same parent
Yunnan Yuntong Zinc Co., Ltd.	Ultimately controlled by the same parent
Chinalco Luoyang Copper Processing Co., Ltd.	Ultimately controlled by the same parent
Chinalco Luoyang Copper Co., Ltd.	Ultimately controlled by the same parent
Minera Chinalco Peru	Ultimately controlled by the same parent
China Copper Southeast Copper Co., Ltd.	Ultimately controlled by the same parent
Baotou Aluminum (Group) Co., Ltd.	Ultimately controlled by the same parent
Chinalco Science and Technology Research Institute Co., Ltd.	Ultimately controlled by the same parent
Guizhou Guilv Huayi Real Estate Development Co., Ltd.	Ultimately controlled by the same parent
Henan Changan Industrial Service Co., Ltd.	Ultimately controlled by the same parent
Henan Changxing Industry Co., Ltd.	Ultimately controlled by the same parent
Henan Chinalco Engineering Construction Co., Ltd.	Ultimately controlled by the same parent

SECTION 11 FINANCIAL REPORT

11 RELATED PARTIES AND THEIR TRANSACTIONS (CONTINUED)

11.4 Particulars of other parties related to the Company (continued)

Other related party	Relationship with the Company
Henan Chinalco Equipment Co., Ltd.	Ultimately controlled by the same parent
Pingguo Aluminum Co., Ltd.	Ultimately controlled by the same parent
Shandong Aluminum Industry Limited	Ultimately controlled by the same parent
Shandong Shanlv Environmental Advanced Materials Co., Ltd.	Ultimately controlled by the same parent
Shanxi Chalco Industrial Service Co., Ltd.	Ultimately controlled by the same parent
Suzhou Xinchang Light and Heat Energy Technology Co., Ltd.	Ultimately controlled by the same parent
Suzhou Nonferrous Metal Design and Research Institute Co., Ltd.	Ultimately controlled by the same parent
Zhengzhou Chinalco Construction and Development Co., Ltd.	Ultimately controlled by the same parent
China Great Wall Aluminum Corporation Limited	Ultimately controlled by the same parent
Chinalco Investment Management Co., Ltd.	Ultimately controlled by the same parent
Zibo Dadi Real Estate Development Co., Ltd.	Ultimately controlled by the same parent
Zibo Dongshan Industry Co., Ltd.	Ultimately controlled by the same parent
Yunnan Metallurgical Group Co., Ltd.	Ultimately controlled by the same parent
China Copper Mineral Resources Co., Ltd.	Ultimately controlled by the same parent
Daxing Anling Jinxin Mining Co., Ltd.	Ultimately controlled by the same parent
China Copper Industry Co., Ltd.	Ultimately controlled by the same parent
Chinalco Qinghai Aluminum and Electricity Co., Ltd.	Ultimately controlled by the same parent
Shanxi Huasheng Aluminum Co., Ltd.	Ultimately controlled by the same parent
Chinalco Aluminum Foil Co., Ltd.	Ultimately controlled by the same parent
Chinalco High-end Manufacturing Co., Ltd.*	Ultimately controlled by the same parent
Ningxia Fenghao Electricity Allocation and Sales Co., Ltd.	Ultimately controlled by the same parent
Chinalco Henan Aluminum Co., Ltd.	Ultimately controlled by the same parent
Chinalco Shanxi Aluminum Co., Ltd.	Ultimately controlled by the same parent
Chinalco Capital Holdings Co., Ltd.	Ultimately controlled by the same parent
Yunnan Defu Environmental Protection Co., Ltd.	Ultimately controlled by the same parent
China Aluminum Insurance Broker (Beijing) Co. Ltd	Ultimately controlled by the same parent
China Copper Asset Management Co., Ltd. (中銅資產經營管理有限公司)	Ultimately controlled by the same parent
Chinalco Asset Operation and Management Co., Ltd	Ultimately controlled by the same parent
China Copper Central China Copper Co., Ltd.	Ultimately controlled by the same parent
Chinalco Mining International	Ultimately controlled by the same parent
China Copper (Shanghai) Copper Co., Ltd.	Ultimately controlled by the same parent

SECTION 11 FINANCIAL REPORT

11 RELATED PARTIES AND THEIR TRANSACTIONS (CONTINUED)

11.4 Particulars of other parties related to the Company (continued)

Other related party	Relationship with the Company
Zhongzhou Branch of Aluminum Corporation of China Limited	Ultimately controlled by the same parent
Chalco New Materials Company Limited	Ultimately controlled by the same parent
Chalco (Shanghai) Carbon Co., Ltd.	Ultimately controlled by the same parent
Guiyang Lvmei Asset Management Co., Ltd.	Ultimately controlled by the same parent
Shanxi 12th Metallurgical Asset Management Co., Ltd.	Ultimately controlled by the same parent
Hunan Changkan Trade and Commercial Development Co., Ltd.	Ultimately controlled by the same parent
Taiyuan China Nonferrous Metal Industry and 12th Metallurgical Real Estate Development Co., Ltd.	An associate of our parent
Yunnan Sunstone Yunnan Aluminum Carbon Material Co., Ltd.	An associate of our parent
Sichuan Liwu Copper Company Limited	An associate of our parent
Yunnan Tianye Chemical Co., Ltd.	An associate of our parent
Yunnan Simao Shanshui Copper Company Limited	An associate of our parent
Peking University Medical Zibo Hospital Co., Ltd.	An associate of our parent
Baotou Sendu Carbon Company Limited	An associate of our parent
Maguanyun Copper and Zinc Industry Co., Ltd. (馬關雲銅鋅業有限公司)	An associate of our parent
Yunnan Yunchuang Tendering Company Limited	An associate of our parent
Chinalco Guizhou Industrial Service Co., Ltd.	An associate of our parent
Qinghai Haiyuan Aluminum Co., Ltd.	An associate of our parent
Henan Great Wall Logistics Co., Ltd.	An associate of our parent
China Rare Earth Group Co., Ltd.	An associate of our parent
Guangxi Hualei Advanced Materials Co., Ltd.	A joint venture of our parent
Chinalco Zibo International Trade Co., Ltd.	A joint venture of our parent
Chongqing Shangjiangchen Real Estate Co., Ltd.	A joint venture of our parent
Guangxi Huayin Aluminum Company Limited	A joint venture of our parent
Chinalco Workwear Technology Co., Ltd. (中鋁工服科技有限公司)	A joint venture of our parent

SECTION 11 FINANCIAL REPORT

11 RELATED PARTIES AND THEIR TRANSACTIONS (CONTINUED)

11.5 Connected transactions

1. Connected transactions on procurement and acceptance of goods and rendering and acceptance of service

Related party	Type of connected transaction	Particular of connected transaction	Pricing policies and decision procedures for related party transactions	Amount incurred for the current period
A subsidiary of China Aluminum Group	Sales of goods and rendering of service	Provide engineering construction services	Negotiated between the parties by reference to market price	1,936,146,491.07
A subsidiary of China Aluminum Group	Sales of goods and rendering of service	Provide engineering design services	Negotiated between the parties by reference to market price	261,063,898.61
A subsidiary of China Aluminum Group	Sales of goods and rendering of service	Provide equipment manufacturing and sales	Negotiated between the parties by reference to market price	146,507,863.96
A subsidiary of China Aluminum Group	Sales of goods and rendering of service	Back-up service and other business	Negotiated between the parties by reference to market price	22,667,228.92
An associate of the Company	Sales of goods and rendering of service	Provide engineering design services	Negotiated between the parties by reference to market price	1,969,938,151.22
An associate of the Company	Sales of goods and rendering of service	Back-up service and other business	Negotiated between the parties by reference to market price	1,418,545.94
A subsidiary of China Aluminum Group	Procurement of goods and acceptance of service	Engineering, construction and supervision service	Negotiated between the parties by reference to market price	53,172,318.01
A subsidiary of China Aluminum Group	Procurement of goods and acceptance of service	Procurement of main materials and auxiliary materials	Negotiated between the parties by reference to market price	37,976,870.36
A subsidiary of China Aluminum Group	Procurement of goods and acceptance of service	Back-up service and other business	Negotiated between the parties by reference to market price	12,186,197.31
An associate of the Company	Procurement of goods and acceptance of service	Engineering, construction and supervision service	Negotiated between the parties by reference to market price	9,203,034.47
An associate of the Company	Procurement of goods and acceptance of service	Procurement of main materials and auxiliary materials	Negotiated between the parties by reference to market price	79,514.15
An associate of the Company	Procurement of goods and acceptance of service	Back-up service and other business	Negotiated between the parties by reference to market price	112,005.66

