

# 2022

## Environmental, Social and Governance Report

Shandong Nanshan Aluminium Co., Ltd



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# About This Report



## Report description

This Report is the 13th Environmental, Social and Governance Report (hereinafter referred to as the Report)<sup>1</sup> issued by Shandong Nanshan Aluminium Co., Ltd., which is an annual report focusing on the management, practice and performance of the Company in respect of environment, society and governance (ESG).

## Data source and reliability assurance

The information and data disclosed in the Report are from statistical reports and official documents of the Company and have been audited by relevant departments. The Company guarantees that this Report does not involve any false records and misleading statements and will be liable for the authenticity, accuracy and integrity of the contents.

## Organisational scope of the Report

The Report is about Shandong Nanshan Aluminium Co., Ltd. and its subsidiaries. In the Report, "we", "the Company" and "Nanshan Aluminium" all refer to "Shandong Nanshan Aluminium Co., Ltd.". Unless otherwise specified, all currencies mentioned in this Report refer to RMB.

## Report preparation process

The preparation process of the Report covers establishment of work team, data collection, interviews with and questionnaire inquiry on stakeholders, framework determination, report preparation, report design, audit by department and senior management, etc.

## Report time frame

The report covers the period from January 1<sup>st</sup>, 2022 to December 31<sup>st</sup>, 2022 (hereinafter referred to as the "Report Period"), some dating back to previous years and covering the first quarter of 2023.

## Confirmation and approval

This Report was audited and approved by the Board of Directors and senior leadership of the Company on April 28, 2023.

## Basis of preparation

The Report is prepared referring to documents such as the *Guideline for the Preparation of the 'Report on Performance of Corporate Social Responsibility'* promulgated by Shanghai Stock Exchange and the *Opinions Concerning Enhancing the Social Responsibility of Listed Companies and the Promulgation of 'Guidelines of Shanghai Stock Exchange for Environmental Information Disclosure of Listed Companies'*, and it also refers and responds to evaluating indicators, such as the United Nations Sustainable Development Goals (UN SDGs), Environmental, Social and Governance Ratings initiated by Morgan Stanley Capital International (i.e., MSCI ESG Ratings), etc.

## Report acquisition

This Report is available for consulting and downloading on the Company's website: [www.600219.com.cn](http://www.600219.com.cn).

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<sup>1</sup>Nanshan Aluminium has upgraded the ESG disclosure form and scope and released the environment, society and governance (ESG) report since 2021. Since the data here include the report released before 2021 (social responsibility reports or sustainable development reports), the report released in 2022 is the 13th environment, society and governance (ESG) report released after the listing of Nanshan Aluminium.

# Address from Chairman of Board



In 2022, with the overall implementation of the "14<sup>th</sup> Five Year Plan" and successful holding of the "20<sup>th</sup> National Congress of the Communist Party of China (CPC)", China's modernisation construction has entered a new journey, which brings both opportunities and challenges to the aluminium market. As a benchmarking enterprise of aluminium processing industry, Nanshan Aluminium remains true to the original aspiration, fully implements the sustainable development concept of "creating a better future for enterprise through green manufacturing", actively responds to the United Nations Sustainable Development Goals (UN SDGs), contributes to the society with strong economic development strength and excellent environmental, social, and governance (ESG) effects and takes lead in promoting the national aluminium industry to achieve high-quality and green development.

Chairman of Board of Nanshan Aluminium

**Lu Zhengfeng**

Nanshan Aluminium sticks to the bottom line of compliance management. By adhering to the principle of openness and transparency, we continuously improve the corporate governance structure through communication with all stakeholders, deepen the enterprise ESG governance constantly and promote the industry compliance development with effective ESG information disclosure. In addition, we constantly carry out the social responsibility audit with an honest and upright attitude, steadily improve the internal risk monitoring and information security capability and ensure the sustainable development of the Company on the right way through multiple channels.

Nanshan Aluminium attaches great importance to the product quality, gives full play to the enterprise advantages of high starting point and high technology, builds a high-quality, multi-level and high-end product series matrix, and provides customers with high-quality products and services continuously. We steadily promote the quality management and control, carry out quality audits periodically and implement the principle of "quality first" in the whole cycle of enterprise production and operation. Besides, we continuously accelerate the pace of scientific research and innovation based on a clear and comprehensive intellectual property protection mechanism, design and develop new products such as 7-series recycled aviation aluminium alloy plates and transform innovation into the driving force of the enterprise development.

Nanshan Aluminium focuses on the upstream and downstream industrial chain, collaborates with all partners to forge ahead continuously and strives to achieve the goal of building a world-class aluminium processing brand. We further optimize the supplier classification, management and performance assessment mechanism, actively carry out supplier exchange activities and build a responsible supply chain from the source. Relying on excellent technical strength and rich industry experience, we participate in the formulation and revision of national and industrial standards, assist to overcome technical challenges such as crushing irregular-shaped and cross-section aluminium alloy materials in the industry, strengthen the industrial talent cultivation and promote the high-quality development of aluminium industry in China.

In addition, Nanshan Aluminium takes the responsibility in environmental protection, actively deals with climate change, formulates and updates the *Greenhouse Gas Emission Targets and Implementation Plan*, takes all measures to reduce carbon emission during production and operation, strives to achieve short/medium-term greenhouse gas emission targets,

continuously improves the energy management system and recycled aluminium recycling and comprehensive utilization system and assists for achieving "carbon peaking and carbon neutrality" goals. On the one hand, we continue to deepen the ultra-low discharge modification achievements and minimise the impact of enterprise on the ecological environment. On the other hand, we always pay attention to the impact of ecological environment on the Company and carry out annual inspections on greenhouse gas and water resource risk assessment periodically. In 2022, Nanshan Aluminium was ranked as Level "B" in CDP Climate Change Questionnaire by means of our high environmental management level.

By adhering to the principle of "people oriented", Nanshan Aluminium fully respects and guarantees the rights of all employees in equal employment and fair development. We pay high attention to the personal value of employees during enterprise development and select and retain high-quality talents through a perfect human resource management system and diversified promotion channels. We try to understand the needs of all employees, provide them with a competitive welfare system in the industry and embody the humanistic care of the enterprise in various aspects. We also stick to the production concept of "safety first", constantly optimize the double prevention system, carry out safety hazard inspections and emergency drills and build and consolidate the safety foundation of the enterprise from top to bottom.

Nanshan Aluminium keeps a commitment to residents and protects the rights and interests of indigenous residents, cultural sites and religious shrines in the whole process of production and operation. Besides, we also share the enterprise development achievements with all sectors of society, continuously carry out public welfare donations and sponsorship activities for the people in need and strive to achieve a common prosperity goal of the enterprise and communities.

The success of Nanshan Aluminium cannot be achieved without the trust and support of all stakeholders. Looking to the future, Nanshan Aluminium will continue to move forward in the harvest of honors, carry out the strategic development idea of "innovation-driven, high-end manufacturing, and intensive processing" with perseverance, accelerate the organic integration of enterprise development and operation place management, create a global high-end aluminium brand with strong innovation power and high-quality products and work together with all partners to strive for the prosperity of national aluminium industry tirelessly!

# Performance Highlights

<p>Compliance and steadiness in Governance.</p>	<p>Female directors account for <b>25%</b></p>	<p>Board meetings were held <b>8 times</b></p>	<p><b>22</b> ESG materiality issues were evaluated and selected (including 9 highly-important issues).</p>	<p>Training and assessment on business ethics and anti-corruption was completed by <b>100%</b></p>	<p>Invested about <b>RMB1,400,000</b> in the information security technology upgrade.</p>	<p>The Company passed the certification of <b>GB/T 23001 Integration of Informatisation and Industrialisation Management Systems and Class 2 classified protection evaluation.</b></p>
<p>Ingenuity quality and great responsibility</p>	<p>Supplier delivery quality audits were carried out <b>36</b> times with a <b>100%</b> pass rate</p>	<p>We passed many <b>system certifications</b>, including ISO 9001 Quality Management System, ISO/TS 22163 Railway System Quality Management System, IATF 16949 Automotive Quality Management System, AS9100 Aerospace Management System, GB/T 29490 Enterprise Intellectual Property Management System.</p>	<p>The Company is first aluminium product chain enterprise that passes "double standard" certification of <b>ASI PS performance standard and ASI CoC regulatory chain materials</b> in China.</p>	<p><b>22</b> scientific research projects were approved, in which, <b>12</b> projects have been accepted with the total subsidy funds of <b>RMB 26,200,000.</b></p>	<p>There were new invention patents <b>13</b> new utility models <b>40</b> A total of inventions <b>76</b> utility models were authorised <b>132</b></p>	<p>The comprehensive score of customer satisfaction survey was <b>95</b> points for packaging materials, <b>98.51</b> points for auto sheets and aeronautical materials and <b>97.54%</b> for civil materials.</p>
<p>Joining hands with industry partners</p>	<p>We <b>never support or use</b> the metals obtained from armed conflicts, illegal mining and poor working environment, i.e., "conflict minerals".</p>	<p>The pass rate of procurement personnel training assessment was <b>100%</b></p>	<p>The "high-performance 6xxx-series aluminium alloy sheet for auto sheets and its industrialisation" jointly declared with GRIMAT Engineering Institute Co., Ltd. <b>won the first prize of the Science and Technology Award for China's Nonferrous Metals Industry.</b></p>	<p>Nanshan Aluminium participated in revision of <b>22</b> national standards and <b>29</b> industrial standards. We acted as the main drafter of <b>1</b> national standard and <b>4</b> industrial standards.</p>	<p>We <b>served as a director and member unit</b> of China Nonferrous Metals Industry Association Aluminium Branch and other associations.</p>	
<p>Low-carbon and environment-friendly development</p>	<p>"<b>Carbon peaking and carbon neutrality</b>" goals achieving carbon peaking by <b>2030</b> carbon neutrality by <b>2050</b></p>	<p><b>Energy target:</b> the carbon emission reduction target that the comprehensive energy consumption of the unit product is <b>lower than the energy consumption quota for nonferrous industry</b></p>	<p>Longkou Nanshan Aluminum Rolling New Material Co., Ltd. and Yantai Donghai Aluminium Foil Co., Ltd. voluntarily inspected the carbon footprint of products such as can/end stock ring, packaging foil and battery foil and obtained <b>the third-party verification certificate of ISO14067 carbon footprint of products.</b></p>	<p>The certification coverage rate of ISO 50001 and ISO 14001 reached <b>87.5%</b></p>	<p>The generating capacity of operating photovoltaic projects in the park was <b>18,804,047.2 kWh</b></p>	<p>We successfully passed the certification of <b>GB/T 36132-2018 General Principles for Assessment of Green Factory.</b></p> <p>We carried out the water resource risk assessment, and <b>no</b> related high risk was found.</p> <p>We keep protecting <b>the ecological environment of the local area</b>, carry out the special risk assessment on biodiversity and actively maintain <b>the biodiversity and ecological balance.</b></p>
<p>Perseverance for goodness, peaking the mountains</p>	<p>The signing proportion of collective agreements was <b>100%</b></p>	<p>There were <b>no</b> child labor and forced labor</p>	<p>The campus recruitment covered <b>72</b> universities and colleges in China.</p>	<p>The training coverage rate of employees was <b>100%</b></p>	<p>We carried out sessions of training <b>4,481</b> with the total training time of <b>657,345 hours</b></p>	<p>We carried out the safety management by referring to the occupational health and safety management system certification (ISO 45001), and <b>100%</b> branches in China passed the Level II safety production standard certification.</p> <p>There were <b>no</b> casualty accidents in past three years.</p> <p>The work-related accident rate (serious injury and casualties) for external construction contractors was <b>0</b></p>



# 01

## About Nanshan Aluminium

Founded in 1993, Shandong Nanshan Aluminium Co., Ltd. (stock code: 600219) was successfully listed on the Shanghai Stock Exchange on December 23, 1999. From a high starting point, we built the complete aluminum processing industrial chain located in the same region, which is unique in the world and covers thermal power, alumina, electrolytic aluminium, melting & casting, aluminum profile/hot rolling-cold rolling-foil rolling/forging and scrap aluminum recovery (recycling). At present, our products cover all aluminium alloy in different fields such as aviation, shipbuilding, nuclear power, rail transit, automobiles and tanks, and most are high value-added products such as auto sheets, aviation plate and power battery foils. Relying on the advantageous aluminium industrial chain and profound corporate culture, we constantly improve the business level and promote the sustainable development of aluminium industry.

Nanshan Aluminium has been selected in the **Top 500 Chinese enterprises** for many years

In 2022, the Company was ranked

**414<sup>th</sup>**

on the list of *Fortune* China Top 500 Enterprises

# 1.1

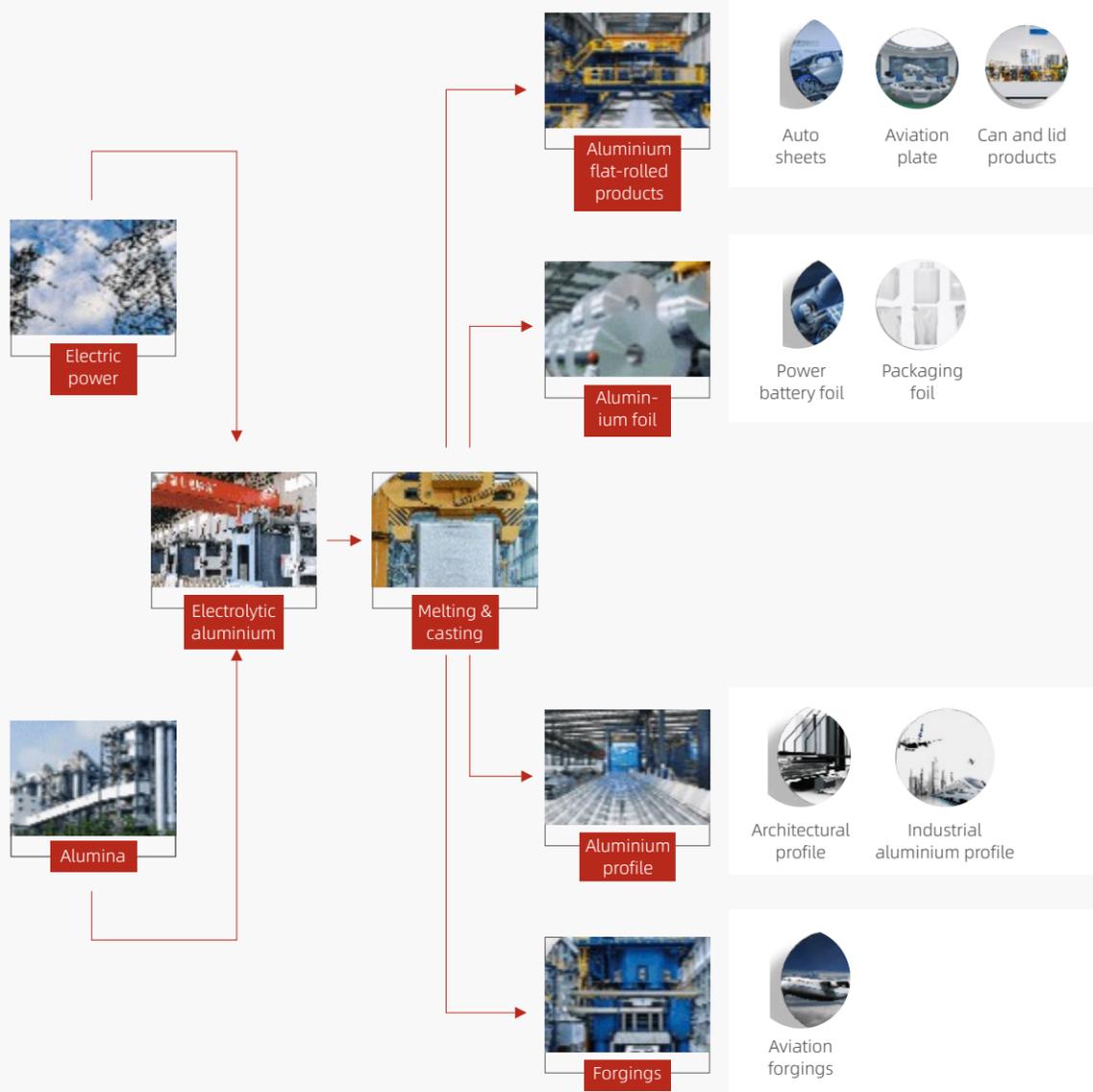
## Industry development

Nanshan Aluminium has always insisted on the development strategy of "innovation-driven, high-end manufacturing, fine and intensive processing", adhered to the Nanshan spirit of "not to do it unless do it best" and aimed to become a benchmark enterprise in China's aluminium processing industry. Since the Company was established, we have constantly improved the industrial chain, deeply engaged in aluminium processing while extending to the upstream and downstream industry, built a whole industrial chain of aluminium smelting, processing, sales and recycling dominated by aluminium processing in an area of 45km<sup>2</sup> and developed a high capability in risk resistance and cost control.



Our terminal products are widely used in many fields such as aviation plates, auto sheets, aluminium foils, tank materials, can lid materials, tank truck materials, container profiles, rail transit profiles, aviation structural members and aluminium alloy doors & windows. Our customers include aircraft manufacturers, automobile OEMs and well-known domestic and foreign new energy vehicle manufacturers, railway traffic equipment manufacturers, communication enterprises, food and beverage enterprises, etc.

### Schematic Diagram of Nanshan Aluminium Industrial Chain



### Key products of Nanshan Aluminium

#### Aluminium flat-rolled products

##### Auto sheets:

Nanshan Aluminium has become an auto sheet supplier with the fastest certification progress, the most certified manufacturers and the most complete certified alloys in China. Besides, we have increased the supply share in some leading automobile enterprises, expanding the market occupancy continuously.

##### Aviation plate:

Nanshan Aluminium has overcome the key technological difficulties of aviation aluminium profiles, concluded co-operation agreements and long-term orders with many world's leading aviation equipment manufacturers in Europe and Asia and further improved the supply level.

##### Can and lid products:

Nanshan Aluminium produces various can stocks, which makes us rank in the leading position in domestic and foreign markets and becomes the largest can stock exporter in China. The annual export volume is more than 300,000t, accounting for 5% of the total volume in the world, and we are highly praised by all users with our high metallurgical quality and formability, high compression strength, high-precision thickness and shape control and good surface quality.

#### Power battery foil:

We have established co-operation relationship with the Top 5 enterprises in China on power battery foil in new energy market and become the major supplier in high-end aluminium foil. Besides, we have explored many well-known enterprises with good future prospects in China, which further increases the high value-added product orders and effectively optimises the order structure.

#### Packaging foil:

We keep the strategic co-operation relationship with high value-added sterile package customers continuously, which achieves a year-on-year increase in sales.

#### Aluminium profile

##### Architectural profile:

We promote the co-operation with large-scale real estate companies; establish long-term co-operation relationship with large civil material customers; complete the construction of Longkou Processing Center preliminarily and support the radiation of civil materials in the market of eastern Shandong.

##### Industrial aluminium profile:

We focus on signing orders with key customers. In 2022, all goods were delivered within specified time, and the market share was increased further.

#### Aviation forgings:

Nanshan Forge has become the first company in China listed on the qualified supplier catalog of side-strut landing gear forgings among the world-famous aviation equipment manufacturers, marking a new step forward in the research and development field of aviation products and high-quality forgings.

#### Aluminium foil

#### Forgings

At present, the main production bases of Nanshan Aluminium include Donghai Thermal Power Plant, Longkou Donghai Alumina Co., Ltd., Electrolytic Aluminium Branch of Shandong Nanshan Aluminium Co., Ltd., Longkou Nanshan Aluminium Rolling New Material Co., Ltd., Nanshan Aluminium Profile Company, Medium-thick Plate Branch, Forging Branch, Technical Research Center, Alumina Project in Indonesia, etc. We have established branch companies or offices in Beijing, Tianjin, Shanghai, Shenzhen, Hainan and Hong Kong, as well as the United States, Australia, Italy, Singapore, Germany and Indonesia, ranking the top with regard to the international market occupancy, and the products are not only popular in China but also exported to many countries and regions such as Asia, America and EU.

# 1.2

## Enterprise strategy

Be harmonious and broad, and aim for the highest. Nanshan Aluminium adheres to the development strategy of "innovation-driven, high-end manufacturing, and intensive processing", takes "building the world-class high-end aluminium foundation" as the objective, develops the traditional advantageous industry steadily based on the complete industrial chain, focuses on the high value-added products such as auto sheets and aeronautical materials, constantly breaks through the monopoly of foreign technologies, strives to be a pioneer in the development of Chinese market, optimises and adjusts the product structure, forms a layout in high-end products to meet the needs of rapidly developing the aviation industry and the market of lightweight of automobile in China, further strengthens, expands and supplements the industrial chain, integrates the enterprise development into regional development strategy, and makes greater contributions to revitalise the glory and dream of national aluminium industry and promote the high-quality development of local economy.

<p><b>Auto sheets</b></p>	<p>Focus on the development state of emerging automotive manufacturers and constantly find potential customers;</p> <p>Expand the scope of automobile OEM certification for external body sheets, improve customer viscosity and increase customer confidence;</p> <p>Accelerate the market layout, focus on the expansion of domestic market share, and promote the layout in the Europe market.</p>
<p><b>Aeronautical materials</b></p>	<p>Expand the industrial chain, upgrade technologies and equipment, increase the additional value of industrial chain and constantly improve the international competitiveness of the industry relying on the raw material supply of aviation aluminium alloy;</p> <p>Promote the certification with major OEMs and increase the market share by means of geographical advantages of current aviation market transferring to the Asian area;</p> <p>Maintain co-operative relationship with COMAC continuously, improve the technology constantly and lay a good foundation for the development of national aluminium industry.</p>
<p><b>Other flat-rolled products</b></p>	<p>Stabilise and strengthen the co-operation relationship with old customers, learn about the product structure of competitors in time, and promote the development of new markets and customers;</p> <p>Promote the production of products, including battery foil, medical foil, plates for house-car, tankers, tooling and molds, and 3C electron plate, ensure the scale of production and sales, and maintain stable order volume by means of improving service, ensuring product quality, reasonable price positioning, research and development innovation, etc.</p>

Strategic Development Direction of Nanshan Aluminium

# 1.3

## Awards and Recognition

Over years of development and relentless pursuit in aluminium processing industry, Nanshan Aluminium has received many corporate honours and product recognition during the reporting period. Besides, we have made great strides forward to intelligent and green manufacturing, won the titles such as provincial digital workshop and green factory and taken the lead in high-quality and green sustainable development of national aluminium industry.

