

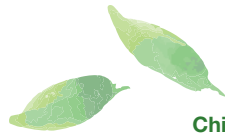


China Hongqiao Group Limited
中國宏橋集團有限公司

(Incorporated under the laws of the Cayman Islands with limited liability)
Stock Code : 1378

2022

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT



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ABOUT THIS REPORT

This report is the Environmental, Social and Governance Report (“**ESG Report**” or the “**Report**”) of China Hongqiao Group Limited (the “**Company**”) and its subsidiaries (collectively referred to as “**China Hongqiao**”, the “**Group**” or “**We**”), which provides detailed information on the various works of China Hongqiao in full implementation of the concept of sustainable development and fulfillment of corporate social responsibility in 2022. For details of corporate governance, please refer to the Corporate Governance Report set out in the 2022 Annual Report of the Group.

REPORTING SCOPE

The Report focuses on the environmental and social performance of the aluminum product manufacturing and sales business of China Hongqiao during the period from 1 January 2022 to 31 December 2022 (the “**Year**” or “**during the Year**”). Such business is the core business and the main source of revenue of the Group. As part of the green primary aluminum operation of China Hongqiao in Yunnan Province has been put into operation, the Group will consider including it into the reporting scope gradually according to the progress of its commissioning. The key performance indicators (“**KPIs**”) disclosed in this Report is based on the manufacturing bases of the Group in Shandong Province, the People’s Republic of China (the “**PRC**”) (data set out in Appendix I).

REPORTING FRAMEWORK

The Report has been prepared in accordance with the Environmental, Social and Governance Reporting Guide under Appendix 27 to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the “**Stock Exchange**”) and in compliance with the “mandatory disclosure” and the “comply or explain” provisions thereof. Unless otherwise specified, currency units in this Report are denominated in Renminbi.

REPORTING PRINCIPLES

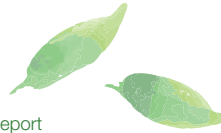
The content of the ESG Report is determined based on the stakeholder engagement and materiality assessment process, which includes identifying environmental, social and governance (“**ESG**”) related issues, collecting and reviewing the management and stakeholders’ opinions and suggestions, assessing the relevance and materiality of the issues and preparing and validating the information reported.

Quantitative environmental and social KPIs are disclosed in the ESG Report so that stakeholders are able to have a comprehensive understanding of the Group’s ESG performance. Information of the calculation standards, methodologies, references and source of data related to these KPIs are set out in relevant sections. In addition, in order to facilitate comparison of the ESG reports of different years, the Group has adopted consistent reporting and calculation methodologies as far as reasonably practicable. For any changes in methodologies, the Group has also presented and explained in detail in corresponding sections.

INFORMATION AND FEEDBACK

For detailed information about the work of the Group in environmental protection, social responsibility and corporate governance, please refer to our official website (www.hongqiaochina.com).

The Group values your opinions on the Report. If you have any comments or suggestions, please feel free to email us via zghqesg@hongqiaochina.com.

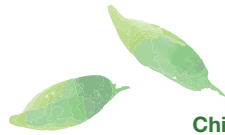


CHAIRMAN'S STATEMENT

At a time when the international economic and political landscape is undergoing profound changes with escalating energy and ecological crises, it is an important proposition for every corporate citizen to think about and explore how to make full use of its energy and shoulder its mission to promote the progress of mankind and create a win-win situation on the road to sustainable development. As one of the world's largest aluminum producers, China Hongqiao has always upheld its core value of "serving the country and benefiting the people", adhering to the concept of sustainable development, paying attention to environmental protection, people's livelihood and social responsibility. At the same time, the Group's strategic thinking is based on the overall economic and social development of China, taking into account the strategic requirements of carbon neutrality and carbon peaking, the "Belt and Road" initiative for cooperation and the grand programme of rural revitalization. With its base deep-rooted in China, the Group's vision is to maintain sustainable and healthy development with a global horizon. We hope that through this ESG Report, the Group can demonstrate to the public that, in the complex and ever-changing context of the times, China Hongqiao is striving to grasp opportunities, embrace innovation with an open mind for fulfilling its corporate social responsibility, dedicated to building a sustainable development methodology, forming its own strategic development system, and being guided by a clear framework to take positive action with firm determination.

In 2022, the Group continued to focus on the "Dual-Carbon" target and China's Vision 2035, and further implemented its green development strategy and deployment at all levels and segments of the Group's business, taking into account its industry, scale and unique characteristics, and strived to leap forward to higher quality in the new stage of renewable energy industrial development and contributed to the establishment of a clean, low-carbon, safe and efficient energy system for the whole society.

During the Year, the Group continued to optimize the transformation of its energy structure and accelerate the conversion of old and new energy sources. In particular, the Wenshan Yunnan Green Aluminum Innovation Park project was selected as a case study for the 2022 Corporate Climate Action during the 27th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP27). In the innovation park, not only traditional energy sources were replaced with green hydropower, making full use of hydropower resources to promote the deep integration of hydropower and the aluminum industry, a 100% local conversion of aluminum water was also achieved and the rate of local deep processing of aluminum alloys had reached more than 80%. At present, the Group's share of clean energy is increasing year-on-year, and the Group is the first in the industry to achieve ultra-low emissions of thermoelectricity, alumina and electrolysis of aluminum, it has been appraised as the only "leader" in energy efficiency in the electrolytic aluminum industry for three times, having two national-level green factories and two provincial-level green factories. The Group continues to demonstrate its leadership in the industry's green and low-carbon energy transformation. With the relocation of production capacity and the gradual implementation of various projects in Yunnan, a sustainable energy ecology that combines clean energy sources such as hydropower and photovoltaic power generation is being reshaped.

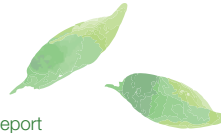


In addition, the Group made efforts in accelerating the transformation and upgrading of the industry, continuing to insist on cluster-driven development, playing a leading role in the industry, building climate leadership and creating a green supply chain. Through forming effective connections with multiple parties for conducting think tanks, standards setting and at the technology level, we are leading the industry chain towards a low-carbon transformation. At present, the Group's lightweight production base is developing steadily, not only the "Aluminum-based Transportation Lightweighting" technology demonstration project was launched, which is expected to fill the many gaps in new energy vehicles in China, the Group has also taken the base as the connection point to join hands with research institutes to develop intelligent manufacturing in the lightweight supporting industry.

At the same time, the Group has been actively building green eco-factories, driving circular economy and promoting green and quality development. During the Year, the first production line of the Sino-German Hongqiao Scholz Circular Economy Industrial Park has commenced production, the one-stop service for scrap vehicles was also officially launched. The project aims to achieve an annual output of 500,000 tonnes of recycled aluminum and the target to dismantle 100,000 scrap motor vehicles by 2026, reducing carbon emissions by an average of 1.9 million tonnes per year. This is not only an important strategic measure for China Hongqiao's green, low-carbon and circular development, and a key project to build a base for auto dismantling and recycled aluminum recycling and closed loop ecological chain, but also a solid step for the Group to actively practise low-carbon transformation and move further towards green and coordinated development.

In the course of implementing its transformation strategy, the Group has devoted a lot of efforts to scientific and technological innovation and digital empowerment. It has not only actively cooperated with the Chinese Academy of Sciences, University of Chinese Academy of Sciences ("UCAS"), National University of Science and Technology, as well as domestic and overseas higher education institutions such as RWTH Aachen University and Fraunhofer Institute in Germany, but also placed emphasis on the incubation of technology companies and research projects to promote the transformation of technological achievements and their industrialization. In particular, the Group joined hands with its partners to launch HQALight, a green and low-carbon aluminium brand, and HQALoop, a recycled aluminium brand, in the aluminum industry exhibition in Germany (ALUMINUM), which fully demonstrates the Group's active exploration and proactive innovation with the help of technology and innovation on the way to achieve its dual-carbon goal.

With an open and integrated mindset, the Group actively integrated into the international governance system for the promotion of international cooperation in technology and production capacity. During the Year, several subsidiaries of the Group, namely Zouping Hongfa Aluminum Technology Co., Ltd. (鄒平宏發鋁業科技有限公司), Binzhou Hongzhan Aluminum Technology Co., Ltd. (濱州宏展鋁業科技有限公司), Shandong Hongchuang Aluminum Industry Holding Company Limited (山東宏創鋁業控股股份有限公司) and Yunnan Hongtai New Material Co., Ltd. (雲南宏泰新型材料有限公司) ("**Yunnan Hongtai**"), were successfully certified under the Aluminum Management Initiative (ASI) Performance Standard V2 (2017). ASI is a global, multi-stakeholder, non-profit standards development and certification organization which is highly substantial, progressive and influential. Its objective is to define globally applicable sustainability performance and material control chain standards for the aluminum value chain. In addition, the Group is also actively participating in the "Belt and Road" initiative. The



Phase II 1 million tonnes alumina project in the Republic of Indonesia (“**Indonesia**”) was fully commissioned during the Year. China Hongqiao has opened up a “Maritime Silk Road for the Aluminum Industry” from Guinea, Africa to China, facilitating the orderly flow of economic factors, resources and production capacity.

The Group attaches great importance to its internal governance strategy and is positioned at the forefront of the international arena with a visionary and strategic development plan that is global, prescient, continuous and innovative. Our goal is to seek sustainable development and perpetual growth of the enterprise and the society in a healthy and complementary way. Not only do we continue to improve our governance system and precisely deepen the targets, from supply chain management, operations and procurement, to corporate governance and business ethics, but also regard our employees as our most valuable asset and the core of our corporate value. Under our “family” culture, we are committed to empowering our partners by creating a safe, equitable, reliable and trusting environment and partnership with mutual trust. On such foundation, we continue to improve the incomes of our employees, design incentive programmes to share the fruits of development, and enrich training programmes for professional skills development.

The Group also contributed to achieving common prosperity, which is the call of the times, through commencing the construction of and supporting diversified projects. In southwest China, the Group has made use of the abundant clean hydropower resources in Wenshan Prefecture, Yunnan Province, to create a green aluminum innovation park and help reduce carbon emissions through forest carbon sinks, thereby increasing the income of the forestry industry and alleviating poverty. When a geological disaster struck certain areas in Honghe Prefecture, Yunnan Province, we immediately donated funds to the affected areas for post-disaster repairs. In addition, the Group relied on the platform of the “Shiping Charity Foundation” to contribute to education, technology and charity and other public welfare projects for the benefit of the community. During the Year, the Group introduced quality education resources to Binzhou and actively invested in two K12 international schools, contributing to the overall development of local education. In addition to continuing to carry out the “Weiqiao Rainbow Homes” charity project, we have also further invested in social organizations such as “One Metre Sunshine” and Xingtian Education Foundation in Binzhou (濱州杏壇教育基金會) to spread love and donated nearly RMB18 million to build a new primary school campus in Yunnan and upgrading of supporting facilities for rural boarding schools for the physical and mental health of children.

It is true that contributing to the sustainable development of our business, community, industry and the world requires dedication and perseverance. This has been the Group’s attitude and values since its inception. The implementation of this philosophy requires visionary wisdom, methods with scientific rigour and fortitude.

Looking ahead, the Group will spare no effort in promoting its core strategy of green and dual-carbon, and will actively engage the entire industry chain and other parties with its increasingly well-established theoretical framework and strong and efficient dynamics. We are committed to becoming an industry leader in environmental, social and governance issues and continuing to create value for the society by actively engaging the entire industry chain and our partners to implement the action agenda we have set out, harmonizing resources, making the environment friendly and giving back to the community.

Zhang Bo
Chairman of the Board

21 April 2023



ABOUT CHINA HONGQIAO

CORPORATE PROFILE

China Hongqiao Group Limited was incorporated in the Cayman Islands, with shares of which listed on the Main Board of the Stock Exchange in 2011, principally engaged in the manufacturing and sales of molten aluminum alloy, aluminum alloy ingots, aluminum alloy processing products and alumina products as a global leading aluminum product manufacturer. After years of hard work, the Group has basically formed the operation pattern of the whole upstream and downstream industrial chain of bauxite mining, alumina, aluminum alloy products, deep processing and sales of aluminum products, and achieved remarkable economies of scale.

During the Year, China Hongqiao has 11 production bases in Zouping, Weiqiao, Bincheng district, Huimin, Yangxin, Beihai, Zhanhua, Boxing, Yunnan Province, Indonesia and Guinea, with an annual operation capacity of 6.459 million tonnes of aluminum products. In 2022, the Group's output of aluminum alloy products was approximately 6.041 million tonnes, and the output of aluminum alloy processing products was approximately 658,000 tonnes.

Downstream customers of China Hongqiao's aluminum alloy include CITIC Dicastal, the world's largest aluminum wheel manufacturer; Bohai Piston, the largest piston manufacturer in Asia; Shandong Innovation Group, the largest aluminum alloy manufacturer in the PRC; BAIC Group and other renowned domestic and overseas enterprises. Intensive processed aluminum products are widely recognised by domestic and overseas can manufacturers, which include more than 100 customers such as Baosteel Packaging, CPMC, ORG Packaging, Gaosen Group, United Can and Ball Corporation. In recent years, the intensive processing sector has undergone rapid development. After years of market development, our can material products have taken a relatively significant share in the domestic and overseas markets. With stable and reliable quality, the market has promising prospects.



MANAGEMENT PHILOSOPHY

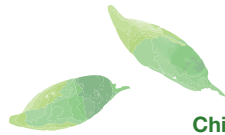
China Hongqiao upholds its core value of “serving the country and benefiting the people”, which is taken as its driving force and mission to facilitate economic development, provide job opportunities, increase income for farmers and build a harmonious society, in a bid to contribute to the local economic and social development. Meanwhile, China Hongqiao responds positively to the PRC’s strategic planning of the “Belt and Road Initiative” by promoting international energy production cooperation in the Well Harvest Winning Alumina Project, which has commenced production in Indonesia, and the joint venture bauxite project in Guinea. This not only demonstrates the influence of the PRC’s enterprises in the global market, but also boosts the local economic development and the construction of infrastructure, which are highly praised by the local government and residents.

With an aim to establish a “resource-saving and environmentally-friendly” enterprise, China Hongqiao has made every effort to achieve sustainable development by setting up an environmentally-friendly, green and efficient production model. In recent years, China Hongqiao has achieved remarkable results in environmental protection by promoting the transformation of environmental protection facilities, eliminating obsolete production capacity, developing and introducing advanced production equipment, and has commenced standardized, scientific, informatized and professional management in its operation.

ESG RESPONSIBILITY MANAGEMENT

THE BOARD’S STATEMENT

The Group believes that sound ESG governance principles will increase its investment value and bring longterm returns to its stakeholders. In order to establish an appropriate and effective ESG management and control system, the Board has formulated specific duties and responsibilities to directly supervise the Group’s ESG related affairs and work. The Board is responsible for formulating and regularly overseeing the progress and quality of the ESG work within the Group to ensure that the various measures are implemented and completed. At the same time, the Board is also responsible for conducting an annual review of the ESG related information, and evaluating the contents and quality of the Report. The Board endeavours to build a communication platform between the Group and major stakeholders to ensure the flow of information.