SECTION 11 FINANCIAL REPORT

11 RELATED PARTIES AND THEIR TRANSACTIONS (CONTINUED)

11.5 Connected transactions (continued)

1. Connected transactions on procurement and acceptance of goods and rendering and acceptance of service (continued)

Related party	Type of connected transaction	Particular of connected transaction	Pricing policies and decision procedures for related party transactions	Amount incurred for the current period
A subsidiary of China Aluminum Group	Sales of goods and rendering of service	Provide engineering construction services	Negotiated between the parties by reference to market price	1,679,236,131.91
A subsidiary of China Aluminum Group	Sales of goods and rendering of service	Provide engineering design services	Negotiated between the parties by reference to market price	323,354,568.15
A subsidiary of China Aluminum Group	Sales of goods and rendering of service	Provide equipment manufacturing and sales	Negotiated between the parties by reference to market price	233,509,363.79
A subsidiary of China Aluminum Group	Sales of goods and rendering of service	Back-up service and other business	Negotiated between the parties by reference to market price	15,585,480.76
An associate of the Company	Sales of goods and rendering of service	Provide engineering design services	Negotiated between the parties by reference to market price	2,684,750,012.25
An associate of the Company	Sales of goods and rendering of service	Back-up service and other business	Negotiated between the parties by reference to market price	12,063.87
A joint venture of China Aluminum Group	Sales of goods and rendering of service	Provide engineering construction services	Negotiated between the parties by reference to market price	10,251,131.35
A subsidiary of China Aluminum Group	Procurement of goods and acceptance of service	Engineering, construction and supervision service	Negotiated between the parties by reference to market price	24,289,145.77
A subsidiary of China Aluminum Group	Procurement of goods and acceptance of service	Procurement of main materials and auxiliary materials	Negotiated between the parties by reference to market price	41,130,732.45
A subsidiary of China Aluminum Group	Procurement of goods and acceptance of service	Back-up service and other business	Negotiated between the parties by reference to market price	22,390,007.81
An associate of the Company	Procurement of goods and acceptance of service	Engineering, construction and supervision service	Negotiated between the parties by reference to market price	12,131,538.89

SECTION 11 FINANCIAL REPORT

11 RELATED PARTIES AND THEIR TRANSACTIONS (CONTINUED)

11.5 Connected transactions (continued)

2. Related party leases

Lessor	Lessee	Leasehold	Leasing income/ expenses recognized for the period	Leasing income/ expenses recognized in the previous period
Chalco Shandong Co., Ltd.	Chalco Shandong Engineering Technology Co., Ltd.	Housing	110,216.49	55,018.23
Luoyang Engineering & Research Institute for Nonferrous Metals Processing	China Nonferrous Metals Processing Technology Co., Ltd.	Housing	867,959.03	
Suzhou Nonferrous Metal Design and Research Institute Co., Ltd.	China Nonferrous Metals Processing Technology Co., Ltd.	Housing	378,962.55	1,567,750.27
Hunan Changkan Business Development Co., Ltd.	China Nonferrous Metals Changsha Investigation and Design Research Institute Co., Ltd.	Housing	1,961,467.71	556,703.13
Zhengzhou Chinalco Construction and Development Co., Ltd.	Sixth Metallurgical Construction Company of China Nonferrous Metals Industry	Housing		633,942.84
Total	-	-	3,318,605.78	2,813,414.47

(continued)

Lessor	Lessee	Leasehold	Income recognized for the period	Lease income recognized in the previous period
China Aluminum Great Wall Construction Co., Ltd.	Chinalco Mining Corporation Limited	Land	846,418.30	846,418.30
Total	-	-	846,418.30	846,418.30

3. Related party guarantees

Guarantor	Guaranteed party	Guarantee amount	Guarantee starting on	Guarantee ending on	Guarantee performed or not
China Aluminum Group Limited	China Aluminum International Engineering Corporation Ltd.	1,500,000,000.00	30 October 2019	29 October 2022	Yes
China Aluminum Group Limited	China Aluminum International Engineering Corporation Ltd.	1,000,000,000.00	29 November 2022		No

SECTION 11 FINANCIAL REPORT

11 RELATED PARTIES AND THEIR TRANSACTIONS (CONTINUED)

11.5 Connected transactions (continued)

4. Borrowing from and lending to related parties

Related party	Borrowing/lending	Amount	Starting date	Expiry date	Remarks
Chinalco Finance Company Limited	Borrowing	250,000,000.00	31 August 2021	30 August 2022	Direct borrowing
Chinalco Finance Company Limited	Borrowing	300,000,000.00	25 October 2022	24 October 2023	Direct borrowing
Chinalco Finance Company Limited	Borrowing	100,000,000.00	25 July 2022	24 July 2023	Direct borrowing
Chinalco Finance Company Limited	Borrowing	50,000,000.00	12 January 2022	11 January 2023	Direct borrowing
Chinalco Finance Company Limited	Borrowing	100,000,000.00	14 January 2022	13 January 2023	Direct borrowing
Chinalco Finance Company Limited	Borrowing	70,800,000.00	14 April 2022	13 April 2023	Direct borrowing
Chinalco Finance Company Limited	Borrowing	140,000,000.00	29 September 2022	28 September 2023	Direct borrowing
Chinalco Finance Company Limited	Borrowing	70,000,000.00	19 December 2022	18 December 2023	Direct borrowing
Chinalco Finance Company Limited	Borrowing	92,000,000.00	21 December 2022	20 December 2023	Direct borrowing
Chinalco Finance Company Limited	Borrowing	109,400,000.00	26 December 2022	25 December 2023	Direct borrowing
Chinalco Finance Company Limited	Borrowing	10,000,000.00	17 October 2022	16 October 2023	Direct borrowing
Chinalco Finance Company Limited	Borrowing	90,000,000.00	29 July 2022	28 July 2023	Direct borrowing
Chinalco Finance Company Limited	Borrowing	150,000,000.00	20 January 2022	20 January 2023	Direct borrowing
Chinalco Finance Company Limited	Borrowing	150,000,000.00	27 January 2022	26 January 2023	Direct borrowing
Chinalco Finance Company Limited	Borrowing	150,000,000.00	27 January 2022	26 January 2023	Direct borrowing
Chinalco Finance Company Limited	Borrowing	170,000,000.00	25 May 2022	24 May 2023	Direct borrowing
Chinalco Finance Company Limited	Borrowing	180,000,000.00	9 December 2022	8 December 2023	Direct borrowing
Chinalco Finance Company Limited	Borrowing	30,000,000.00	2 March 2022	1 March 2023	Direct borrowing
Chinalco Finance Company Limited	Borrowing	30,000,000.00	8 June 2022	7 June 2023	Direct borrowing
Chinalco Finance Company Limited	Borrowing	40,000,000.00	7 September 2022	15 June 2023	Direct borrowing
Chinalco Finance Company Limited	Borrowing	500,000,000.00	28 December 2022	27 December 2025	Direct borrowing
Chinalco Finance Company Limited	Borrowing	597,000,000.00	1 March 2021	29 February 2024	Direct borrowing
Chinalco Finance Company Limited	Borrowing	50,000,000.00	29 July 2022	28 July 2025	Direct borrowing
Chinalco Finance Company Limited	Borrowing	50,000,000.00	9 August 2022	08 August 2024	Direct borrowing
Chinalco Finance Company Limited	Provide deposit service	4,243,818,831.69	-	-	Direct borrowing
Total	-	7,723,018,831.69	-	-	-



SECTION 11 FINANCIAL REPORT

11 RELATED PARTIES AND THEIR TRANSACTIONS (CONTINUED)

11.5 Connected transactions (continued)

5. Remuneration of key management

Item	Amount incurred for the current period	Amount incurred for the previous period
Remuneration of key management	6,575,470.00	5,348,198.00