<p><b>Wind</b></p> <p>China's Top 500 Listed Companies in Market Value in 2022</p>	<p><b>China Enterprise Reform and Development Society and China Cooperative Trade Enterprises Association</b></p> <p>Chinese Enterprise Credit Ranking List in 2022</p>	<p><b>China Association for Public Companies</b></p> <p>Performance Evaluation (Level 4A) for Board Secretary of Listed Companies in 2022</p>
<p><b>China Nonferrous Metals Industry Association</b></p> <p>"A356.2 Alloy Ingot" of Nanshan Aluminium won the "Gold Cup Award" for the physical quality of nonferrous metal products in China</p>	<p><b>Department of Science &amp; Technology of Shandong Province, Shandong Provincial Department of Finance and Shandong Provincial Tax Service, State Taxation Administration</b></p> <p>Nanshan Aluminium obtained the <i>High Tech Enterprise Certificate</i></p>	<p><b>Department of Industry and Information Technology of Shandong Province</b></p> <p>"Intelligent High-end Aluminium Alloy Flat-rolled Product Workshop" of Nanshan Aluminium was selected into the Provincial Digital Workshops List and Provincial Green Factories in 2022</p>
<p><b>Department of Science &amp; Technology of Shandong Province, Information Research Institute of Shandong Academy of Sciences, and Innovation and Development Institute of Shandong Province</b></p> <p>Science and Technology Leading Enterprises of Shandong Province in 2022</p>	<p><b>Shandong Council for Brand Development</b></p> <p>Brand Value List of Key Industries of Shandong Province in 2022</p>	<p><b>Department of Industry and Information Technology of Shandong Province</b></p> <p>The first batch of excellent new material products of Shandong Province</p>
<p><b>Roadshow - China IR</b></p> <p>Capital Market Best Communication Award of 6<sup>th</sup> China IR Annual Awards</p>	<p><b>COMEIN FINANCE</b></p> <p>The Best Roadshow IR Team in 2022</p>	<p><b>TIMES MEDIA</b></p> <p>Golden Orange Award Gold Medal Innovation Secretary and High Quality Development Listed Company in 2022</p>

Performance Evaluation (Level 4A) for Board Secretary of Listed Companies

The Best Roadshow IR Team in 2022

Nanshan Aluminium obtained the *High Tech Enterprise Certificate*

The first batch of excellent new material products of Shandong Province

Awards and Recognition of Nanshan Aluminium

# 02

## Compliance and Steadiness in Governance

Nanshan Aluminium firmly believes that compliance management is the foundation for healthy and sustainable development of an enterprise. We constantly improve the corporate governance framework and working mechanism to reduce potential governance risks. We actively combat corruption and uphold integrity and promote the integrity management, continuously improve the internal control audit and reporting and complaint mechanism, as well as the risk management system, and realise the stable development of Nanshan Aluminium through reasonable governance.

# 2.1

## Corporate governance

Nanshan Aluminium strictly abides by national laws and regulations, such as the *Company Law of the People's Republic of China* and the *Securities Law of the People's Republic of China*, and guidelines and normative document requirements, such as the *Code of Corporate Governance for Listed Companies* and *Listing Rules of Shanghai Stock Exchange*. We constantly improve the corporate governance framework and further regulates the company operation. The Company has established Shareholders' Meeting, Board of Directors, Supervisory Board and Professional Committee, all governance layers and committees work in accordance with the regulations and working systems with clear rights and responsibilities. While actively expanding the global market, Nanshan Aluminium is committed to improving the governance mode and its diversity and professional level, so as to empower the Company for development.



### Board of Directors and Committee of Nanshan Aluminium

In order to improve the corporate governance framework, Nanshan Aluminium is committed to building a diverse, inclusive, professional and compliant Board of Directors and senior management talent team. With regard to the staff composition, we ensure the diversification on many aspects such as gender, age, cultural/education background, region, professional experience, skills and tenure. We continue to enrich the composition of members of the Board of Directors and strengthen the specialisation and diversity of the Board of Directors. All directors have rich industry experience and good education background. Besides, we have established the *Work System of Independent Directors* to strictly standardise the tenure of members of the Board of Directors, strengthen their independent judgment power and improve the decision-making independence of the

Board of Directors. We also deepen the understanding of the Board of Directors and management layer about ESG and other concepts by carrying out internal/external training, help them know the future development direction of the industry and improve the whole ESG governance level of the Company.

By the end of the reporting period, female members of the Board of Directors of Nanshan Aluminium account for 25%, while independent directors account for 37.5%. In 2022, the Company held 8 board meetings, with the attendance rate of directors of 100%, and 46 proposals approved after deliberation.

### Diversity of members of the Board of Directors

- ◆ Members with different professional skills and industry backgrounds are elected into the Board of Directors based on the gender, age, culture/education background, region, professional experience, skills and tenure

### Decision-making independence

- ◆ The Company strictly standardises the tenure of members of the Board of Directors. To guarantee the compliance of company operation, the re-election term of independent directors shall not exceed six years
- ◆ Besides, the Company continuously strengthens the independent judgment power of members of the Board of Directors, requires them to strictly follow the Company's regulations and minimises the impact of external factors and interest conflict on decision making



### Construction of the Board of Directors of Nanshan Aluminium

# 2.2

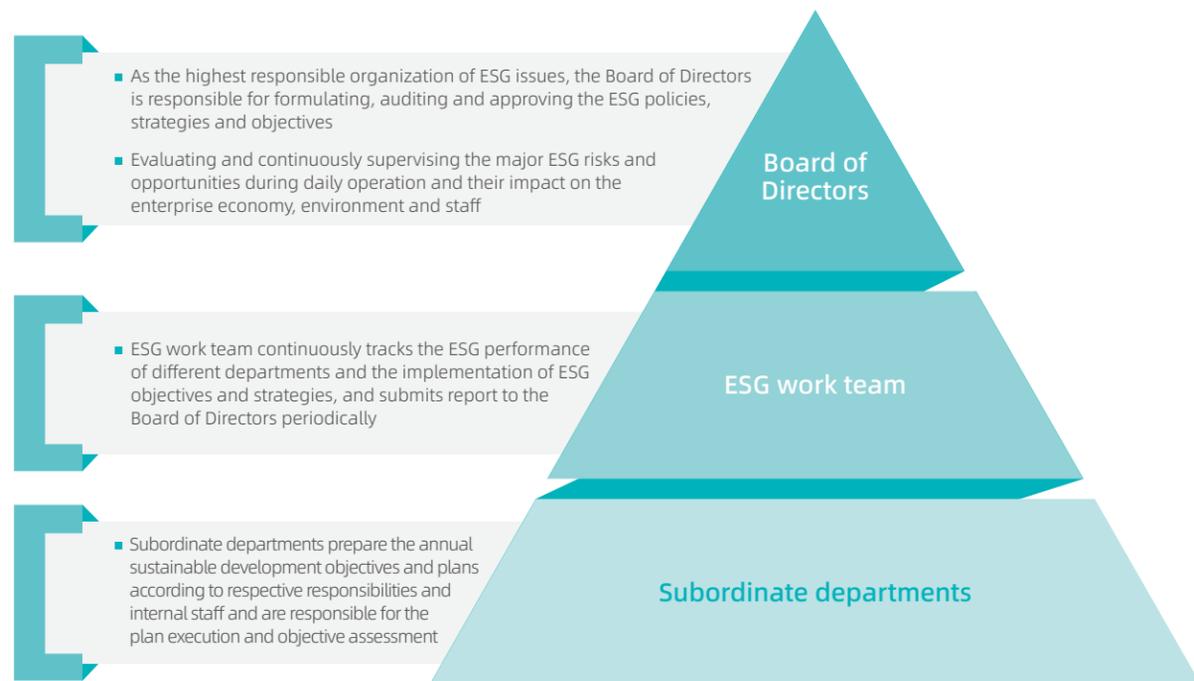
## ESG management

Nanshan Aluminium always remains true to the original aspiration, follows the national guideline of "carbon peaking and neutrality" goals, continuously deepens the ESG governance, keeps communication and exchange with all stakeholders, promotes the organic integration of the business philosophy "green, energy conservation, emission reduction and efficiency improvement" and the Company's strategy, and constantly creates sustainable values for all sections of society.

### ESG governance

Nanshan Aluminium always carries out ESG governance according to laws and regulations, establishes and continuously optimizes the ESG governance framework which takes the Board of Directors as the leadership, ESG work team as the supervisory institution and the subordinate departments as the main enforcement body, to lay an organization foundation for the compliance of ESG issues.

Besides, we organize and participate in ESG training and exchange activities periodically, strengthen the understanding of all employees on ESG concepts gradually and improve the ESG governance level of the Company constantly while grasping industry trends.



ESG Governance Framework of Nanshan Aluminium

### Communication with stakeholders

Nanshan Aluminium firmly believes that enterprise development could not be achieved without the trust and support of stakeholders. The Company establishes diversified communication channels according to the internal system of *Control Procedures for Information Exchange, Negotiation and Communication* and evaluates their effectiveness periodically, to listen and respond to the expects and needs of stakeholders and establish a close, friendly and fair co-operation relationship with them.

Stakeholders Groups	Issues of Concerns for Stakeholders	Main Communication Channels
Government/Regulators	<ul style="list-style-type: none"> <li>Compliance management</li> <li>Combat corruption and uphold integrity</li> </ul>	<ul style="list-style-type: none"> <li>Tax payment according to law</li> <li>Periodic information reporting</li> <li>Safety production</li> <li>Pollutant emission compliance</li> </ul>
Investors/Shareholders	<ul style="list-style-type: none"> <li>Business and operation situation</li> <li>Research and development technology and innovation</li> <li>Business layout and strategy plan</li> <li>Information disclosure</li> <li>Corporate governance and risk control</li> </ul>	<ul style="list-style-type: none"> <li>Hold Shareholders' Meetings</li> <li>Company investigation, roadshow/reverse roadshow</li> <li>Release regular reports and hold achievement meetings</li> <li>Investor hotline and email</li> <li>Interactive platform of Shanghai Stock Exchange</li> </ul>
Suppliers	<ul style="list-style-type: none"> <li>Fair competition</li> <li>Formulation of industrial standards</li> <li>Supply chain management</li> </ul>	<ul style="list-style-type: none"> <li>Enhance research and development capabilities</li> <li>Strengthen supply chain management and co-operation</li> <li>Participate in industry activities</li> </ul>
Customers	<ul style="list-style-type: none"> <li>Business ethics</li> <li>Product quality</li> </ul>	<ul style="list-style-type: none"> <li>Collect customer opinions</li> <li>Handle customer complaints</li> <li>Conduct customer satisfaction survey</li> </ul>
Research Institutes	<ul style="list-style-type: none"> <li>Scientific and technological innovation</li> </ul>	<ul style="list-style-type: none"> <li>Industry-university-institute co-operation</li> </ul>
Society/Public	<ul style="list-style-type: none"> <li>Social public welfare</li> <li>Community development</li> </ul>	<ul style="list-style-type: none"> <li>Maintain communication with government departments and social organisations</li> </ul>
Employees	<ul style="list-style-type: none"> <li>Employee health and safety</li> <li>Employee remuneration and benefits</li> <li>Employee development and training</li> <li>Employee working environment</li> </ul>	<ul style="list-style-type: none"> <li>Hold conferences of employee representatives</li> <li>Implement employee training</li> <li>Collect and respond to opinions and suggestions of employees</li> </ul>
Environment	<ul style="list-style-type: none"> <li>Renewable energy resources</li> <li>Energy conservation and emission reduction</li> <li>HSE management improvement</li> <li>Discharge and management of waste gas, wastewater and solid waste</li> </ul>	<ul style="list-style-type: none"> <li>Communicate with and learn from environmental protection departments and social organisations</li> <li>Exchange advanced experience at home and abroad</li> <li>Improve production process</li> </ul>

Stakeholders Groups, issues of concerns and communication channels

### Information disclosure and investor communication

By adhering to the principle of openness and transparency, Nanshan Aluminium performs the information disclosure obligations according to the internal systems such as *Management Procedures for Information Disclosure* and the principles of authenticity, accuracy, completeness, timeliness, and fairness, releases regular and temporary announcements, carries out ESG information disclosure in accordance with laws and regulations and promotes the industry development with good ESG performance.

Besides, we actively build a bridge for communicating with investors according to the market development status and internal strategic planning, to protect the legitimate rights and interests of investors, especially the small and medium-sized investors effectively. We keep good communication with investors through different channels such as the interactive platform

of Shanghai Stock Exchange, investor hotline and email, provide the latest information timely through official website and WeChat official account and organize investors to carry out online/offline investigation and exchange, analyst meeting, road-show, achievement meeting and shareholders' meeting, so that all investors can know the company operation, management and development strategies timely and comprehensively. In 2022, Nanshan Aluminium organized and participated in more than 170 online/offline activities for investors, communicated with over 500 buyer institutions and 50 seller institutions, guaranteed the timely and smooth market communication channels during the industry downturn, showed a good company image and protected the legitimate rights and interests of investors from infringement effectively.

#### Activity of "March 15 Protecting the Legitimate Rights and Interests of Investors"

In March 2022, just when the "World Consumer Rights Day" comes, Nanshan Aluminium organized a propaganda and education activity with the theme of "Comprehensive registration system, reform towards the future". The activity constantly enhanced the investment knowledge, risk prevention and self-protection awareness of investors, especially the small and medium-sized investors through website propagation, promotional material pasting and theme lecture training, which can further improve the protection idea of internal investors and create a good investment environment for investors.

During the reporting period, Nanshan Aluminium has pasted more than 200 promotional materials; and carried out 11 theme lectures, with more than 1,125 participants.



Scene photo of the theme propaganda and education activity of "March 15 Protecting the Legitimate Rights and Interests of Investors"

### ESG Materiality Issues

In 2022, Nanshan Aluminium reviewed and updated the Company's ESG materiality issues in appropriate time from two aspects such as strategy relevance and creditor importance according to the requirements of nonferrous metal industry for ESG governance, the annual business condition and the peer benchmarking results. After evaluating and selecting 22 materiality issues, an annual major issue matrix was drawn to provide guidelines and direction for achieving the Company's ESG strategic target and report disclosure.



Materiality Issue Matrix of Nanshan Aluminium in 2022

# 2.3 Integrity management

By adhering to the enterprise culture of "taking loyalty as the first, kindness as the virtue, honesty as the foundation and sincerity as the foothold", Nanshan Aluminium promises to conduct business with integrity in all business relationships and transactions and strictly prevent all activities that may have adverse effect on Company's integrity and reputation. We create and actively maintain a fair and impartial business environment to promote the development of industry integrity.

## Business ethics and anti-corruption

Creating a fair and honest business environment is one of the goals that Nanshan Aluminium is striving for. We strictly abide by the national laws and regulations such as *Company Law of the People's Republic of China*, *Anti-unfair Competition Law of the People's Republic of China* and *Anti-monopoly Law of the People's Republic of China*, and have released system procedure documents such as *Management Procedures for Labour and Business Ethics Hazards*, *Management Procedures for Enterprise Merger and Acquisition*, *Management Procedures for Clean Governance*, *Employee Handbook* and *Marketing Management System*. With regard to observing business ethics, combating corruption and upholding integrity, we stand firm and strictly standardise the *Code of Conducts* for all employees.

We firmly believe that the Company's commercial activities should be based on "fair transactions". Therefore, in order to control and manage the business ethics risks related to operation, we have defined the codes of business ethics and conducts for incorruptible procurement and operation, privacy and identity confidentiality, illegitimate income, labor rights in daily work of the company leaders and employees. We supervise the codes of business ethics and conducts for employees, and follow the principle of fair competition to maintain the benefits of the Company and shareholders effectively. Besides, we carry out the risk identification, evaluation and control of business ethics every year, and evaluate and improve the Company's performance in business ethics periodically.

Nanshan Aluminium pays high attention to the work of combating corruption and upholding integrity of the Company. We established the *Anti-corruption Policy*, which takes integrity risk identification as the

foundation and anti-corruption management mechanism improvement as the key point, strengthen the anti-corruption unwaveringly and implement the management methods effectively. We precisely define the management regulations for anti-corruption and anti-bribery and prohibit employees from accepting or providing bribery or accepting commissions and other personal interests. In addition to the anti-corruption requirement for internal employees, we also establish clear anti-corruption provisions for our suppliers, service providers and contractors. We establish a complete violation and disciplinary review system. The Company's Discipline Inspection and Supervision Committee is responsible for investigating the illegal and disciplinary incidents, dealing with the behaviours that violate national laws and regulations, company rules and regulations or damage the interests and image of the Company, prosecuting or transferring relevant personnel to judicial authorities according to the severity and timely reporting to the Chairman of Board and the Board of Directors.

We carry out educational training on business ethics periodically and require all employees to participate in the training, so as to improve their performance in business ethics effectively. Besides, we carry out propagation and training on anti-corruption in the Company actively, organise employees to participate in training activities with a theme of combating corruption and upholding integrity, publicise the anti-corruption system, assess employee performance periodically and strengthen their compliance awareness of clean employment. During the reporting period, the training and assessment completeness of our employees in business ethics and anti-corruption reached 100%.

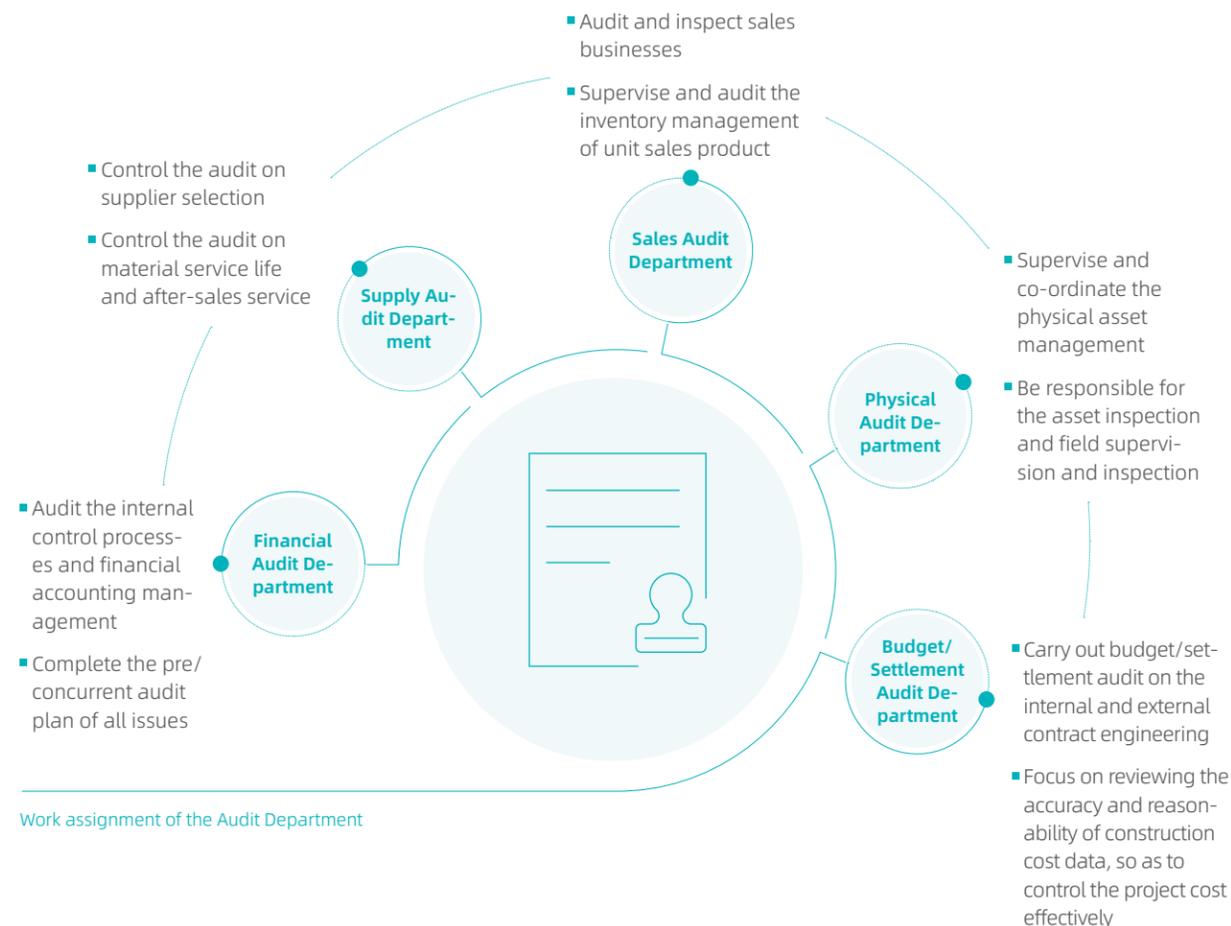
Propaganda and training objects	Main content of anti-corruption management
Board of Directors	<ul style="list-style-type: none"> <li>Directors and supervisors participated in the special training on "Cracking down Financial Fraud Strictly and Eliminating Fund Occupation Resolutely" organised by China Association for Public Companies</li> <li>Training on <i>Management Procedures for Clean Governance</i></li> </ul>
Senior management	<ul style="list-style-type: none"> <li>Training on <i>Management Procedures for Clean Governance</i></li> </ul>
Employees	<ul style="list-style-type: none"> <li>Training on <i>Management Procedures for Clean Governance</i></li> <li>Training activity with the theme of "Combating Corruption and Upholding Integrity"</li> </ul>

Responsible Business Alliance (RBA), the largest corporate social responsibility alliance in global supply chain, aims to formulate industrial standards and code of conduct in labor, health and safety, environment and ethics for the electronics industry or the industry and its supply chain companies with electronic products as the key element, so as to ensure the working environment safety, the respect and dignity to

workers and the compliance of management activities with environmental protection and ethics requirements. During the reporting period, Medium-thick Plate Branch passed RBA7.0 audit by the third-party certification agency, and there were no non-conforming items during the audit. A great achievement was made in the construction of ESG governance system.

## Internal control audit

Nanshan Aluminium strictly supervises the implementation of the Company's social responsibilities according to the internal rules of *Management System Manual* and further strengthens the internal supervision management. To improve the internal constraint mechanism, we have established the Financial Department, Supply Department, Sales Department, Physical Department and Budget/Settlement Audit Department under the Audit Department.



During the reporting period, we established an internal audit plan, broke it down for execution in every month. Simultaneously, we carried out special audits, including supply and sales audit. With regard to the supply audit, we conducted an overall inspection on the arrival materials of branches and strictly implemented the changing/refunding system for the non-conforming products; and with regard to the sales audit, we conducted the progress inspection on the annual sales tasks of Flat-Rolled Product Division and Aluminium Profile Company. We timely summarised and submitted the audit results and rectification suggestions to the Board of Directors and tracked the implementation of relevant issues till the rectifications were completed. Besides, we invited qualified third-party inspection agencies to check the purchased materials required external inspection. By the end of the reporting period, we have conducted 36 external inspections, with the pass rate of 100%.