In addition, the Board has engaged an independent consultant to assist in the management of the Group's ESG affairs, to perform data collection and analysis and to provide recommendations on the improvement of ESG performance. The consultant also assists the Board in the collection and analysis of the Group's stakeholders' views on ESG matters and conducts a materiality assessment to identify the Group's material ESG issues. The materiality assessment is based on questionnaires for collection of the views of stakeholders, including the directors, and consolidation of the material ESG issues of the industry. Stakeholders' concern towards various ESG issues are scored and ranked to identify the material issues. The Board ultimately acknowledges and endorses the results of the assessment.

In order to effectively lead the Group's ESG process, the Board monitors the work of each department on an on-going basis to ensure that they work closely together to achieve the sustainable development objectives of compliance operation and fulfilling social responsibility. The Board also reviews the implementation of the relevant work annually in the light of the Group's objectives and will propose and discuss the Group's ESG performance and progress at meetings when necessary.

STAKEHOLDER ENGAGEMENT

The Group deeply understands the close relationship between stakeholders and the business development of the Group. The preparation of this Report, with the participation of different stakeholders, has prompted us to be more informed about the Group's current management on the environmental and social aspects. The information we collected is both a summary of relevant environmental and social work performed by the Group during the Year and the basis of formulating our strategies for short-term and long-term sustainable development.

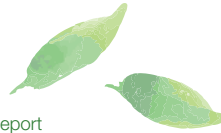


In order to understand the stakeholders' opinions and demands, the Group communicated with them through various channels so as to review and enhance our performance in environmental, social and corporate governance and meet their reasonable demands.

Stakeholders	Expectations and Requirements	Communication and Response Methods
Government and regulatory authorities	• Compliance with the national policies and laws and regulations	• Regular submission of information
	• Promotion of the local economic development	• Regular communication with regulatory authorities
	• Creation of job opportunities	• Special report
	• Tax payment on time and in full	• Inspection and supervision
	• Production safety	
Shareholders	• Investment returns	• General meeting
	• Operation in compliance with laws and regulations	• Announcement by the Company
	• Enhancement of corporate value	• E-mail, telephone and website of the Company
	• Transparency of information and effectiveness of communication	• Special report
		• On-site inspection
Partners	• Integrity management	• Roadshows, live meetings/ teleconferences/video conferences, etc.
	• Fair competition	• Review and assessment meeting
	• Fulfillment of contracts in compliance with laws	• Business communication
	• Mutual benefit and win-win cooperation	• Communication and seminars
		• Discussion of cooperation
Customers	• Quality products and services	• Regular summit conferences
	• Health and safety	• Customer service center and hotline
	• Fulfillment of contracts in compliance with laws	• Customer opinion survey
	• Integrity management	• Customer communication meeting
		• Social media platforms
		• Return visits
		• Visits



Stakeholders	Expectations and Requirements	Communication and Response Methods
Environment	Fulfillment of emission standards	Communication with local environmental protection departments
	Energy conservation and emission reduction	Communication with local residents
	Efficient use of water resources	Report submission
	Ecological protection	Investigation and inspection
		Real-time online monitoring
Industry	Setting up industry standards	Communication with local labor departments
	Promotion of industry development	Participation in industry forums
		Visits and inspections with industry peers
Employees	Safeguarding rights and interests	Internal publication and intranet of the Company
	Occupational health	Employee representatives meeting
	Remuneration and benefits	Democratic forums
	Career development	Employees mailbox
	Employee caring	Employee communication meeting
		Training and workshop
The community and the public	Improvement of community environment	Communication with the community
	Participation in charitable activities	Website of the Company
	Openness and transparency of information	Announcements issued by the Company
		Interviews with media
		Social media platforms

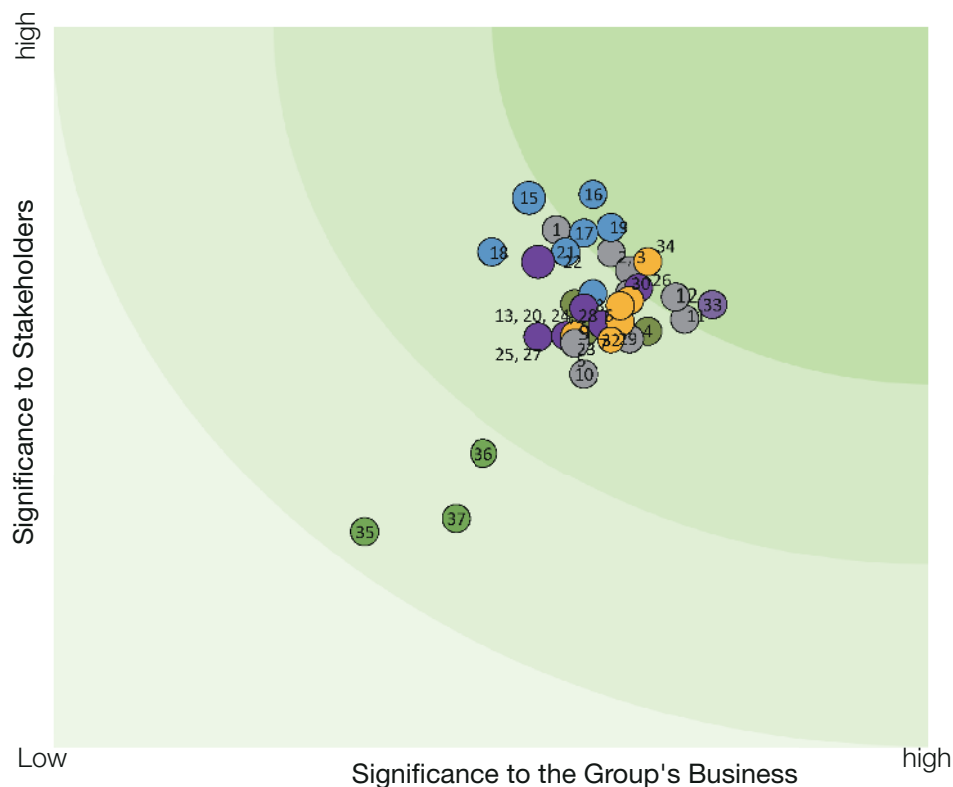


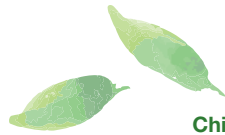
MATERIALITY ASSESSMENT

In preparing the Report, China Hongqiao has entrusted an independent third-party consultant to conduct a materiality assessment in a fair and equal manner. The materiality assessment is implemented in three main phases:

- (i) To identify 37 potentially material issues that may affect the Group's business or stakeholders at environmental, social and governance levels based on relevant national and local standards and policies, industrial features and the Group's own development;
- (ii) To invite internal and external stakeholders (including employees, management, directors, customers, suppliers and the community) to complete online questionnaires so as to collect and examine their awareness of each of the issues; and
- (iii) To analyze over 1,300 validated questionnaires and form a two-dimensional matrix of "Importance to the Group's Business" and "Importance to Stakeholders" to determine the priorities for potential material issues.

Below is the materiality matrix analyzed based on the results of the questionnaires.





Environment and Resources	Employment and Labor Practices	Operating Practices	Community Investment
1. Environmental compliance	15. Employment compliance	22. Operational compliance	35. Public charity
2. Exhaust management	16. Remuneration and benefits	23. Managing environmental risks of supply chain	36. Promotion of social development
3. Wastewater management	17. Working hours and holiday entitlement	24. Managing social risks of supply chain	37. Poverty alleviation
4. Noise management	18. Diversity and equal opportunities	25. Procurement practices	
5. Greenhouse gas emissions	19. Occupational health and safety	26. Quality management	
6. Waste management	20. Employee training and development	27. Customers' health and safety	
7. Energy use	21. Prevention of child labor and forced labor	28. Responsible marketing and promotion	
8. Use of water resources		29. Customer services management	
9. Green energy projects		30. Protection of intellectual property	
10. Use of raw and packaging materials		31. Research and development	
11. Soil pollution management		32. Information safety	
12. Ecological protection		33. Customers' privacy protection	
13. Responding to climate change		34. Anti-corruption	
14. Prevention and handling of environmental incidents			



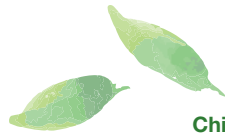
By analyzing the results of questionnaires, the Group identified 10 material issues which are disclosed in detail in the Report.

Aspects	Material Topics	Corresponding Sections
Environment and resources	2. Exhaust management	Prevention and Control of Pollution
	3. Wastewater management	Prevention and Control of Pollution
	11. Soil pollution management	Prevention and Control of Pollution
	12. Ecological protection	Prevention and Control of Pollution
Employment and labor practices	16. Remuneration and benefits	Recruiting Talents; Caring for Employees
	17. Working hours and holiday entitlement	Recruiting Talents; Caring for Employees
	19. Occupational health and safety	Occupational Health and Safety
Operating practices	26. Quality management	Quality Management and Innovative Research and Development
	33. Customers' privacy protection	Privacy Protection
	34. Anti-corruption	Anticorruption Practice

UN Sustainable Development Goals

The Group believes that sustainable development is the development direction of an enterprise. We are committed to achieving environmental, social and economic benefits, as well as corporate responsibility. To achieve this vision, the Group takes into account sustainability elements in its governance approach, business decisions and in all aspects of its operations. In addition, we join hands with our stakeholders, including customers, communities and suppliers, to achieve our respective sustainable development goals.

In response to the UN Sustainable Development Goals initiative, the Group has identified 12 sustainable development goals that are most relevant to the Group and we are committed to contributing and exerting a positive influence on these areas. The table below sets out all the relevant targets and summarizes the positive benefits generated in each indicator during the Year.



UN Sustainable
Development Goals

Summary of specific goals

Positive impacts



1.4 By 2030, ensure that all men and women, particularly the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technologies and financial services, including microcredit.

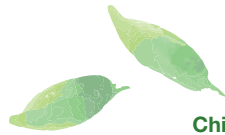
1.A Ensure significant mobilisation of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions.

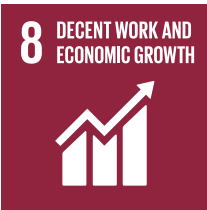
[Adhering to People-Oriented Governance – Caring for Employees] The Group's labor union carries out regular surveys and visits to employees in difficulties, and takes the initiative to understand the living condition of employees in difficulties, their family relationships and financial burdens. Assistance is provided to employees who are suffering from illnesses, or whose families encountering misfortunes or difficulties in life.

[Caring for Social Well-Being – Overseas Contributions] The Group has provided tens of thousands of jobs for and brought advanced agricultural technology and other technology to Guinea and Indonesia, thereby promoting local economic development. The successful operation of the Group's projects has attracted and driven more enterprises and investors into the local area to commence works in fields such as development, infrastructure construction and agriculture, giving impetus to the local economic development. By leveraging China's advanced agricultural facilities, farming techniques and management experience, the Group seeks to develop a scalable agricultural facility and farming model as soon as possible, based on the unique climatic conditions of Guinea, to cultivate a number of reproducible vegetable varieties and to bring in a new breed of local agricultural workers who can manage the fields independently, thereby boosting local economic development.



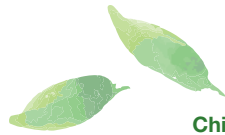
UN Sustainable Development Goals	Summary of specific goals	Positive impacts
	3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being	[Adhering to People-Oriented Governance –Occupational Health] The Group has developed a comprehensive and detailed safety management system and accident emergency plan, formulated monthly health and safety inspection work plans and conducted safety education activities to safeguard the occupational safety and health of workshop staff. [Adhering to People-Oriented Governance –Occupational Health] The Group ensures the health and safety of its employees by conducting safety and prevention training for occupational disease, technical renovation and safe production management.
	4.7 By 2030, ensure that all learners acquire the knowledge and skills necessary to promote sustainable development, including education for sustainable development, sustainable lifestyles, human rights, gender equality, peace and non-violence advocacy, global citizenship, appreciation of cultural diversity, and the contribution of culture to sustainable development. 4.A Build and upgrade education facilities that are suitable for children, the physically and/or mentally challenged, and for both genders and provide safe, non-violent, inclusive and effective learning environment for all.	[Caring for Social Well-Being – Education and Charity, Overseas Contributions] The Group actively participated in the Weiqiao Rainbow Home (魏橋彩虹之家) project sponsored by the Beijing Rainbow Charity Foundation (北京彩虹公益基金會). [Adhering to People-Oriented Governance – Caring for Employees] The Group has continued to participate in the “Sany Student Aid” charity programme, visited students in need in the towns, street offices and families of our employees with financial needs in Zouping City and offered assistance to them, helping them complete their studies.



UN Sustainable Development Goals	Summary of specific goals	Positive impacts
 8 DECENT WORK AND ECONOMIC GROWTH	8.2 Increase the production capacity of the economy through diversification, technological upgrading and innovation, including a focus on high value-added and labor-intensive industries. 8.6 Significantly reduce the number of young people who are unemployed, out of school or untrained by 2020. 8.8 Protect the rights of workers and promote a safe working environment, including migrant workers, especially women, and those who perform hazardous work.	[Caring for Social Well-Being – Overseas Contributions] SMB Winning Consortium has more than 22,000 project staff directly or indirectly involved in Guinea, and the number of the subcontractors and merchants who specifically served SMB Winning Consortium reached over 5,000, and more than 90,000 job opportunities (including indirect employment) have been cumulatively created in Guinea, hence driving the economic growth of Guinea. [Adhering to People-Oriented Governance – Employment Policy] Talent Cultivation, Caring for Employees – The Group strictly prohibits the employment of child labor and forced labor, provides various training to employees on a regular basis, protects the rights and interests of employees, and fosters a strong atmosphere of respect for labor, practical work and creativity.
 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	9.4 Upgrade infrastructure and transform industry and commerce by 2030, so that they can achieve sustainable development, to improve energy efficiency and to move towards clean and environmentally-friendly technologies and industrial processes, all countries should act in accordance with their respective capabilities.	[Pursuing Excellence in Quality] Quality Management and Innovative Research and Development – By continuously upgrading its production technology and equipment through innovative research and development (“R&D”) and encouraging staff members to participate in minor reforms in an in-depth and persistent manner and activities related to tackling key problems of QC (Quality Control) thoroughly, the Group strives to ensure stability and enhancement of product quality. [Promoting Green Production] Prevention and Control of Pollution, Energy Conservation and Consumption Reduction – The Group regards energy-saving transformation as an important part in its production management system. In addition to requiring all production units to attach great importance to energy conservation, it also urges all employees to actively participate in energy-saving technological transformation so as to enhance the utilization efficiency of energy and resources.