SECTION 11 FINANCIAL REPORT

11 RELATED PARTIES AND THEIR TRANSACTIONS (CONTINUED)

11.6 Receivables from and payable to related parties

1. Receivables

Item	Related party	Closing balance		Opening balance	
		Carrying balance	provision for bad debt	Carrying balance	provision for bad debt
Accounts receivable	A subsidiary of China Aluminum Group	1,330,437,056.61	195,203,958.80	2,819,224,859.57	361,466,738.65
Accounts receivable	A joint venture of China Aluminum Group	116,172,952.13	3,221,107.17	80,653,597.93	956,521.48
Accounts receivable	An associate of China Aluminum Group	24,098,411.75	349,523.12	2,321,967.01	622,710.34
Accounts receivable	An associate of our parent	859,761,165.21	20,674,759.27	505,860,407.02	3,451,125.58
Subtotal	-	2,330,469,585.70	219,449,348.36	3,408,060,831.53	366,497,096.05
Other receivable	A subsidiary of China Aluminum Group	108,177,978.98	20,099,983.18	135,251,104.45	24,814,810.99
Other receivable	A joint venture of China Aluminum Group	800,000.00	144,540.00	400,000.00	115,138.00
Other receivable	An associate of China Aluminum Group	1,499,366.63	468,819.40	40,000.00	20,000.00
Other receivable	A joint venture of the Company			59,138.00	29,321.40
Other receivable	An associate of our parent	11,052,947.95	539,802.00	23,571,556.85	23,259,203.97
Subtotal	-	121,530,293.56	21,253,144.58	159,321,799.30	48,238,474.36
Prepayment	A subsidiary of China Aluminum Group	2,710,988.62		8,750,937.59	
Prepayment	An associate of China Aluminum Group			3,011,902.00	
Prepayment	A joint venture of the Company	1,809,000.00		8,560,801.00	
Prepayment	An associate of our parent	14,024,713.49		3,649,581.70	
Subtotal	-	18,544,702.11		23,973,222.29	
Total	-	2,470,544,581.37	240,702,492.94	3,591,355,853.12	414,735,570.41

SECTION 11 FINANCIAL REPORT

11 RELATED PARTIES AND THEIR TRANSACTIONS (CONTINUED)

11.6 Receivables from and payable to related parties (continued)

2. Payables

Item	Related party	Closing balance	Opening balance
Account payable	A subsidiary of China Aluminum Group	61,976,866.82	100,786,234.00
Account payable	A joint venture of China Aluminum Group		
Account payable	An associate of China Aluminum Group		4,661,286.77
Account payable	A joint venture of the Company	23,354,118.88	13,246,547.89
Account payable	An associate of the Company	14,980,519.82	8,248,853.27
Subtotal	–	100,311,505.52	126,942,921.93
Other payable	A subsidiary of China Aluminum Group	26,449,026.42	54,139,352.74
Other payable	A joint venture of China Aluminum Group	50,000.00	
Other payable	An associate of China Aluminum Group	1,400.00	12,000.00
Other payable	A joint venture of the Company		244,600.00
Other payable	An associate of the Company	1,518,698.00	1,000,000.00
Subtotal	–	28,019,124.42	55,395,952.74
Short-term loans	A subsidiary of China Aluminum Group	1,607,488.37	2,024,736.08
Non-current liabilities due within one year	A subsidiary of China Aluminum Group	1,163,272.57	832,039.30
Subtotal	–	2,770,760.94	2,856,775.38
Total	–	131,101,390.88	157,873,770.07

SECTION 11 FINANCIAL REPORT

11 RELATED PARTIES AND THEIR TRANSACTIONS (CONTINUED)

11.7 Contract assets and contract liabilities of related parties

1. Contract assets

Related party	Closing balance		Opening balance	
	Carrying balance	Provision for impairment	Carrying balance	Provision for impairment
A subsidiary of China Aluminum Group	786,219,813.46	40,965,728.35	836,979,499.98	20,715,387.29
A joint venture of China Aluminum Group	5,237,722.89	1,759,669.09	378,217.99	1,891.10
An associate of China Aluminum Group	161,237.53	806.19	200,000.01	1,000.00
An associate of the Company	849,473,850.69	4,241,037.78	563,246,814.71	2,816,234.08
Total	1,641,092,624.57	46,967,241.41	1,400,804,532.69	23,534,512.47

2. Contract liabilities

Related party	Closing balance	Opening balance
A subsidiary of China Aluminum Group	378,242,565.21	336,337,192.56
A joint venture of China Aluminum Group	12,948,804.20	15,195,926.27
An associate of China Aluminum Group	1,837,002.71	
An associate of the Company	222,790,673.22	7,323,133.97
Total	615,819,045.34	358,856,252.80

SECTION 11 FINANCIAL REPORT

12 COMMITMENTS OR CONTINGENCIES

12.1 Commitments

The Company and Yunnan Transportation Investment Construction Group Co., Ltd. (“Yunnan Transportation Investment”) jointly formed a non-government equity investor to work together with the local governments to invest in and establish three project companies, namely Yunnan Ningyong Expressway Co., Ltd. (“Ningyong Expressway”), Yunnan Linyun Expressway Co., Ltd. (“Linyun Expressway”) and Yunnan Linshuang Expressway Co., Ltd. (“Linshuang Expressway”), for the construction and operation of the said expressways under PPP mode. The shareholding of the Company, Yunnan Transportation Investment and the investment vehicle designated by the local governments in the three PPP project companies was 30%, 40% and 30% respectively.

The capital structure of each project company is as follow:

The investment vehicle designated by local government contributed 30% of total project investment (of which RMB30 million is the registered capital and the rest is capital reserve). The Company and Yunnan Transportation Investment respectively contributed RMB30 million and RMB40 million as paid-in registered capital.

Meanwhile, the Company and Yunnan Transportation Investment provide credit enhancement for the difference between the total investment and the capital contribution in proportion to their relative shareholding (3:4), and are liable for the financing for the operation period on a 42.86%:57.14% basis. Each shareholder is liable for the financing for the operation period of the project company according to their shareholding proportion.

According to the relevant agreements, the Company is required to provide credit enhancement up to RMB4.559 billion, RMB3.19 billion and RMB2.086 billion (up to RMB9.835 billion in total) for investment loans granted to Ningyong Expressway, Linyun Expressway and Linshuang Expressway respectively, and issue a letter of undertaking for deficiency. The letter of undertaking for deficiency should be signed up to the above amounts respectively after negotiation with relevant creditors.

As of the date of approval of this report, the Company has actually issued the letter of undertaking and provided credit enhancement as follows:

Ningyong Expressway was granted a credit line of RMB11 billion by the bank, and the Company has issued a letter of undertaking for deficiency as to RMB9.347 billion or 42.86% of the credit line. The bank has actually granted a loan of RMB8.619 billion, and the Company has provided credit enhancement for RMB3.694 billion of the loan.

Linyun Expressway was granted a credit line of RMB10.1 billion by the bank, and the Company has issued a letter of undertaking for deficiency as to RMB6.0 billion or 42.86% of the credit line. The bank has actually granted a loan of RMB5.85 billion, and the Company has provided credit enhancement for RMB2.507 billion of the loan.

Linshuang Expressway was granted a credit line of RMB9.9 billion by the bank, and the Company has issued a letter of undertaking for deficiency as to RMB4.32 billion or 42.86% of the credit line. The bank has actually granted a loan of RMB4.32 billion, and the Company has provided credit enhancement for RMB1.852 billion of the loan.

SECTION 11 FINANCIAL REPORT

12 COMMITMENTS OR CONTINGENCIES (CONTINUED)

12.2 Contingencies

Significant pending litigation or arbitration

No.	Plaintiff/Applicant/ Appellant	Defendant/Respondent/Appellee	Cause	Amount claimed (RMB ten thousand)
1	China Aluminum International Engineering Corporation Ltd.	Qingdao Xinfu Co-creation Asset Management Co., Ltd. Shandong Real Estate Development Group Qingdao Company Liang Yongjian, Wang Xiaoning, Qingdao Liangyou Catering Co., Ltd.	Other civil disputes	90,921.54
2	Guiyang Aluminum and Magnesium Design Institute Construction Contracting Co., Ltd	Guizhou Huada Real Estate Development Co., Ltd.	Construction project contract disputes	51,729.85
3	Guiyang Branch of China Aluminum International Engineering Corporation Ltd.	Guizhou Huaren New Material Co., Ltd.	Construction project contract disputes	39,092.16
4	China Aluminum International Engineering & Equipment Co., Ltd.	Shandong Homerun Tires Co., Ltd Shandong Kemai Rubber Group Co., Ltd. Qingdao Fmax Tire Co., Ltd. Qingdao Zhonghaoxuan International Trade Co., Ltd.	Sales contract disputes	34,868.06
5	China Aluminum International Engineering Corporation Ltd.	Vietnam National Coal and Mineral Industries Group (TKV)	Construction project contract disputes	26,264.83
6	Guiyang Aluminum and Magnesium Design Institute Construction Contracting Co., Ltd.	Anshun Xixiu District Urban Investment Development Co., Ltd. Guizhou Huada Real Estate Development Co., Ltd.	Warranty Contract Disputes	25,775.00