External Inspection **36**times | External Inspection Pass Rate **100%**

## Whistleblowing and complaint mechanism

Nanshan Aluminium holds a zero-tolerance attitude towards all corruption, illegal and disciplinary violations, establishing the *Reporting Management Policy* and setting a whistleblowing complaint mechanism for all employees to find and deal with relevant issues in time. All units are required to set a suggestion box with a lock and posted with reporting

phone number/email in non-monitoring area, and realise responsibility control through self-check and self-correction. We also focus on privacy confidentiality and protection mechanisms for the whistleblowers. If a whistleblowing clue is found to be true, the whistleblower would be rewarded.



Complaint Investigation Process

# 2.4 Risk management

During the process of operation and development, Nanshan Aluminium fulfils social responsibilities and obligations earnestly, establishes a major risk monitoring and reporting mechanism and improves the risk control level continuously.

Nanshan Aluminium strictly abides by the *Listing Rules of Shanghai Stock Exchange* and other regulations, establishes the internal risk control systems such as *Control Procedures for Risks and Opportunities*, *Project Risk Management System*, *Management Method for Supplier Risk Evaluation*, *Management Method for Sales Service Risk Evaluation* and *Management Method for Product Inspection Effectiveness Risk Evaluation*, integrates the enterprise risk control and compliance management into the whole process of production, construction, operation and management, and creates a safe and reliable production and management environment for the Company. We monitor and identify potential internal/external risks by improving the risk identification process, and respond in time.. We define key internal operation risks and external macro potential risks through special audit and daily risk identification, and deal with the risks effectively. Some major risks are recorded in the annual report and please refer to the Company's Annual Report for more details.

Additionally, in terms of the exchange rate fluctuation risks in foreign trading activities, we adopt various foreign currencies such as US dollars and euros for order settlement and signing in order to maximize diversification of exchange rate fluctuation risk. For the overseas purchasing, we reduce the foreign exchange loss through the foreign currency settlement. Besides, we handle the spot settlement and sales of foreign exchange in small quantities and multiple times by means of financial companies, so as to reduce the exchange rate fluctuation effectively. We have established a special team for aluminium ingot futures and reducing the impact of future aluminium price and exchange rate fluctuation on the processing cost of export orders by locking the forward exchange rate.



Internal/external risk consideration dimension



# 2.5 Information security

Nanshan Aluminium pays high attention to information security and actively establishes the network and information security responsibility mechanism. Nanshan Aluminium strictly abides by the laws and regulations, such as *Personal Information Protection Law of the People's Republic of China* and *Interim Provisions on the Protection of Trade Secrets of Central Enterprises*. To guarantee the network information security, we have updated internal management mechanisms such as *Management System for Data Security*, *Management System for Network Configuration* and *Management System for Network Operation Monitoring* to promote the standardisation, institutionalisation and scientisation of network information security.

## Information security technology upgrade

By upgrading the information network technology, Nanshan Aluminium constantly improves the information security guarantee capability. In 2022, the Company established a network security group constituted by different units and the technicians of Information Department. The group is responsible for dealing with the safety hazards found by security induction platform, online behaviour system, penetration test and vulnerability scanning, checking the computers and business systems of intranet and extranet through remote monitoring

and field inspection, reporting the network security hazards according to laws and regulations and formulating optimisation protection strategies and vulnerability repair/interception measures. Besides, we have completed the upgrading and replacement of data center application delivery gateway and online behaviour management system, the authorisation and upgrading of bastion host, security induction platform and SIP probe unit, as well as the classified protection evaluation, with a total investment of about RMB 1,400,000.

- Launch of protective products**  
 In 2022, Nanshan Aluminium launched Mo-reSec protective products for protecting the real assets of the Company, as well as attack evidence collection and tracing.
- Antivirus software optimisation**  
 In 2022, we authorised and upgraded the version of AsiaInfo antivirus software, including the data center application delivery gateway, online behaviour management system, bastion host, security induction platform (SIP), probe unit and rule feature library.
- Safety risk vulnerability check**  
 We conducted patrol through remote monitoring and field inspection. carried out vulnerability scanning once a month and security induction every day; and reported and punished the safety risks and asked to make rectifications within specified time.
- Security induction platform upgrade**  
 We upgraded the version of security induction platform, and collected all key data to identify all potential threats and improve the response speed to events and the identification capability of advanced threats.

### Network security guarantee measures

With the joint efforts of all departments, Nanshan Aluminium has passed the certification of GB/T 23001 Integration of Informatisation and Industrialisation Management Systems by the end of the reporting period. Besides, we completed Class 2 classified protection evaluation on BPM approval system, Exchange mail system and supply chain system. In the future, we will continue to upgrade the information security products and improve the digital operation service capability and information security guarantee level.

## Information security drills and training

Nanshan Aluminium actively participates in the supervision activities on external data security, co-operates with government sectors to carry out attack-defense drills and network security inspection, and further strengthens the information security guarantee capability. In addition, we actively organise the daily network information security training, prevent the information security risks in advance and improve the network security awareness of employees effectively. During the reporting period, Nanshan Aluminium has carried out 5 network information training sessions, with the total training period of 346 hours.

- May 2022**  
 Nanshan Aluminium undertook the "Longkou network protection" attack-defense drill and simulated network attack on 18 enterprises and public institutions in the city, and successfully passed the drill at last.
- July 2022**  
 Besides, we successfully passed the "Supervision and inspection on network and data security organised by public security organs in 2022".
- December 2022**  
 We successfully passed the "data security management system and data security protection inspection" organised by the Publicity Department of the Municipal Party Committee (Internet Information Office).

Network information security inspection and simulation drills

- September 2022**  
 We issued a network security propaganda and learning notice during Yantai network security publicity week and organised all employees to watch and learn the short video of network security.

Network information security training

### Network security events and treatment

In 2022, we paid high attention to network security events after identifying the vulnerabilities of control system, held a special meeting after receiving notice and established a specialised team to check all servers and modify the complexity requirement of business system password. After modification, the security group carried out the security detection for confirmation, held a settlement meeting to re-emphasise the importance of network security, punished the responsible persons and carried out normalised self-inspection and vulnerability scanning on the Company's network.



# 03

## Ingenuity Quality and Great Responsibility

Nanshan Aluminium insists on serving all customers with high technology and quality, better service and latest products from a high starting point. We strictly control product quality through quality management and training, continuously promote the scientific research and innovation and intellectual property protection, inject vitality into the development and constantly improve the brand influence. We always consider the customer needs, improve the service quality, strengthen the information protection and create a larger value for customers with high-quality products.

# 3.1

## Product quality

The industry-leading product quality is an important competitiveness of enterprises. Nanshan Aluminium always adheres to the development concept that "quality is the life of an enterprise", strengthens the construction of quality management system, focuses on product quality certification, enhances the quality awareness of all staff and contributes to customers and the society with high-quality products.

### Quality management

Nanshan Aluminium constantly optimises own quality management system, establishes an internal system related to quality management and keeps improving the product quality with a perfect quality management mechanism. In addition, we establish a three-level quality management structure, carry out supervision and inspection on quality management orderly and lay a good foundation for improving the product quality to the industry-leading level.



Quality Management Structure

To ensure that products conform to quality standards and contract requirements, Nanshan Aluminium integrates the quality control into the whole process of production. During the reporting period, Nanshan Aluminium invited third-party agencies to carry out quality audit, supervised the quality of goods, raw materials and products and strictly controlled the product quality.



Quality Management Flow



**Third-party quality audit**

During the report period

the Audit Department organised suppliers for conducting

**36** delivery quality reviews and inspections

and

**27** batches of goods and raw materials

and

**9** batches of machine parts were checked

with the pass rate of

**100%**

So far, we have passed many quality management system certifications and organised internal/external reviews according to the annual audit plan. In 2022, we conducted 45 internal reviews and 44 external reviews on quality management system, and carried out 16 daily supervisions/inspections. Besides, we are the first responsible enterprise that has passed the dual standard certification of ASI (Aluminium Stewardship Initiative) PS and ASI CoC, and set up standards for the high-quality and sustainable development of aluminium processing industry.

In 2022

Internal quality reviews

**45**times

External quality reviews

**44**times

Daily supervisions/inspections

**16**times

Quality management system certification	Certification subject of Nanshan Aluminium
IATF 16949 Automotive Quality Management System	Flat-Rolled Product Division of Nanshan Aluminium, Yantai Donghai Aluminium Foil Co., Ltd. and Aluminium Profile Plant of Nanshan Aluminium
AS 9100 Aerospace Management System	Flat-Rolled Product Division of Nanshan Aluminium, and Aluminium Profile Plant of Nanshan Aluminium
ISO/TS 22163 Railway System Quality Management System	Aluminium Profile Plant of Nanshan Aluminium
ISO 9001 Quality Management System	Shandong Nanshan Aluminium Co., Ltd
GB/T 29490 Enterprise Intellectual Property Management System	Aluminium Profile Plant of Nanshan Aluminium, Medium-thick Plate Branch and Electrolytic Aluminium Company of Nanshan Aluminium
NADCAP special products and process certification	Aluminium Profile Company of Nanshan Aluminium

Quality System Certification



**RBA (Code of Conduct - Responsible Business Alliance) certification**

In July 2022, the Medium-thick Plate Branch of Nanshan Aluminium passed the RBA7.0 audit by a third-party certification agency designated by customers, 5 aspects including hundreds of clauses about the labor, health and safety, environment, ethics and management system were accepted. Besides, the working environment safety, the rights and interests of employees as well as the environmental protection and ethics of operation activities of the enterprise and its supply chain were also inspected. Nanshan Aluminium had no non-conforming items during the audit and was highly recognised by customers.



## Quality culture

Nanshan Aluminium enhances the quality awareness of all employees, combines quality assessment results with the employee performance in quality management assessment system, implements the guideline of "quality first", actively carries out quality training in different departments and factories, improves the quality control level of employees and creates the quality culture for all employees.

### Activities of quality management group

To constantly stimulate the enthusiasm of employees for participating in quality improvement and innovation and promote the high-quality development of Nanshan Aluminium, the Management and Control Center of Nanshan Aluminium carried out the technical breakthrough and quality management group activities in 2022, and encouraged all units to select issues according to the hotspots and difficult points in quality improvement and efficiency increase and participate in assessment of quality research achievements. After rounds of selection, the quality group determined and issued fifteen research achievements, which was a session with the largest number of participants and issued achievements in the past few years. All research were based on the solution of actual problems and committed to serving the product quality development of the Company. Nanshan Aluminium held an achievement press conference of the management group to commend outstanding researches and further create the enterprise culture of "quality first".



### Quality training in the Indonesian factory

In 2022, the Alumina Plant in Indonesia carried out quality training activities according to the training plan, such as the training on aluminum oxide scorch control, so as to greatly improve the control ability of dispatchers over the production process indicators of alumina, as well as the control level of employees on the production process and final product indicators.



# 3.2 Innovative research and development

The innovative R&D is the core driving force behind the industrial development. Nanshan Aluminium attaches great importance to and encourages scientific research and innovation inside, carries out industry-university-institute co-operation projects outside, and explores digital empowerment while constantly strengthening the intellectual property protection and training, so as to obtain the industry competitiveness with technology leadership and digital intelligence.

## Scientific research innovation

Nanshan Aluminium encourages employees to carry out and accelerate scientific research and innovation through scientific research projects in the group, industry-university-institute co-operation projects and industry upstream/downstream co-operation. During the reporting period, 22 scientific research projects of Nanshan Aluminium were approved, wherein 12 projects were accepted, with the total subsidy funds of RMB 26,200,000.

### 7-series recycled aviation aluminium alloy plate project

Nanshan Aluminium designs and develops the whole-process production line of 7-series recycled aviation aluminium alloy plates and determines the ingot homogenisation, heat treatment, rolling and aging heat treatment process. The performance of 7-series recycled aviation aluminium alloy plates meets the requirements of AMS 4050 standard.

Besides, we develop a kiloton/year recycled aviation aluminium profile demonstration project, accumulate the production data of more than 27 furnaces of 7050 recycled aviation aluminium alloy ingot (total output capacity: about 1,350t), realise the supply industrialisation of recycled aviation aluminium and supply products to more than 10 OEMs and suppliers.

#### Internal Research and Development Highlights in 2022

#### The first prize

The "high-performance 6xxx-series aluminium alloy sheet for auto sheets and its industrialisation" jointly declared by Nanshan Aluminium and GRIMAT Engineering Institute Co., Ltd. won the first prize of the Science and Technology Award for China's Nonferrous Metals Industry

#### The first prize

The project "A green smelting method for recycled aluminium alloy" jointly declared by Nanshan Aluminium, University of Science and Technology Beijing, Zhaoqing Delta Aluminium and other units won the first prize of New and Old Kinetic Energy Conversion High Value Patent Cultivation Competition

#### The first prize

The invention patent "Heat treatment method for improving natural aging stability of 6000-series aluminium alloy and aluminium alloy sheets" (patent number: ZL201710445217.7) jointly authorised by Nanshan Aluminium and Yantai Nanshan University won the first prize of Shandong Provincial Patent Award

#### Industry-university-institute Project Highlights in 2022

### Key Laboratory for Light Alloy Material Preparation and Forming of Shandong Province

Nanshan Aluminium establishes the "Key Laboratory for Light Alloy Material Preparation and Forming of Shandong Province", which takes the enterprise as the subject and the market as the orientation. We carry out basic researches on the application of light alloy materials such as aluminium alloy, magnesium alloy and titanium alloy by combining industry, university and institute together, and study the full life cycle of materials through research and development of new alloy, plastic forming and heat treatment process such as aluminium electrolysis, smelting, casting, rolling, extrusion and forging, as

well as the physical, chemical, microstructure experimental detection analysis and performance evaluation of light alloy materials.

Over years of experience in research and development and production of aluminium and aluminium alloy, Nanshan Aluminium has invested over RMB 100,000,000 in this laboratory, purchased domestic and foreign advanced experimental and testing equipment and built an advanced metal material detection platform, which can undertake more than 200 experimental/detection items.

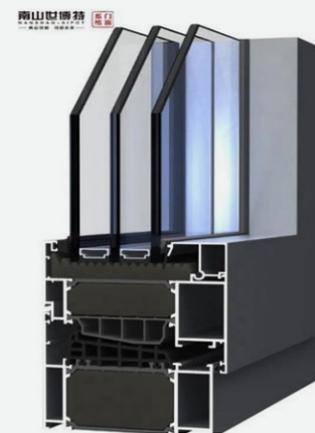
### Co-operation in demonstration project of aluminium-based lightweight transportation technology

Nanshan Aluminium co-operates with a material company to construct aluminium-based lightweight transportation project. So far, the project has completed component design, process simulation and experiment simulation, established technical prototype under industrial conditions, proposed the component design optimisation plan for processing high-performance transportation aluminium alloy materials through microstructure structure analysis, and finally confirmed the target components of industrial production.

At present, we are dealing with a pilot plan for homogenisation annealing based on experimental conditions, compare it with homogenisation annealing process and the initial morphology and evolution law of primary solidification precipitates in basic research, so as to determine the process parameters for homogenisation annealing treatment of industrial melting & casting and ingot casting. With regard to the research, we have applied four invention patents.

### Nanshan SIPOT 100-series passive window has passed a German certification

In response to the national strategy of "carbon peaking and carbon neutrality", reduce the energy consumption and improve the living environment, Nanshan SIPOT designs and develops the 100-series ultra-low energy consumption passive window independently. According to the technical standard for passive ultra-low energy consumption green buildings, the heat transfer coefficient "U" of the whole window is lower than 0.80 W/(m<sup>2</sup> · K) and successfully passes the energy conservation evaluation of German Passive Housing Research Institute. The energy conservation level is pHB, which can maximise the heat preservation, heat insulation and airtightness performance of buildings, effectively reduce the dependence on active mechanical heating or cooling system, realise high-quality living environment and assist for achieving the strategic targets of carbon peaking and neutrality.



### Preparation of national and industrial standards

In 2022, Nanshan Aluminium participated in revision of national standards

22

and

29

industrial standards

We acted as the main drafter of 1 national standard and 4 industrial standards.

In 2022, Nanshan Aluminium participated in formulating, revising and releasing national standards

10

and

2

industrial standards

including as a main drafter of 1 national standard and 1 industrial standard



### Industrial informatisation

We constantly improve informatisation management, co-ordinate procurement and production management through business process management (BPM), promote the linkage of strategy, business, technology and management by establishing informatisation and industrialisation management framework system and realise intelligent management. During the reporting period, we have made a significant progress in informatisation management in Bintan Park of Indonesia.

### Informatisation management of Indonesian factory

Indonesian park establishes 16 core functional modules such as production management, operation monitoring, equipment management, HSE management and production reporting based on production and operation, breaks through the systems such as alumina (DCS), power plant (SIS), coal gas (SIS), port (PLC), numerical control (NC) system and e-card system, integrates with the business management system such as BPM and enterprise resource planning (ERP) effectively, realises the interconnection of equipment, data and system and the accurate data sharing of systems, and breaks through the information isolated island through high-quality information transfer.

By means of IoT and real-time database, we can obtain production data automatically, generate production reporting according to the template and greatly ensure the data accuracy. Besides, we can master the production plan, equipment operation, production execution and statistics in real time through data acquisition and analysis, and realise the digital management. We also design a mobile terminal APP for data monitoring and rectification tracking to realise real-time monitoring of equipment operation data, timely patrol of equipment location and closed-loop management of equipment defects and maintenance work order.

## Intellectual property

Nanshan Aluminium attaches great importance to the application and protection of intellectual property, formulates the *Management System Manual* for intellectual property protection in accordance with the *Patent Law of the People's Republic of China*, *Anti-unfair Competition Law of the People's Republic of China*, *Norms for the Administration of Intellectual Property of Enterprises* and *Guidelines for Intellectual Property Management of Industrial Enterprises*, defines the intellectual property protection in the whole process of business co-operation, obtains GB/T 29490 Enterprise Intellectual Property Management System and passes the supervision and audit of intellectual property management system.

### Previous preparations

Supervise the intellectual property related to the market and company periodically, investigate the laws, policies and implementation of intellectual property in destination before foreign trading, know relevant industry litigation regulations, analyse possible dispute and its damage to the enterprise and formulate a preventive plan

### Contract signing

Sign written contracts for external entrusted business, make agreement on the ownership and confidentiality of intellectual property, and submit the contacts to the Legal Department for review and filing

### Process monitoring

Monitor the infringement of intellectual property during purchasing, sales, research and development or other business, report problems to the Intellectual Property Department, and entrust the Legal Department for protecting intellectual property with administrative and judicial measures

### Risk control

Formulate an emergency plan for intellectual property, investigate and analyse infringement according to the Control Procedures for Intellectual Property Information Resource Management and Retrieval, organise all departments to identify and evaluate the intellectual property risks and take risk control measures

Intellectual Property Management

## Nanshan Aluminium successfully passes the audit on intellectual property.

In November 2022, Nanshan Aluminium successfully passed the review on national intellectual property demonstration enterprises by China National Intellectual Property Administration. Since being recognised as a national intellectual property demonstration enterprise, Nanshan Aluminium has improved the intellectual property system constantly and made great contributions to the construction of intellectual property power.

In February 2022, Shandong Nanshan Aluminium Co., Ltd. successfully passed the supervision and audit on intellectual property management system organised by Zhongzhi (Beijing) Certification Co., Ltd. In this audit, the Technology Department, Purchasing Department, System Certification Department, Intellectual Property Department, Technology Management Department and General Office of Longkou Longkou Nanshan Aluminum Rolling New Material Co., Ltd.,

Medium-thick Plate Branch, Aluminium Profile Company and Electrolytic Aluminium Company were involved. The audit group reviewed the intellectual property management system of Nanshan Aluminium in current year according to GB/Enterprise Intellectual Property Management, intellectual property management system documents of the Company and existing laws, regulations and local policies. Since no non-conforming items were found, Shandong Nanshan Aluminium Co., Ltd. successfully passed the audit.

In the future, we will further deepen the strategy of developing enterprise with intellectual property, promote the construction of intellectual property system, improve the comprehensive abilities and core competitiveness, continue to create high economic and social benefits and increase power for the high-quality development of enterprise.



According to the internal system, Nanshan Aluminium encourages all employees for patent application and paper publishing and accelerate the transformation of intellectual property through cash bonus. Besides, we organise employees for special training on intellectual property, constantly improve their comprehensive abilities in application, protection and utilisation of independent intellectual property and increase the patent projects greatly in the reporting period. In 2022, Nanshan Aluminium carried out 8 internal training sessions on intellectual property, external learning and patent excavation for all employees, with a total participants of 340 people.

In 2022

Carrying out

**8**

internal raining sessions on intellectual property, external learning and patent excavation

A total participants of

**340** people

### Annual patent achievements

In 2022, Nanshan Aluminium increased

**13**

authorised invention patents

and

**40**

utility models

and a total of

**76**

inventions

and

**132**

utility models were authorised

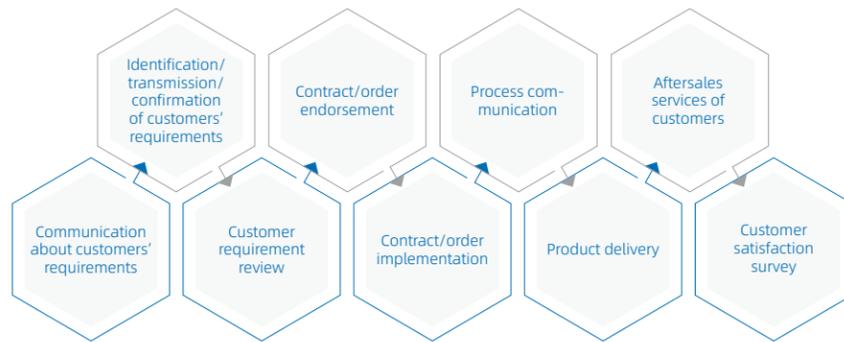
# 3.3

## Customer service

By adhering to the concept of service-oriented, Nanshan Aluminium takes the market and customers as the orientation, optimises service guarantee, implements responsible marketing, strengthens privacy protection and provides customers with all-round high-quality services.

### Quality service

Nanshan Aluminium abides by the laws and regulations such as *Law of the People's Republic of China on the Protection of Consumer Rights and Interests*, formulates the policies such as *Process Control Procedures Related to Customers*, *Control Procedures for After-sales Service*, *Control Procedures for Customer Satisfaction Measurement and Management Regulations for Product Service*, standardises the customer process and improves the customer satisfaction in the whole procedure.



Customer Service Process

### Customer communication

We standardise the customer complaint and product service procedures according to the *Management Regulations for Product Service*, respond to the after-sales service and requirements in the current day and deal with the quality objections of customers timely and properly during the purchasing and using.