UN Sustainable Development Goals	Summary of specific goals	Positive impacts
	10.3 Ensure equal opportunity and reduce inequalities, including by eliminating discriminatory laws, policies and practical approaches and promoting appropriate legislation, policies and action in this regard.	[Adhering to People-Oriented Governance – Recruiting Talents] The Group firmly opposes gender discrimination. Employees, regardless of gender, are treated equally and the distribution of work is implemented according to actual needs. The Group also protects the lawful rights and interests of female employees according to law and complies with the relevant laws and regulations to provide female employees with benefits during pregnancy, delivery and lactation, including arranging breastfeeding time for employees returning to work after delivery.
	11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and the elderly.	[Caring for Social Well-Being – Overseas Contributions] In order to provide convenience conditions for the development of local villages, SMB Winning Consortium undertook 17.5 km of road levelling tasks in total during the Year.
	12.4. By 2020, in accordance with the agreed international framework, manage chemicals and wastes during their life cycle in an environmentally sound manner to significantly reduce their release into the air, water and soil to minimise their adverse impact on human health and the environment. 12.5. By 2030, significantly reduce waste generation through prevention, reduction, recycling and reuse. 12.7 Promote public procurement procedures that are sustainable in accordance with national policies and priorities.	[Promoting Green Production] The Group attaches great importance to pollution prevention, including the management and supervision of exhaust gas, waste water and soil pollution, and is committed to reducing greenhouse gas emissions in the production process to achieve an environmentally-friendly and sustainable production environment. [Pursuing Excellence in Quality – Raw Material and Supply Chain Management, Quality Management and Innovative Research and Development, Industry Standards, Privacy Protection, Anti-corruption Practice] The Group has implemented an interlocking quality management network with the participation of all, strictly complying with national, industry and international standards to safeguard product quality and actively promoting the standardisation of the aluminum industry in China. In addition, the Group has always adopted a “zero tolerance” attitude towards illegal acts such as bribery, extortion, fraud and money laundering, and ensures that the privacy rights of both the Group and its customers are not infringed.



UN Sustainable Development Goals	Summary of specific goals	Positive impacts
	13.3. Improve education, awareness and capacity of people and organisations on climate change risk reduction, adaptation, impact reduction and early warning. Improve human and institutional capability.	[Promoting Green Production] The Group proactively implemented the “3060” national dual-carbon commitment strategic target by promoting the active participation of staff in energy conservation and emission reduction, carrying out energy conservation and emission reduction related technological transformation, and managing and supervising the entire production process to achieve the purpose of energy-saving and energy efficiency enhancement. [Pursuing Excellence in Quality – Raw Materials and Supply Chain Management] The Group adopts the principle of conducting procurement from nearby suppliers to reduce transportation costs and carbon emissions caused by transportation.
 	14.1. By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution. 15.2. By 2020, further implement sustainable management of all types of forests, ending deforestation, restoring damaged forests and significantly increasing global afforestation and reforestation.	[Promoting Green Production – Prevention and Control of Pollution, Green Office] The Group formulates and monitors the implementation of our internal environmental protection policies and guidelines, establishes environmental risk contingency plans, organizes training and emergency drills on environmental incidents, regularly inspects the Group's production facilities and pollutants discharge facilities and conducts environmental performance appraisal for each production unit to ensure that exhaust gas, wastewater and solid waste are properly treated and disposed of to reduce the harm to underwater and terrestrial organisms.
	17.16. Complement and enhance global cooperation on sustainable development through multilateral cooperation. sustainable development, mobilizing and sharing knowledge, expertise, technology and financial support to help all countries achieve sustainable development goals, particularly in developing countries.	[Caring for Social Well-Being – Overseas Contributions] While participating in the development of Guinea and Indonesia, the Group has also been committed to promoting the economic and social development of Guinea and Indonesia, making an ongoing contribution to local employment, education, transportation, medical welfare, leisure and sustainable development projects of the community, and creating a new mode for multiparty cooperation and mutual benefit in overseas mining development.



OCCUPATIONAL HEALTH AND SAFETY

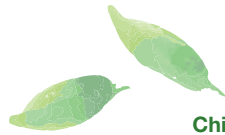


The Group recognises that, it must adequately protect the health and safety of its employees and create a safe and healthy working environment, so that its employees can work at ease and safely. Adhering to the production safety philosophy of “comprehensive management with priority of safety and emphasis on prevention”, the Group continued to strictly enforce its production safety management and employee occupational health management to minimize personal injury and economic loss in the course of production and operation.

PRODUCTION SAFETY MANAGEMENT

In accordance with laws and regulations such as the Work Safety Law of the PRC, the Special Equipment Safety Law of the PRC, the Interim Provision on the Identification and Treatment of Hidden Perils of Work Safe Accidents, the Provisions on Safety Training of Production and Operation Entities and the Regulations on Safety Production in Shandong Province, the Group has developed a comprehensive and detailed safety management system and accident emergency plan.

In order to continuously monitor whether the working environment and conditions of each workshop are in compliance with the Group’s occupational safety and health standards, the Group has formulated a monthly health and safety inspection plan, which carries out various types of special inspections on a monthly basis to prevent any health and safety-related accidents, and to safeguard the occupational safety and health of employees in the workshops. The monthly inspections during the Year focused on the Group’s factory areas, such as the special safety management inspection of non-operating areas such as canteens and dormitories in January; special inspection of significant sources of danger at the factory area in March; special inspections of electrical preventive test and inspections of oil systems, explosive dust and rolling mill fires in all units in May; special inspections of grid-related electrical main equipment and fire and explosion protection for respective units in October, to ensure safety in the factory areas and to provide a safe working environment for employees. In addition, the Group is committed to modifying and upgrading the machinery and equipment in the workshop with a view to strengthening occupational safety and health protection in the working environment.

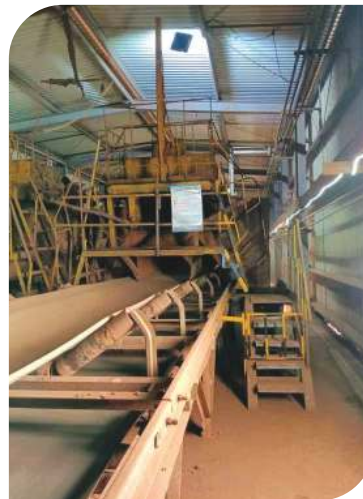


Case studies – Interlocking of the raw material side belts with the raw material trolley

Given that there is no interlock between the raw material side belt trolley and the belt, it is very easy for the belt to get off during operation, which in turn will cause wear and tear to the belts and damage due to heavy loads on trolley decelerators, and become hidden danger to site safety. In order to improve the quality of safety work, to prevent misuse by workers and to stabilize the safe operation of the unloading trolley, the workshop is equipped with an interlock between the No. 2 belt and the unloading trolley, i.e. the trolley cannot travel unless the No. 2 belt is stopped and the trolley can only be emptied when the belt is stopped. Similar technical modifications can effectively reduce the occurrence of accidents and protect the health and safety of employees.



Interlocking Device Controllers



Loading Trolley with Interlock

The Group attaches great importance to providing employees with a safe and healthy working environment while actively providing them with various safety training opportunities to enhance their awareness of protecting themselves and others. The Group sets monthly training topics and targets in the safety training programme, and provides monthly training on safety and health protection to its employees in different areas, such as explanation of safe production responsibility, emergency training on various contingencies, training on special equipment, occupational disease prevention measures and handling training



OCCUPATIONAL HEALTH MANAGEMENT

The Group strictly abides by relevant laws and regulations including the Work Safety Law of the PRC, the Law of the PRC on the Prevention and Control of Occupational Diseases and the Provisions on the Supervision and Administration of Occupational Health at Work Sites, to implement the management work regarding employees' occupational health during the production process, which includes warning and notification of occupational disease hazards, occupational disease prevention education, maintenance of protective equipment and facilities, monitoring and evaluation of hazards, reporting of hazard incidents and emergency rescue, and so on.



Fire drill training



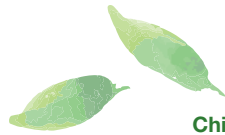
Occupational hygiene and health training



Firefighting safety education and training session



Firefighting education and training session



The Group provides employees with complete and professional personal protective equipment such as safety helmets, safety goggles, earplugs, anti-high temperature protective shoes, insulated shoes and gloves, acid-resistant gloves, dust masks and gas masks and strictly supervises the use of protective supplies and the operation and protective functions of protective devices. In addition, the Group regularly disinfects the production area and production equipment to prevent the spread of any infectious diseases in the production area. In order to identify and control various sources of occupational hazards such as air pollutants, dust, noise and radiation, the Group has entrusted a qualified occupational health and technical service agency to test occupational hazards in each production plant regularly. For new recruits or employees exposed to occupational hazards, the Human Resource Department will arrange occupational health checks before and during employment and create health records to monitor the health conditions of employees regularly. Occupational health checks will also be provided for employees when they leave the Group.

PROMOTING GREEN PRODUCTION



In recent years, China has attached great importance to the concept of ecological civilization, comprehensively strengthened the protection on ecological environment, promoted prevention and control of pollution, and increased its construction efforts on environmental protection year by year to deepen the ecological protection policies. By always working hard to adhere to the path of green development as the abiding theme in the aluminum industry, China Hongqiao actively increased investment in environmental protection to build a green electrolytic aluminum enterprise with low consumption, low emission and high input-output ratio, and strived to become a benchmarking enterprise of green environmental protection in the aluminum industry, while promoting the ecological environmental protection and construction of ecological civilization. During the Year, in strict compliance with environmental laws and regulations of the country and places of operation, China Hongqiao continued to promote green production in the four aspects of prevention and control of pollution, energy conservation and consumption reduction, resource recycling and reusing, and green office. In addition, the environmental management system established and formulated by the Group was certified with ISO14001:2015 by the International Organization for Standardization, demonstrating the Group's commitment to environment protection management which obtained effective results.

PREVENTION AND CONTROL OF POLLUTION

The Environmental Protection Department of the Group is responsible for supervising the environmental protection of the Group comprehensively, including formulating and monitoring the implementation of our internal environmental protection policies and guidelines, establishing environmental risk contingency plans, organizing training and emergency drills on environmental incidents, regularly inspecting the Group's production facilities and pollutants discharge facilities, conducting environmental performance appraisal for each production unit and keeping abreast of the latest development of the environment-related regulations and standards in the PRC. The Group also strictly monitors governance and emissions of "three wastes", and integrates environmental protection equipment into its normal production management system. It implements 24-hour real-time supervision of the pollutant discharge standards and operational parameters of environmental protection facilities to ensure the long-term stable operation and fulfillment of standards. The Group has always reviewed the management system on emissions, improved the processing facilities for emissions, and strived to control the emission of pollution so as to reduce its impact on the surrounding environment.



Exhaust Gas Treatment

The Group's emissions of exhaust gas mainly come from power plant boilers and aluminum production. The Group continued to strictly comply with the relevant laws and regulations such as the Law of the PRC on the Prevention and Control of Atmospheric Pollution. Exhausted gas is emitted in compliance with relevant standards after purification in the factory. Real-time monitoring data is uploaded by our automatic monitoring equipment installed on the exhaust emission outlet to the monitoring platform of the local government's environmental protection department so that the exhaust gas emission level of the Group can be monitored remotely and continuously.

Sources of Exhaust Gas	Major Components	Processing Facilities and Processes
Boilers at power plant	Nitrogen oxides	Denitration system: Low-nitrogen combustion + SCR (Selective Catalytic Reduction) process
	Particulates	Dust removal system: High-efficiency electrostatic precipitator + wet dust collector or tubular dust collector
	Sulfur dioxide	Desulfurization system: Limestone-gypsum wet desulfurization and magnesia wet desulfurization
Alumina production	Sulfur dioxide	Desulfurization system: Tannin extract wet desulfurization
	Nitrogen oxides	Denitration system: Low-nitrogen combustion + SNCR (Selective Non-Catalytic Reduction) + SCR process
	Particulates	Dust removal system: Electric-bag composite dust removal
Electrolytic aluminum production	Sulfur dioxide	Desulfurization system: Limestone-gypsum wet desulfurization
	Fluoride	Dry flue gas purification system: Alumina adsorption + bag dust capture
	Particulates	
Aluminum deep processing production	Emissions from aluminum melting furnace, holding furnace and ingot heating furnace ¹	Emit after disposal by bag filter
	Tiny amount of non-methane hydrocarbon gas produced from hot rolling and annealing process	Collected by gas-collecting hood and emit after disposal by oil fog purifier/spray and fogging + water treatment

¹ The main fuel of such process is natural gas which belongs to clean energy, and does not produce highly concentrated air pollutants.



Wastewater Discharge

The wastewater discharged by the Group was mainly production wastewater and domestic sewage. The Group continues to strictly comply with the relevant laws and regulations such as the Wastewater Pollution Prevention and Control Law of the PRC. The wastewater is processed in the factory for simple pretreatment to meet the requirements of the Water Quality Standards for Discharge to Municipal Sewers (GB/T 31962-2015), Integrated Wastewater Discharge Standard (GB8978-1996) and Aluminum Industry Pollutant Discharge Standard (GB25465-2010) and discharged into the local municipal sewage treatment plant through municipal pipelines. The Environmental Protection Department of the Group collects samples from outfalls and performs quality sampling test every month to ensure that the wastewater meets the discharge standards. In addition, the outfalls are equipped with online monitoring system and connected with the local environmental protection departments, and the relevant data is uploaded on a real-time basis.

The Group is committed to the goal of water conservation and recycling. In order to improve water efficiency and prevent water pollution, the Group has continued to implement various measures as follows:

- Wastewater produced from alumina production is fully recycled and reused, attaining zero discharge of wastewater;
- Cooling water used in the casting process is recycled for use in the electrolytic aluminum production process;
- Water discharged from the cooling water tower of the power plant is recycled and reused in priority;
- Water used for spraying and cleaning of vehicles is recycled and used to a certain extent before being applied for coal yard spraying;
- The fluoride in the fluoride-containing wastewater generated from desulfurization can be reduced by adsorption of desiccant, thus enabling the wastewater to be reused after treatment;
- Building rainwater precipitation and decontamination pools in the aluminum plant to reduce the content of pollutants such as alumina powder and fluoride salts in rainwater, thus to avoid the discharge of polluted rainwater and to allow part of the treated rainwater to be reused for production;
- Switching to a square, non-filling cooling tower to improve the cooling effect and reduce water consumption.

During the Year, in order to improve the emergency capability of employees at the sewage treatment station to respond to all kinds of accidents, we held annual emergency drills according to the Environmental Emergency Response Plan for of Yangxin County Huihong New Material Co., Ltd. (《陽信縣匯宏新材料有限公司企業突發環境事件應急預案備案表》). We simulated the incident where the water quality exceeds the standard at sewage treatment station and hazardous waste storage leakage at the hazardous waste warehouse and held an emergency drill for operation in confined spaces, which strengthened the emergency handling capacity of the environmental protection management personnel and ensured control of environmental protection management. Through this exercise, relevant staff were able to master and familiarize themselves with various emergency handling skills, ensuring that adequate emergency supplies are in place and regular checks are conducted to minimize the impact of accidents on the environment and personnel.