SECTION 11 FINANCIAL REPORT

12 COMMITMENTS OR CONTINGENCIES (CONTINUED)

12.2 Contingencies (continued)

Significant pending litigation or arbitration (continued)

No.	Plaintiff/Applicant/ Appellant	Defendant/Respondent/Appellee	Cause	Amount claimed (RMB ten thousand)
7	Chaleco (Tianjin) Construction Co., Ltd.	Tianjin Zijinshan Environmental Protection Industry Investment Co., Ltd. Tianjin Wuqing District Tianzi Environmental Protection Co., Ltd. Tianjin Jinghai Tianzi Sunshine Environmental Protection Co., Ltd. Tianzi Environmental Protection Investment Holdings Co., Ltd. Tianzi Environmental Protection Equipment Manufacturing (Tianjin) Co., Ltd. Huazhiyuan International Trade (Tianjin) Co., Ltd. Gaowei Huatianzi Environmental Protection Industry Development Co., Ltd.	Construction project contract disputes	17,669.55
8	Guizhou Huaren New Material Co., Ltd.	Chinalco International Guiyang Branch	Construction project contract disputes	14,523.36
9	China Mining Construction Group Ltd. Mianchi Branch	China Aluminum Zhongzhou Mining Co., Ltd. Sanmenxia Branch	Construction project contract disputes	12,906.00
10	China Fourth Metallurgical Construction Co., Ltd.	Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy	Construction project contract disputes	8,434.06
11	Sixth Metallurgical Construction Company of China Nonferrous Metals Industry	Henan Hongxuan Real Estate Co., Ltd.	Construction project contract disputes	7,953.70
12	Xi'an Geotechnical Engineering Co., Ltd. of China Nonferrous Metals Industry	Shenyang Branch of China Aluminum International Engineering Corporation Ltd.	Construction project contract disputes	7,539.50
13	China Aluminum International Shandong Chemical Industry Co., Ltd.	Huang Zhongqing (黃中慶), Huang Shunqing (黃順慶), Zhao Youjie (趙友傑), Shandong Jiata Plastic Packaging Co., Ltd., Huang Chunqing (黃春慶), Huang Feng (黃峰), Lin Yulei (林玉雷)	Sales contract disputes	7,461.06

SECTION 11 FINANCIAL REPORT

12 COMMITMENTS OR CONTINGENCIES (CONTINUED)

12.2 Contingencies (continued)

Significant pending litigation or arbitration (continued)

No.	Plaintiff/Applicant/ Appellant	Defendant/Respondent/Appellee	Cause	Amount claimed (RMB ten thousand)
14	Sixth Metallurgical Construction Company of China Nonferrous Metals Industry	Kaili City Traffic Bureau, Kaili City Government	Construction project contract disputes	7,460.07
15	Seventh Metallurgical Civil Engineering Co., Ltd.	Guiyang Aluminum and Magnesium Design and Research Institute Engineering Contracting Co., Ltd. Guiyang Aluminum-Magnesium Design and Research Institute Co., Ltd.	Construction project contract disputes	6,734.50
16	China Nonferrous Metals Industry's Twelfth Metallurgical Construction Co., Ltd.	Xi'an Coordinated Urban and Rural Construction Investment Development Co., Ltd., Xixian Investment Co., Ltd.	Loan contract disputes	6,320.00
17	Sixth Metallurgical Construction Company of China Nonferrous Metals Industry	Xinjiang Kingho Investment Holdings Co., Ltd., Xinjiang Kingho Energy Group Co., Ltd.	Construction project contract disputes	6,136.02
18	Shanghai China Aluminum International Supply Chain Management Co., Ltd.	Shanghai Golden Elephant Aluminum Co., Ltd., Shanghai Zhongquan Investment Co., Ltd.	Sales contract disputes	5,836.77
19	China Aluminum Great Wall Construction Co., Ltd.	Changge Hongji Weiye Real Estate Development Co., Ltd.	Construction project contract disputes	5,621.55
20	Lv Yikui (吕宜奎)	Panjin Hetai Real Estate Development Co., Ltd., Shenyang Aluminum and Magnesium Design and Research Institute Co., Ltd., Liaoning Jindi Second Construction Engineering Co., Ltd.	Construction project contract disputes	5,600.00
21	Sixth Metallurgical Construction Company of China Nonferrous Metals Industry	Zhonghe Anshan Shengshide Real Estate Co., Ltd.	Construction project contract disputes	5,500.00
22	China Nonferrous Metals Industry's Twelfth Metallurgical Construction Co., Ltd.	Taiyuan Jiaxin Zongli Real Estate Co., Ltd.	Construction project contract disputes	5,331.00

SECTION 11 FINANCIAL REPORT

12 COMMITMENTS OR CONTINGENCIES (CONTINUED)

12.2 Contingencies (continued)

Significant pending litigation or arbitration (continued)

No.	Plaintiff/Applicant/ Appellant	Defendant/Respondent/Appellee	Cause	Amount claimed (RMB ten thousand)
23	Sixth Metallurgical Construction Company of China Nonferrous Metals Industry	Inner Mongolia Hengda Real Estate Co., Ltd.	Construction project contract disputes	5,208.36
24	China Nonferrous Metals Changsha Investigation and Design Research Institute Co., Ltd.	Changsha Evergrande Children's World Theme Park Tourism Development Co., Ltd., Evergrande Children's World Group Co., Ltd, Shenzhen Kunxing No. 6 Investment Partnership (深圳市坤行 六號投資合夥企業)	Construction project contract disputes	12,334.72
25	Sixth Metallurgical Construction Company of China Nonferrous Metals Industry	Chaoyang Construction Group Co., Ltd.	Construction project contract disputes	6,142.22
26	Ninth Metallurgical Construction Co., Ltd.	Fujian Zhongnuo Anju Car Rental Co., Ltd.	Dispute over engineering construction contract	37,340.16
27	Henan Province Jade Construction Engineering Co., Ltd. (河南省嘉德建築工 程有限公司), China Nonferrous Metals Processing Technology Co., Ltd.	The Housing and Urban-Rural Construction Department of Jianxi District, Luoyang City	Construction project contract arrears case	9,829.36
28	Challeco (Tianjin) Construction Co., Ltd.	Tianjin Jizhou Xincheng Construction Investment Co., Ltd.	Private lending disputes	6,364.31
29	DING Jie	CHALIECO (Tianjin) Construction Co., Ltd.	Contract dispute case	5,430.88
30	Zhong Ai Culture Communication (Tianjin) Co. Ltd. (中愛文化傳播 (天津)有限公司)	Tianjin Construction and the third party Tianjin Xintong Properties Co., Ltd.	Contract dispute case	5,106.15
31	Challeco (Tianjin) Construction Co., Ltd.	Henan Longcheng Venture Development Co., Ltd. (河南省龍城創業發展有限公 司), Henan Longxing Development Co., Ltd. (河南省隆興發展有限公司)	Construction project contract disputes	6,544.00

SECTION 11 FINANCIAL REPORT

12 COMMITMENTS OR CONTINGENCIES (CONTINUED)

12.3 Guarantees

Hanzhong Ninth Metallurgical Construction Co., Ltd., a wholly-owned subsidiary of Ninth Metallurgical Company, which is in turn our subsidiary provides several and joint liability guarantee for Mian County Urban and Rural Infrastructure Construction Co., Ltd. in respect of a RMB100 million loan granted by Agricultural Development Bank of China which matures on 19 October 2027. As of December 31, 2022, the balance of guarantee was RMB45.40 million.

13 EVENTS AFTER THE BALANCE SHEET DATE

- (1) Significant non-adjustment items: Nil.
- (2) Profit distribution: Nil.
- (3) Sales return: Nil.
- (4) Description of other events after the balance sheet date: Nil.