During the reporting period, we strengthen the customer visiting. Our sales personnel will visit customers every month, know their production and operation status, answer and solve their problems, visit the production and technicians if necessary and solve their problems in a timely manner.

Try to know the using conditions, problems, performance of the same batch and the product performance of other suppliers by telephone, email, WeChat or field visit after receiving the customers' quality feedback or complaints

➤ Collect relevant samples and photos, and send them to the Production Department and Technology Department for investigation and analysis, determine the treatment plan through investigation and negotiation, track the secondary use condition of products on site if necessary and find the cause or solve the problems

✓ Treatment agreements are formulated after confirming solutions and send to customers after the approval. Solutions requiring for changing or refunding shall be sent to the Storage and Transportation Department for vehicle arrangement. QC and warehouse keepers recheck the weight of returned goods and make treatment according to the agreement

✓ The sales personnel report the customers' requirements such as suggestions on performance improvement, specification change and new products to the Technology Department. The Technology Department shall review the customers' requirements and arrange relevant tests after the approval. The Sales Department and Product Service Department assist in knowing the using conditions and improvement effect of products, report relevant information to the Technology Department and confirm the subsequent production mode

Customer Complaint Service Process

We pay high attention to the customer complaint management and try to solve all product and service problems wholeheartedly. With regard to complaints, the Quality Assurance Department and Sales Department visit customers' factories for technical exchange, know their requirements for product performance, timely adjust the production process parameters, carry out multiple tracking and survey and verify whether the problems are improved.

### Satisfaction survey

✓
Satisfaction survey

We conduct the customer satisfaction survey every year according to the *Control Procedures for After-sales Service*, including but not limited to the investigation on product conformity, delivery timeliness, major customer complaints and corrective measures. For the items with low satisfaction mark, we co-ordinate with relevant departments for rectifications, and track and verify whether the problems are improved.

In 2022

the comprehensive score of customer satisfaction survey was points for packaging materials

95

points for auto sheets

98.51

aeronautical materials for civil materials

97.54%

### Responsible marketing

Nanshan Aluminium establishes an orderly and high-efficiency marketing management system, optimises the annual sales policy according to the industry development trend and market situation, controls the risks and improves the marketing management system. We prepare the training plan every year and organise marketing personnel for training as planned, including the product knowledge, project management, customer management and business etiquette, so as to improve the overall quality and level of the sales team.

Nanshan Aluminium focuses on responsible marketing and

is committed to building a fair, impartial and open marketing ecology. We have formulated the *Management Procedures for Clean Governance* and *Marketing Management System* to stipulate the integrity of business personnel. All departments conduct self-inspection and self-correction, and are subject to the review of the Audit Department. During co-operation, we abide by the *Integrity Agreement* signed with customers, participate in the training of "Anti-hunting, integrity awareness and execution" and are subject to the integrity management and field audit organised by the customers' Supplier Management Department irregularly.

### Privacy protection

Nanshan Aluminium attaches great importance to the customer privacy protection, strictly abides by the laws such as *Cyber Security Law of the People's Republic of China* and *Personal Information Protection Law of the People's Republic of China*, formulates and abides by the systems such as *Implementation Rules for Trade Secret Management and Control Procedures for Production Process*, signs the *Confidentiality Agreement* with some partners during co-operation and protects the customer privacy and the rights and interests of the Company.

To further improve the privacy protection capability, Nanshan Aluminium constantly strengthens the information and network security management ability. We establish the *Management System for Data Security*, *Management System for Data Backup*, *Management System for Network Configuration*, *Management System for Network Operation Monitoring*, *Management System for Network Access* and *Management System for Application System Maintenance* and ensure the security guarantee with the information security management software.



# 04

## Joining Hands with Industry Partners

Nanshan Aluminium pays high attention to the mutually beneficial relationship with suppliers and other co-operative enterprises and aims to promote the innovative development of the industry. We strengthen the responsible supply chain management and deepen the co-operation and exchange with co-operative suppliers. We are also committed to promoting resource sharing and advantage complementarity through the win-win development of the industry and strategic co-operation of enterprises, and create a bright future for the industry with all partners hand in hand.

# 4.1

## Responsible supply chain

Building a stable and continuous responsible supply chain is a key link for Nanshan Aluminium to keep moving forward. While constantly standardising the purchasing process of raw materials, we also strengthen the sustainable development management level of supply chain, commit to establishing a fair and transparent co-operation relationship with the supply chain and make progress with all co-operative suppliers hand in hand.

### Whole process management

Nanshan Aluminium adheres to the purchasing principle of fairness, impartiality, and openness and standardises the purchasing process in strict accordance with the laws and regulations such as *Civil Code of the People's Republic of China* and *Tendering and Bidding Law of the People's Republic of China*. Besides, we formulate normative documents such as *Management Procedures for Implementation of ASI by Suppliers (Contractors and Service*

*Providers)*, communicate with all suppliers to publicise our requirements for the responsible supply chain, constrain responsibilities, rights, and interests of the Company and suppliers with rules and systems and gradually improve the sustainable development management of suppliers. We also formulate regulations for the approval, exit and evaluation of suppliers and commit to establishing a fair and transparent co-operation relationship with them.



Whole process management

## Supplier approval

Nanshan Aluminium is committed to establishing a long-term and stable co-operation relationship with suppliers, implements strict approval policies and promotes the construction of responsible supply chain. We have clear approval conditions for the suppliers and traders and carry out prequalification and field audit to confirm whether they have the ability in long-term and stable supply. To realise further standardisation, informationisation and transparency of purchasing process, we select long-term co-operative suppliers through open tendering and make a public announcement on the "official website of Nanshan Holdings" and "China Tender Website" for 7 days.



Supplier Approval Process

In 2022, we further optimised the classification of suppliers and took more reasonable measures for the classification. According to the supply amount and scale, we classify the suppliers into Class A and B and follow different tendering and approval process.

Material classification	Specified condition	Tendering and approval process
<p><b>(A)</b> Class A materials</p>	<ul style="list-style-type: none"> <li>An annual purchasing amount for single/packaging amount of more than RMB 10,000,000</li> <li>Direct manufacturer, not an agent or trader</li> <li>Qualified production equipment and process</li> <li>Complying with national laws and regulations and industrial policies</li> <li>Good financial status, no legal disputes, debt or loan</li> </ul>	<ul style="list-style-type: none"> <li>Tendering in the way of signing framework agreement, professional website guidance price fluctuation and similar material packaging</li> <li>Change of all issues should be confirmed by the leaders of corresponding units, supply company, Supply Audit Department and the Purchasing General Manager, as well as the approval of the Chairman of Board. No unit or individual has the right to change issues without authorisation</li> </ul>
<p><b>(B)</b> Class B materials</p>	<ul style="list-style-type: none"> <li>Direct manufacturer, not an agent or trader</li> <li>Qualified production equipment and process</li> <li>Complying with national laws and regulations and industrial policies</li> <li>Good financial status, no legal disputes, debt or loan</li> </ul>	<ul style="list-style-type: none"> <li>Report to the Chairman of Board for approval after the joint field audit of the Legal Department, Financial Audit Department, Centralised Purchasing Technology Department and the Supply General Manager of Nanshan Holdings</li> </ul>

Supplier Classification

To further improve the supplier management mechanism, goods with the annual supply amount of more than RMB 10,000,000 and goods and projects involving a supply unit with the annual supply amount of RMB 10,000,000 shall be filed and tabulated, and the supervision strategy and system for bulk purchasing shall be established for assessment.

To keep consistent with the sustainable development guidelines of suppliers in environmental protection, ethics, safety, health and human rights, we formulate provisions for guaranteeing the labor rights and interests of suppliers, environmental protection and occupational health and safety. We have clear requirements for the suppliers' integrity and co-ordinate with all suppliers to establish an honest and upright purchasing process. Therefore, all suppliers are required to sign integrity constraint documents such as *Sunshine Commitment Letter* and *Integrity Commitment Letter*.

### Sunshine Commitment Letter



We require all enterprises to sign the above commitment letters, including integrity, business and default commitment, so as to define the integrity and business ethics of suppliers. In case of any defaults, we have right to terminate the co-operation or transfer to judicial authorities for treatment.

## Supplier evaluation and exit

To ensure long-term and stable supply of high-quality raw materials, we establish a scoring and evaluation mechanism for evaluating the operation status of suppliers, i.e., to evaluate the product arrival time and quality acceptability every month. Besides, we incorporate the social responsibility performance of suppliers into evaluation and provide them with improvement suggestions or measures. For suppliers whose overall evaluation score is less than 60 points, we will give a warning, reduce or even terminate the co-operation with them, as the case may be. Any supplier with its score deducted by more than 30 points will be removed.

### Supplier ESG management evaluation

The Supply Department co-ordinates with the Quality Management Department and other departments of Nanshan Aluminium to carry out field audits on the "subordinate major suppliers/contractors/service providers" at least once every two years, fill in the *Field Audit Report on Suppliers/Subcontractors/Service Providers* and evaluate their social responsibility performance. In addition, we conduct field surveys on the goods arrival period and services of some new co-operative suppliers every month and provide/track the implementation of improvement measures.

## Conflict mineral management

### Commitment of Nanshan Aluminium

We never support or use the metals obtained from armed conflicts, illegal mining and poor working environment, i.e., "conflict minerals". Suppliers should investigate their products for metals such as gold (Au), tantalum (Ta), tin (Sn), tungsten (W), aluminium (Al) and identify their sources in accordance with the "OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-affected and High-risk Areas (DDG)".

We have formulated the *Management Procedures for Prohibiting the Use of Conflict Minerals* to prevent our suppliers from using conflict minerals of Democratic Republic of Congo and its adjacent areas. We also require suppliers to sign the *Commitment Letter on Not Using Conflict Minerals* and provide *Investigation Report on Conflict-free Minerals*.

## Co-operation and exchange with suppliers

We hope to establish and maintain a good co-operation relationship with excellent suppliers, expand the co-operation with them, keep active communication and exchange, encourage widely market participation and co-operation and commit to making progress with all suppliers. To keep active communication and exchange with suppliers in carrying out industry trends and strategic co-operation, we invite excellent

suppliers to participate in industrial exhibitions and annual meeting every year. Besides, we have organised 24 training sessions and 12 examinations for all purchasing personnel, with the total training time of 48 hours. The trained purchasing personnel communicating with suppliers can publicise our rules and systems to the suppliers regularly and be helpful for solving their problems during working.

Purchasing Personnel Training Rate

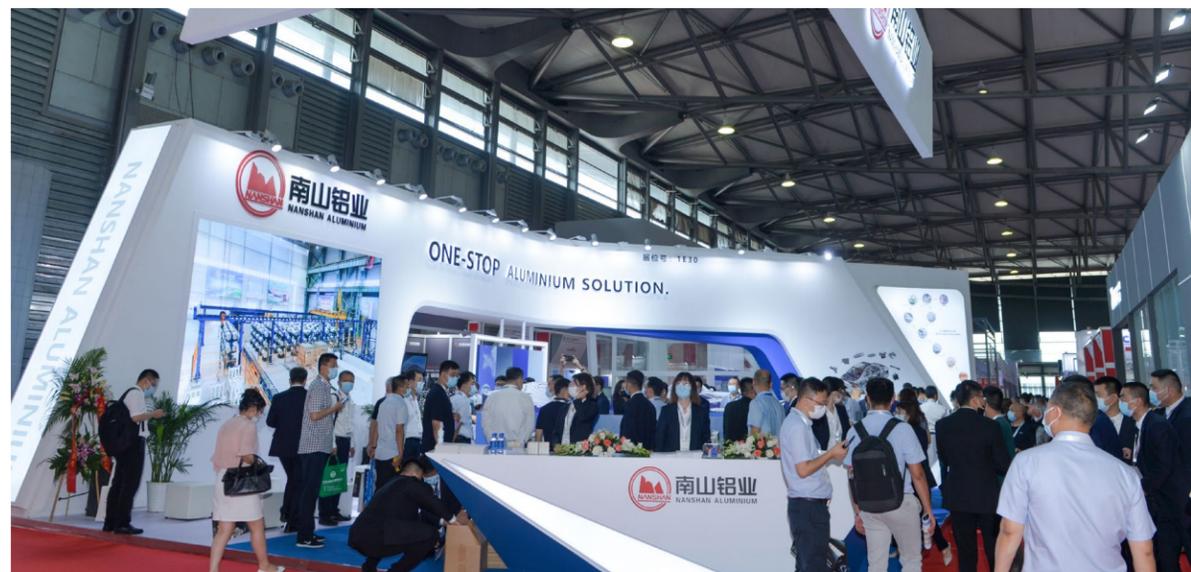
100%

Purchasing Personnel Training Times

24 Times

Purchasing Personnel Training Hours

48 hours



# 4.2

## Making progress together

By actively following the concept of "making progress together", Nanshan Aluminium is committed to co-operating with the government, enterprises and universities to promote industry construction and development through co-construction and sharing and achieve win-win results in expanding co-operation with all sectors of society.

## Win-win development of the industry

Nanshan Aluminium actively participates in activities organised by different industry associations and engaged in internal construction, strives to build a bridge for internal and external co-operation and promotes the implementation of substantive achievements of industry associations, as well as the industry development and innovation. So far, we have been serving as the director and member unit in many industry associations such as China Nonferrous Metals Industry Association, and made great contributions to assist the technology development of all associations and the whole aluminium industry.

Name of industry association	Role
China Nonferrous Metals Industry Association	Vice President Unit
China Nonferrous Metals Fabrication Industry Association	Vice Director-General Unit
Shandong Advanced Materials Industry Association	Vice President Unit
Shandong Aluminium Industry Association	Vice President Unit

### Association entry of Nanshan Aluminium (Partial)

Besides, as a technological champion and pioneer of aluminium industry, we actively participate in the formulation of industrial standards. By the end of the reporting period, we have formulated or revised 10 national standards and 2 industrial standards, including as a main drafter of 1 national standard and 1 industrial standard.

### Outstanding achievement: the standard drafted by Nanshan Aluminium was rewarded

The national standard *Aluminium and Aluminium Alloy Terms and Definitions - Part 4: Aluminium Scrap* that we dominated in drafting won the first prize of the "Excellent Technical Standards Award" in the field of nonferrous metals, the industrial standard *Alloy Wires Used for the Grain Refiner for Aluminium and Aluminium Alloys - Part 1: Al-Ti-B Wires* that we participated in drafting won the second prize, and the national standard *Test Method for Determining Susceptibility to Stress Corrosion Cracking of Aluminium Alloys*, *The Norm of Energy Consumption per Unit Product of Electrolytic Aluminium and Alumina* and the industrial standard *Prebaked Anode for Aluminium Electrolysis* won the third prize.

**Highlight activity: promote the industry progress through university-enterprise co-operation**

On March 4, 2022, Alumina Branch of Nanshan Aluminium in Bintan, Indonesia held a university-enterprise co-operation forum in the way of network video. The parties expanded respective ideas extensively to strengthen the university-enterprise co-operation and talent cultivation. Nanshan Aluminium solemnly promised to insist on the strategy of "strengthening the enterprise with talents", actively carry out the talent con-

cept of "possessing intelligence and virtue, appointing people on their merits, designating assignment according to competence and giving full scope to the talents", keep consistency in the development direction and target with co-operative schools, i.e., to strengthen the talent cultivation, create more job opportunities for students, promote educational development and jointly fulfil the social responsibility with all universities.



Symposium on University-enterprise Co-operation and Exchange with Batam State Polytechnic

**Highlight activity: Nanshan Aluminium made a stage pose on ALUMINIUM CHINA-South China**

On August 10, 2022, Nanshan Aluminium appeared at South China International Aluminum Industry Exhibition with the latest products, showed research and development achievements in the lightweight of automobile and new energy and received a widespread attention from industry peers and co-operative customers. During the exhibition, many

industry insiders visited and exchanged ideas at the Exhibition Hall of Nanshan Aluminium, fully knew the product specifications, varieties and research and development innovation capability through the advertising videos, sample exhibitions and negotiations, which lays a good foundation for subsequent order placement and project co-operation.



**Enterprise co-operation**

While constantly improving the independent innovation capability, we also actively promote the co-operation with many enterprises, universities and institutes, explore the future development direction and potential benefits of the whole industry and promote the industrial sustainable development, which fully reflects the mission and responsibility of Nanshan Aluminium as an excellent representative of the industry. In addition, we expand the upstream and downstream communication channels of the industry, accelerate technical co-operation and innovation of enterprises, constantly improve the industry knowledge sharing platform and collaborate with industry partners on the path of green innovation and development.

Project name	Co-operative unit	Achievement
High-performance 6xxx-series aluminium alloy sheet for auto sheets and its industrialisation	GRIMAT Engineering Institute Co., Ltd.	Won the first prize of Science and Technology Award for China's Nonferrous Metals Industry
A green smelting method for recycled aluminium alloy	University of Science and Technology Beijing, Zhaoqing Delta Aluminium, etc.	Won the first prize of New and Old Kinetic Energy Conversion High Value Patent Cultivation Competition
Heat treatment method for improving natural aging stability of 6000-series aluminium alloy and aluminium alloy sheets	Yantai Nanshan University	Won the first prize of Shandong Provincial Patent Award

**Highlight co-operation with aviation industry: Nanshan Aluminium further expands the batch supply of C919 aviation plates**

Nanshan Aluminium has supplied materials in batches for COMA C919, and the Company's aviation plates will be further expanded by the increasing market scale of homemade large aircrafts. So far, Nanshan Aluminium has passed the certification of 2- and 7-series alloy plates and sheets which are mainly used for fuselage frame, partition, wing sheet/beam/rib, wherein the 7-series aluminium alloy plates have been applied to C919 and ARJ21.

**Highlight co-operation with railway transportation**

Nanshan Aluminium has developed and supplied dozens of cross sections for Jakarta-Bandung High-speed Railway in Indonesia, and most materials are profiled bars with large cross section, multiple cavities and different thickness. We have tackled many key and difficulty problems based on our rich experience, advantages and industry-leading technologies, and mastered the core technology for extrusion of aluminium alloy profiles with irregular cross-sections.



Trial operation of Jakarta-Bandung High-speed Railway

# 05

## Low-carbon and Environment-friendly Development

Nanshan Aluminium adheres to the sustainable development concept of "creating bright future of enterprise through green manufacturing" and continuously carries out the sustainable development path. We constantly strengthen the energy and environmental management system, and integrate energy conservation, emission reduction, resource recycling and biodiversity protection into all links of production and operation. Besides, we continue to focus on the cutting-edge technology of carbon reduction, promote energy conservation and carbon reduction comprehensively, accelerate the construction of low carbon recycling system, assist for the green and low-carbon transformation of aluminium processing industrial chain and fulfil the social responsibility of an industry-leading enterprise.

# 5.1

## Dealing with climate change

At present, the low-carbon transformation has become a necessary path for the manufacturing industry to achieve sustainable development and transformation. As a key enterprise of carbon emission in the industry, Nanshan Aluminium attaches great importance to low carbon production, commit to reducing the greenhouse gas emission during production and strives to alleviate the adverse effect of company operation on climate. Besides, we implement energy and greenhouse gas management, promote the use of renewable energy resources and energy conservation technology transformation, and actively deal with climate change.

### Risk management

Since the climate change is one of the decisive challenges in the 21<sup>st</sup> century, Nanshan Aluminium pays high attention to the risks caused by climate change. As a world-leading complete aluminium processing industrial chain enterprise, Nanshan Aluminium actively responds to the *Paris Agreement* and *National Climate Change Adaptation Strategy* of Chinese government, and takes lead in promoting China's nonferrous metal industry to realise high-quality and green development.

In 2022, we identified and assessed the risk issues of climate change, took countermeasures during daily production and operation and continuously improved our risk control level on climate change. During the reporting period, Nanshan Aluminium participated in the questionnaire on CDP climate change, conducted self-evaluation on potential carbon emission risks and opportunities, promoted and formulated effective carbon strategy, created the development direction of green, low-carbon and sustainable operation and management and rated as "B" ("management level"), which represents that Nanshan Aluminium has formed a complete climate change governance

framework, risk management methods and emission reduction initiatives. Through the questionnaire on CDP climate, Nanshan Aluminium establishes a good corporate image and enhances the competitiveness in the industry.



The CDP score of Nanshan Aluminium is higher than the average level of global metal processing industry.

In 2022, we updated the *Greenhouse Gas Emission Targets and Implementation Plan*,<sup>2</sup> including the short and medium-term emission target plan of greenhouse gas of unit product and emission reduction measures.<sup>3</sup>

#### "Carbon peaking and carbon neutrality" goals

- ▲ Carbon peaking by 2030
- ▲ Carbon neutrality by 2050

#### Energy target

- ▲ Overall energy consumption of the unit product < energy consumption quota for nonferrous industry

#### Carbon emission reduction target of Nanshan Aluminium

For the carbon footprint of electrolytic aluminium products, please refer to *Greenhouse Gas Emission Targets and Implementation Plan* on the official website of Nanshan Aluminium.

<sup>2</sup> [http://www.600219.com.cn/static/admin/upload/file/20230309/20230309163136\\_76008.pdf](http://www.600219.com.cn/static/admin/upload/file/20230309/20230309163136_76008.pdf)

<sup>3</sup> Disclosure boundary of greenhouse gas emission data: 600,000t/year alumina production line, 480,000t/year electrolytic aluminium production line, 450,000t/year aluminium alloy slab ingot production line, 200,000t/year aluminium alloy flat-rolled product production line, 750,000t/year hot rolling production line, 600,000t/year aluminium alloy flat-rolled product production line and 40,000t/year high-precision aluminium and aluminium alloy foil production line of Shandong Nanshan Aluminium Co., Ltd.

As a member of Aluminum Stewardship Initiative (ASI), Nanshan Aluminium constantly optimises the carbon emission management structure by establishing a clear carbon reduction target and continuously implementing the practices of carbon neutrality. We established a working group of greenhouse gas reduction on March 7, 2022, with the General Manager as the group leader, the General Managers of branches as the deputy group leaders and the responsible persons in charge of carbon inspection of branches as the members, so as to promote the carbon emission management continuously and effectively.