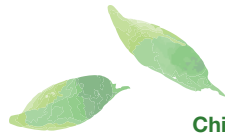


Soil Pollution Management

Red mud is a kind of strong alkaline solid waste generated during the alumina production process of the Group. If the red mud is disposed of improperly, not only the surrounding soil will be heavily polluted, the groundwater and atmosphere will also be affected significantly. In order to prevent the deterioration of the ecological environment caused by red mud and the damage to human health, the Group strictly follows the Measures for the Prevention and Control of Environmental Pollution by Tailings to conduct prevention and supervision of red mud. The red mud produced is discharged into the red mud storage facility which is under strict leakage prevention and safety management after it is dewatered and filtered. We also set up a control zone around the alumina production facility and the red mud storage facility and a number of groundwater observation wells to monitor whether the red mud has polluted the surrounding environment such as heavily polluting the soil and water. As red mud contains a large number of mineral elements that can be recycled, we recycle the highly magnetic materials by centrifugation and magnetic separation, and make the remaining materials into bricks to be used as roadbeds and building materials. In addition, we also regularly hold emergency drills to simulate the surrounding environment to prevent the spread of red mud in severe weather conditions and enhance the management and control capabilities of red mud.

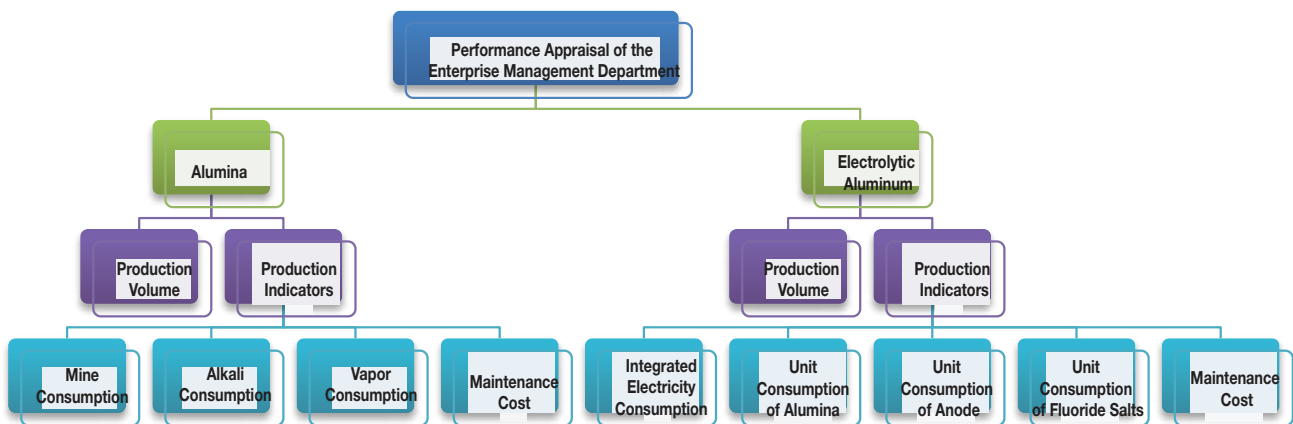
ENERGY CONSERVATION AND CONSUMPTION REDUCTION

The Group's energy use target is to strive to reduce energy consumption. With scientific and effective lean management alongside persevering exploration and innovation, in recent years, the Group has made remarkable achievements in saving energy and reducing consumption and has reduced production costs effectively, setting a new model of energy conservation in the industry. Among which, the primary aluminum production line designed by Shandong Weiqiao Alumina & Power Co., Ltd. (山東魏橋鋁電有限公司) ("**Weiqiao Aluminum & Power**") is equipped with advanced and reliable technologies and has effectively increased output and energy utilization rate and achieved the environmental goals for energy conservation and emission reduction. In addition, the energy-saving standardization management system established by the Group can be integrated into an organic entity through various tasks, including energy-saving assessments, management and control, statistics, monitoring and measurement, so as to achieve the purpose of energy-saving and energy efficiency enhancement. In April 2021, the electrolytic aluminum production and energy saving mode of Weiqiao Aluminum & Power continued to be listed as a standardized demonstration project by The Standardization Administration of the PRC (中國國家標準化管理委員會), making it the only aluminum smelting enterprise selected in the country. In the future, Weiqiao Aluminum & Power will participate in the implementation and revision of energy saving standards, and actively promote advanced energy saving technologies and products. During the Year, after self-evaluation of the reporting unit and third-party evaluation, Shandong Hongqiao New Material Co., Ltd. (山東宏橋新型材料有限公司) was rated as a national "Green Factory" by the local Ministry of Industry and Information Technology after procedures such as evaluation, expert verification and public announcement, which recognised the Group's efforts and achievements in promoting green manufacturing, leading the green transformation of the region's manufacturing sector.



Resource Management

The Group continues to comply with laws and regulations and industry standards regarding energy management, energy measurement and energy consumption quotas, including the Aluminum Industry Standardization Requirements, the Norm of Energy Consumption Units for Products of Aluminum Metallurgical Enterprise (GB 21346-2013) and the Product Energy Consumption Limit for Electrolysis Aluminum Enterprises (DB 37/743-2017). The Enterprise Management Department of the Group is responsible for overseeing the energy conservation and emission reduction work during the production process so as to reduce waste. The Enterprise Management Department organizes training and promotional activities regularly and formulates a monthly quota plan for each production unit and conducts monthly performance appraisals on the fulfillment of indicators of each production unit. In addition, the Group strictly monitors the use of packaging materials for aluminum deep-processing products to eliminate wasteful practices.



Energy-saving Transformation

The Group regards energy-saving transformation as an important part of its production management system. In addition to requiring all production units to attach great importance to energy conservation, it also urges all employees to actively participate in energy-saving technological transformation so as to enhance the utilization efficiency of energy and resources. During the Year, the Group completed over 40 energy conservation and technology transformation projects, including technical transform of decomposing condensate cooling casing system promotion project, comprehensive utilization of concentrate heat, technical transform of decomposing raw material plate for evaporating raw material temperature enhancement, reform of horizontal return pump, etc., so as to continuously improve environmental protection technologies and maintain ultra-low emissions.



Cases studies – Energy-Saving Equipment Upgrading



Hot rolling adding automatic sleeve loading equipment

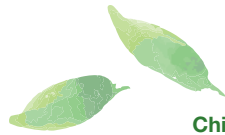
Before the upgrade, to produce rolls, it needs the hot rolling mill to produce to a thickness of 5.0mm, followed by the cold rolling mill to produce to a thickness of 2.5mm and that a steel sleeve is required; after the improvement, the hot rolling mill added a steel sleeve to the coiling mandrel before rolling the material rolls, and the hot rolling mill will be rolled to a thickness of 2.5mm for direct shipment to clients without going through cold rolling. After calculating the cost of electricity and rolling oil for one pass of a single cold rolling machine, by having all Haixin material rolls produced in hot rolling, it saves RMB105,900 per month in cold rolling operation cost, which can recover the RMB3.62 million in equipment investment cost in 34 months and continue to generate economic benefits.

In order to further increase the effect of energy-saving, the Group and its aluminum-processing enterprises endeavour to avoid the processing of secondary re-melting of traditional re-melted aluminum ingots by using molten aluminum alloy, which helps to minimize energy consumed by aluminum ingots during the process of secondary re-melting, such as heavy oil and natural gas, while reducing the emissions of carbon dioxide, dust and flue gas during the process of re-melting. With the increase in number and proportion of molten aluminum alloy used, the Group's effectiveness in energy-saving and emission reduction has become more significant.



#3 Rolling mill inlet pinch roller improvement

The short length and the groove in the middle of the original clamping roller prevented the rolling oil from being completely squeezed out of the frame during the closing process, this resulted in a waste of rolling oil. By redesigning the clamping roller, the roll body was lengthened and made into a flat roll. After 3 months of use, the tail rolling oil at the tail end was completely squeezed out, saving approximately 0.614 tonne of rolling oil per month.



Case Studies – Green Aluminium Innovation Industrial Park

In line with the global trend of energy reform and in conformity with the national policies of energy structure optimisation, key industry distribution adjustment and industrial transfer, the Group cooperates with the People's Government of Yunnan Province to establish a green aluminum innovation industrial park, which allows the Group to fully enjoy and utilise the policy for integrating water, electricity and aluminum promoted by the People's Government of Yunnan Province. By banking on the clean hydropower advantage of Yunnan, the industrial park will replace traditional energy with green hydropower, which will further enhance the energy efficiency of the Group's production, reduce its reliance on traditional energy, reduce the emission of pollutants and greenhouse gases and lower production cost. The equipment, technology, process and automated control of the green aluminum innovation industrial park are up to the international leading standard in the industry. Various operations in the production process have achieved basic automation and intelligentization, and achieved an advanced level in terms of average labor efficiency per capita. Among these, the 600KA electrolysis cells were awarded the First Prize of the China Nonferrous Metals Industry Scientific Technology Award in 2016. It is currently the largest electrolysis cells model in the world and can effectively reduce flue gas emission. In addition, the first domestic wet flue gas desulphurization system of electrolysis plants was installed at the back of the feed dry flue gas purification system of the industrial park and the wet desulphurization system was introduced. After electrolysis of flue gas by the wet desulphurization process, the levels of sulphur dioxide, smoke particles and fluorides are controlled at below the aluminum limits of the national industrial pollutant emission standards, truly achieving ultra-low flue gas emission of the aluminum electrolytic industry. Yunnan Hongtai successfully passed the ASI performance standard V2 (2017) certification of the Aluminum Industry Management Initiative. At present, the industrial park is in constriction stage and the Group will continue to increase its capacity and expand in scale, so as to enable the Group to pursue sustainable development in respect of green, low carbon, environmental protection.



Yunnan green aluminium innovation industrial park



Case Studies – Light weight automotive

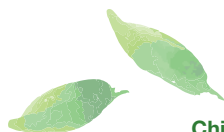
Automotive lightweighting, which adopts lightweight materials to reduce the weight of car, is one of the major methods to realise energy saving and emission reduction of automobiles nowadays, so the fuel consumption and emissions in the operation of the vehicle will be reduced. The Group initiated production and research in relation to light-weight automotive, with the objective of developing light-weight parts of motor vehicles and the core technology of the whole-vehicle manufacturing system, and endeavoring to build a world-leading and the largest full-process automotive lightweight R&D and manufacturing base in China and a world-class R&D center for lightweight aluminum materials. Supported by domestic and foreign research institutions such as the UCAS and Soochow University, the project has established a complete research and development system and research team with more than 200 research and development personnel and more than 20 top experts at home and abroad. At the initial stage, it is mainly committed to the research and development of core technologies such as lightweight parts of motor vehicles and whole-vehicle manufacturing systems. In the future, the Group will gradually expand its technology to the research and development of lightweight materials and spare parts for rail transportation, aviation and aerospace, military industry, etc., so as to contribute to the development of lightweight materials in China in terms of research and development and storage.



Production line of light weight automotive

Publicity and Education

In order to encourage employees to actively participate in energy conservation and emission reduction, the Group raises the employees' awareness of energy conservation and emission reduction through publicity and education, and guides and drives all employees to create a good atmosphere for energy conservation and emission reduction. The Group provides employees with training on energy conservation and emission reduction, covering enterprise production and national energy conservation policies, the importance of environmental protection as well as the energy conservation and emission reduction requirements and environmental control indicators, etc. The training and evaluation can help employees further understand the importance of clean production, energy saving and emission reduction and thus strengthen their awareness of environmental protection.



WASTE MANAGEMENT

The final solid waste generated by the Group can be classified into non-hazardous waste and hazardous waste. The Group strictly implements the regulations such as the Law of the PRC on Prevention and Control of Environmental Pollution by Solid Waste, General industrial solid waste storage and landfill pollution control standard (GB18599-2020) the Control Standard of Contaminated Hazardous Waste Storage (GB18598-2019) and so on, to ensure that solid wastes are properly disposed.

Types of Wastes	Major Components	Disposal Methods
General waste	Domestic garbage	Cleared and handled by the Municipal Sanitation Department
	Waste accessories	Sold to qualified recycling companies
	Ash from power plant, slag, desulfurization gypsum	Sold to construction materials companies for recycling
	Scrap and dust of carbon anode blocks	Sold to external parties for comprehensive utilization
	Electrolyte powder, electrolyte blocks	Sold to qualified entities for handling
	Construction waste	Entrusting qualified entities for handling
	Red mud	Stored in sepcific red mud storage facilities, recycling and reusing some of the useful substances, or making them into bricks and selling them to construction companies
Hazardous waste	Waste lubricants, waste denitration catalyst	Sold to qualified companies for extracting valuable ingredients through smelting, purification and other methods
	Coal tar	Entrusting qualified entities for handling
	Waste carbon residue (slag)	Recycling the useful substances through the flotation process and selling them to qualified recycling companies
	Scrapped paint barrel, scrapped oil barrel	Sold to qualified entities for handling

The Group is committed to the goal of minimizing waste emissions and proactively reduces the amount of waste by recycling and reusing waste. Through using dual chamber furnace process to melt the waste with impurities, recycled materials, wastes collected from the market and/or clean materials, the Group recycles and reuses aluminum scraps generated during the production process so as to reduce industrial waste. Such technique provides a comprehensive system that can be easily operated, and in particular, for the melting of waste with thin wall and impurities, which reduces the wasting of thin-wall materials and the environmental impact caused by the recycling of aluminum scraps. Moreover, the Group adopts flotation process and comprehensively utilizes the waste carbon residue (slag) generated from the aluminum smelting process. Part of the products obtained from flotation are reused as raw material for electrolytic aluminum production and part for selling. The comprehensive utilization of aluminum electrolytic waste carbon residue serves as a good illustration of resource recycling of waste carbon residue to avoid environmental pollution, and at the same time, creates greater economic benefits for the Group.

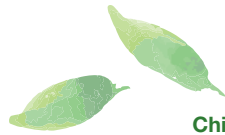


Case studies – Aluminum Recycling Technology Industrial Park

In order to improve the efficiency and automation of scrap metal recycling and to overcome the current difficulties in China in failing to produce high quality secondary aluminum, the Group has collaborated with Scholz, which is the largest vehicle dismantling and metal recycling company in Germany, to introduce its state-of-the-art scrapped vehicle dismantling technology and secondary aluminum production technology, so that China can achieve non-downgrade use of secondary aluminum and the aluminum industry to realise green recycling. In the dismantling, crushing and sorting processes, the project uses Scholz's unique and internationally leading metal crushing and sorting processes which has a recycling rate of 97% for scrapped vehicles, exceeding the standards in Germany and Europe (95%). In addition, the automation level of metal sorting is also at an advanced international level. This has completely changed the state of sorting scrap metal by labor in China, and achieved the sorting of scrap aluminum in accordance with the alloy series. In addition, the project will also construct a complete recycling production line to achieve the non-downgrade use of the scrap ring-pull cans. During the Year, the first production line in the Sino-German Hongqiao Scholz Circular Economy Science & Technology Industrial Project has commenced operation, the Group expects that after the completion of the project, it can recycle and dismantle 100,000 scrapped motor vehicles annually, produce 500,000 tonnes of secondary aluminum and 200,000 tonnes of selected raw materials of aluminum alloy and aluminum alloy products annually, realizing an output value of nearly RMB10 billion. The Group believes that the secondary aluminum project will overcome the current difficulties in China in failing to produce high quality secondary aluminum, and greatly enhance the economic value of secondary aluminum, which will serve as a leading demonstration for the development of the secondary aluminum industry in China.