14 OTHER KEY MATTERS

14.1 Lease

1. Lessor

- (1) Operating lease

Item	Amount
① Income	60,670,486.03
Lease income	60,670,486.03
Variable lease payment related income not included in lease receipts	
② Undiscounted lease receipts to be received in each of five consecutive fiscal years following the balance sheet date	292,126,051.05
Year 1	61,293,546.61
Year 2	64,755,624.61
Year 3	55,360,625.61
Year 4	55,305,626.61
Year 5	55,410,627.61

SECTION 11 FINANCIAL REPORT

14 OTHER KEY MATTERS (CONTINUED)

14.1 Lease (Continued)

2. Lessee

Item	Amount
Interest expense of lease liabilities	2,955,261.37
Short-term lease expenses for simplified processing included in the cost of related assets or the current profit and loss	33,196,639.55
Low-value asset lease expenses for simplified processing included in the cost of related assets or the current profit and loss (excluding short-term lease charges for low-value assets)	
Variable lease payment not included in the measurement of lease liabilities included in the cost of related assets or the current profit and loss	
of which: the portion generated from the leaseback transactions	
Income from sublease of right-of-use assets	
Total cash outflow related to leases	29,367,423.55
Relevant profit or loss arising from the leaseback transactions	
Cash inflow from the leaseback transactions	
Cash outflow from the leaseback transactions	
Others	

See Note 5.18 for details on right-of-use assets.

SECTION 11 FINANCIAL REPORT

14 OTHER KEY MATTERS (CONTINUED)

14.2 Debt restructuring

1. Disclosure of debtors

Way of debt restructuring	Carrying amount of debt	Gains from debt restructuring	Increase in owner's equity such as share capital
Debts settled with cash below the carrying amount of the debts	177,394,158.22	10,094,069.09	–
Debts settled with non-cash assets			–
Debt to capital			–
Revision of other debt conditions			–
Combined restructuring mode			–

2. Disclosure of debtors

Way of debt restructuring	Carrying amount of debt	Debt restructuring loss amount	Increased amount of long-term equity investment	Percentage of debtor's equity (%)
Creditor's rights recovered with cash below the carrying amount of the creditor's rights	11,823,061.35	1,481,006.52	–	–
Creditor's rights recovered with non-cash assets			–	–
Debt-to-equity conversion			–	–
Revision of other debt conditions			–	–
Combined restructuring mode			–	–

SECTION 11 FINANCIAL REPORT

14 OTHER KEY MATTERS (CONTINUED)

14.3 Segment report

1. Financial information reported by segment

Item	Design and survey	Project construction	Equipment manufacturing	Inter-segment elimination	Total
I. Operating revenue	2,686,803,433.01	18,710,385,043.06	2,449,079,458.78	-148,939,018.63	23,697,328,916.22
II. Operating cost	1,879,754,267.88	16,810,048,211.38	2,130,698,669.92	-147,289,018.64	20,673,212,130.54
III. Income from investments in associates and joint ventures	8,401,149.38	7,754,115.70	-2,830.58		16,152,434.50
IV. Credit impairment loss	-33,119,246.26	392,098,983.09	5,270,261.68		364,249,998.51
V. Asset impairment loss	9,942,973.44	13,353,949.89	2,240,386.12		25,537,309.45
VI. Depreciation and amortization fee	76,884,090.34	187,448,479.29	17,402,312.16		281,734,881.79
VII. Total profit	75,450,792.21	155,577,632.13	65,472,160.62	-11,525,982.54	284,974,602.42
VIII. Income tax expense	29,672,023.62	40,009,805.00	8,526,417.35	1,889,323.15	80,097,569.12
IX. Net profit	45,778,768.59	115,567,827.13	56,945,743.27	-13,415,305.69	204,877,033.30
X. Total assets	24,524,986,367.29	23,334,326,260.56	3,698,639,140.75	-4,166,663,176.73	47,391,288,591.87
XI. Total liabilities	14,996,512,674.95	25,142,893,839.72	2,143,736,242.39	-5,346,911,427.96	36,936,231,329.10

2. 2022

Item	Engineering design and consultancy	Engineering contracting	Equipment manufacturing	Inter-segment elimination	Total
I. Operating revenue	2,686,803,433.01	18,710,385,043.06	2,449,079,458.78	-148,939,018.63	23,697,328,916.22
Including: Revenue from contracts with clients	2,651,592,477.19	18,689,237,439.45	2,444,767,532.18	-148,939,018.63	23,636,658,430.19
Lease income	35,210,955.82	21,147,603.61	4,311,926.60		60,670,486.03
II. Segment income	75,450,792.21	155,577,632.13	65,472,160.62	-11,525,982.54	284,974,602.42
Income tax expense	-	-	-	-	80,097,569.12
Net profit	-	-	-	-	204,877,033.30
III. Total assets	24,524,986,367.29	23,334,326,260.56	3,698,639,140.75	-4,166,663,176.73	47,391,288,591.87
IV. Total liabilities	14,996,512,674.95	25,142,893,839.72	2,143,736,242.39	-5,346,911,427.96	36,936,231,329.10

SECTION 11 FINANCIAL REPORT

14 OTHER KEY MATTERS (CONTINUED)

14.3 Segment report (Continued)

3. 2021

Item	Engineering design and consultancy	Engineering contracting	Equipment manufacturing	Trading	Inter-segment elimination	Total
I. Operating revenue	2,451,037,687.10	19,758,586,888.43	1,546,395,466.70	326,436,722.07	183,733,321.37	23,898,723,442.93
Including: Revenue from contracts with clients	2,405,846,163.41	19,749,045,693.53	1,537,771,613.49	325,926,452.59	183,733,321.37	23,834,856,601.65
Lease income	45,191,523.69	9,541,194.90	8,623,853.21	510,269.48		63,866,841.28
II. Segment income	30,964,361.51	128,069,432.44	-88,641,655.76	-1,004,573,658.80	2,238,372.75	-936,419,893.36
Income tax expense	-	-	-	-	-	106,042,205.22
Net profit	-	-	-	-	-	-1,042,462,098.58
III. Total assets	23,688,567,135.31	34,562,466,579.73	3,356,744,131.24	4,015,076,148.70	5,600,097,334.44	60,022,756,660.54
IV. Total liabilities	14,188,747,754.17	30,599,262,714.85	2,388,752,714.47	2,434,199,456.44	5,952,928,651.51	43,658,033,988.42

14.4 Auditor's remuneration

Auditor's remuneration	Amount incurred for the current period	Amount incurred for the previous period
Total	5,732,000.00	5,732,000.00

SECTION 11 FINANCIAL REPORT

14 OTHER KEY MATTERS (CONTINUED)

14.5 Directors', Supervisors' and Employees' Emoluments

1. Directors' and supervisors' emoluments

Director/supervisor	Fee	Salary, subsidy, allowance and bonus			Contribution to social security and housing provident funds	Contribution to pension fund	Others	Total
		Basic salary	Subsidy, allowance	Bonus				
Directors								
LI Yihua		286,000.00		518,661.00	128,312.00			932,973.00
LIU Jing		312,000.00	120,000.00	525,236.00	139,206.00			1,096,442.00
ZHANG Jian		234,000.00	15,600.00	374,400.00	128,831.00			752,831.00
WU Jianqiang		26,000.00		47,151.00	10,894.00			84,045.00
GUI Weihua		142,857.12						142,857.12
SIU Chi Hung		107,142.84						107,142.84
TONG Pengfang		107,142.84						107,142.84
CHEUNG Hung Kwong		35,714.28						35,714.28
FU Jun		35,714.28						35,714.28
Subtotal		1,286,571.36	135,600.00	1,465,448.00	407,243.00			3,294,862.36
Supervisors								
FAN Guangsheng		312,000.00	35,600.00	439,370.00	139,206.00			926,176.00
Subtotal		312,000.00	35,600.00	439,370.00	139,206.00			926,176.00
Total		1,598,571.36	171,200.00	1,904,818.00	546,449.00			4,221,038.36

SECTION 11 FINANCIAL REPORT

14 OTHER KEY MATTERS (CONTINUED)

14.5 Directors', Supervisors' and Employees' Emoluments (Continued)

2. Five highest paid individuals

Among the five highest paid individuals of the Company for the year, there are 2 directors and 1 supervisor. Their emoluments has been reflected in the emoluments of directors and supervisors. The emoluments paid to the remaining 2 persons during the year are as follows:

Item	Amount incurred for the current period
Salary, subsidy, allowance and bonus	1,431,526.00
Contribution to social security and housing provident funds	278,412.00
Retirement benefits	
Others	
Total	1,709,938.00

Among the emoluments of the above 5 persons paid for the year, 4 of them were paid within RMB1,000,000.00. 1 of them was paid ranging from RMB1,000,001.00 to RMB1,500,000.00.