In 2022, in order to standardise the Company's greenhouse gas management requirements, Nanshan Aluminium carried out internal carbon emission inspection, scientific statistics and evaluation, and established and implemented the *Management System for Greenhouse Gas Inspection*. Besides, Nanshan Aluminium carries out the greenhouse gas inspection of previous year annually and issues related reports, so as to ensure the effective implementation of overall greenhouse gas plan and emission/carbon reduction mechanism through data check and tracking verification mechanism. In 2022, the greenhouse gas emissions of unit product of branches of Nanshan Aluminium achieved the emission reduction target. The details are as follows:

Branch	Expected carbon emission target in 2022 ≤ (tCO <sub>2</sub> e/t product)	Actual performance in 2022 (tCO <sub>2</sub> e/t product)	Completion progress
Longkou Donghai Alumina Co., Ltd.	2.23	2.22	Completed
Electrolytic Aluminium Company	17.19	17.19	Completed
Longkou Nanshan Aluminum Rolling New Material Co., Ltd.	0.61	0.57	Completed
Medium-thick Plate Branch	1.095	1.092	Completed
Yantai Donghai Aluminum Foil Co., Ltd.,	1.31	1.25	Completed

During the reporting period, we invited third-party agencies to check the carbon emission of Nanshan Aluminium, and Shandong Nanshan Aluminium Co., Ltd. has successfully passed the audit and certification of ISO 14064 greenhouse gas emission standard. In addition, we designed and implemented a standard greenhouse gas inventory template according to ISO 14064 standard and supervise the emission source, energy consumption data and emission load in each quarter, so as to ensure the accuracy of emission data. The audit scope of ISO 14064 includes:



### Inspection of carbon footprint of products

Under the background of global carbon emission reduction trend and the China's policy "carbon peaking and carbon neutrality", Nanshan Aluminium actively responds to the carbon reduction requirements for the upstream and downstream supply chain in accordance with the greenhouse gas emission reduction requirements of foreign customers, formulates the gradual reduction target and measures of carbon emission based on the third-party product verification report and focuses on building the key links of low-carbon aluminium metal supply chain. In the reporting period, Longkou Nanshan Aluminum Rolling New Material Co., Ltd. and Yantai Donghai Aluminium Foil Co., Ltd. voluntarily inspected the carbon footprint of products such as can/end stock ring, packaging foil and battery foil and obtained the third-party verification certificate of ISO14067 carbon footprint of products.



ISO 14067 Carbon Footprint Verification Statement

See the table below for details of the greenhouse gas emission of Nanshan Aluminium during the report period:

Emission indicators	Unit	2021 Data <sup>4</sup>	2022 Data <sup>5</sup>
<b>Greenhouse gas emission indicators (aluminium products)</b>			
Total greenhouse gas emission (scope 1 + scope 2)	t CO <sub>2</sub> -eq	13,057,121	9,630,182
Greenhouse gas emission (scope 1)	t CO <sub>2</sub> -eq	2,118,741	1,504,469
Greenhouse gas emission (scope 2)	t CO <sub>2</sub> -eq	10,938,379	8,125,713
<b>Carbon emission intensity<sup>6</sup></b>			
Longkou Donghai Alumina Co., Ltd.	t CO <sub>2</sub> -eq/t product	0.55	2.22
Longkou Nanshan Aluminum Rolling New Material Co., Ltd.	t CO <sub>2</sub> -eq/t product	0.52	0.57
Medium-thick Plate Branch	t CO <sub>2</sub> -eq/t product	0.58	1.09
Electrolytic Aluminium Branch of Shandong Nanshan Aluminium Co., Ltd.	t CO <sub>2</sub> -eq/t product	13.24	17.19
Yantai Donghai Aluminum Foil Co., Ltd. of Nanshan Aluminium	t CO <sub>2</sub> -eq/t product	/	1.25
<b>Greenhouse gas emission indicator (electric power)</b>			
Total greenhouse gas emission of electric power	t CO <sub>2</sub> -eq	/	10,099,361
<b>Greenhouse gas emission indicators (overseas factories)</b>			
<b>Total greenhouse gas emission</b>			
American factory	t CO <sub>2</sub> -eq	/	41,088
Indonesian factory	t CO <sub>2</sub> -eq	/	769,070
<b>Carbon emission intensity</b>			
American factory	t CO <sub>2</sub> -eq/t product	0.45	0.45
Indonesian factory	t CO <sub>2</sub> -eq/t product	/	0.66

## Low carbon production

Nonferrous metal smelting is one of the key control industry of carbon emission. Nanshan Aluminium publishes the enterprise standard documents such as *Greenhouse Gas Emission Targets and Implementation Plan* and *Management Procedures for Accounting of Greenhouse Gas*, and proposes the short/medium-term emission reduction path of greenhouse gas. We take carbon reduction measures during production and operation through electric power decarbonisation, direct emission reduction and recycling, so as to achieve the short/medium-term emission goals of greenhouse gas.

<sup>4</sup> In order to improve the disclosed granularity data of greenhouse gas, we revised the data of 2021 in ESG report of 2022. In 2021, the data scope of greenhouse gas emission indicators (aluminium products) involved Nanshan Electrolytic Aluminium Factory (Phase IV), Longkou Donghai Alumina Co., Ltd. (Phase I Low temperature line), Longkou Nanshan Aluminum Rolling New Material Co., Ltd., Yantai Donghai Aluminium Foil Co., Ltd., Medium-thick Plate Branch of Shandong Nanshan Aluminium Co., Ltd. and Aluminium Profile Plant (Aviation Product Division). In 2021, the greenhouse gas emission indicators of electric power industry and overseas factories were listed separately. Since Indonesian factory was just put into operation at that time, there were no statistic data about it.

<sup>5</sup> In 2022, the data scope of greenhouse gas emission indicators (aluminium products) involved Nanshan Electrolytic Aluminium Factory (Phase IV), Longkou Donghai Alumina Co., Ltd., Longkou Nanshan Aluminum Rolling New Material Co., Ltd., Yantai Donghai Aluminium Foil Co., Ltd., and Medium-thick Plate Branch of Shandong Nanshan Aluminium Co., Ltd. In 2022, the greenhouse gas emission indicators of electric power industry and overseas factory were listed separately.

<sup>6</sup> Since the calculation boundary and audit scope of carbon emission intensity in 2022 was changed compared to 2021, the emission intensity in 2022 was higher than that in 2021.

## Direct emission reduction

Nanshan Aluminium has realised that high-efficiency energy management is an important link for achieving carbon targets. We strictly abide by the laws and regulations such as *Energy Conservation Law of the People's Republic of China*, establish an energy management structure with clear hierarchy and responsibilities, and actively explore the new technologies, equipment, materials and process of energy management based on high-efficiency energy management system.

Since 2014, Nanshan Aluminium has established and implemented an energy management system and a three-level document management system constituted by the energy management manual, procedure documents and management system documents. In 2022, Nanshan Aluminium optimised the system further based on the previous energy management structure. We establish the Production & Operation Co-ordination Department to manage and supervise the energy conservation work of subordinate units, implement the energy management decisions and check the implementation situation of energy conservation measures.

Nanshan Aluminium combines the management theories and skills with practical operation through systematic training on carbon reduction and environmental protection, and conveys the sustainable development concept and green low-carbon working method to all employees. During the reporting period, we carried out more than 90 training sessions on energy conservation and emission reduction according to the annual training plan, including energy management system, energy conservation awareness and energy conservation management.

Nanshan Aluminium positively fulfils obligations in energy conservation and emission reduction. In our continuing efforts, many factories have passed the ISO 50001 energy management system certification, including the production and energy management activities organised in the core production and operation places such as Alumina Company, Electrolytic Aluminium Company, Medium-thick Plate Branch, Longkou Nanshan Aluminium Rolling New Material Co., Ltd., Donghai Aluminium Foil Co., Ltd. and Aluminium Profile Plant. In the future, we will continue to improve the coverage of energy management system and implement the advanced measures for energy conservation and emission reduction in more operation places.



Energy Management Structure

Coverage rate of ISO 50001 certification

# 87.5%

ISO 50001 Energy Management System Certification

## Electrolytic Aluminium Company carried out the energy conservation transformation of electrolytic cells

Electrolytic Aluminium Company is a pillar industry of Nanshan Aluminium. It has two factory areas (Nanshan and Donghai) and two electrolytic aluminium factories, with 676 300KA and 400KA electrolytic cells.

Since 2021, Electrolytic Aluminium Company has started digital and intelligent transformation on electrolytic cell control system, and upgraded crust breaking cylinders into intelligent energy-conservation crust breaking cylinders. Through digital and intelligent transformation of electrolytic cell control system, it is estimated that the integrated AC power consumption of aluminium liquid in 2023 will be reduced by more than 40kWh/t.Al than that in 2022, the electricity consumption could be reduced by 19,000,000kWh/year, and carbon emission can be reduced by 15,500t.

Besides, Electrolytic Aluminium Company also co-operates with Northeastern University Engineering & Research Institute to develop the energy-conservation lined structure electrolytic cells, and

reduces the integrated energy consumption and greenhouse gas emission by upgrading electrolytic cells. So far, the first trial cell has been put into operation in November 2022, 4 electrolytic cells were replaced in 2022, and 70 energy-conservation cells will be replaced by 2023. After replacing electrolytic cells, the integrated AC power consumption of aluminium liquid was reduced by more than 200kWh/t.Al compared with that in 2022. The electricity consumption can be reduced by 94,000,000kWh/year, and the carbon emission can be reduced by 77,000t.



## Energy conservation technology transformation of Donghai Thermal Power Plant

We transformed the frequency converter of No.3 unit forced draft fan of Donghai Thermal Power Plant. We increased frequency converter loops based on the power frequency operation of original forced draft fan (for backup). The project was started from May 2022 and completed and put into operation in August. The project investment is RMB 2,400,000, and the electricity consumption can be reduced by 2,127,000kWh/year.



The energy conservation technology transformation for improving the disturbance of No.5 unit gas desulfurisation system (absorber slurry deflection devices are arranged on the inlet filter screens of No.1-No.4 circulating pump) can solve the problems such as low output of circulating pump and poor desulfurisation efficiency due to the serious blocking of inlet filter screen caused by the solidification and deposit of desulfurisation slurry. The project was demonstrated in October 2021 and put into operation in May 2022. It reduces the slurry solidification and deposit and screen blocking remarkably, increases the output of circulating pump, solves the problem of high auxiliary power ratio and saves the electricity by about 3,050,000kWh/year.



## Electric power decarbonisation

Electric power is a main energy type for manufacturing aluminium products. We mainly promote the electric power decarbonisation of Nanshan Aluminium through green electric power procurement and renewable energy power generation.

### Green electric power procurement

Nanshan Aluminium takes the energy structure improvement as the starting point, calculates the power requirement during production according to the customers' carbon reduction targets and requirements, actively consumes the renewable energy resources through green electric power transaction and green electric power certificate purchasing and realises replacement of thermal power. During the reporting period, Nanshan Aluminium has purchased 30,000,000kWh green electricity certificate and co-ordinated for peak regulation during the Spring Festival and in the daily period.

### Renewable energy power generation

In 2022, we constructed photovoltaic power generation projects in different factories and improved the energy structure remarkably through clean energy. During the reporting period, an electricity of 18,804,047.2kWh has been consumed from the operating photovoltaic projects.

The construction situation of photovoltaic projects is shown as below:



### Recycling

Nanshan Aluminium continuously improves the recycling and comprehensive utilisation system of recycled aluminium and has built an aluminium scrap recovery project with the annual output of 100,000t to strengthen the cyclic utilisation of recycled aluminium. Besides, we co-ordinate with customers to implement aluminium closed-loop project according to the product process plan, increase the use of industrial waste and reduce the use of electrolytic aluminium water/remelting ingot, as well as the carbon emission of industrial chain.

Waste heat recovery and utilisation is an important way to save and utilise energy efficiently in aluminium smelting and processing industry. Nanshan Aluminium implements low-temperature recovery and utilisation of waste heat during aluminium smelting.

By utilising the cascade recovery of waste heat from alumina calcination furnace, we can save about

**10,000<sub>t</sub>**

of steam every year

By utilising the waste steam of high-pressure unit in alumina settlement workshops, we can save

**8,000<sub>t</sub>**

of steam every year

And by using waste heat steam boilers in the calcination process, we can save about

**70,000<sub>t</sub>**

of steam every year

During the reporting period, the energy consumption indicators of Nanshan Aluminium are described in the following table:

Energy consumption situation			
Energy consumption indicator	Unit	2021 Data	2022 Data <sup>7</sup>
Indirect energy consumption			
Purchased electric power	kWh	2,048,287,783	4,884,915,500 <sup>8</sup>
Purchased steam	t	/	/
Direct energy consumption			
Diesel	t	4,309	3,699
Raw coal	t	6,564,588	5,167,786
Natural gas	10,000m <sup>3</sup>	31,743	31,162
Comprehensive energy consumption	Ton of standard coal	5,301,002	4,183,717
Purchasing of green electric power energy	kWh	/	30,000,000
Self-generation and self-utilisation of solar electric power energy	kWh	/	18,804,047

<sup>7</sup> Data scope covers some major production factories in China (Donghai Thermal Power Plant, Nanshan Electrolytic Aluminium Factory, Nanshan Aluminium Profile Plant, Longkou Donghai Alumina Co., Ltd., Longkou Nanshan Aluminum Rolling New Material Co., Ltd., Yantai Donghai Aluminium Foil Co., Ltd., Yantai Nanshan Aluminium New Material Company and Medium-thick Plate Branch of Shandong Nanshan Aluminium Co., Ltd.).

<sup>8</sup> Due to the shutdown of a unit in Donghai Thermal Power Plant in 2022, the consumption of diesel oil and raw coal was reduced, while the purchasing electric power was increased.

# 5.2

## Environmental impact

Under the theme of "establishing an ecological civilisation system and promoting green and sustainable economic and social development", Nanshan Aluminium carries out the ecological environmental protection concept, fulfils responsibility in ecological environmental protection according to the guidelines of building resource-saving enterprise, promotes clean production and circular economy and regards "green" as the main theme of industrial development. In 2022, we continued to define the environmental objectives, improved the environmental management system and structure, optimised the manufacturing process in production links and reduced pollutant emission from the source.

### Short-term goals

Realising lightweight and recycling of solid waste at the branches of Nanshan Aluminium by treating solid waste properly

### Medium and long-term goals

While achieving the short-term goals, realising the ultra-low discharge of waste gas and "zero emission and full recycling" of wastewater at most branches of Nanshan Aluminium by fully upgrade and transform the environmental protection facilities for wastewater and gas

Environmental management target of Nanshan Aluminium

### Environmental management

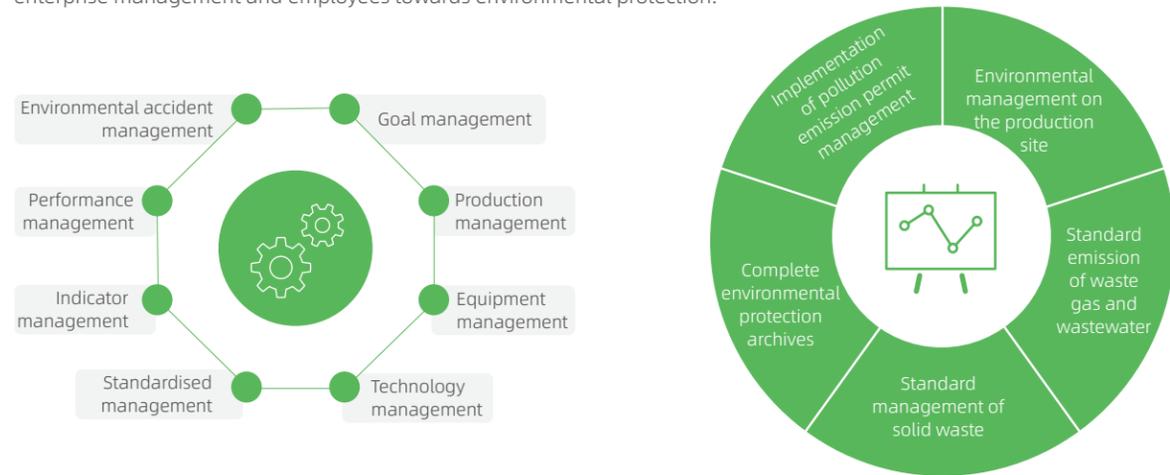
Nanshan Aluminium strictly abides by the national laws and regulations on ecological environmental protection such as *Environmental Protection Law of the People's Republic of China*, *Environmental Impact Assessment Law of the People's Republic of China* and *Regulations on Administration of Construction Project Environmental Protection*. For overseas operation places, we strictly abide by the laws and

regulations of the United States and Indonesia, as well as local environmental regulatory requirements, implement the *Management Methods for Environmental Protection of Nanshan Holdings*, and strictly fulfil our responsibility in the environmental protection. During the reporting period, Nanshan Aluminium has no environmental protection accidents, violations or punishment.



## Management system

The *Management Methods for Environmental Protection of Nanshan Holdings* systematically defines the environmental objectives, key work, functional division and assessment mechanism of the Company. We attach great importance to the steady realisation of short, medium and long-term environmental protection goals, focus on eight categories of management and five assessment indicators, and check and evaluate all subordinate enterprises periodically. We closely associate the assessment result to the performance of management level and branch leaders, so as to enhance the importance and enthusiasm of enterprise management and employees towards environmental protection.



Eight Dimensions of Environmental Management System of Nanshan Aluminium      Five assessment indicators of environmental performance

## Carry out professional training and enhance the environmental protection awareness

In 2022, Nanshan Aluminium formulated a complete training plan for the environmental protection leaders, including hazardous waste management, pollutant emission permit management system and environmental protection laws and regulations, and the training was organised by the heads of Security and Environment Department. Apart from internal training, we actively organise external training about carbon emission and green factory for the environmental protection leaders, so as to further improve their environmental protection knowledge and professional skills.



Deeply rooted in high-quality green development and as an integrated aluminium enterprise planning a layout in whole industrial chain, Nanshan Aluminium integrates with the international standard, optimises management and improves benefits. During the reporting period, the environmental management system of the Company has been recognised by many professionals and successfully passed the certification of ISO 14001 environmental management system and GB/T 36132-2018 General Principles for Assessment of Green Factory.

Coverage rate of ISO 14001 certification  
**87.5%**



Green Factory Certificate

## Management Structure

By establishing a sound management structure, Nanshan Aluminium defines the environmental management duties and authorities of different levels and continuously improves the environmental governance capability. We established a three-level environmental management structure constituted by the "Headquarters Environmental Protection Office - Branch Management - Branch Security and Environment Department" to fully carry out the performance assessment of environment management and steadily promote the implementation of green strategy of Nanshan Aluminium.



Three-level environmental management structure of Nanshan Aluminium

Nanshan Aluminium invited Shandong Longxin Monitoring Technology Co., Ltd. (hereinafter referred to as "Longxin Company") as the third-party agency (i.e. external environmental protection manager) to guide and supervise the environmental management of core operation places, organise all units to prepare environmental protection indicator management plan and carry out clean production and environmental impact assessment. In 2022, Longxin Company increased the environmental inspection frequency and intensity on different units and factories of Nanshan Aluminium, and carried out multiple environmental protection inspections referring to the key points of environmental protection department, so as to further guarantee the environmental compliance of the Company.

## Compliance of emission

By adhering to the concept of "promoting clean production and realising sustainable development", Nanshan Aluminium actively carries out pollution prevention and control in all production links. We implement high-standard management over waste gas, wastewater and solid waste in strict accordance with the pollutant emission management laws,

regulations and requirements of regulatory agencies in overseas operation places. We improve the pollutant treatment capability by upgrading the technology in source reduction and recycling, actively explore the recycling method of waste, strengthen the pollution prevention and control and promote the standard and clean emission of production.

## Waste gas management

Nanshan Aluminium has formulated and implemented the *Control Procedures for Emission of Atmospheric Pollution* in strict accordance with the *Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution*, *Comprehensive Emission Standards for Atmospheric Pollutants*, as well as the laws and regulations of overseas operation places. We strive to promote ultra-low discharge modification according to different production process of branches, treat the particles, nitrogen oxide, sulfur dioxide, fluoride and VOCs generated from the production links through environmental protection process such as bag dust removal, electrostatic dust removal, wet electrostatic dust removal, SNCR and SCR denitration, limestone/gypsum wet

desulfurisation, alumina adsorption, catalytic combustion and oil mist recovery, and continuously reduce the impact of production on atmospheric environment.

By learning from excellent practices in domestic and abroad, the emission concentration of nitrogen oxide and sulfur dioxide of Nanshan Aluminium is much lower than the local standard requirement of Shandong Province due to the adoption of advanced environmental protection equipment in the industry. In the future, Nanshan Aluminium will strengthen the management and control on arbitrary emission and on-site environmental protection, and further reduce the impact on surroundings.

### Accelerate the organised ultra-low discharge modification

We strictly abide by the national and local requirements for atmospheric pollutant emission.

We incorporate the waste gas treatment facilities within the responsible areas of all branches into the branch and workshop equipment management. They accept the patrol inspection, maintenance, care and overhaul equivalent to the main equipment to ensure their efficient and normal operation.

### Constantly propel the unorganised ultra-low discharge control

All production posts shall control the arbitrary emission of production system, collect the spills into system timely and prevent secondary pollution.

During storage, transportation and handling, we take preventive measures such as enclosing, dust screen and vehicle washing to prevent dust pollution.

### Unintermittent ultra-low discharge monitoring assessment

All units shall install the online monitoring system according to environmental protection management requirements and obtain the mark of conformity through contrastive monitoring and effectiveness audit.

Longxin Company defines the monitoring points, items, frequency and time according to the annual self-monitoring plan of each unit.

Nanshan Aluminium fully supports ultra-low discharge modification, continuously invests in ultra-low discharge modification projects and improves the air quality of factory area and surroundings. So far, all branches strictly abide by the national and local laws, regulations and requirements, and the production emission conforms to the standard.

The following table provides our waste gas emission indicators during the reporting period:

Waste gas emission indicators			
Emission indicators	Unit	2021 Data	2022 Data <sup>9</sup>
Nitrogen oxide	t	2,935	3,484
Sulfur dioxide	t	2,768	7,801
Non-methane hydrocarbon	t	169	143
Particles in flue gas from the burning and roasting furnace	t	59	72
Particles	t	1,030	838

<sup>9</sup> Data scope covers some major production factories of Donghai Thermal Power Plant, Nanshan Electrolytic Aluminium Factory, Nanshan Aluminium Profile Plant, Longkou Donghai Alumina Co., Ltd., Longkou Nanshan Aluminium Rolling New Material Co., Ltd., Yantai Donghai Aluminum Foil Co., Ltd., Yantai Nanshan Aluminum New Material Co., Ltd., Medium-thick Plate Branch of Shandong Nanshan Aluminium Co., Ltd. and Indonesian and American factories. Indonesian factory was officially put into operation in 2022. Due to the increase of annual output, the indicators of nitrogen oxide, sulfur dioxide and particles in flue gas from the burning and roasting furnace were increased in 2022.