Production line of Sino-German Hongqiao Scholz



GREEN OFFICE

The Group proactively responds to the national environmental and protection policies, adheres to low carbon and environmental protection philosophy in office, and encourages all employees to set their own examples and take small steps, such as saving water and electricity, and reducing the consumption of paper and other office supplies in daily office activities. We also encourage employees to commute to and from workplace on foot or by public transports and comply to the restriction on the use of private cars that is based on even- and odd-numbered license plates in order to reduce the use of motor vehicles and adopt a greener and healthier way of travel.

Water Consumption

- Posting water-conservation slogans in toilets
- Purchasing and using water saving appliances
- Strengthening daily maintenance of water meters, plumbing and water appliances to avoid the “running”, “spraying”, “dripping” and “leakage” of water
- Reusing of steam condensation
- Changing supply pumps of domestic water and purified water and improving the utilization efficiency of devices

Electricity Consumption

- Posting energy-conservation slogans in office
- Purchasing and using office supplies with energy efficiency labels
- Turning off power supply of various kinds of electrical appliances after work to reduce standby energy consumption
- Installing LED and other lightings with high efficiency
- Strengthening the management of lightings to save power, turning on the lights selectively in big office, and installing voice-activated switch in staircases
- Setting temperature of air conditioners at 26°C or above during summer
- Using video and teleconferences to replace unnecessary business trips

Office Supplies Management

- Posting paper-saving slogans in office
- Making full use of paperless office platform, intranet, communication software and other channels to process documents online
- Reducing font size and margins when printing, making text format more compatible with paper and promoting double-sided printing and paper recycling
- Sharing printer to reduce idle equipment
- Collecting and reusing paper bags and card indexes
- Following the principle of “Adjusting first, reporting after” to strengthen the audit and reporting on various plans
- Repairing and utilizing old and used materials to improve material usage efficiency



RESPONDING TO CLIMATE CHANGE

In recent years, climate change has attracted international attention and is of high relevancy to all enterprises. Therefore, the Group is committed to reducing greenhouse gas emissions as its goal, actively participates in coping with climate change and has adopted a series of energy saving and consumption reduction measures. In addition, the Group also advocates the green environmental volunteerism, encourages employees to actively participate in environmental protection charity activities such as voluntary planting of trees and contribute to environmental protection. Through the tree planting activities, greening the surrounding environment and reduction of greenhouse gases in the atmosphere over the Year, the Group made contributions to tackle climate change. The Group organized cadres and workers to carry out extensive both for the plant areas and home. Through tree planting activities, the awareness of environmental protection of “everybody being responsible for afforestation and greening” is further enhanced among cadres and workers.



Tree planting activities

In order to strictly control the relevant risks arising from climate change, the Group regularly monitors global and local government policies and regulations on climate change to identify potential climate-related risks and opportunities that may affect the Group's operations. We also conduct risk assessments to determine the appropriate level of exposure to climate-related risks and associated vulnerability to business operations, so as to formulate responding and preventive measures as early as possible.



The Group is aware of the natural environmental risks brought about by the increased severity of extreme weather events. Extreme weather may cause transportation difficulties and disruption to the supply chain, which in turn may reduce our production capacity. In addition, due to the increasingly stringent policies and enhanced emission reporting obligations, the Group may also be exposed to transitional risks such as policy risks. As the national carbon emission trading system commenced operation, the aluminum industry will be included in the carbon emission trading system in the future, and the price of greenhouse gas emissions may increase due to the government policies. Furthermore, as stakeholders have increasing concern over the Group's response to climate change and whether the goods and services we provided are environmentally friendly or low-carbon, the Group may need to increase its investment in environmental protection technology, which may lead to higher costs.

To cope with the increased frequency of extreme weather events due to climate change, the Group has developed a number of risk mitigation measures and emergency management plans. The Group provides comprehensive insurance coverage for properties and other assets vulnerable to extreme weather damage and enhances the resilience of the physical structure of buildings through design and appropriate maintenance. We will adopt special work arrangements and issue safety warnings according to special weather conditions, and have developed emergency evacuation plans for extreme weather events to protect the health and safety of employees. In addition, the Group assesses climate-related risks in the supply chain to identify alternative sources of supplies and requires suppliers to take climate-related risk prevention measures to ensure stable plant production. Besides, we regularly exchange points of view and opinions with stakeholders on climate-related issues to help us continuously review and improve our policies on climate change and energy.

Looking ahead, the Group will continue to adhere to the "innovative, harmonious, green, open and sharing" new development philosophy, actively respond to national development policies, and proactively implement the country's "3060" dual-carbon commitment strategic target. The Group has initiated its planning, layout and implementation of dual-carbon work in advance, and through promoting its dual-carbon strategic planning project, the Group shall be able to fulfill its environmental and social responsibilities, while contributing to the sustainable development of the community and the industry.



ADHERING TO PEOPLE-ORIENTED GOVERNANCE



Excellent talents are the cornerstone to achieve the Group's strategic goals and driving force for sustainable development. By adhering to the employment principle of "selecting appropriate talents, respecting value and being people-oriented", the Group not only strives to protect employees' rights and maintain employees' physical and mental health, but also attracts talents through scientific talent training methods, an effective incentive mechanism, a platform of fair competition and vast opportunities of career development, enabling all employees to fully demonstrate their personal value in the Group, match their personal planning with the business development goals of the enterprise and achieve mutual growth of the employees and the enterprise.

RECRUITING TALENTS

In order to meet the development needs, we recruit talents from different cultures, different backgrounds and different regions to join our team to increase the diversity of employees. The Group strictly complies with the relevant laws and regulations, in the recruitment, dismissal, promotion and remuneration of employees such as the Labor Law of the PRC, the Labor Contract Law of the PRC and the Labor Contract Regulations of Shandong Province, to protect the legitimate rights and interests of employees in a legal manner.

Employment Policy

The Group carries out its recruitment mainly through a variety of channels such as social recruitment, online recruitment, campus recruitment, telephone contact, employee recommendation and talent exchange. Eligible applicants will be assessed in the form of medical examinations, paper examinations and interviews, during the process, the Group upholds the principle of equal opportunity, and considers and employs talents in a fair, open and just manner and promises that it will never discriminate on grounds of gender, age, race, religion, marital status, and so on. In order to eliminate the employment of child labor and forced labor, the Group not only checks the identity and age of candidates carefully during recruitment in accordance with the relevant laws and regulations such as the Provisions on the Prohibition of Using Child Labor, but also strictly prohibits any conducts of requiring any employee to work overtime on a compulsory basis or arranging work beyond their job duties. Once any such case is found, the Group will conduct thorough investigation and immediately dismiss the related employee. Exit interviews will be conducted by the Group for departing employees to understand their reasons for the departure and make improvements according to their reasonable suggestions.



The Group has established a sound remuneration management system and provides competitive remuneration packages to attract talents. Under the premise of ensuring fairness and incentives for the assessment of wages, each department regularly assesses and adjusts the wage level according to the salary standard of the post, workload, work performance, years of service, skill levels of the employees and other factors. In addition to the basic wage, the employees' remuneration also includes performance-based bonus and various types of subsidies such as skill subsidies, position subsidies, and high temperature allowances. We will purchase and pay social insurances for employees, such as pension insurance, medical insurance (including maternity insurance), unemployment insurance, work injury insurance, etc., in accordance with related labor and social welfare laws and regulations, while providing them with additional benefits such as free accommodation, medical, food and transportations. The Group has also established a reasonable dismissal system and formulated legal conditions of dismissal in accordance with the relevant laws and regulations.

During the Year, the Group found no cases of child labor or forced labor.

Rights Protection

The Group is committed to safeguarding the rights of its employees and eliminating any exploitation of rights. In order to ensure that employees have enough resting time, the Group stipulates that the working hours of employees should not exceed the statutory standards and relevant provisions shall be set out in labor contract. Eight-hour working system and three shifts with four groups are adopted for employees in each production unit. Employees are required to work overtime only under specific circumstances. Overtime payment is made to employees in accordance with the applicable standards stipulated in relevant laws. All employees enjoy statutory holidays, home leave, marital leave, funeral leave and maternity leave.

The Group firmly opposes gender discrimination. Employees, regardless of gender, are treated equally and the distribution of work is implemented according to actual needs. The Group also protects the lawful rights and interests of female employees according to law and complies with the relevant laws and regulations to provide female employees with benefits during pregnancy, delivery and lactation, including arranging breastfeeding time for employees returning to work after delivery.



TALENT CULTIVATION

“Strong enterprise with great talents” is one of the important strategic goals of the Group. The Group highly values personal development of our employees by not only creating a clear career development path for all kinds of talents, but also encouraging their continuous growth through performance appraisal, job selection and training, so as to provide backup force for the sustainable and stable development of the enterprise.

Performance Evaluation and Promotion

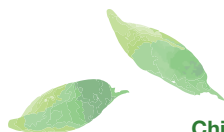
Apart from serving as the basis for employees’ compensation adjustment, the Employees Performance Dynamic Management System of the Group is also an important basis for employee competition, promotion and change of position. Employees who have achieved outstanding results in performance appraisal will be given priority in the process of promotion.

In addition, the Job Selection System is adopted in each production unit and the Group has also set up a selection and employment mechanism that can better identify the outstanding talents from the peers. Following the principles of “fair, just, open, competitive and merit-based”, outstanding employees will have the opportunity to compete for different positions. The most suitable candidates are selected level by level through a series of assessments, including branch factory assessment, written tests, interviews, practice exams, safety assessment and democratic evaluation. The job selection process is closely monitored by all the employees for reporting and complaining about any violations.



Employees’ Training

By adhering to the talent concept of “cultivating talents by demand”, the Group has established a comprehensive and diversified staff training system for our employees to help them master the skills and knowledge for their work. We provide specific training programmes which are guided by experienced staff for all new employees to help them master all necessary skills during the first four months of their internships. In addition, we also provide employees with various trainings such as production safety, emergency training, fire training, for operation in confined spaces and trainings related to risk control and clean production, to cultivate their awareness of production safety and energy conservation. In terms of quality control, we regularly provide technical and theoretical learning and technical practice tests for our employees. We also provide award for outstanding employees in such trainings to motivate them to improve their skills and ensure product quality. Furthermore, we also conducted a number of trainings to develop the soft skills in communication, decision-making and team spirit, including effective communication skills, team management and growth mindset.



During the Year, the Group continued to implement each of the annual training programmes and commence job training, professional and technical personnel training, elementary management training and middle and senior management training.

Trainees	Training Goals	Training Methods and Contents
Management training for middle and senior management cadre	To improve management skills and overall quality of management cadres	Participating in training classes for middle and senior management cadre taught by experts and professors; reading educational materials; cadre warning education is performed through watching films and televisions for integrity advocacy, corruption punishment cases, warning videos and so on
Branch factory employees	To meet eligibility criteria and be able to operate independently	New employees: receiving educations about rules and regulations of the Company, safety awareness, environmental awareness, dedication, ethics, compliance with disciplines and laws and other aspects
		After determining the type of job or changing position: learning knowledge of the environment quality system, job responsibilities, fire safety and emergency knowledge, environmental protection knowledge and the related skills of the assigned position
Production plant employees	To meet eligibility criteria and be able to operate independently	Trainings targeting at technical courses on process, machine operation knowledge, equipment maintenance and care, and at the same time providing chemical knowledge, emergency knowledge, fire safety and environmental awareness, job safety regulation, strengthening sense of responsibility, and so on
Logistics department employees	To improve the overall capability of employees	Personnel training, business skills and specialized trainings on the integrated management system
Electricians, welders, climbing workers, chemical managers, and so on	To ensure the normality and safety of electricity consumption for production and living of the Company and improve environmental quality	Political thoughts and professional ethics education, safety education, environmental education, emergency knowledge training, job safety regulation training, technical theory study and practice
Special types of work, internal auditors, firefighters, safety officers, and so on	To standardize operations and eliminate employees who are not competent for the work	ISO14001 Environmental Management System Standards Training, professional skills operation training, safety management training, environmental awareness and concept training



Safety training



Monthly training of technical personnel



Energy conservation and emission reduction quiz



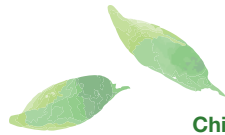
Factors of steam deficiency in flash evaporators and mud layer control and liquid balance in settling tanks



Training on efficient communication skills



Growth mindset training



In addition to providing internal trainings, during the Year, the Group continued the cooperation with Xiang Bei Institute of Technicians (魯北技師學院), Shandong University and Northeastern University, respectively, according to which, the Group may select its internal staff to attend relevant training programmes organized by these institutions, which helps improve workforce quality and management capabilities. In the meantime, apart from the courses in those training programmes, the Group may organize specialized training for relevant staff when requirements of designated products or recommendations for improvement are received. We have put the mechanism of training evaluation in practice to review the training outcomes and enhance the whole training system. The evaluation includes safety examination, professional examination, skill examination, etc.

Commendation and Rewards of Employees

In order to evaluate employee performance fairly and objectively, the Group has formulated and implemented the Employees Performance Dynamic Management System and grants extra bonuses as incentives to outstanding employees after conducting regular employee performance assessments to enhance the quality of work, work efficiency and proactiveness of the employees. During the Year, the Group held the annual summary commendation conference, at which advanced units, excellent managers, model workers, pacesetters, advanced workers and excellent new staff of the Company were commended, and bonuses, prizes, medals, trophies and certificates of honor were awarded to those advanced individuals and groups to create a strong atmosphere of respecting labor, advocating pragmatism and encouraging innovation.