SECTION 11 FINANCIAL REPORT

15 NOTES TO FINANCIAL STATEMENTS OF THE PARENT

15.1 Accounts receivable

1. Disclosure by aging

Aging	Closing balance	Opening balance
Within 1 year	435,728,658.04	270,917,718.27
Between 1-2 years	132,266,455.07	432,908,486.20
Between 2-3 years	120,337,451.86	186,282,371.58
Between 3-4 years	92,069,478.96	439,597,642.03
Between 4-5 years	235,474,074.78	32,426,939.34
Over 5 years	451,867,110.38	452,165,261.22
Sub-total	1,467,743,229.09	1,814,298,418.64
Less: Provision for impairment	556,957,656.27	667,471,780.68
Total	910,785,572.82	1,146,826,637.96

SECTION 11 FINANCIAL REPORT

15 NOTES TO FINANCIAL STATEMENTS OF THE PARENT (CONTINUED)

15.1 Accounts receivable (Continued)

2. Accounts receivable disclosed by the bad debt provision method

Category	Closing balance			
	Carrying balance		Provision for bad debts	
	Amount	Percentage (%)	Amount	Percentage (%)
Accounts receivable tested for provision for bad debts on an individual basis	765,189,752.44	52.13	477,817,329.34	85.79
Accounts receivable tested for provision for bad debts on a collective basis	702,553,476.65	47.87	79,140,326.93	14.21
Including:				
Group 1: expected credit loss group	500,928,028.04	34.13	79,140,326.93	14.21
Group 2: receivables from subsidiaries	201,625,448.61	13.74		
Total	1,467,743,229.09	-	556,957,656.27	-

Category	Opening balance			
	Carrying balance		Provision for bad debts	
	Amount	Percentage (%)	Amount	Percentage (%)
Accounts receivable tested for provision for bad debts on an individual basis	401,770,102.61	22.14	256,607,979.36	38.44
Accounts receivable tested for provision for bad debts on a collective basis	1,412,528,316.03	74.67	410,863,801.32	61.56
Including:				
Group 1: expected credit loss group	1,354,687,515.12	3.19	410,863,801.32	61.56
Group 2: receivables from subsidiaries	57,840,800.91	77.86		
Total	1,814,298,418.64	100.00	667,471,780.68	100.00

SECTION 11 FINANCIAL REPORT

15 NOTES TO FINANCIAL STATEMENTS OF THE PARENT (CONTINUED)

15.1 Accounts receivable (Continued)

2. Accounts receivable disclosed by the bad debt provision method (Continued)

- (1) Accounts receivable tested for provision for bad debts on an individual basis as at the end of the period

Entity	Carrying balance	provision for bad debts	Expected credit	
			loss rate (%)	Reason for the provision
Debtor 1	481,762,713.12	289,057,627.88	60.00	The Company makes provision for credit loss based on the recoverability of the amounts
Debtor 2	236,668,344.63	142,001,006.78	60.00	The Company makes provision for credit loss based on the recoverability of the amounts
Debtor 3	32,133,034.69	32,133,034.68	100.00	The Company makes provision for credit loss based on the recoverability of the amounts
Debtor 4	14,625,660.00	14,625,660.00	100.00	The Company makes provision for credit loss based on the recoverability of the amounts
Total	765,189,752.44	477,817,329.34	-	-

SECTION 11 FINANCIAL REPORT

15 NOTES TO FINANCIAL STATEMENTS OF THE PARENT (CONTINUED)

15.1 Accounts receivable (Continued)

2. Accounts receivable disclosed by the bad debt provision method (Continued)

(2) Accounts receivable tested for provision for bad debts on a collective basis

① Group 1: Expected credit loss group

Aging	Closing balance			Opening balance		
	Expected credit		provision for bad debts	Expected credit		provision for bad debts
	Carrying balance	loss rate (%)		Carrying balance	loss rate (%)	
Within 1 year (inclusive)	300,151,023.80	0.50	1,500,755.11	213,806,917.36	0.50	1,069,034.58
Between 1 to 2 years	26,117,844.47	10.00	2,611,784.45	321,679,146.36	10.00	32,167,914.64
Between 2 to 3 years	95,209,143.80	20.00	19,041,828.76	147,584,725.27	20.00	29,516,945.04
Between 3 to 4 years	29,643,660.64	30.00	8,893,098.19	439,597,642.03	30.00	131,879,292.63
Between 4 to 5 years	5,426,989.82	50.00	2,713,494.91	31,576,939.34	50.00	15,788,469.67
Over 5 years	44,379,365.51	100.00	44,379,365.51	200,442,144.76	100.00	200,442,144.76
Total	500,928,028.04	-	79,140,326.93	1,354,687,515.12	-	410,863,801.32

3. Accounts receivable tested for provision for bad debts on credit risk characteristics group

During the period, the provision for bad debts was RMB2,879,079.16, and the provision for bad debts recovered or reversed was RMB20,318,576.92.

4. Other major receivable written-off during the reporting period

Accounts receivable of RMB93,074,626.65 was written off during the reporting period.

SECTION 11 FINANCIAL REPORT

15 NOTES TO FINANCIAL STATEMENTS OF THE PARENT (CONTINUED)

15.1 Accounts receivable (Continued)

5. Top five debtors of accounts receivable as at the end of the period

Entity	Carrying balance	Percentage in total accounts receivable (%)	Provision for bad debts
No. 1	481,762,713.12	32.82	289,057,627.88
No. 2	237,048,770.65	16.15	1,185,243.85
No. 3	236,668,344.63	16.12	142,001,006.78
No. 4	200,269,933.57	13.64	
No. 5	110,119,904.14	7.50	47,730,408.57
Total	1,265,869,666.11	86.25	479,974,287.08

15.2 Other receivables

Item	Closing balance	Opening balance
Interest receivable	346,630,755.55	335,554,019.42
Dividends receivable	660,029,198.75	573,773,776.54
Other receivables	5,719,653,566.94	4,822,177,035.71
Less: provision for bad debts	18,659,828.01	10,775,267.74
Total	6,707,653,693.23	5,720,729,563.93

1. Interest receivable

(1) Classification of interests receivable

Item	Closing balance	Opening balance
Entrusted loans	346,630,755.55	335,554,019.42
Less: provision for bad debts		
Total	346,630,755.55	335,554,019.42

SECTION 11 FINANCIAL REPORT

15 NOTES TO FINANCIAL STATEMENTS OF THE PARENT (CONTINUED)

15.2 Other receivables (Continued)

2. Dividends receivable

(1) Dividends receivable by category

Item	Closing balance	Opening balance
Sixth Metallurgical Construction Company of China Nonferrous Metals Industry	169,870,462.40	169,870,462.40
Ninth Metallurgical Construction Co., Ltd.	144,168,000.00	144,168,000.00
China Nonferrous Metals Changsha Investigation and Design Research Institute Co., Ltd.	10,374,899.93	90,374,899.93
Shenyang Aluminum & Magnesium Design Institute Co., Ltd.	109,866,100.00	41,866,100.00
China Aluminum Great Wall Construction Co., Ltd.	21,252,414.21	21,252,414.21
Kunming Survey and Design institute Co., Ltd. of China Nonferrous Metals industry	66,083,600.00	37,593,600.00
Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy	61,026,800.00	16,006,800.00
China Aluminum International Aluminum Application Engineering Co., Ltd.	10,311,600.00	6,811,600.00
Chinalco Southwest Construction Investment Co., Ltd.	4,079,900.00	709,900.00
China Aluminum International Investment Management (Shanghai) Co., Ltd.	6,000,000.00	120,000.00
China Aluminum International Technology Development Co., Ltd.	46,640,000.00	45,000,000.00
Chinalco Tendering Co., Ltd.	8,125,422.21	
China Aluminum International Yunnan Aluminum Application Engineering Co., Ltd.	2,230,000.00	
Total	660,029,198.75	573,773,776.54

SECTION 11 FINANCIAL REPORT

15 NOTES TO FINANCIAL STATEMENTS OF THE PARENT (CONTINUED)

15.2 Other receivables (Continued)

3. Other receivables:

(1) Other receivables by nature

Nature	Closing balance	Opening balance
Advance	135,990,891.18	67,278,032.81
Retention funds or deposits	3,078,934.45	12,963,731.40
Imprest	355,989.56	880,592.33
Others	5,580,227,751.75	4,741,054,679.17
Subtotal	5,719,653,566.94	4,822,177,035.71
Less: provision for bad debts	18,659,828.01	10,775,267.74
Total	5,700,993,738.93	4,811,401,767.97