## Prevention and control of solid waste

In accordance with the *Law of the People's Republic of China on the Prevention and Control of Solid Waste Pollution, Technical Specifications for Collection, Storage, and Transportation of Hazardous Waste, Management Method for Transfer of Hazardous Waste* and relevant regulations of overseas operation places, Nanshan Aluminium promotes the recycling of harmless waste while ensuring the safe and

effective treatment of hazardous waste. We formulate the *Control Procedures for Solid Waste*, and collect and treat the solid waste according to the principle of "reduction, recycling and hazard-free treatment" based on the prevention and control measures of "source reduction, intermediate control, terminal governance and recycling".



Waste Staging Hierarchy of Nanshan Aluminium

### Hazardous waste incinerator

In 2022, Shandong Nanshan Aluminium Co., Ltd. invested RMB 9,200,000 in building the hazardous waste incinerator (design treatment capacity: 500kg/h solid waste, equal to 3,600t/a) on the north and east of bathroom of new aluminium alloy production line in Donghai Industrial Park, and reserved an allowance for treatment. The treatment objects include surface treatment sludge, oily sludge, waste rolling oil, waste mineral oil and waste liquid pressure oil generated from existing project. After incineration, it is estimated that 2,668t of hazardous waste can be reduced every year.

Estimated amount of reduced hazardous waste

# 2,668t

### Grade-keeping and comprehensive utilisation project of recycled aluminium

In 2022, Nanshan Aluminium continued to promote the construction of grade-keeping and comprehensive utilisation project of recycled aluminium. Through an advanced production process of recycled aluminium and grading utilisation, we can achieve energy conservation, emission reduction and clean production while producing high-quality aluminium products. The grade-keeping and comprehensive utilisation project of recycled aluminium can collect 106,900t of aluminium scrap every year, produce 100,000t of recycled aluminium water, reduce the solid waste and achieve remarkable economic benefits.



During the reporting period, the comprehensive utilisation ratio of solid waste (hazardous waste and general waste) of Nanshan Aluminium reached 50% and all hazardous waste was treated as required, which reaches the industry-advanced and historical best level.

Amount of produced and utilised solid wastes			
Indicators	Unit	2021 Data	2022 Data <sup>10</sup>
Total generation of solid wastes	t	5,564,270	5,263,747
Wherein: Generation of hazardous wastes	t	81,490	86,419
Reutilised hazardous wastes	t	20,793	85,928
Wherein: Generation of general wastes	t	5,482,780	5,177,328
Reutilised general wastes	t	3,048,956	3,828,615

### Wastewater discharge

In strict accordance with *Water Pollution Prevention and Control Law of the People's Republic of China* and other laws and regulations of operation places, Nanshan Aluminium formulates the *Control Procedures for Sewage Discharge*, continuously optimises the environmental protection facilities and management system for wastewater with the "zero discharge and all recycling" as the target, and reduces the adverse effect of water pollutants on human health and environment.

During construction, all branches build sewage treatment facilities in factory area to meet the municipal sewage discharge/collecting standards according to the characteristics of product and production process. In addition to the conventional pollutants such as COD, BOD, ammonia nitrogen and total phosphorus, we also treat the industrial wastewater containing heavy metal and waste oil with the sewage treatment technologies such as "demulsification, flocculation, reducing agent reduction, multi-media filtration and activated carbon filtration".

### Comprehensive utilisation modification of the wastewater in the backflow water of Nanshan Thermal Power Plant

The original make-up water of No.4 slag scraper of Nanshan Thermal Power Plant is industrial water and used for cooling the boiler slug and sealing the hearth, but the wastewater after cooling contains sundries and heavy metal and cannot be recycled due to water quality, which is wasteful for industrial water. According to the field investigation and calculation results, Nanshan Thermal Power Plant adds the linkage valves and complementary tubes to the original tubes, utilises the filter water comprehensively from the backflow water tank as the source of make-up water for No.4 slag scraper. It prevents the filter water in the backflow water tank from flowing back into the tower and reduces the risk of shutdown accidents. Furthermore, it helps us save the industrial water of 17,280t, significantly reducing the unnecessary consumption of industrial water.

Save the amount industrial water

# 17,280t




<sup>10</sup> Data scope covers some major production factories of Donghai Thermal Power Plant, Nanshan Electrolytic Aluminium Factory, Nanshan Aluminium Profile Plant, Longkou Donghai Alumina Co., Ltd., Longkou Nanshan Aluminium Rolling New Material Co., Ltd., Yantai Donghai Aluminium Foil Co., Ltd., Yantai Nanshan Aluminium New Material Co., Ltd. Medium-thick Plate Branch of Shandong Nanshan Aluminium Co., Ltd. and Indonesian and American factories.

During the reporting period, Nanshan Aluminium complies with all standards in wastewater discharge. The related indicators are as follows:

Wastewater discharge conditions			
Emissions	Unit	2021 Data	2022 Data <sup>11</sup>
Wastewater	10,000t	113	97
Filter pressing water	10,000t	238	239
Recycled wastewater	10,000t	130	130
COD	kg	57,376	57,392
Ammonia nitrogen	kg	598	615

### Green office

In addition to carrying out the concept of green and low carbon production, Nanshan Aluminium is committed to creating a green office environment in the Company and integrates the sustainable development concept into daily work. We advocate paperless office, promote the use of energy conservation equipment, publicise water saving and encourage employees to use public transport, so as to practice a low-carbon lifestyle from top to bottom.

We promote the energy conservation modification of lights and adopt the timing and voice control light management mode to reduce the power consumption in lighting

Electrocarers are used as the vehicles for security/equipment inspection and visiting



We strengthen the employees' saving consciousness by pasting the slogans such as water saving and turning off lights when leaving

We further popularise water-conserving devices in office places and conduct a regular inspection to avoid water venting, overflowing, dripping and leakage



Promotion of Energy Conservation and Emission Reduction

#### Green Office Measures

<sup>11</sup> To improve the wastewater management effectiveness, Nanshan Aluminium improved all statistical data of wastewater discharge indicators in 2022, and re-evaluated and traced the wastewater discharge data of 2021. We hereby adjust the wastewater discharge data of 2021, please take the ESG report of 2022 as the standard. The wastewater data scope in 2022 covers some major production factories of Donghai Thermal Power Plant, Nanshan Electrolytic Aluminium Factory, Nanshan Aluminium Profile Plant, Longkou Donghai Alumina Co., Ltd., Longkou Nanshan Aluminium Rolling New Material Co., Ltd., Yantai Donghai Aluminium Foil Co., Ltd., Yantai Nanshan Aluminium New Material Co., Ltd. Medium-thick Plate Branch of Shandong Nanshan Aluminium Co., Ltd. and Indonesian and American factories.

# 5.3

## Resource conservation

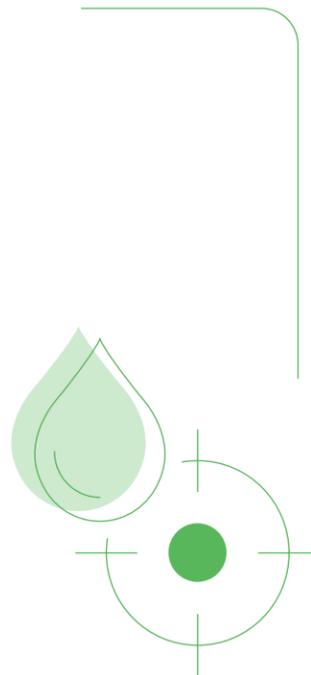
Nanshan Aluminium constantly enhances the water resource management level and actively takes the measures for protecting biodiversity. We strictly control the potential risks of water resource by carrying out water resource risk assessment and optimise the closed-loop utilisation of water resource, so as to guarantee the water consumption safety and stability during production and operation. Besides, we carry out special risk assessment on biodiversity, take measures to reduce risks and minimise the adverse effect on biodiversity.

### Water resource management

Nanshan Aluminium regards the utilisation and management of water resource as a materiality issue and constantly promotes the delicacy management of water resources. During the operation, the Company strictly abided by and implemented the *Water Law of the People's Republic of China*, the *Regulations for the Administration of Water Collection Licenses and Water Resources Fees*, the *Water Pollution Prevention and Control Law of the People's Republic of China* and other laws and regulations, as well as attached importance to water resource management and conservation in the whole value chain. Our production water mainly comes from municipal pipelines. When in shortage of water, the water supply company of Nanshan Group is responsible for communicating with Longkou Water Supply Company for introducing water from the Yellow River. In 2022, Nanshan Aluminium formulated and successfully achieved the annual water consumption and withdrawal targets according to the actual production situation. We also established a complete water resource management and control system in long-term practice.

### Water resource risk management

Nanshan Aluminium carries out water resource risk assessment on Alumina Company, Electrolytic Aluminium Company, Medium-thick Plate Branch, Longkou Nanshan Aluminium Rolling New Material Co., Ltd. and Donghai Aluminium Foil Co., Ltd., and the assessment scope includes occurrence probability, hazard rating and risk level of water resource risks. According to the water resource risk analysis result, we issued the *Water Resource Risk Assessment Report of Shandong Nanshan Aluminium Co., Ltd.* and confirmed that there is no high water resource risks, which further strengthen the management and take corresponding countermeasures. In addition, we formulated a *Water Balance Diagram of Shandong Nanshan Aluminium Co., Ltd.* according to the analysis on the water supply and consumption volume to further sort out the high water consumption links, take specific water conservation measures and continuously improve the water resource utilisation ratio of the Company.



### Water resource consumption

Nanshan Aluminium continues to implement the water resource comprehensive management idea of "multi-purpose, grading and cascade utilisation", and promotes the reasonable utilisation of water resource through technical transformation and recycling. During the reporting period, we continued to inspect and optimise the production lines with high water consumption in factories, and reduced unnecessary water resource loss by improving the water conservation process. On the other hand, we constantly optimised the internal water circulation system, and improved the reuse rate of rainwater, sewage and water resource through recycling of rainwater and sewage.

#### Recycling of rainwater in red mud reservoir

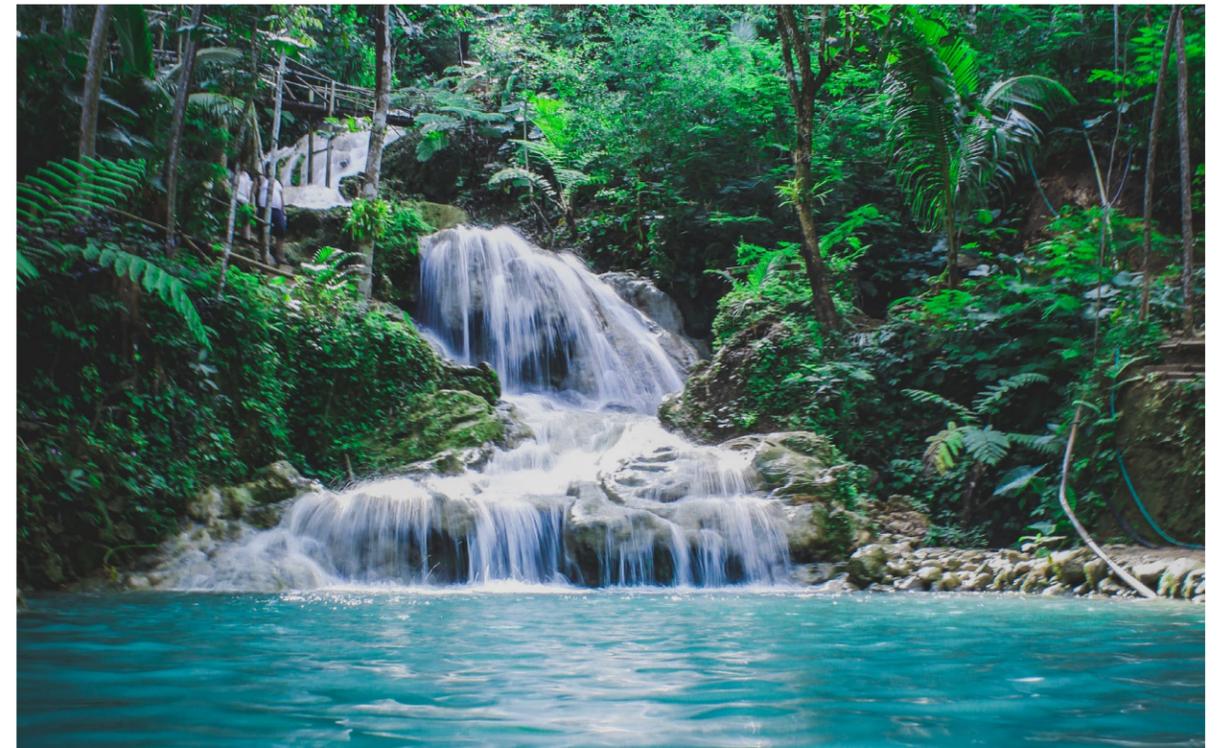
We have completed the diversion transformation of rainwater and sewage in the factory and living area of Longkou Donghai Alumina Co., Ltd., so the rainwater in factory area can be collected and recycled through a sedimentation tank

#### Flushing water reuse

In Longkou Donghai Alumina Co., Ltd., the water for flushing the "running, emitting, dripping and leaking" products in alkaline workshop as well as for the floor and equipment is recycled by a special sewage pump station

#### Technology transformation of ultrafiltration back washing water

We adjust the operation mode and increase the ultrafiltration time and chemical cleaning frequency according to the raw water quality, so as to reduce the ultrafiltration water and save water resources



#### Prior control

- Make precedent water resource risk warning and announcement
- Carry out transparent and compliant evaluation and research on potential water resource risks

#### In-process control

- Continuously monitor the water discharge and quality, and control the occurrence probability of potential water resource risks with active risk control measures

#### Post-action control

- Periodically disclose the monitoring result of water pollution discharge and discharge reduction plan, and realise transparent management of water resource risks

### Circulating water polarisation device

Shandong Yili Electric Industry Co., Ltd. (Nanshan Thermal Power Plant) co-operates with Polarised Water Treatment Institute of Shandong University of Science and Technology to transform the circulating water system of two units. By installing circulating water polarisation devices, circulating water can keep a high concentration ratio (6 times or above) when the condenser is not scaling and the cooling tower is low in algae content, the concentration ratio can be controlled according to the seasons and water quality, and 690,000m<sup>3</sup> water can be saved each year.



water can be saved each year

**690,000m<sup>3</sup>**

In the reporting period, Nanshan Aluminium had no water shortage or relevant events. The water resource utilisation indicator is shown as below:

Water resource consumption indicators			
Indicators	Unit	2021 Data <sup>12</sup>	2022 Data <sup>13</sup>
Total water withdrawals	10,000m <sup>3</sup>	515	482
Municipal water withdrawal	10,000m <sup>3</sup>	515	482
Total water consumptions	10,000m <sup>3</sup>	575	493
Total volume of circulating and reclaimed water	10,000m <sup>3</sup>	60	11 <sup>14</sup>

<sup>12</sup>To improve the water resource management effectiveness, Nanshan Aluminium improved all statistical data of water resource consumption indicators in 2022, and re-evaluated and traced the water resource consumption data of 2021. We hereby adjust the water resource consumption data of 2021, please take the ESG report of 2022 as the standard. In 2021, the total water withdrawal of water resource consumption did not include surface water and groundwater, so the data result is 0.

<sup>13</sup>Data scope covers some major production factories of Nanshan Electrolytic Aluminium Factory, Nanshan Aluminium Profile Plant, Longkou Donghai Alumina Co., Ltd., Longkou Nanshan Aluminum Rolling New Material Co., Ltd., Yantai Donghai Aluminium Foil Co., Ltd., Yantai Nanshan Aluminium New Material Co., Ltd. and Medium-thick Plate Branch of Shandong Nanshan Aluminium Co., Ltd. and Indonesian and American factories. In 2021, the total water withdrawal of water resource consumption did not include surface water and groundwater, so the data result is 0.

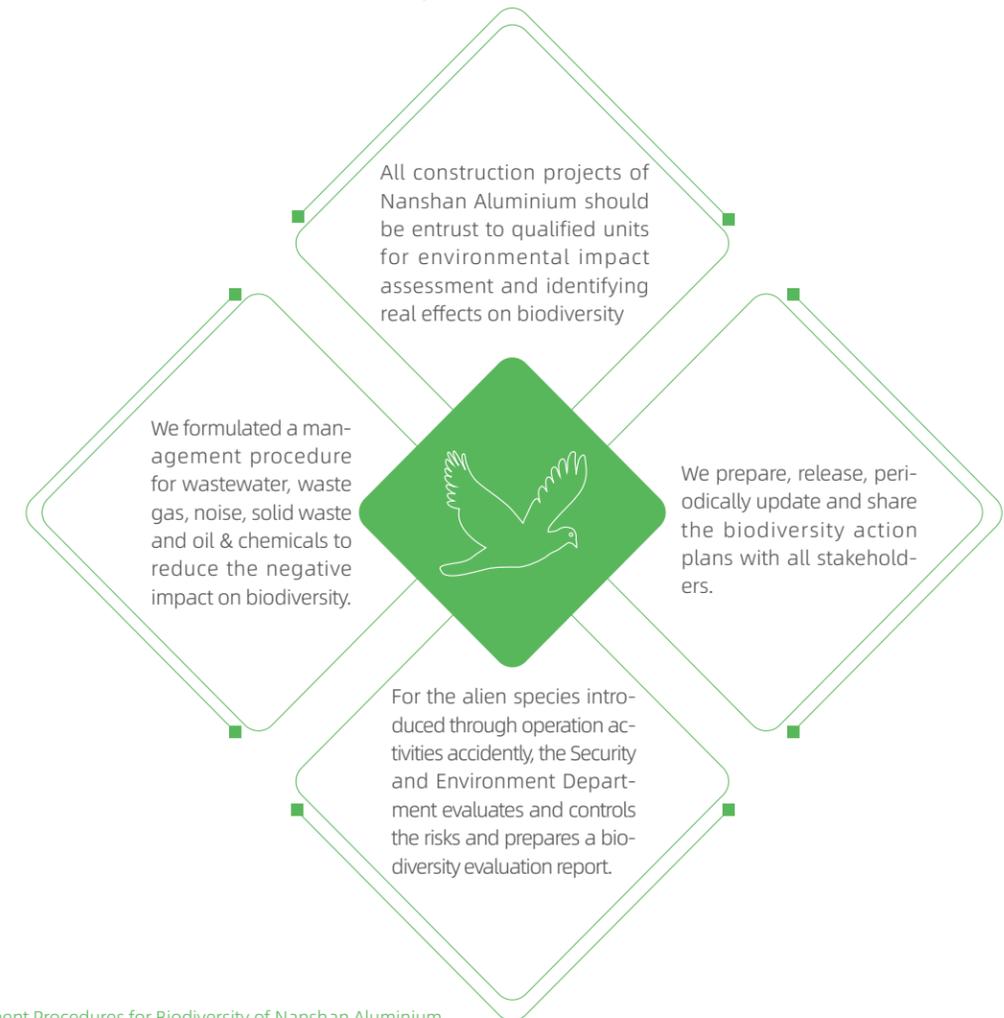
<sup>14</sup>In 2022, Nanshan Aluminium comprehensively implemented cost reduction and efficiency increase, so the water demands in different processes was reduced. Besides, due to the improvement of deep processing and reuse standard, the total volume of circulating and reclaimed water was reduced slightly compared to 2021.

## Biodiversity protection

Biodiversity is a foundation and guarantee for human survival and development. By adhering to the concept of building a planet with harmonious coexistence between human and nature, we strictly abide *Environmental Impact Assessment Law of the People's Republic of China*, *Law of the People's Republic of China on Soil and Water Conservation*, *Regulations on the Administration of Construction Project Environmental Protection* and the suggestions of *Biodiversity Conservation in China*. Nanshan Aluminium not only min-

imises the adverse effect on biodiversity during production and project operation, but also optimises the positive effect.

The Company formulated the *Management Procedures for Biodiversity Protection of Nanshan Aluminium* and defined the management procedures on new (reconstruction and expansion) projects, daily environmental management activities, biodiversity risk management and alien species assessment.



Management Procedures for Biodiversity of Nanshan Aluminium

In 2022, Nanshan Aluminium carried out a special biodiversity risk assessment on the five production places, i.e. Alumina Company, Electrolytic Aluminium Company, Longkou Nanshan Aluminum Rolling New Material Co., Ltd., Medium-thick Plate Branch and Yantai Donghai Aluminium Foil Co., Ltd. We prepared a *Biodiversity Report of Nanshan Aluminium* according to the assessment result and gave

precedent warning for potential risks. We strictly control the adverse effect of production units on surrounding ecological environment through the measures such as "wastewater detection", "introduced species approval", "entry introduction and quarantine" and "transportation vehicle cleaning", and continuously protect the ecological environment of local area.



06

# Perseverance for Goodness, Peaking the Mountains

Nanshan Aluminium always regards employees as the most precious wealth of the enterprise. We insist on maintaining the employees' legitimate rights and interests, continuously optimizing the human resource management system, focusing on the employee development and physical/mental health and providing them with good occupational experience. We also insist on coordinated development with communities and actively making contributions to build a better society.

# 6.1

## Urgent needs of talents

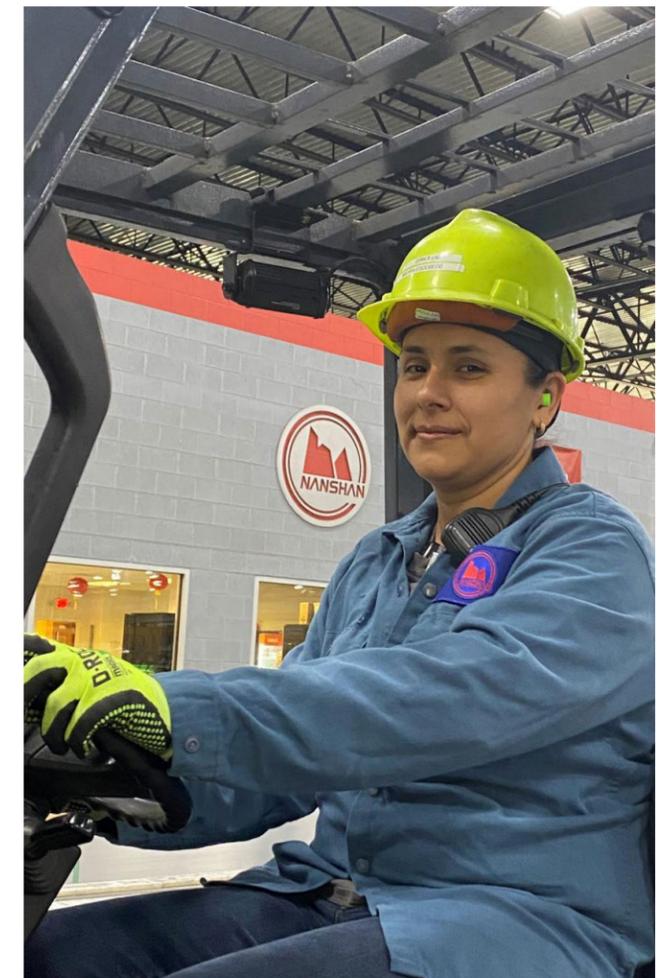
Nanshan Aluminium adheres to the development concept of "people first" and regards talents as the core strategic resource for sustainable development of the enterprise. We continuously expand the excellent talent team, insist on equal and compliant employment, create a diverse and inclusive corporate culture and vigorously support the company development.