Work summary commendation conference



Speech by representative of excellent managers

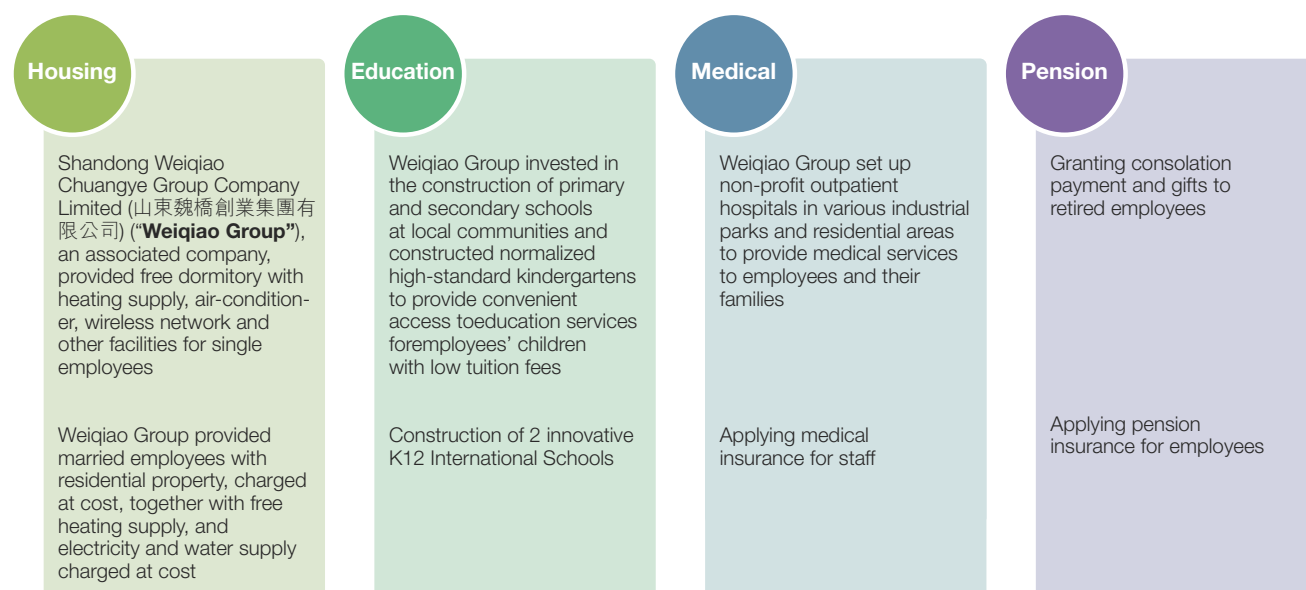


CARING FOR EMPLOYEES

The support and dedication of each employee are indispensable for the growth and development of the Group. In addition to providing an ideal working environment for employees, the Group also extends its care to employees' families and lives.

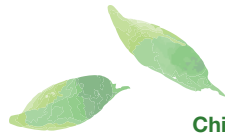
Welfare System

The Group upholds the principle of “ensuring housing for employees, medical services for the illness, pension insurance for the retired and education for their children”. We are continuously improving the employees' welfare system that integrates housing, education, health care and pension insurance mechanisms.



Helping Employees in Need

The Group always adheres to the philosophy of “thinking from the employees' perspective, considering their worries, resolving their concerns”, providing them with what they are in need and caring about their families and lives. The Group's labor union carries out regular surveys and visits to employees in difficulties, and takes the initiative to understand the living situation of these employees, their family relationships and financial burdens. Priority is given to employees who are suffering from illnesses, or whose families encounter misfortunes or difficulties in life. The Group encourages the spirit of “All for one and one for all” and encourages staff to make donations to colleagues in financial difficulties, creating an atmosphere of solidarity and love.



Visiting employees in need, giving relief payment



Establishing a complete file of workers in difficulty and providing precise assistance

In addition, the Group has continued to participate in the Zouping City “Sany Student Aid” (「三一助學」) charity programme to support the development of education in Zouping City. Each year, the poverty alleviation team formed by each unit visited the towns, street offices and families of our employees with financial needs in Zouping City before the Spring Festival to provide one-to-one targeted assistance and to deliver consolation gift to each student. The children are encouraged to strengthen their courage and confidence in overcoming difficulties, to learn science and culture well, to work hard to achieve a better future, and to repay the society and the country with excellent results.



Sany student aid programme



Cultural and Sports Activities

In order to help employees achieve work-life balance, enrich their spare-time life and enhance their sense of belonging and cohesion for the Group, the Group held various types of employee activities during the Year, including the most beautiful dormitory competition, eat dumplings and wearing fragrance packet in Dragon Boat Festival, cadre fitness games, special activities for Women's Day etc. Meanwhile, the Group holds large-scale technical competitions in autumn and winter every year. In addition to demonstrating the technical level of the participants, the competitions also test the safety knowledge and safety operation skills of the employees, ensuring the quality and safety. Generous rewards are given to employees who have excellent performance in the competitions, and the Group will also arrange work experience sharing sessions among employees to promote learning and communications between employees, improve employees' business skills and foster their spirits of excelling at work.



The most beautiful dormitory competition



Safety Speech Contest



Women's Day activities



Dragon Boat Festival activities



Cardiopulmonary resuscitation competition



Spring Festival performance



Sports gala



Welcoming event for the 101st birthday of the Communist Party of China



PURSUE EXCELLENCE IN QUALITY



Molten aluminum alloy, the major product of China Hongqiao, is the main material for manufacturing aluminum products and other products including aluminum deep-processing products such as coils, can stocks, aluminum foils, etc. China Hongqiao possesses advanced manufacturing equipment, specialized production technology, strong R&D (research and development) capability as well as scientific and highly efficient management model. By virtue of pursuit and persistence of excellence in quality, China Hongqiao is able to continue providing customers with high quality, safe and stable products along with excellent service.

SUPPLY CHAIN MANAGEMENT

The raw materials necessary for the production and operation of the Group mainly include raw coals, bauxites and anode carbon blocks, and the required supplies mainly include equipment, accessories, production ancillaries, labor insurance and office supplies. In order to maintain a healthy and orderly supply chain system, continuously optimize the supplier teams and reduce the environmental and social risks posed by substandard suppliers, the Group has been devoted to improving the procurement process and regularly identifying, assessing, managing and monitoring environmental and social risks of the supply chain. The Group will conduct environmental surveys in the form of questionnaires or site visits to assess and monitor the performance of all suppliers in terms of environmental compliance, environmental protection and resource conservation, and give priority to suppliers with ISO50001 energy management system certification, ISO14001 environmental management system certification or low carbon product certification. In addition, the Group assesses and monitors the safety and health performance of products and services provided by all suppliers and gives priority to suppliers with ISO45001 occupational health and safety management certification in order to effectively manage and monitor environmental and social risks in the supply chain. The Group has established long-term relationships with many suppliers and has endeavoured to ensure that all suppliers comply with the Group's commitment to quality and ethics and the Group's anti-bribery policy.

Procurement of Raw Materials and Supplies

The Group appoints tender companies to procure the raw materials (other than bauxites) and supplies in accordance with the materials consumption plan submitted by each production unit. The procurement is in compliance with its internal procurement management system, which covers the procurement process, procurement discipline, quality requirements, contract execution and management, goods acceptance process and punishment standards for non-conforming goods, and so on. After supplier's operation qualifications, economic strength, equipment conditions and supply capacity are inspected and assessed by the tender company, the eligible suppliers are then selected to participate in the tender. The bidding process strictly follows relevant regulations such as the Bidding Law of the PRC and is conducted in an open, fair and equitable manner to protect the interests of both parties. In addition to adhering to the principle of "comparing quality of the same products, comparing price of the same quality and comparing service at the same price", The Group also advocates green procurement by purchasing or selecting products that have the least impact on the environment wherever possible, for example, products that comply with clean technology production or help reduce water consumption. Moreover, the Group also adopts the principle of conducting procurement from nearby suppliers to reduce transportation costs and carbon emissions caused during transportation.



Procurement of Raw Coal

The Group did not implement centralised tendering for coal suppliers this Year. At the same time, due to the volatility of the coal market and frequent price changes, the Group has adopted a system of direct pricing followed by adjustments according to market conditions. To avoid overbuying and producing waste, coal-using units report the monthly coal consumption plan on the basis of monthly usage amount, and then the Purchasing Department determines the amount of coal required and purchasing target through tender in light of the inventory. During the Year, the Group commenced the coal import business and will procure imported coal opportunistically accordingly to the coal market condition. Apart from considering the price, the Group also evaluates factors such as the bidder's integrity, the environmental impact (including sulphur content), etc., to ensure that the coal purchased is of a high quality but at a low price. .

QUALITY MANAGEMENT AND INNOVATION RESEARCH AND DEVELOPMENT

The Group implements the “one-vote veto system” for quality control. Every process of the production line is checked carefully, forming a quality control network that all steps are closely connected and monitored by all staff members. The policies of “two prohibitions”, which include prohibition of passing defective products from the former procedures to the latter procedures and prohibition of storing and outputting disqualified products, are enforced in our production. The policies of “three unacceptances”, which comprise unacceptance of unconvinced reasons, unacceptance of unimproved measures and unacceptance of the irresponsibility of any personnel in charge, are also put in place for quality incidents.

The Group has set up a well-equipped and highly functional quality control center, and the quality management system is also in line with the standard of the International Organization for Standardization ISO 9001: 2015. Through continuously upgrading its production technology and equipment through innovative R&D and encouraging staff members to participate in minor reforms in an in-depth and persistent manner and activities related to tackling key problems of QC (Quality Control) thoroughly, the Group strives to ensure stability and enhancement of product quality.

Quality Control

The Group has set up a quality control system that closely monitors the quality of raw materials, semi-finished products and finished products step by step. All production processes of raw materials from entering to leaving the factory are traceable, in which composition testing, random sampling, labeling, packing, transportation and storage all strictly comply with relevant standards and specifications. For raw materials, ancillary materials and non-conforming products which fail in the initial and final testing procedures, the Group will conduct isolation, analysis and correction and provide opinions and suggestions for the incident according to the Control Procedures of Non-Conforming Products.



To guarantee the health and safety of its products, the Group strictly conforms to the requirements of national, industrial and international standards such as the National Food Safety Standard for Food Contact Materials and Use of Additives Standards for Products (GB9685-2016) and the National Food Safety Standard for Water-based Modified Epoxy Paint of the Inner Wall Cans (GB 11677-2012) to ensure that the amount of toxic and harmful contents contained in the packing products for food and drugs meet the legal standards and that the production environment and processes fulfill the specific hygienic requirements. Can materials produced by the Group currently meet the width and thickness requirements of all domestic and foreign can factories and are capable to satisfy the specific requirements of customers. The various key performances have been widely recognized by clients. The Group has established stable partnerships with more than one hundred renowned enterprises at home and abroad, including Baosteel Packaging, CPMC, ORG Packaging, Gaosen Group, United Can, Ball Corporation.

If a complaint from a customer about the quality of the Group's products is received, the Group will analyse the cause of the product quality issue and formulate preventive measures and product quality improvement plans. For products that need to be returned, we will communicate with the customer before proceeding to the return process, and such returns will be completed within 5 days. The Group will continue to follow up on product improvements and production workshops are required to strictly follow the product quality improvement plans to ensure that the product quality is improved. During the Year, the Group did not recall any aluminum products for safety and health reasons.

Implementation of SAP&MES Information Platform

In order to deal with the increasingly complex information management needs, and facilitate the transition of refinement, digitization and informatization management of the Group, we cooperated with IBM Company and Shanghai Baosight and have designed the System Applications and Products (SAP) & Manufacturing Execution System (MES) informatization platform through years of research. The SAP&MES platform provides a comprehensive system that connects enterprise management, all production lines and on-site production equipment to help us plan and organize production and operation activities reasonably and efficiently, and achieve efficient control and management on quality. Meanwhile, by collecting and utilizing production management data, we can more objectively analyze and identify problems in production technology, capacity planning, quality management, etc., in an enhanced manner, providing a new source of power for the Company to improve the overall operational efficiency and quality management.



Innovation and R&D

Innovation and R&D are the major driving forces for the Group to reduce energy consumption, optimize production techniques and enhance product quality. The Group pay high attention to innovative platform construction and industry and academic collaboration. On the one hand, we actively invest resources into the R&D team, establish research centers and laboratories, recruit research and development personnel, purchase advanced equipment, etc. On the other hand, we continue to strengthen the partnership with scientific research institutions in the form of industrial and academic collaboration. During the Year, the Group continued to exchange and cooperate with Soochow University, Central South University, Northeastern University, Binzhou Technical College and other institutions. Besides, the Group encourages its staff to work on improvements of production facilities and techniques regarding safety, energy conservation, efficiency enhancement and environmental protection and to learn from and promote the technical transformation projects with promotional value. During the Year, the Group implemented a total of 600 minor reform projects and applied for 153 patents. Hence, the Group spares no effort in continually improving its performance in environmental protection, employee safety safeguard and quality control.



Facilitating Development of the Industry

The Group took part in formulating several national and industrial standards, such as the Assessment Specification for Green Aluminum Plants (《鋁行業綠色工廠評價規範》), the Unalloyed Aluminum Ingots for Remelting (GB/T 1196-2017) and the Safety Guidance for Use of Vacuum Ladles (DB37/T2800-2016), promoting the standardization in the PRC's aluminum industry and improving the quality control of aluminum products and production safety management. In addition, we wrote papers on innovation and R&D jointly with a number of renowned scholars, in an effort to explore how to enhance the quality of aluminum alloy in all aspects and promote the continuous and mutual progress and development of the Group and the industry.

As a forerunner in the industry standards, the Group has won a number of national and local awards, including the Standards Excellence Prize from the National Nonferrous Metals Standardisation Technological Committee and the Enterprise Standard Forerunner Certificate from the Institute of High Quality Standardisation. The above certificates confirm China Hongqiao's leading position in the aluminum industry in China in terms of quality management and technical standards.

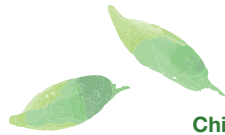


Enterprise Standard Forerunner Certificate



Technical Standards Excellence Prize

As a Chinese enterprise with global presence and international cooperation, the Group is determined to meet the high standards of the global aluminum industry. By joining the Aluminium Stewardship Initiative (ASI), the Group will be able to accelerate the pace of carbon neutrality and sustainable development, promote responsible aluminum production and establish close cooperation with partners from other countries.



SALES AND SERVICES

The Group maintains long-term relationships with multiple clients and adopts a business model of “determining production based on sales” and provides various products with different specifications in accordance with the requirements of downstream customers, which ensures its product supply and minimizes inventory backlog. The Group mainly promotes its sales and services through participating in customer seminars and exhibitions and publishing promotional videos and booklets. During the Year, many of the Group’s products were exhibited and marketed at various international exhibitions and exchange sessions, including active participation in the German Aluminum Industry Exhibition (德國鋁工業展覽會), South China International Aluminum Industry Exhibition (華南國際鋁工業展覽會) and China-South Asia Expo and the 26th China Kunming Import and Export Fair (中國－南亞博覽會暨第26屆中國昆明進出口商品交易會) to connect with the international market. The Group showcased its cutting-edge technologies and innovative products to the world at major industry exhibitions at home and abroad, and leveraging the Qingdao Summit of Multinational Leaders and the Conference of the Parties to the United Nations Framework Convention on Climate Change, the Group promoted the concept of open, integrated and win-win green and sustainable development.



German Aluminum Industry Exhibition



China-South Asia Expo and the 26th China Kunming Import and Export Fair

During the Year, the Group continued to strictly comply with relevant laws and regulations such as the Advertising Law of the PRC and the Trademark Law of the PRC, as well as its internal rules including the Working Rules of Sales Corporation and the Corporate Customer Credit Management System. All product and business information is carefully reviewed before being publicly disclosed to eradicate any acts of misleading or cheating clients with false information. The Group has registered multiple trademarks in China and Hong Kong according to relevant laws while signing cooperation agreements with different working partners, showing that the Group highly respects the trademark rights of others and lawfully protects the trademarks of the Group from any violation.