(2) Aging analysis of other receivables

Aging	Closing balance	Opening balance
Within 1 year	5,376,067,911.88	4,400,111,234.61
Between 1 to 2 years	167,915,375.98	220,491,272.62
Between 2 to 3 years	100,392,861.85	55,400,250.57
Between 3 to 4 years	682,339.32	2,967,610.64
Between 4 to 5 years	2,967,610.64	1,045,266.50
Over 5 years	71,627,467.27	142,161,400.77
Less: provision for bad debts	18,659,828.01	10,775,267.74
Total	5,700,993,738.93	4,811,401,767.97

SECTION 11 FINANCIAL REPORT

15 NOTES TO FINANCIAL STATEMENTS OF THE PARENT (CONTINUED)

15.2 Other receivables (Continued)

3. Other receivables: (Continued)

(3) Provision for bad debts

Provision for bad debts	Stage 1	Stage 2	Stage 3	Total
	Future 12-month expected credit losses	Lifetime expected credit losses (not credit-impaired)	Lifetime expected credit losses (credit-impaired)	
Balance as at 1 January 2022	86,016.17	5,664,934.36	5,024,317.21	10,775,267.74
Balance as at 1 January 2022 in the period				10,775,267.74
- transfers to stage 2	-14,103.68	14,103.68		
- transfers to stage 3		-70,843.89	70,843.89	
- transfers back to stage 2				
- transfers back to stage 1				
Provision for the period	3,583,380.61	3,778,802.32	522,377.34	7,884,560.27
Reversal for the period				
Write off for the period				
Other changes				
Balance as at 31 December 2022	3,655,293.10	9,386,996.47	5,617,538.44	18,659,828.01

SECTION 11 FINANCIAL REPORT

15 NOTES TO FINANCIAL STATEMENTS OF THE PARENT (CONTINUED)

15.2 Other receivables (Continued)

3. Other receivables: (Continued)

- (4) Recovery or reversal of the provision for bad debts

No recovery or reversal of the provision for bad debts in the current period.

- (5) Other major receivable written-off during the reporting period

No other receivable was actually written off during the current period.

- (6) Top five debtors of other receivables as at the end of the period

Entity	Nature	Closing balance	Aging	Proportion to total closing balance of other receivables (%)	Balance of provision for bad debts
No. 1	Principal and interest of entrusted loan	1,635,120,009.73	Within 1 year	28.59	
No. 2	Principal and interest of entrusted loan	1,193,581,137.42	Within 1 year	20.87	
No. 3	Principal and interest of entrusted loan	589,528,801.50	Within 1 year	10.31	
No. 4	Principal and interest of entrusted loan	428,399,004.01	Within 1 year	7.49	
No. 5	Principal and interest of entrusted loan	341,710,926.51	Within 1 year	5.97	
Total	-	4,188,339,879.17	-	73.23	

SECTION 11 FINANCIAL REPORT

15 NOTES TO FINANCIAL STATEMENTS OF THE PARENT (CONTINUED)

15.3 Long-term equity investment

Item	Closing balance			Opening balance		
	Carrying balance	Provision for impairment	Book value	Carrying balance	Provision for impairment	Book value
Investments in subsidiaries	7,621,404,571.91	294,977,001.95	7,326,427,569.96	7,538,322,157.94	200,000,000.00	7,338,322,157.94
Investments in associates and joint ventures	252,567,179.15		252,567,179.15	253,005,878.65		253,005,878.65
Total	7,873,971,751.06	294,977,001.95	7,578,994,749.11	7,791,328,036.59	200,000,000.00	7,591,328,036.59

1. Investments in subsidiaries

Investee	Opening balance	Additions for the period	Reductions for the period	Closing balance	Provision for impairment in the current period	Provision for impairment Closing balance
Guiyang Aluminum and Magnesium Design Institute Co., Ltd.	598,559,465.50	53,207,500.00		651,766,965.50		
Shenyang Aluminum & Magnesium Design Institute Co., Ltd.	332,257,365.81			332,257,365.81		
Changsha Engineering & Research Institute Limited for Nonferrous Metallurgy	415,612,236.37			415,612,236.37		
China Nonferrous Metals Industry's Twelfth Metallurgical Construction Co., Ltd.	1,255,780,969.93			1,255,780,969.93		
China Aluminum International Engineering & Equipment Co., Ltd.	200,000,000.00			200,000,000.00		200,000,000.00
Chalieco (Tianjin) Construction Co., Ltd.	226,887,383.73			226,887,383.73		
Sixth Metallurgical Construction Company of China Nonferrous Metals Industry	1,203,000,000.00			1,203,000,000.00		

SECTION 11 FINANCIAL REPORT

15 NOTES TO FINANCIAL STATEMENTS OF THE PARENT (CONTINUED)

15.3 Long-term equity investment (Continued)

1. Investments in subsidiaries (Continued)

Investee	Opening balance	Additions for the period	Reductions for the period	Closing balance	Provision for impairment in the current period	Provision for impairment Closing balance
China Nonferrous Metals Processing Technology Co., Ltd.	170,479,260.67	550,000,000.00		720,479,260.67		
Duyun Development Zone Tongda Construction Co., Ltd.	5,000,000.00			5,000,000.00		
China Aluminum International Technology Development Co., Ltd.	60,000,000.00			60,000,000.00		
Wenzhou Tongrun Construction Co., Ltd.	18,000,000.00			18,000,000.00		
China Aluminum International Yunnan Aluminum Application Engineering Co., Ltd.	78,000,000.00			78,000,000.00		
Wenzhou Tonghui Construction Co., Ltd.	27,000,000.00			27,000,000.00		
China Aluminum International Investment Management (Shanghai) Co., Ltd.	25,000,000.00	480,738,713.97		505,738,713.97		
China Nonferrous Metals Changsha Investigation and Design Research Institute Co., Ltd.	69,273,189.34	80,000,000.00		149,273,189.34		
Changsha Tongxiang Construction Co., Ltd.	10,000,000.00			10,000,000.00		
Hunan Tongdu Investment and Development Co., Ltd.	6,000,000.00		6,000,000.00			
Chalieco Hong Kong Corporation Limited	65,572,000.00			65,572,000.00		

SECTION 11 FINANCIAL REPORT

15 NOTES TO FINANCIAL STATEMENTS OF THE PARENT (CONTINUED)

15.3 Long-term equity investment (Continued)

1. Investments in subsidiaries (Continued)

Investee	Opening balance	Additions for the period	Reductions for the period	Closing balance	Provision for impairment in the current period	Provision for impairment Closing balance
China Aluminum International Engineering (India) Private Limited	5,941,804.59			5,941,804.59		
Guangxi Tongrui Investment Construction Co., Ltd.	250,000,000.00			250,000,000.00		
Ninth Metallurgical Construction Co., Ltd.	623,170,000.00			623,170,000.00		
China Aluminum International Aluminum Application Engineering Co., Ltd.	144,500,000.00			144,500,000.00		
Qingdao Xinfu Gongchuang Asset Management Company Limited	9,000,000.00			9,000,000.00		
Chalco Shandong Engineering Technology Co., Ltd.	187,946,928.49			187,946,928.49	94,977,001.95	94,977,001.95
Kunming Survey and Design institute Co., Ltd. of China Nonferrous Metals industry	263,457,753.51			263,457,753.51		
Chinalco Southwest Construction Investment Co., Ltd.	213,020,000.00			213,020,000.00		
Yunnan Miyu Expressway Investment and Development Co., Ltd.	1,074,863,800.00		1,074,863,800.00			
Total	7,538,322,157.94	1,163,946,213.97	1,080,863,800.00	7,621,404,571.91	94,977,001.95	294,977,001.95