### Equal employment

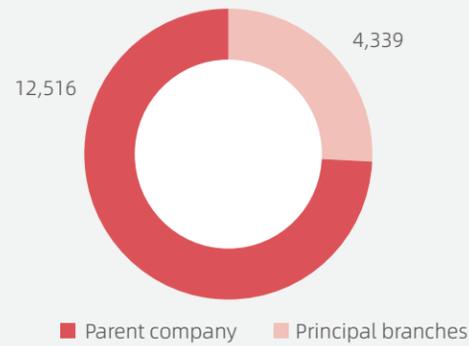
In strict accordance with the *Labor Law of the People's Republic of China* and *Labor Contract Law of the People's Republic of China*, Nanshan Aluminium establishes a complete human resource management system including staffing management system, recruitment system, training system, compensation and welfare system, performance system, employee job change management system and foreign expert management regulations.

During employment period, we adhere to the corporate culture of "diversity and equality", strictly abide by the systems such as *Management Procedure for the Prohibition of Discrimination* and *Management Procedure for the Prohibition of Mental and Physical Abuse*, eliminate discriminations due to race, creed, gender, age and marital status, constantly optimize the internal employee structure and realize reasonable employee distribution of different companies, genders, ages, specialties, levels and educational background. As of December 31, 2022, we own 16,855 employees in the distribution as follows:

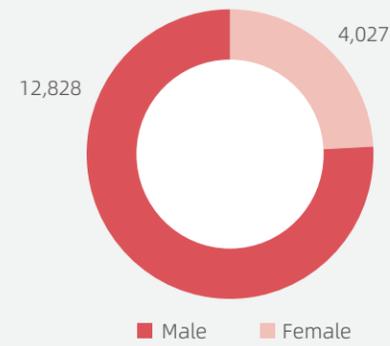
We own  
**16,855** employees



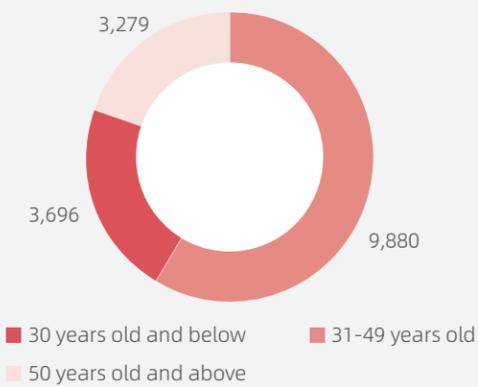
By company



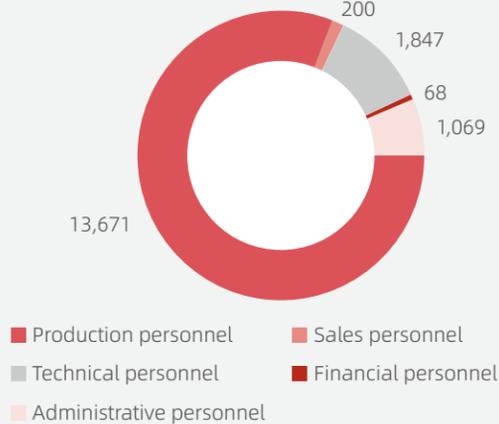
By gender



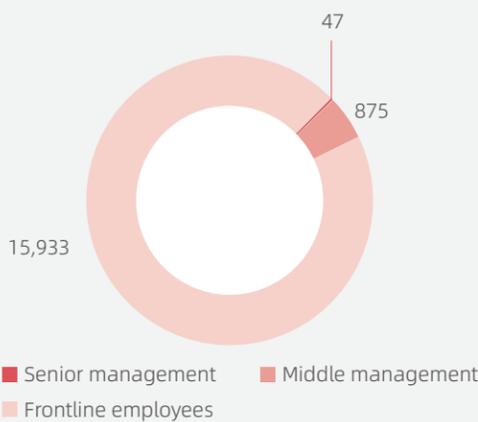
By age



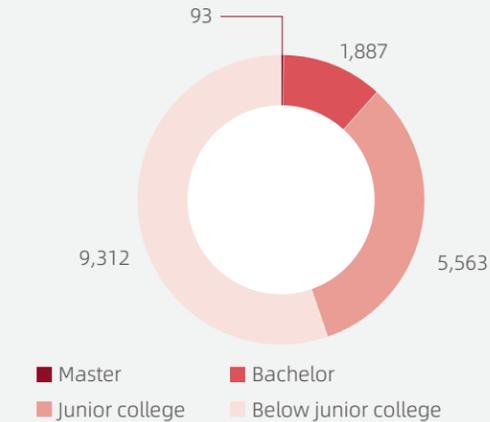
By specialty



By level



By education background



Employee Structure of Nanshan Aluminium in 2022 (Unit: Person(s))<sup>15</sup>

<sup>15</sup>The following data statistic scope includes Chinese on-duty employees (including Indonesian projects).

The Company is always committed to maintaining the basic rights and interests of employees. We resolutely resist the employment of child labour and forced labour and formulate and continuously update the *Management Procedures for Prohibition of Forced Labour*, *Management Procedures for Prohibition of Child Labour and Remedial Measures* and *Management Procedures for Protection of Underage Workers* according to the International Labour Office (ILO). We strictly review the identity of all employees. If child labour is found after inspection, we will stop the employment immediately, pay the labour remuneration and contact with their parents or statutory guardians in a

timely manner. In 2022, we had no employment of child labour or forced labour.

Besides, we fully respect and guarantee the employees' rights such as freedom of association and faith, right to collective bargaining, freedom to form and participate in trade unions and peaceful assembly based on the *Management Procedure for the Right to Freedom of Organizing Trade Unions and Collective Bargaining* and *Management Procedure for Staff Representative*. In 2022, the proportion of collective agreement signing and employee representatives was 100%.

## Talent attraction

Nanshan Aluminium insists on building a high-level, high-potential and dynamic employee team and continuously improves the core competitiveness of the enterprise. We select high-quality talents by assessing their morality, ability, experience and job qualification, to promote the steady development of the Company.

chasing and other benefits to drive the positive development of employment in the operation place with rich enterprise resources. In Indonesia, we hire local residents preferentially and provide them with training on basic operation skills. In 2022, the number of Indonesian employees accounted for 68%.

In 2022, we fully expanded recruitment channels and widely attracted excellent talents through campus and social recruitment and internal recommendation. We fully consider the local recruitment conditions, offer a large number of job opportunities for local residents in Longkou, and provide house pur-



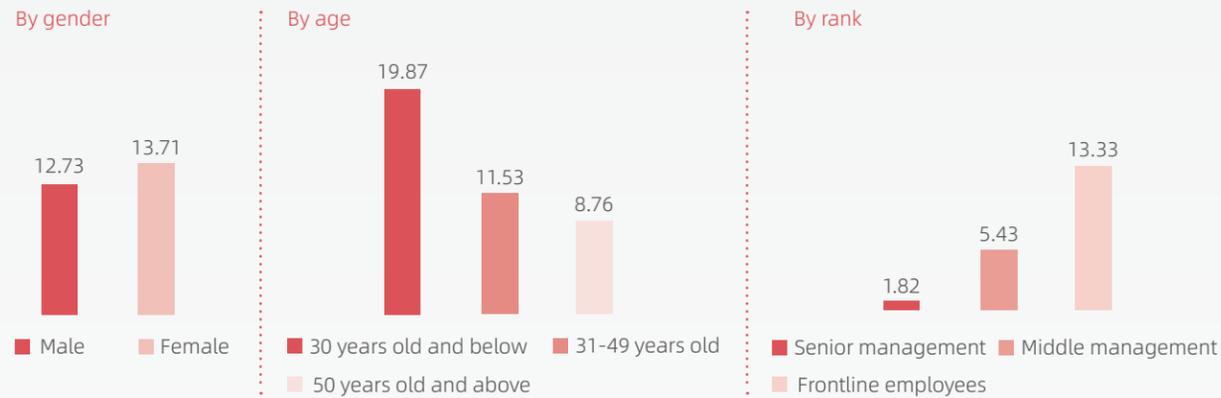
<p><b>Campus recruitment</b></p> <p>At present, the campus recruitment has covered 72 universities and colleges in China, wherein 9 universities were increased in 2022. To attract and retain high-quality talents, we improve the salary plan for college students and provide them with attractive and competitive remuneration.</p>	<p><b>First-line ordinary employee recruitment</b></p> <p>We revise and update the policy of "cultivating new employees under the guidance of experienced employees", improve the recruitment rewards and make specific requirements for the recruitment of different units.</p>	<p><b>Special talent recruitment</b></p> <p>We introduce core position talents, high-end technology research and development specialists and management personnel according to the actual production and operation requirements as well as the situation of domestic and foreign peer enterprises.</p>
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### Highlight Measures for Recruitment of Nanshan Aluminium

We pay high attention to the employee turnover and associate the turnover rate with the assessment of units and department heads. Besides, we formulate an incentive policy for core backbones. Considering the industry development prospect, we implement a remuneration incentive mode, which connects the individual income with the Company's business efficiency, to fully stimulate the employees' motivation and retain and attract excellent talents to the maximum. As of December 31, 2022, the employee turnover rate of the Company was 12.96%.<sup>16</sup> The details are as follows:



<sup>16</sup> Calculation formula of turnover rate: Turnover rate = Number of department employees in the period / (number of initial employees + number of new employees).



Employee Turnover of Nanshan Aluminium in 2022 (Unit: %)

## Talent cultivation

Nanshan Aluminium focuses on the personal development of employees, provides them with high-efficiency and perfect training system and clear occupational development path, and co-operates with all employees to strive for the sustainable development of enterprise hand in hand.

### Employee training

Nanshan Aluminium attaches great importance to the value created by employees during enterprise development. We continuously promote the construction of training management system according to the investigation result of training needs, prepare detailed training plan and customized training route for employees, promote their capacity building, expand their visions and create a high-quality talent team.

We focus on the training modes and contents and realize the whole coverage by combining online training with offline training. Relying on internal resources, we develop and continuously optimize the online learning platform and formulate specific course content and learning materials. In addition, we co-operate with many external training institutions to carry out open class and vigorously support the employee training. We gradually expand the lecturer teams, carry out one-to-one apprenticeship training activities, empower employees in operation place with professional perspective and promote the overall improvement of employee competency.



One-to-one apprenticeship training

**Training for new college students**

According to the *Training and Assessment Plan for College Students*, we assist them to quickly integrate with the working positions and become a viable force for company development on three aspects: working skills, management ability and corporate culture integration.

**Acquisition of professional qualification certificates**

We co-operate with the government to carry out enterprise self-rating, establish a self-evaluation platform for professional technicians such as bench workers and electricians, and help all employees obtain the professional qualification certificate suitable for specific posts.

**Educational improvement**

We co-operate with Yantai Nanshan University and help employees improve their educational background through correspondence education and network education.

Highlight measures for employee training of Nanshan Aluminium

### "New apprenticeship system" training project

In 2022, Nanshan Aluminium carried out the training project "new apprenticeship system", wherein 112 employees participated in the training, and 108 of them obtained the skill level certificate finally. According to the work idea of "enrollment upon recruitment, entering the company means entering a school, joint training of enterprise and university", the project is mainly for the company's bench workers, electricians and other professional technicians, issues professional qualification certificates to the employees who pass the training assessment, improves their expertise and operation skills, cultivates their craftsmanship, and improves the overall quality of employee team and the innovation capability and competitiveness of the Company.



Employees participated in the training of "new apprenticeship system"



### "Golden Blue Collar" training project

In 2022, Nanshan Aluminium actively responded to the government's call and promoted the technical talents cultivation mode of "golden blue collar". As a system theory learning and practice skill improvement platform jointly built by universities and enterprises, the project takes the improvement of vocational skills of employees as the core, follows the learning mode of "enterprise-university system, work-study integration" and fully assists for the comprehensive ability improvement of professional technicians such as electricians and bench workers. During the reporting period, we organized 171 employees to participate in the "golden blue collar" training project, and 138 of them obtained the skill level certificate finally.



Employee training qualification certificate of "Golden Blue Collar" training project

### Yantai Talent Workstation of Nanshan Aluminium successfully passed the final assessment

In July 2022, the "Yantai Talent Workstation of Nanshan Aluminium" declared by the Company successfully passed the final assessment. The workstation highly accords with the national talent policies and the Company's development needs. It takes introduction and cultivation of high-level talents as the major task, promotes the innovative technology research and development and the achievement transformation and application, and builds the talent base for maintaining the vitality of the enterprise and realizing high-quality industrial development.

Yantai Talent Workstation has introduced and cultivated 27 high-level talents and cultivated 54 engineering technicians for the Company since its establishment.

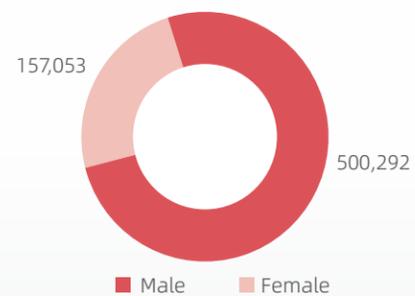


Composition of "Yantai Talent Workstation of Nanshan Aluminium"

During the reporting period, Nanshan Aluminium has carried out 4,481 trainings for all employees, with the total training time of 657,345 hours.



Training hours of employees classified by gender



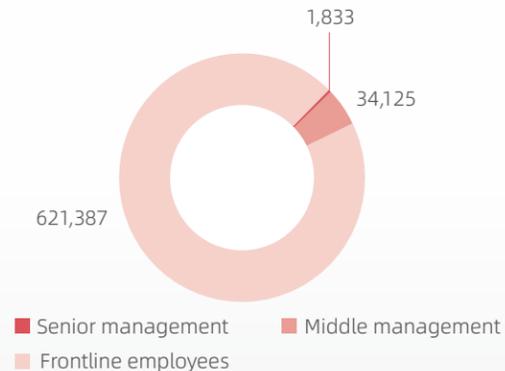
### PT Bintan Alumina Indonesia of Nanshan Aluminium carried out language training on Chinese and Indonesian

In May 2022, PT Bintan Alumina Indonesia of Nanshan Aluminium carried out language training sessions on Chinese and Indonesian for the management personnel above director level and employees of major technical posts, about 300 persons participated in the training. The activity gradually improved the oral proficiency of Chinese and Indonesian employees according to their actual requirements and oral level, strengthened the exchange between Chinese and Indonesian employees, and transferred many high-quality talents for enterprise business.



Language training site on Chinese and Indonesian

Training hours of employees classified by rank



Employee Training of Nanshan Aluminium in 2022 (Unit: Hour)

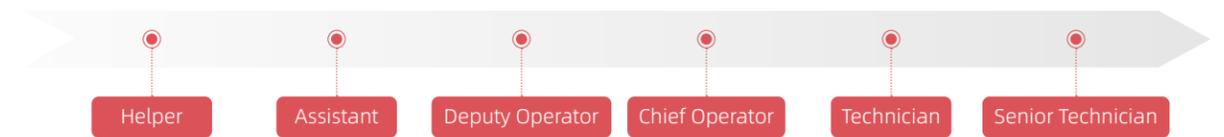
### Employee promotion

Nanshan Aluminium formulated a clear personal career promotion path for employees and planned their development direction reasonably. We divide the posts into six categories of operation, functional, management, logistics, marketing and technology sequence. Personnel in the sequences can promote vertically from the operation, execution and management level to the decision-making level. Posts in different sequences can be adjusted according to the characteristic of the business line. We establish a dual-channel promotion mechanism, so that the post setting can meet the requirements of

business operation and employee promotion.

In 2022, we implemented different measures to optimize the organization structure and cadres' system, actively promoted the "cadres withdrawal mechanism", carried out dynamic management of rotation, promotion and elimination on the current management cadres, to ensure the matching between personnel capability and post requirements, excavate more excellent talents and realize overall improvement of personnel capability.

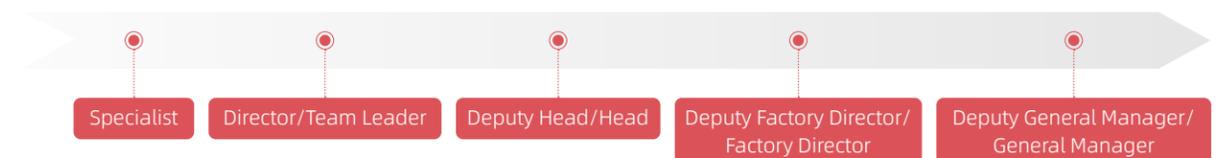
Promotion channel of operation sequence



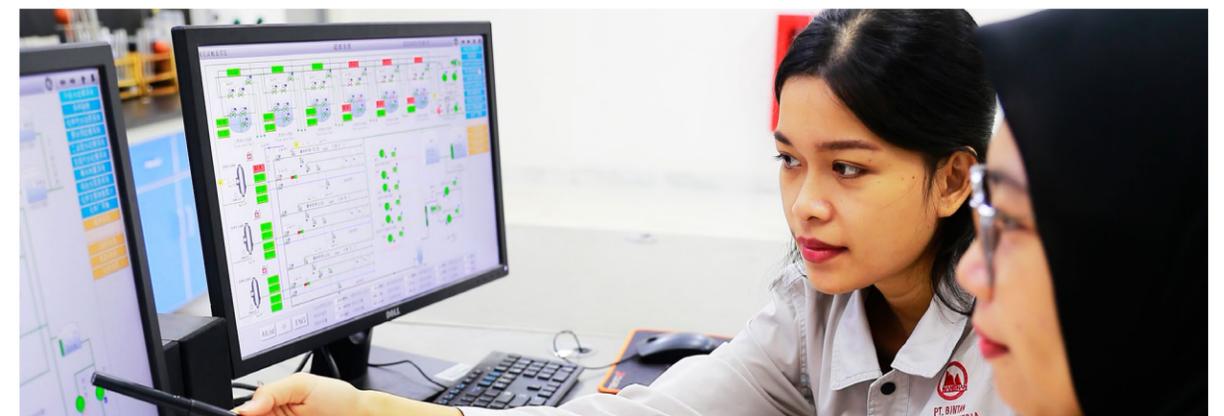
Promotion channel of technology sequence



Promotion channel of management sequence



Sequence Promotion Case of Nanshan Aluminium



# 6.2

## Employee care

Nanshan Aluminium regards the employees as the center, fully understands their needs, breaks through the communication channel, provides employees with diversified care and guarantee, creates a warm working and living environment and shares enterprise development achievements with them.

### Benefits

Nanshan Aluminium continuously expands the employee welfare modes, provides them with mandated benefits such as paid annual leave and supplementary benefits such as seniority allowance, night duty allowance, full attendance bonus, overseas allowance, transportation allowance, high-temperature allowance, health allowance, heating allowance, holiday benefits and birthday allowance, optimizes the construction of living facilities and builds a sound and industry-competitive welfare system for all employees.

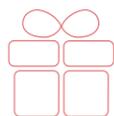
- |                             |  |
|-----------------------------|--|
| Mandated benefits           | <ul style="list-style-type: none"> <li>• Paid annual leave, funeral leave, maternity leave, marriage leave and breastfeeding leave</li> </ul>  |
| Supplementary benefits      | <ul style="list-style-type: none"> <li>• Welfare allowance: Seniority allowance, overseas allowance, transportation allowance, high-temperature allowance, health allowance, heating allowance, holiday benefits, birthday allowance, night duty allowance, full attendance bonus and meal allowance</li> <li>• Performance incentive: Overproduction bonus, project bonus and excellence bonus</li> </ul> |
| Infrastructure construction | <ul style="list-style-type: none"> <li>• Welfare housing: Free dormitories and daily necessities such as water, electricity, and heating facilities for non-local employees</li> <li>• Entertainment venues: gyms, sports venues, libraries, etc. for employees; free visit of 5A Nanshan tourist attractions for internal employees</li> </ul>  |



Indonesian factory distributed holiday benefits to employees

Employee Welfare System of Nanshan Aluminium

Besides, we periodically carry out rich cultural and sports activities such as tourism, artistic performances and sports activities, help employees balance the relationship between life and work, alleviate their working pressure, provide a platform and opportunities for their communication and exchange, enhance the team cohesion and improve their sense of belonging and identification to teams and the Company.



Hiking activities



New Year party



Outgoing activities

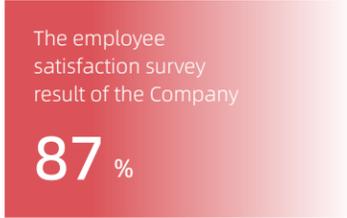
For showing the corporate humanistic care, we strictly guarantee the mandated benefits of female employees, such as maternity leave and breastfeeding leave in accordance with the *Management Procedures for Protection of Women Employees*, provide medical room, maternity lounge and nursery room for them and help them solve the problems, such as sanitation and breastfeeding. In addition, we pay high attention to the employees in straitened circumstances, provide condolences and assistance to the employees with living difficulties recognized by the government, pass on warmth and care to them and help them overcome difficulties.

### Democratic communication

Nanshan Aluminium listens to the needs of employees and continuously strengthens the communication and exchange with them. According to the *Employee Complaint (Appeal) Management Procedure*, *Management Procedure for Staff Representative and Information Exchange, Negotiation and Control Procedures*, we fully understand the employees' thought through employees' representative meeting, pre/post-shift meeting, symposiums and employee relation specialists, accept the constructive feedback from employees and actively implement the measures.

We also encourage employees to maintain their rights and interests through a complete complaint handling mechanism. We establish and continuously optimize different information feedback channels such as employees' representative meeting, suggestion box, email, telephone, direct communication with leaders and on-line communication platform. After receiving feedback, we will make a thorough investigation to further know the employee's complaints, to solve their problems properly. We keep strict confidentiality for the personal information of employees who give complaints or suggestions.

Besides, we periodically organize employee satisfaction investigations, form investigation reports, collect and listen to employees' complaints and ideas timely and make rectifications and improvements according to the actual situation. In 2022, the employee satisfaction survey result of the Company was 87%.



Employees' Representative Meeting of Nanshan Aluminium



# 6.3 Safety production

Nanshan Aluminium fully understands the importance of safety for the sustainable development of an enterprise. We establish and continuously improve the internal safety management system, carry out safety risk control, occupational health management and safety culture propaganda comprehensively, integrate the safety idea into full life cycle of enterprise production and operation and create a safe and comfortable working environment for employees.