In order to understand customers’ satisfaction with the Group’s products, the Group has stipulated working regulations for sales companies and required sales personnel to actively contact customers and establish a continuous and stable communication channel, so as to collect customers’ opinions and improve service quality. If we receive complaints from customers relating to our products, we will reply to them as soon as possible after completing investigation and take appropriate improvement measures if necessary, to prevent the recurrence of similar incidents. During the Year, the Group did not receive any complaints in relation to the Group’s products and services.



PRIVACY PROTECTION

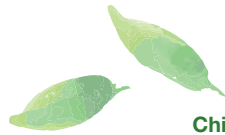
The Group gives priority to information security to protect both internal privacy and client information. Its information center provides training sessions regarding information safety, system application and security on a non-regular basis to improve employees' skills in system application and raise their awareness of security. In order to regulate the use and management of computers and internet resources, according to internal regulations and rules such as the Administrative Rules for Security of Using Office Computers and Network, the Group regulates relevant data backup and protection, anti-virus system management, central computer room management and user password setting, and strictly prohibits unauthorized access to external devices and disclosure of confidential documents and ensures the normal operation of the equipment in computer room and proper storage of important data. In addition, the Group has formulated contingency plans for illegal system intrusion and illegal data tampering, which clearly specify the remedial and corrective measures to be taken by the system administrators in the event of illegal network intrusion and system content tampering, in order to minimize the risk and impact of leakage of information of the Company and its customers. The system administrators should immediately shut down the server and the system, block or delete the compromised login accounts, and use antivirus software to remove the hacker program. In addition, the system administrators should identify and restore all tampered or deleted data to restore the system and network as soon as possible.

In addition to improving information security, the Group also ensures that the privacy interests of both the Group and its customers are protected by supervising the bidding and purchasing procedures strictly, carrying out education regarding secrecy, signing confidentiality agreements with employees in specific positions, and with customers and suppliers.

ANTI-CORRUPTION PRACTICE

The Group always adopts the attitude of "zero tolerance" towards unlawful acts such as bribery, extortion, fraud and money laundering. During the Year, the Group continued to abide by the relevant laws and regulations such as the Anti-Money Laundering Law of the PRC and the Criminal Law of the PRC and put the Anti-fraud Control Procedures, the Administrative Measures on Complaints and Reports and other internal rules and regulations into practice, we have also established a comprehensive reporting process. The Group has set up the Economic Supervision Department as a permanent body to urge each department to carry out the anti-fraud duties. All departments convene an anti-corruption meeting each month to summarize, review and study cases of non-compliance occurred in the past. The Chairman of the Board also holds regular anti-corruption meetings to mobilize and supervise the leaders of various departments to strengthen the building of a clean and honest organization. In addition, the Disciplinary Inspection Committee and the Economic Supervision Department of the Group jointly prepared a variety of anti-corruption publications such as Anti-corruption In Organization (《勤廉陣地》) and The Overhanging Sword (《利劍高懸》), which recorded a number of typical cases of corruption and carried out in-depth information collection and analysis.

In order to support the Group's middle and senior cadres to serve the public interest wholeheartedly and uphold integrity, we engaged experts to organize anti-corruption and integrity training this Year. Through films and televisions for integrity advocacy, educational materials, corruption punishment cases, warning videos and so on, we have been able to educate our cadres and raise their awareness of the need to combat corruption and maintain integrity.



For bidding and purchasing, the Group has adopted strict monitoring measures. In addition to ensuring fairness, openness and equity in the bidding process, the Group also requires personnel and management cadres related to bidding and procurement to sign an undertaking of integrity. The procurement department also signs an agreement on anti-corruption with the bidders to prevent the acts like accepting rebates or engaging in private transactions. During the Year, the Group was not aware of any non-compliance with the relevant laws and regulations in relation to bribery, extortion, fraud and money laundering that had a significant impact on the Group.

CARING FOR SOCIAL WELL-BEING



The successful development of China Hongqiao is attributed to the full support and trust of the country and all parties from the society. China Hongqiao always keeps in mind the initial mission of “building a business for the country and benefiting the people”. We accumulate our love through minor acts of kindness and give back to society and people by actively participating in social welfare undertakings and fulfilling our responsibilities and missions as a corporate citizen.

COMMUNITY WELFARE

The Group always pays close attention to the interests of the community where it operates and regards improving the community’s well-being as an important way to realize its value. Over the years, the Group has actively organized and participated in various types of charity and social welfare activities and encouraged employees to participate in such activities. During the Year, the Group donated RMB1 million to Red Cross Society of Honghe Prefecture, Yunnan Province, for post-disaster repairs in areas affected by floods and mudslides, demonstrating its corporate social responsibility and commitment.

The Group has also actively carried out other charitable activities. During the Year, we carried out tree planting activities to help protect the ecological environment. By having all units of the Company to organise tree planting activities for the cadres and staff, it further enhances their awareness of afforestation and greening the environment as the responsibility of everyone.

Furthermore, all units of the Company organized voluntary blood donation activities in which the cadres and staff actively participated. The Group joined hands with the central blood station to organize voluntary blood donation activities to help alleviate the tight supply of clinical blood during special periods. The Group has actively fulfilled our corporate social responsibility and received positive responses from our cadres and staff. Voluntary blood donation is a good deed that benefits the country, the people and the donors, and it is also a duty and responsibility that every citizen should fulfill. It is very meaningful to be able to participate in the voluntary blood donation for saving others’ lives. The Group will continue to take the initiative to contribute to the cause of voluntary blood donation, promote the spirit of selflessness and spread love and positive energy through practical actions.



The Group has also actively carried out poverty alleviation work through education. The Group continued to actively participate in the Weiqiao Rainbow Home (魏橋彩虹之家) project sponsored by the Beijing Rainbow Charity Foundation (北京彩虹公益基金會) to ensure the sustainable development of the Rainbow Homes in both hardware and software aspects, providing the children with a healthy and interesting learning life and a warm and loving home. During this Year, Weiqiao Rainbow Homes continued to take up responsibility of aesthetic education in rural areas and educate children with art, allowing them to enjoy art in the natural environment of the village and guiding young people to develop a correct aesthetic and cultural outlook through aesthetic education programmes, community activities and school culture. Weiqiao Rainbow Home serves the communities in Binzhou, Linyi and Heze of Shandong Province as well as Yanshan and Deqin of Yunnan Province, providing activities and counselling to left-behind children to enable them to attain all-round growth and feel love and warmth in the company. Up to now, the number of children benefited from the “Weiqiao Rainbow Home” project has reached over 20,000.

Case studies – Weiqiao Rainbow Homes in various places

Wenshan, Yunnan – 10 Weiqiao Rainbow Homes

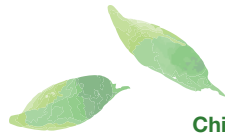
The 10 Weiqiao Rainbow Homes in Yanshan, Yunnan Province, jointly organized a reading programme and a “Reading Star” award. The 25 children who were selected as “Reading Stars” came to Shandong Province to participate in the Qilu Chinese National Learning Summer Camp (齊魯大地國學夏令營), where they were able to experience the Chinese culture of Shandong region and visit enterprise. The theme of this “National Study Tour” is Song Lyrics, and we hope that through this summer camp, students will gain a deeper understanding of Song Lyrics and learn more about the culture and literature of the Song Dynasty. In addition, all Weiqiao Rainbow Home students received a Rainbow reading pack as a gift for the new school year. The Rainbow reading pack is not only to encourage the village children to read, but also to stimulate their reading enthusiasm. Through regular reading classes, occasional reading activities and annual summer camps, the children are able to develop their reading habits and improve their reading skills.





After the donation of the Weiqiao Rainbow Homes project to 10 schools in Yanshan County over the past few years, reading has become a hobby for many children. “Chasing a Beam of Light” by Ji Yongqi of Kaji Primary School, Ganhe Township, published in the September issue of Chinese School Literature. Rainbow reading packs, book reading corners for schools, reading sharing sessions, reading leadership programmes, summer camps and study tours are just some of the activities that continue to be donated each year to open the doors of rural children to a wider world of reading. On 28 October 2022, with the arrival of the Weiqiao Rainbow Homes at Ganhe Secondary School in Yanshan, Yunnan, China School Literature joined hands with the Weiqiao Rainbow Homes to establish a “Key Base School” at Ganhe Secondary School. The editorial department of China School Literature donated 15,600 copies of China School Literature magazine to the project schools, bringing rich spiritual food to the children and enriching the cultural life of the project schools.





Four locations in Shandong Province – 4 Weiqiao Rainbow Homes

The four Weiqiao Rainbow Homes in Shandong Province offer a wide range of aesthetic education programmes, including choirs, calligraphy classes, science and creativity, as well as organising competitions and activities to broaden students' horizons. Ms. Cao Xia, deputy dean of the School of Fine Arts of Qilu Normal University, brought a vivid and intuitive aesthetic course to the children. The flexible classroom turned knowledge into interest, and the interactive teaching allowed students to learn easily and give free rein to their imagination and creativity.







OVERSEAS CONTRIBUTIONS

To advocate the economic strategy of “The Belt and Road Initiative” of the country, China Hongqiao has devoted itself to promoting the economic development of the places where it has overseas projects in recent years, and also contributing to the local economic development to fulfill its corporate social responsibility.

Guinea

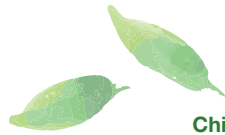
The SMB Winning Consortium formed by the Group, Winning International Group of Singapore, Yantai Port Group and United Mining Supply (UMS) of Guinea established in Guinea upheld the concept of “development in mutual benefit, benefiting the people”. Since 2014, while developing bauxite resources, the SMB Winning Consortium has also been committed to promoting the economic and social development of Guinea, making an ongoing contribution to local employment, education, transportation, medical welfare, leisure and sustainable development projects of the community, and creating a new model for multi-party cooperation and mutual benefit in overseas mining development.

During the Year, the SMB Winning Consortium continued to strictly abide by relevant local laws and regulations in Guinea including the Mining Law and the Environment Law and made generous investments in the community construction to promote the development of the local community and economy, which greatly improved the living standards of the Boké people in Guinea. During the Year, in order to solve the drinking water problems of the local communities in the Boké region, SMB Winning Consortium completed the construction of 14 improved manual wells and 5 mechanical wells in the affected areas in 2022, in accordance with the Sustainable Development Project Plan. In order to provide convenient conditions for the development of local villages, the SMB Winning Consortium repaired community roads during the Year with an aggregate of more than 17 km. At the same time, in order to ensure the safety of traffic along the railway line and property, the SMB Winning Consortium built a number of underground passages along the line to effectively strengthen and consolidate relations with local communities. In addition, on the premise of being adaptable to the unique climate condition of Guinea, the SMB Winning Consortium will utilise China’s advanced agricultural facilities, techniques and management experience to develop an agricultural facility and farming model that can be widely promoted, and cultivate a number of breedable vegetable varieties, with the aim of developing a group of new local agricultural workers who can independently carry out field management, and thereby driving the development of the local economy. During this Year, the SMB Winning Consortium has successfully carried out vegetable farming projects, pineapple field projects and rice trial field projects in five communities. In order to maintain good relations with the surrounding communities, the SMB Winning Consortium has made a number of donations, for example: every quarter, the SMB Winning Consortium distributes rice and cooking oil to surrounding villages that maintain peace and stability, as well as donating cattle and sheep for Eid al-Fitr and Eid al-Adha during religious festivals in the community villages. In addition, the SMB Winning Consortium has donated 148 sets of tables and chairs to primary schools in the region, funded the renovation of local public buildings and bridges, and participated in funeral assistance activities in the community. SMB Winning Consortium continues to increase its social responsibility commitment, with a cumulative investment of approximately 85 billion Guinea francs, equivalent to approximately RMB56 million.



Contributions and outcomes from SMB Winning Consortium to the Guinean Community

Employment	• Actively supported youth employment and gave priority to recruiting candidates from surrounding communities • Promoted localization by hiring more qualified local individuals and gradually reducing the proportion of foreign employees • Provided local employees with tailor-made training and cultivation programmes to facilitate the handover of key positions and major management positions to local employees • Donated fishing boats and life jackets to the local residents to support fishermen in developing offshore fisheries
Education	• Established literacy training centres, built and reconstructed primary schools • Cooperated with Jiangsu Maritime Vocational Institute to jointly establish the "Winning Mariners College of Jiangsu Maritime Vocational Institute (江蘇海事職業技術學院韋立船員學院)" with an aim of training the young mariners from Guinea and other West African countries
Medical welfare	• Provided local employees with free medical services and their immediate families with medical services • Provide local employees with free annual body check services and actively commenced education training on diseases • Donated to local villages to build clinics and temporary isolation clinics, and provided residents with medical security and limit the spread of virus • In response to the novel coronavirus pneumonia pandemic, donated anti-pandemic supplies and funds to the locals
Transportation	• Donated funds to repair the national highway from Kankan to Kerouane near Simandou mine with a total length of 145km to tackle the difficulty in travelling by foot during rainy season and the road dust dispersion • Cooperated with local railway company to establish the first local green railway company and construct local railway facilities which are in line with the concept of sustainable development
Well-being	• Invested more than RMB1.0 million on the construction of a local water treatment plant, ensuring the water is safer for consumption • Drilled wells in surrounding communities and repaired some existing wells with faults or damages, solving the water shortage problem • Showed respect to local customs and culture with active involvement in the community, such as giving out rice and livestock at local festivals, actively participating in and funding weddings and funerals as well as religious ceremonies of local villagers • Gave out candies, notebooks and footballs to children in local villagers before International Children's Day
Culture and leisure	• Sponsored and organized social football matches and sponsored the local professional team • Installed outdoor large-screen TVs with electricity supplied for villagers to watch TV shows such as football matches
Sustainable community development	• Planted the cashew trees in the restored mining area and returned the administrative right of the land to the local villagers after the bloom; the mining area after reclamation will become an orchard that brings the villagers income • Promoted the planting technology of agricultural sheds and vegetable farms to support the local sustainable development
Others	• Organized several China-Guinea economic forums to promote economic development between both countries • Donated USD4 million to sponsor the completion of the future entire development planning of the capital, Conakry, and to assist in clean-up activities in Conakry and Boké, which greatly improved the living environment of the two cities • Donated USD5 million to sponsor the comprehensive inspection of mining resources in Guinea and help the local government accurately understand the status of national resources • Cooperated with the local outstanding enterprises to jointly develop the mining industry in Boké • Procured the construction for international commercial port of Boké to turn Boké to a major port of Guinea



SMB Winning Consortium's investment
in the construction of wells

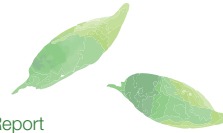


SMB Winning Consortium's
agriculture project

As of December 2022, SMB Winning Consortium has more than 22,000 project staff directly or indirectly involved in Guinea, and the number of the subcontractors and merchants who specifically served SMB Winning Consortium reached over 5,000, and more than 90,000 job opportunities (including indirect employment) have been cumulatively created in Guinea. During the Year, tax paid by SMB Winning Consortium to Guinea amounted to approximately USD235 million. Its projects have been running smoothly in Guinea which attracted more enterprises and investors to invest in the mining, infrastructure construction and agricultural industries, hence driving the economic growth of Guinea.