SECTION 11 FINANCIAL REPORT

15 NOTES TO FINANCIAL STATEMENTS OF THE PARENT (CONTINUED)

15.3 Long-term equity investment (Continued)

2. Investments in associates and joint ventures

Investee	Opening balance	Increase in investment	Decrease in investment	Investment gain or loss recognized under equity method	Changes in the current period				Closing balance	Provision for impairment Closing balance
					Adjustments to other comprehensive income	Other equity changes	Cash dividends or profit declared	Provision for impairment		
I. Joint ventures										
Shanghai Fengtong Equity Investment Fund Partnership (Limited Partner)	8,889,700.85			-27,415.80						8,862,285.05
Subtotal	8,889,700.85			-27,415.80						8,862,285.05
II. Associates										
Chalco-Steering Intelligent Technology Co., Ltd.	3,655,201.34			-2,136,556.95						1,518,644.39
Chalco Tendering Company Limited	22,258,521.45			9,004,505.90		-8,125,422.21				23,137,605.14
Yunnan Ningyong Highway Co. Ltd.	15,000,000.00			-2,518,671.89						12,481,328.11
Yunnan Linyun Highway Co. Ltd.	15,000,000.00			2,306,488.28						17,306,488.28
Yunnan Lin Shuang Expressway Co., Ltd	15,000,000.00			-277,540.05						14,722,459.95
Zhuzhou Tiaogao Crane Co., Ltd.	173,202,455.01			1,335,913.22						174,538,368.23
Subtotal	244,116,177.80			7,714,138.51		-8,125,422.21				243,704,894.10
Total	253,005,878.65			7,686,722.71		-8,125,422.21				252,567,179.15

SECTION 11 FINANCIAL REPORT

15 NOTES TO FINANCIAL STATEMENTS OF THE PARENT (CONTINUED)

15.4 Operating income and operating cost

1. Operating income and operating cost by category

Item	Amount incurred for the current period		Amount incurred for the previous period	
	Revenue	Cost	Revenue	Cost
I. Subtotal of principal business	767,563,842.89	709,661,457.26	578,874,389.87	645,437,238.64
Engineering contracting	573,781,027.45	550,169,439.50	488,106,673.38	512,975,782.85
Engineering design and consultancy	193,782,815.44	159,492,017.76	89,211,099.18	130,936,330.41
Trading and sales			1,403,814.94	1,381,172.58
Equipment manufacturing			152,802.37	143,952.80
Less: inter-segment elimination				
II. Subtotal of other business	111,675,759.31		514,977,427.27	13,380.53
Lease	72,833.68		1,301,374.33	
Others	111,602,925.63		513,676,052.94	13,380.53
Less: inter-segment elimination				
Total	879,239,602.20	709,661,457.26	1,093,851,817.14	645,450,619.17

2. Operating revenue for the current period by time of revenue recognition

Revenue recognition time	Engineering contracting	Engineering survey and design	Equipment manufacturing	Engineering consultation
At a point in time	10,819,664.82			18,527,388.11
Over a period of time	674,564,288.26	175,255,427.33		
Total	685,383,953.08	175,255,427.33		18,527,388.11

SECTION 11 FINANCIAL REPORT

15 NOTES TO FINANCIAL STATEMENTS OF THE PARENT (CONTINUED)

15.5 Gain on investment

Source of gain on investment	Amount incurred for the current period	Amount incurred for the previous period
Gain on long-term equity investment accounted for under the cost method	324,145,695.46	322,715,300.00
Gain on long-term equity investment accounted for under the equity method	7,686,722.71	7,236,001.68
Gain on disposal of financial assets at FVTPL		
Investment income from available-for-sale financial assets during holding period		992,911.31
Investment income from disposal of bond investment	37,324.04	
Gain on investment in discretionary wealth management products		
Gain or loss on derecognition of financial assets at amortized cost	16,531,622.47	-53,219,455.06
Gains on debt restructuring		
Gain on investment in wealth management products		4,568,750.00
Investment gains and losses of financial liabilities designated at fair value through profit or loss		
Total	348,401,364.68	282,293,507.93

SECTION 11 FINANCIAL REPORT

16 SUPPLEMENTARY INFORMATION

16.1 Breakdown of non-recurring profit and loss for the period

Item	Amount	Remarks
1. Gain or loss on disposal of non-current assets, including written-off asset impairment provisions	133,765,003.69	
2. Tax return, reduction or exemption arising from ultra vires approval, without official approval document, or on an occasional basis		
3. Government subsidies recorded in current P&L (except government subsidies closely related to business operations granted continuously in a fixed amount or quota according to the unified national standards)	23,616,759.05	
4. Financing fee from non-financial enterprises recorded in profit or loss	30,926,471.21	
5. Income generated by the fair value of the identifiable net assets of the investee when the investment cost of acquiring subsidiaries, associates and joint ventures is less than the investment cost		
6. Gain or loss on non-monetary asset exchange		
7. Gain or loss on assets under discretionary investment or management		
8. Asset impairment provisions arising from force majeure factors such as natural disasters		
9. Gains or losses on debt restructuring	3,088,355.15	
10. Restructuring costs, such as employee settlement cost and integration cost		
11. Gain or loss in excess of fair value arising from obviously unfair transactions		
12. Net profit or loss of subsidiaries arising from business combination under common control for the period from the beginning of the period to the combination date	115,122,906.61	

SECTION 11 FINANCIAL REPORT

16 SUPPLEMENTARY INFORMATION (CONTINUED)

16.1 Breakdown of non-recurring profit and loss for the period (Continued)

Item	Amount	Remarks
13. Gain or loss on contingencies not related to usual operations of the Company		
14. Gain or loss on changes in fair value arising from holding held-for-trading financial assets, other non-current financial assets, derivative financial assets and trading financial liabilities, and gain on investment from disposal of held-for-trading financial assets, other non-current financial assets, other debt investments, trading financial liabilities and derivative financial liabilities, except for the effective portion of hedging related to usual operations of the Company		
15. Reversal of provision for bad debts for receivables tested for impairment on an individual basis	357,664,933.43	
16. Gain or loss on entrusted loans		
17. Gain or loss on changes in the fair value of investment property subsequently measured at fair value		
18. Impact of non-off adjustments on current P&L as required by taxation and accounting laws and regulations		
19. Trustee fee income from entrusted operations		
20. Other non-operating income and expenses other than above items	-12,459,841.29	
21. Gain or loss on disposal of associates	-551,310.42	
22. Other items falling within the definition of nonrecurring gain or loss		
23. Impact of income tax	-85,531,114.95	
24. Impact of minority interests	-27,544,161.17	
Total	538,098,001.31	

SECTION 11 FINANCIAL REPORT

16 SUPPLEMENTARY INFORMATION (CONTINUED)

16.2 Net asset yield and earnings per share

Profit for the Reporting Period	Weighted average net assets yield (%)		Earnings per share			
	In the current period	In the previous period	Basic		Diluted	
			In the current period	In the previous period	In the current period	In the previous period
Net profit attributable to ordinary shareholders	-0.21	-21.18	-0.0036	-0.4065	-	-
Net profit attributable to ordinary shareholders net of non-recurring gain or loss	-10.72	-22.71	-0.1855	-0.4359	-	-

Notes: There are no dilutive potential ordinary shares.

Breakdown of earnings per share

Item	2022	2021
Net profit attributable to the parent company for the period	112,506,304.80	-1,070,420,931.60
Less: interest on other equity instruments declared	123,188,828.73	132,576,190.33
Subtotal	-10,682,523.93	-1,202,997,121.93
Weighted average number of ordinary shares in issue	2,959,066,667.00	2,959,066,667.00
Basic earnings per share	-0.0036	-0.4065

China Aluminum International Engineering Corporation Limited
7 March 2023

The Notes to Financial Statements from page 18 to page 143 are signed by the following persons in charge:

Legal representative:
LI Yihua

Accounting principal:
ZHANG Jian

Accounting function's principal:
ZHANG Xiuyin

Date: 7 March 2023

Date: 7 March 2023

Date: 7 March 2023



SECTION 12 FIVE-YEAR PERFORMANCE SUMMARY

Item	2022	2021	2020	2019	2018
Total assets	4,739,128.86	6,002,275.67	5,593,193.83	5,793,433.56	5,116,234.87
Total equity	1,045,505.73	1,636,472.27	1,564,907.86	1,555,096.86	1,330,784.71
Income	2,369,732.89	2,389,872.34	2,471,782.33	3,334,999.79	3,572,061.01
Profit before tax	28,497.46	-93,641.99	-185,804.56	40,159.27	64,260.76
Earnings per share (RMB)	0.00	-0.41	-0.72	0.00	0.07
Roe (%)	1.53	-6.51	-12.14	1.90	3.85

Chairman: LI Yihua

Date of submission approved by the Board: 7 March 2023

INFORMATION ON AMENDMENT

Applicable Not applicable



中鋁國際工程股份有限公司
China Aluminum International Engineering Corporation Limited