Indonesia

PT. Well Harvest Winning Alumina Refinery ("**PT. Well Harvest Winning**"), jointly established by the Group, Indonesian Halida Group (印尼哈利達集團) and Singapore Winning Group (新加坡韋立集團), is the largest industrial alumina company in Indonesia and even in Southeast Asia, which fills the domestic industrial gap in Indonesia and promotes the progress of Indonesia's industrial modernisation. By adhering to the vision of "people-oriented governance and cooperation for achieving mutual benefits", PT. Well Harvest Winning consecutively hired more than 3,200 Indonesian labor, which greatly contributed to local employment, driving both economic and social development. In addition, PT. Well Harvest Winning has established a specialized social responsibility group to launch various projects to actively participate in donating funds to people in need, providing education funds, medical assistance, religious assistance, and repairing infrastructure.



During the Year, PT. Well Harvest Winning has accumulatively invested approximately RMB1.20 million. PT. Well Harvest Winning established a cooperation union with the local villagers to continue teaching them farming, fishing and other skills and providing them with agricultural equipment, fishing gear and other equipment and material so that the local villagers can be self-reliant and this improves their living standards. PT. Well Harvest Winning also actively carried out charity events including coastline restoration, maintenance of churches, investment in school construction and education funds. Through various methods, including improving education, health conditions and family economic status and increasing villagers' income, PT. Well Harvest Winning helps the local villagers to establish a comprehensive and sustainable development of human and natural resources. Through the provision of food subsidiaries, education and consultation on healthy living and free medicine to children, pregnant women and the elderly, PT. Well Harvest Winning improves the standard of health services and continuously improves the public health environment.

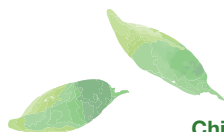
Along with self-development, PT. Well Harvest Winning will continue to integrate the fulfilment of social responsibility into the development strategy and cooperative culture of the Company, organically integrate economic and social benefits as a value pursuit, and give back to the local community through various means.



PT. Well Harvest provided additional food



PT. Well Harvest provided educational scholarship



APPENDIX I: SUMMARY OF KEY PERFORMANCE INDICATORS

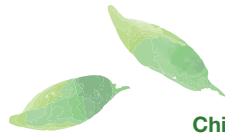
KEY PERFORMANCE INDICATORS	2022	2021
Environment		
Emissions		
<i>Exhaust gas</i>		
Nitrogen oxides (tonnes)	8,547	9,415
Sulfur dioxide (tonnes)	10,367	19,775
Particulates (tonnes)	691	761
Fluoride (tonnes)	197	171
<i>Wastewater</i>		
Ammonia nitrogen (tonnes)	8	7
Total nitrogen (tonnes)	70	71
Chemical oxygen demand (tonnes)	288	219
Greenhouse gas (“GHG”)		
Total GHG emissions (scope 1&2) (ten thousand tonnes of CO ₂ equivalent) ¹	7,875	7,870
Scope 1 Total direct GHG emissions (ten thousand tonnes of CO ₂ equivalent) ²	5,353	5,139
Scope 2 Total indirect energy GHG emissions (ten thousand tonnes of CO ₂ equivalent) ³	2,522	2,731
GHG emission intensity (tonnes of CO ₂ equivalent/tonne of production capacity per annum)	12.19	12.19
Solid waste		
<i>Non-hazardous waste⁴</i>		
Total non-hazardous waste generated (ten thousand tonnes)	898	716
Non-hazardous waste intensity (tonnes/tonne of production capacity per annum)	1.39	1.11
<i>Hazardous waste⁵</i>		
Total hazardous waste generated (ten thousand tonnes)	1,792	1,766
Hazardous waste intensity (tonnes/tonne of production capacity per annum)	2.77	2.73
Use of resources		
<i>Energy</i>		
Total energy consumption (TWh) ⁶	210	196
Energy consumption intensity (MWh/tonne of production capacity per annum)	32.54	30.32
Total electricity consumption (TWh) ⁷	88	82
Total steam consumption (ten thousand tonnes) ⁸	3,741	3,301



KEY PERFORMANCE INDICATORS	2022	2021
Environment		
<i>Water</i>		
Total water consumption (ten thousand cubic meters)	14,401	20,181
Water consumption intensity (cubic meters/tonne of production capacity per annum)	22.30	31.24
<i>Packaging materials⁹</i>		
Wood products		
Total consumption (tonnes)	2,633	3,407
Intensity (tonnes/ten thousand tonnes of finished products)	40.01	50.70
Paper products		
Total consumption (tonnes)	543	769
Intensity (tonnes/ten thousand tonnes of finished products)	8.25	11.45
Plastic products		
Total consumption (tonnes)	298	314
Intensity (tonnes/ten thousand tonnes of finished products)	4.53	4.68
Metal products		
Total consumption (tonnes)	219	159
Intensity (tonnes/ten thousand tonnes of finished products)	3.33	2.37

Notes:

1. The list of greenhouse gases of the Group includes carbon dioxide and greenhouse gases produced by refrigerants. GHG emissions are presented in carbon dioxide equivalent
2. Scope 1 included the GHG emissions involved in the consumption of stationary sources, motor vehicles and consumption of refrigerants. The emission data were calculated based on the "Land Transportation Enterprises – Greenhouse Gas Emissions Accounting Methodology and Reporting Guidelines (Trial)" published by the National Development and Reform Commission, the People's Republic of China and the method and relevant conversion factor for greenhouse gas emissions of enterprises set out in the Requirements of the Greenhouse Gas Emission Accounting and Reporting-Part 4: Aluminum Smelting Enterprises issued by the Standardization Administration of the People's Republic of China, and Appendix 2: Reporting Guidance on Environmental KPIs of the Stock Exchange.
3. Scope 2 included the GHG emissions involved in the purchased electricity. The emission data were calculated based on the average carbon dioxide emission factor of regional power grids in China published by National Development and Reform Commission, the People's Republic of China.
4. Non-hazardous wastes include: desulfurization gypsum, slag, ash, scrap carbon anode, electrolyte powder, electrolyte blocks, construction waste and waste accessories.
5. Hazardous wastes include: waste lubricants, waste denitration catalyst, coal tar, red mud, scrapped paint barrel and scrapped oil barrel.
6. The total energy consumption includes the consumption of coal and diesel oil for generating electricity and steam, natural gas for producing aluminum products, vehicle fuel consumption and purchased electricity. The emission data were calculated with reference to the "Land Transportation Enterprises – Greenhouse Gas Emissions Accounting Methodology and Reporting Guidelines (Trial)" published by the National Development and Reform Commission, the People's Republic of China and conversion factor set out in the Requirements of the Greenhouse Gas Emission Accounting and Reporting-Part 4: Aluminum Smelting Enterprises issued by the Standardization Administration of the People's Republic of China.
7. The total electricity consumption of the Group includes the self-generated electricity and purchased electricity. All self-generated electricity of the Group was for internal use.
8. All steam of the Group was self-generated, part of it was for internal use, and the rest was sold to external parties.
9. The finished products involving the consumption of packaging materials are the aluminum alloy processing product of the Group.



KEY PERFORMANCE INDICATORS	2022	2021
Social		
Employment		
<i>Number of employees (turnover rate)</i>		
Gender		
Male	39,191 (10)	35,945 (10)
Female	7,456 (8)	6,705 (10)
Age		
Below 30	8,730 (21)	7,602 (9)
30-50	33,857 (8)	31,585 (10)
Over 50	4,060 (3)	3,463 (10)
Region		
Mainland China	4,544 (10)	39,011 (10)
Indonesia	345 (4)	3,603 (9)
Guinea	26 (8)	29 (7)
Hong Kong	12 (0)	7 (14)
Type of employment		
Full-time	46,647 (10)	42,650 (10)
Part-time	0 (0)	0 (0)
<i>Average training hours of employee (Percentage of trained employees)</i>		
Gender		
Male	8 (100)	8 (100)
Female	8 (100)	8 (100)
Rank of employee		
Senior management	8 (100)	8 (74)
Middle management	8 (100)	8 (94)
Base-level management	8 (100)	8 (87)
Frontline employees	8 (100)	8 (100)



KEY PERFORMANCE INDICATORS	2022	2021	2020
Health and safety			
Number of work-related fatalities (persons)	0	0	0
Number of work injuries (persons)	0	0	0
Lost days due to work injury (days)	0	0	0

KEY PERFORMANCE INDICATORS	2022	2021
Major suppliers		
China	114	122
Others ¹	17	3

Note:

1. Other countries include Australia and Guinea

APPENDIX II: ESG REPORTING GUIDE CONTENT INDEX

ESG Aspects	General Disclosure and Key Performance Indicators (“KPI”)		Chapters/Statement
A. Environment			
A1: Emissions	General Disclosure		Promoting Green Production – Prevention and Control of Pollution
	KPI A1.1	The types of emissions and respective emissions data.	Appendix I: Summary of Key Performance Indicators
	KPI A1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions and intensity.	Appendix I: Summary of Key Performance Indicators
	KPI A1.3	Total hazardous waste produced and intensity.	Appendix I: Summary of Key Performance Indicators
	KPI A1.4	Total non-hazardous waste produced and intensity.	Appendix I: Summary of Key Performance Indicators
	KPI A1.5	Description of emissions target(s) set and steps taken to achieve them.	Promoting Green Production – Prevention and Control of Pollution, Promoting Green Production – Energy Conservation and Consumption Reduction, Promoting Green Production – Green Office, Promoting Green Production – Responding to Climate Change
	KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.	Promoting Green Production – Prevention and Control of Pollution, Promoting Green Production – Waste Management, Promoting Green Production – Green Office



ESG Aspects	General Disclosure and Key Performance Indicators ("KPI")		Chapters/Statement
A2: Use of Resources	General Disclosure		Promoting Green Production – Energy Conservation and Consumption Reduction
	KPI A2.1	Direct and/or indirect energy consumption by type in total and intensity.	Appendix I: Summary of Key Performance Indicators
	KPI A2.2	Water consumption in total and intensity.	Appendix I: Summary of Key Performance Indicators
	KPI A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them.	Promoting Green Production – Energy Conservation and Consumption Reduction, Promoting Green Production – Green Office
	KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them.	Promoting Green Production – Energy Conservation and Consumption Reduction, Promoting Green Production – Green Office
	KPI A2.5	Total packaging material used for finished products and with reference to per unit produced.	Appendix I: Summary of Key Performance Indicators
A3: The Environmental and Natural Resources	General Disclosure		Promoting Green Production
	KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	Promoting Green Production
A4: Climate Change	General Disclosure		Promoting Green Production – Responding to Climate Change
	KPI A4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	Promoting Green Production – Responding to Climate Change



ESG Aspects	General Disclosure and Key Performance Indicators (“KPI”)		Chapters/Statement
B. Social			
Employment and Labor Practices			
B1: Employment	General Disclosure		Adhering to People-Oriented Governance – Recruiting Talents, Adhering to People-Oriented Governance – Talent Cultivation, Adhering to People-Oriented Governance – Caring for Employees
	KPI B1.1	Total number of employees by gender, type of employment, age group, and region.	Appendix I: Summary of Key Performance Indicators
	KPI B1.2	Employee turnover rate by gender, age group and region.	Appendix I: Summary of Key Performance Indicators
B2: Health and Safety	General Disclosure		Occupational Health and Safety
	KPI B2.1	Over the last three years, number and rate of work-related fatalities per year.	Appendix I: Summary of Key Performance Indicators
	KPI B2.2	Lost days due to work-related injury.	Appendix I: Summary of Key Performance Indicators
	KPI B 2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored.	Occupational Health and Safety
B3: Development and Training	General Disclosure		Adhering to People-Oriented Governance – Talent Cultivation
	KPI B3.1	The percentage of employees trained by gender and employee category.	Appendix I: Summary of Key Performance Indicators
	KPI B3.2	The average training hours completed per employee by gender and employee category.	Appendix I: Summary of Key Performance Indicators
B4: Labor Standards	General Disclosure		Adhering to People-Oriented Governance – Recruiting Talents
	KPI B4.1	Description of measures to review employment practices to avoid child and forced labor.	Adhering to People-Oriented Governance – Recruiting Talents
	KPI B4.2	Description of steps taken to eliminate such practices when discovered.	Adhering to People-Oriented Governance – Recruiting Talents



ESG Aspects	General Disclosure and Key Performance Indicators (“KPI”)		Chapters/Statement
Operating practices			
B5: Supply Chain Management	General Disclosure		Pursuing Excellence in Quality – Supply Chain Management
	KPI B5.1	Number of suppliers by geographical region.	Appendix I: Summary of Key Performance Indicators
	KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored.	Pursuing Excellence in Quality – Supply Chain Management
	KPI B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	Pursuing Excellence in Quality – Supply Chain Management
	KPI B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	Pursuing Excellence in Quality – Supply Chain Management
B6: Product Responsibility	General Disclosure		Pursuing Excellence in Quality – Sales and Services, Pursuing Excellence in Quality – Privacy Protection
	KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	Pursuing Excellence in Quality – Quality Management and Innovative Research and Development
	KPI B6.2	Number of products and service-related complaints received and how they are dealt with.	Pursuing Excellence in Quality – Sales and Services
	KPI B6.3	Description of practices relating to observing and protecting intellectual property rights.	Pursuing Excellence in Quality – Sales and Services
	KPI B6.4	Description of quality assurance process and recall procedures.	Pursuing Excellence in Quality – Quality Management and Innovative Research and Development
	KPI B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored.	Pursuing Excellence in Quality – Privacy Protection



ESG Aspects	General Disclosure and Key Performance Indicators (“KPI”)		Chapters/Statement
B7: Anti-corruption	General Disclosure		Pursuing Excellence in Quality – Anti-corruption Practice
	KPI B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	Pursuing Excellence in Quality – Anti-corruption Practice
	KPI B7.2	Description of preventive measures and whistleblowing procedures, how they are implemented and monitored.	Pursuing Excellence in Quality – Anti-corruption Practice
	KPI B7.3	Description of anti-corruption training provided to directors and staff.	Pursuing Excellence in Quality – Anti-corruption Practice
Community			
B8: Community Investment	General Disclosure		Caring for Social Well-Being
	KPI B8.1	Focus areas of contribution	Caring for Social Well-Being
	KPI B8.2	Resources contributed to the focus area.	Caring for Social Well-Being



China Hongqiao Group Limited
中國宏橋集團有限公司

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