## Safety management

Nanshan Aluminium always adheres to the production concept of "safety first". The Company carries out safety management in strict accordance with the *Production Safety Law of the People's Republic of China*, *Fire Protection Law of the People's Republic of China*, *Regulations on Reporting, Investigation and Handling of Production Safety Accidents*, *Regulations on Supervision and Management of Occupational Health in Workplace* and other safety-related laws and regulations, as well as the *Safety Management Standard System and Management System for Safety Production Rewards and Accountability* of the Company.

By taking a sound safety management structure as the foundation and effective safety management objectives as

the guidelines, the Company sorts out and implements the safety production management responsibilities of different departments, associates safety performance with the remuneration performance of senior executive, builds a complete safety responsibility network and establishes a safe and sustainable enterprise development mode. During the reporting period, all branches of Nanshan Aluminium in different operation places carried out safety management based on the Occupational Health and Safety Management System Certification (ISO 45001) and safety production standard certification requirements, while all domestic companies passed the Class II safety production standard certification, and established and improved a dual-prevention system.

**Goal**

There is no casualty accidents, no fire or explosion accidents and no occupational disease accidents. The key performance indicators of occupational health and safety were mainly the work-related accident rate, supplemented by hazardous events. The work-related accident rate is 1‰.

**Assessment indicator**

The Company conducts profit and tax assessment on senior executives based on their monthly assessment and year-end assessment results, of which safety assessment accounts for 15%. The Company practices one-vote veto for work-related death incidents.

Health and Safety Goals of Nanshan Aluminium



Safety Management Structure of Nanshan Aluminium

## Safety risk prevention and control

Nanshan Aluminium insists on starting from the source, deeply carries out safety risk identification and hidden danger elimination, formulates an emergency plan for possible major safety risks during daily operation and minimizes the occurrence probability and impact of safety risks.

In 2022, the Company carried out safety hazard inspection and emergency drills with the themes of the holding of "20th National Congress of the Communist Party of China (CPC)" and "Safety Production Month", to fully prevent and control safety production accidents.

### Safety inspection before holidays

In September 2022, to further consolidate the safety management achievements during the National Day, excavate the hazards, eliminate production hidden dangers and assist the enterprise production and operation, Nanshan Aluminium carried out safety inspection on water, electricity, heating, natural gas, fire prevention, production safety, equipment and facilities.



Safety inspection before holidays

### Hidden danger elimination activity of "Safety Production Month"

In 2022, by sticking to the theme of "Safety Production Month", Nanshan Aluminium steadily carried out hidden danger elimination on equipment and facilities, safety protection, fire-fighting equipment, field management, chemicals, deep well casting, metal smelting and personnel operation, and assisted for improving the safety risk control level.

Besides, the Company organized all employees to carry out the activity of "identifying safety hazards around", effectively identified the production safety risks through self-inspection and self-correction and strengthened the safety management achievements. Employees who provided excellent rectification suggestions were rewarded and encouraged after review. During the reporting period, 78 safety hazards were timely identified and rectified by employees.



Hidden danger elimination activity

### Emergency drills of Alumina Factory in Bintan, Indonesia

In May 2022, Alumina Company of Nanshan Aluminium in Bintan, Indonesia carried out the activity of "Emergency rescue drills for vehicle injury". The activity simulated vehicle injury accident of commanders on site, further verified the effectiveness and timeliness of safety treatment process and improved the emergency handling capability of employees.



Activity of "Emergency rescue drills for vehicle injury"



Activity of "identifying safety hazards around"

The Company takes major safety accidents occurred in the industry as a warning, focuses on safety accidents and injured employee treatment and standardizes the accident report process by referring to the *Appraisal Standard for Human Injury Degree*. We have made explicit provisions on the injury level and report period of safety accidents as well as the safety responsibilities of different departments, so that relevant departments can timely and accurately receive the accident information, carry out accident investigation and disposal in the first time and fully guarantee the life safety of employees.

During the report period, Nanshan Aluminium had 18 industrial accidents, with the work-related accident rate of 0.95‰ and the lost time injury rate (LTIR) of 0.45.<sup>17</sup> In the past three years, we had no major casualties, all accidents were minor injury/health damage, and all employees concerned were treated and treated properly.



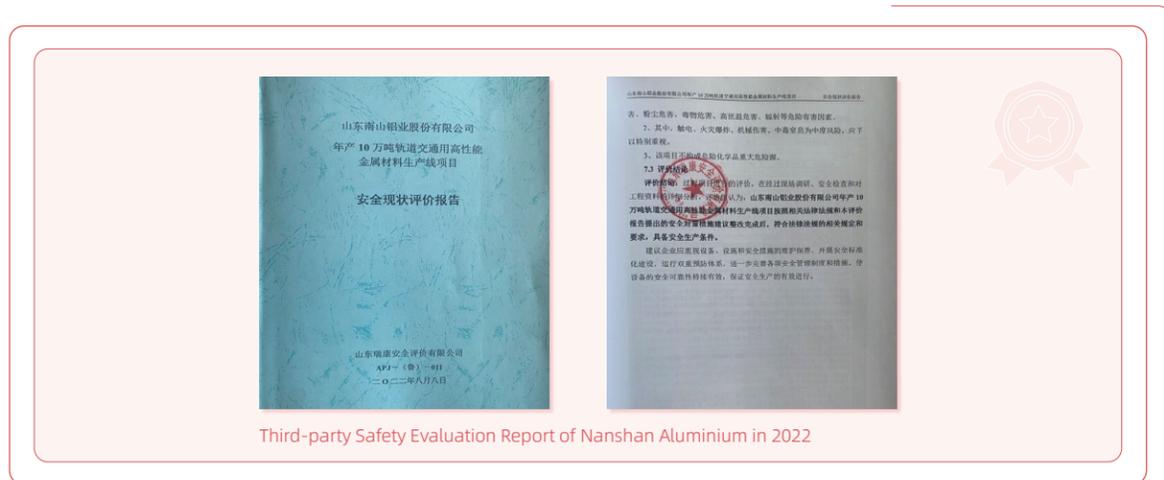
Minor injury and dangerous events	Minor accidents	Severe accidents	Casualty accidents
Report and archive within 24 hours	Report and archive within 12 hours	Report and investigate within 6 hours	Report and investigate within 30 minutes

Reporting Time Limit of Production Safety Accidents

Besides, Nanshan Aluminium invites third-party agencies to check and evaluate the safety production conditions periodically and provide multiple perspectives for the smooth implementation of safety production. In 2022, we invited Shandong Rui'an Safety Appraisal Co., Ltd. to conduct safety status evaluation on the 100,000t rail transit high-performance metallic material production line project of Aluminium Profile Company, and all items met the requirements of safety production and occupational safety.



Third-party safety evaluation process of Nanshan Aluminium



<sup>17</sup> Calculation formula: Injury rate per million working hours = number of injured employees / (employees \* working hours per day \* working days per year) \* 10<sup>6</sup>.

### Contractor safety management

Nanshan Aluminium adheres to the principle of "who is in charge of management, who is responsible", formulates and continuously improves the *Safety Management System for External Construction Personnel*, provide system guidelines for guaranteeing the life safety of external construction personnel and improving the contractor's safety management capability, and strictly prevents safety accidents of industrial chain. In the report period, the work-related accident rate (serious injury and casualties) for external construction contractors was 0.

**Contractor selection**

- Contractors shall provide qualification certificate documents, including but not limited to enterprise qualification certificate, safety qualification certificate, construction level certificate, safety management personnel qualification certificate, special operation personnel qualification certificate and employee insurance information.
- All contractors shall sign a safety management agreement, which further specifies the potential hazards and control measures during operation and clarifies the responsibilities of the parties in safety production management.

**Daily management of contractors**

- Integrate contractor safety management into overall safety management of the Company, periodically carry out safety supervision and inspection, timely identify the potential risks in operation place and urge the contractors for rectification.
- Strictly standardize the labor protective articles of employees and guarantee the life safety of construction personnel to the maximum.

**Contractor performance assessment**

- Periodically carry out contractor safety performance evaluation and assessment.
- Strictly standardize the safety management review on contractor's hazardous operation.
- Periodically review the technical plan for contractor's construction safety and confirm the technical disclosure of contractor safety.

**Training to contractors**

- Urge the contractors to carry out daily safety education and training on construction personnel and ensure the construction personnel are trained before entering the construction site.

Contractor Safety Management Measures

### Occupational health

Nanshan Aluminium always gives priority to the occupational health and safety of employees. The Company follows the occupational health and safety policy of "focusing on safety and prevention, reducing risks and guaranteeing health", constructs a perfect occupational health and safety management system, continuously promotes safety culture propaganda and creates a healthy, safe and comfortable working environment for all employees.

#### Employee health

In accordance with the *Law of the People's Republic of China on Prevention and Control of Occupational Diseases, Regulations on Supervision and Management of Occupational Health in Workplace* (No.47 order of the State Administration of Work Safety), *Measures for Supervision and Management of Occupational Health Supervision of Employers* (No.49 order of the State Administration of Work Safety) and other laws and regulations, as well as the *Management Procedures for Infrastructure and Work Environment* and other internal regulations, the Company continuously improves the occupational health and safety performance based on the occupational health indicators and the existing peer and best practices, and implements the occupational health protection for all employees effectively.

We continue to promote the construction of occupational hazard risk grading and control system and hidden danger elimination and governance system, fully check the potential occupational hazard risks in workplace from the aspects such as operation environment, equipment and facilities, surrounding environment and occupational health management, and classify, evaluate and publicize the risks according to the risk category, level and impact. Besides, we continuously optimise the hidden danger elimination and governance system, standard and list, formulate an emergency plan for occupational health, refine the responsibility for occupational hazard elimination to the department, post and equipment/facilities, and co-ordinate with all units to realize normalized management of occupational hazard risks.

We further guarantee the health and safety of employees in production and life by improving the archives management and strengthening safety protection.

Improve the archive management

- Sign the *Occupational Health Notification Contract with New Employees*
- Periodically carry out occupational health examinations for all employees
- Manage and back up the documents related to occupational health publicity training, occupational hazard monitoring and detection evaluation and workers' occupational health monitoring by laws and regulations

Strengthen the safety protection

- Continuously promote the iteration of production process and equipment, and effectively reduce the harmful factors such as dust, toxic substance and noise
- Purchase and distribute special labor protective articles for the personnel working on site and dangerous posts according to actual needs, strictly standardize the wearing and use of labor protection articles
- Suspend the occupational hazard notification cards and warning signs in public place with occupational hazards

Occupational Health and Safety Protection Measures of Nanshan Aluminium

Safety culture publicizing and implementation

Nanshan Aluminium attaches great importance to the construction of enterprise safety culture, commit to continuously enhancing the employees' safety prevention awareness and emergency response capability through staff training, emergency drills and other safety culture promotion, to lead the healthy development of employees with the guidance of sustainable safety culture.



Sketches of Safety Culture Corridor



Safety Training Activities of Branches of Nanshan Aluminium



Enterprise entity responsibility training of Donghai Thermal Power Plant



Fire safety training of Donghai Thermal Power Plant



Commencement safety training of Electrolytic Aluminium Company



First-aid safety training of Flat-Rolled Product Division

In 2022, the Company carried out a series of safety production training and emergency drills with the theme of "Safety Production Month" on the popularization of safety laws and regulations, safety rules and systems, post operation procedures, emergency plan, fire safety knowledge and accident cases by suspending promotional banners, setting bulletin boards and watching educational film of safety warnings. In addition, Indonesian factory actively responded to the initiative of provincial government of Riau Archipelago, Indonesia to organize donation activities for construction units in local area, participated in the flag raising ceremony and gymnastics competition in "Safety Production Month" organized by the provincial government and Labor Department of Riau Archipelago, Indonesia, and won the *Enterprises Conforming to BPJS Standards for K3 Safety Month in the Province of Riau Archipelago, Indonesia* and *Excellent Award of K3 Safety Month Gymnastics Competition in the Province of Riau Archipelago, Indonesia* issued by the provincial government of Riau Archipelago, Indonesia, which were highly appraised by the local government and Labor Department of Riau Archipelago, Indonesia.



Award photo of *Enterprises Conforming to BPJS Standards for K3 Safety Month in the Province of Riau Archipelago, Indonesia*



Award photo of *Excellent Award of K3 Safety Month Gymnastics Competition in the Province of Riau Archipelago, Indonesia*

During the report period

The Company carried out safety training sessions

4,231

Total training time of

250,000 hours

the participants of

125,000 persons



Publicity Mobilisation Meeting of "Safety Production Month"



**Safety production "Eight Focuses and Twenty Measures" training**

In 2022, the Company carried out safety production "eight focuses and twenty measures" training, invited the Director of Emergency Management Office of Xufu Street to interpret relevant contents, strengthened the employees' understanding in safety production laws, regulations and knowledge, assigned the safety production responsibilities to individuals and advocated for all employees working together to create a safe and stable working environment.



Safety Production Training Site

**"Safety Production Consulting Day" activity**

In June 2022, the Company carried out the activity of "Safety Production Consulting Day" with the theme of "observing safety production law, doing well as the first responsible person" for the safety management personnel of all units, answered the doubts of different units about safety work, further strengthened the work safety production achievements of the enterprise and laid a good foundation for effective implementation of safety management.



"Safety Production Consulting Day" Activity Site

**Popularisation activity of safety production laws and regulations**

In 2022, the Company carried out the popularization activity of safety production laws and regulations for all cadres and employees, particularly publicized the laws and regulations closely related with safety production such as *Production Safety Law of the People's Republic of China*, *Amendment to the Criminal Law of the People's Republic of China* and *Regulations on Safety Production of Shandong Province*, clearly defined the obligations of operation personnel and emergency treatment requirements, and strengthened the safety production concept of "observing, learning and using laws".



Training Activity of Safety Laws and Regulations

# 6.4 Passing on warmth

Nanshan Aluminium always adheres to the concept of "serving and repaying society", actively fulfils the social responsibility, focuses on community development, insists on harmonious development mode and community reciprocity, constantly repays the society with practical actions and passes on warmth and love to the society.

## Community protection

Nanshan Aluminium takes the *Management Procedures for Indigenous Protection and Autonomy and Protection of Prior and Informed Consent Rights*, *Management Procedures for Protection of Cultural Sites and Religious Shrines* and *Control Procedures for Local Community Impact* as the guidance, continuously protects the rights and interests of indigenous residents, ancient cultural sites and religious shrines, and fully displays its responsibility as a responsible enterprise.

### Protection of the rights and interests of indigenous residents

The Company pays high attention to the impact of operation on the community in project site, actively promotes the communication and co-operation with indigenous residents and local institutions, develops the mineral resources and other local natural resources properly with the acknowledge and consent of indigenous residents, and carries out new construction, reconstruction and expansion according to laws and regulations.

*Informed Consent Rights*, we construct and continuously optimize a diversified and open complaint channel for indigenous residents, steadily carry out the work related with indigenous residents such as local labor, women, collection and settlement, and fully guarantee their basic rights and interests. According to the evaluation outline, indigenous residents could deeply participate in project evaluation, monitoring and treatment, and establish a good relationship with the Company.

Relying on the *Management Procedures for Indigenous Protection and Autonomy and Protection of Prior and*

**Commitment of Nanshan Aluminium**

We fully respect the basic rights and interests of indigenous residents, including but not limited to the rights to survival, development, use of natural resources (such as mines, land and scenic spots), benefit sharing and informed consent. During new construction (reconstruction and expansion), closure, decommissioning, divestment and natural resource acquisition, we promise not to collude with the local government, but provide compensation or resettlement after the expropriation of natural resources in strict accordance with laws and regulations. We also promise to communicate well in advance, treat the recruitment, work arrangement, salary and job promotion of indigenous residents with a fair and just attitude, and completely eradicate all discriminations.

### Protection of cultural sites and religious shrines

Nanshan Aluminium deeply knows the importance of tangible cultural heritage for the inheritance of Chinese civilization and focuses on realizing co-existence and win-win of cultural protection and enterprise development. In accordance with the opinions of cultural relics administration department and *Management Procedures for Protection of Cultural Sites and Religious Shrines*, the Company gives

attention to the environment, society and financial cost and benefits, steadily avoids, protects and transfers the ancient cultural sites and religious shrines, rectifies the projects which may have impact on the environment and safety of local ancient cultural sites and religious shrines, and effectively protect the material cultural.



#### Commitment of Nanshan Aluminium

We fully respect the freedom of religious belief in operation place and promise to protect the ancient cultural sites and religious shrines by laws and regulations during daily operation.

### Public welfare care

Nanshan Aluminium always keeps commitment to respecting and supporting community livelihood, empowers the community development with enterprise resources, continuously enhances the residents' sense of happiness and belonging and makes contributions to build prosperous community.



#### Commitment of Nanshan Aluminium

The Company focuses on solving the adverse effect of enterprise operation on local communities through active communication in strict accordance with national laws and regulations, fully maintains the legitimate and traditional rights and interests of local communities in land, livelihood and natural resources, and makes unremitting efforts to promote community development.

### Assisting student development

Nanshan Aluminium always regards education as a key link to carry out public welfare activities. In 2022, the Company co-operated with the government in operation place to actively carry out school aid construction, provided pick-up services for local teachers and students and effectively improved the local education level and students' living quality. Besides, the Company widely carried out sponsorship activities in culture, sports, science and technology according to the needs for high-quality talents and provided financial security for promoting the comprehensive development of student groups.

#### Cultural and sports sponsorship activities

- Nanshan Aluminium distributed a sponsorship of USD 2,500 to the Community Sports Center in Lafayette, the United States for supporting the recreational and sports activities of local students and enriching the spare time of local young students
- Nanshan Aluminium distributed sponsorship to the rugby team of Jefferson High School, lacrosse team of Harrison High School and other student movement groups for supporting the development of young athletes

#### Technological innovation sponsorship

- In 2022, American factory of Nanshan Aluminium distributed sponsorship to student groups such as the McCultson Robotics Group and the Robotics Commune of West Lafayette Community School for supporting the robot research and competitions of students

Some Sponsorship Activities of Nanshan Aluminium in 2022

### Showing humanistic care

Nanshan Aluminium fully respects the customs and habits in the operation place, makes every effort to guarantee the life quality of local people through charitable donations and shows the humanistic care of an enterprise.

In 2022, American factory of Nanshan Aluminium donated sponsorship to food donation banks for supplying sufficient food to low-income groups in need and tried to eliminate the impact of hungry on local community development. Besides, the Company supplied festival gifts such as flour, rice, cream, sugar and juice to surrounding Muslim people during Lesser Bairam in 2022, conveying sincere blessings of the enterprise with practical actions.

### Guaranteeing life and health

Nanshan Aluminium always cares for the community people and sees the role as protecting the life and health of the masses. Under the background of shrinking demand, the Company responds to the national call in first time, widely carries out charitable donations and volunteer services such as unpaid blood donation according to the needs of local government and community, and conveys love and warmth to community people in special period.



#### Donations of oxygenators to Riau Archipelago, Indonesia

As a responsible enterprise, Nanshan Aluminium always interprets the corporate love with practical actions. In February 2022, Alumina Company in Bintan, Indonesia donated 100 medical oxygenators to Riau Archipelago, with the total value of more than RMB 1,500,000, aiming to solve the local problem of medical supplies shortage in Indonesia and providing vigorous support for the life and health of local residents.



Oxygenator Donation Site

### Unpaid blood donation

In 2022, to relieve the blood supply pressure of blood donation stations during the industry downturn, Nanshan Aluminium and Indonesian factory actively organized internal employees to participate in unpaid blood donation and effectively fulfilled the social responsibility.



Indonesian factory carried out unpaid blood donation activities

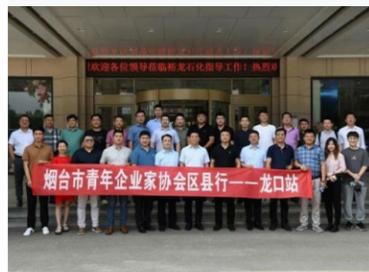
### Promoting common prosperity of communities

Nanshan Aluminium always adheres to the original intention of repaying society, committed to integrating sustainable development concept into public welfare and charitable undertakings, focuses on talent employment, residents safety and environment governance and makes unremitting effort to realize common prosperity of enterprise and community.



#### Improving living environment

- Nanshan Aluminium actively co-operates with communities in operation place, continuously carries out activities such as community health governance and holiday decorations according to the actual situation and festival holidays, and creates a comfortable, artistic and green living environment for community residents.



#### Promoting talent backflow

- In June 2022, the activity of "Yantai Young Entrepreneurs Association's Tour in District and City" - Longkou Station and Longkou Youth Assistance "Double Recruitment and Attraction" was carried out, more than 30 young entrepreneurs from different districts of Yantai came to Longkou for examination and exchange, discussed the innovation and development issues and explored the path of win-win co-operation.
- In August 2022, "Home in Longkou - Green Bird Returns" 2022 Longkou Youth Talent Hometown Tour" organised by the Talent Leading Group Office of Longkou Municipal Party Committee was carried out successfully. 76 outstanding young students of Longkou nationality from 54 well-known domestic universities such as Renmin University of China and Tongji University were invited.

#### Guaranteeing resident safety

- Nanshan Aluminium actively co-operates with local fire brigade to participate in firefighting and joint defense tasks in surrounding villages and towns and makes own contributions to protect the life safety of residents.

Highlight activities of Nanshan Aluminium for promoting common prosperity of communities in 2022

## Performance of UN SDGs

Nanshan Aluminium is committed to combining the United Nations Sustainable Development Goals (UN SDGs) with enterprise development, actively responds to and supports SDGs from multiple dimensions according to the identified materiality issues.

SDGs	Response of Nanshan Aluminium	SDGs	Response of Nanshan Aluminium
	<ul style="list-style-type: none"> <li>Donate sponsorship to food donation banks for helping the low-income groups in need and try to eliminate the impact of hungry on local community development</li> <li>Supply sufficient foods to surrounding Muslim people during Lesser Bairam and convey the sincere blessing of enterprise with practical actions</li> </ul>		<ul style="list-style-type: none"> <li>Refuse the employment of child labor and forced labor, and resolutely eliminate the illegal employment</li> <li>Attach importance to the talent cultivation and provide a reasonable and clear promotion path for employees</li> <li>Create job opportunities and promote local economic growth</li> </ul>
	<ul style="list-style-type: none"> <li>Provide occupational health and safety protective measures for employees and strengthen the safety protection in their daily life</li> <li>Provide diversified employee benefits and improve the employee welfare system</li> </ul>		<ul style="list-style-type: none"> <li>Accelerate the pace of scientific research and innovation through industry-university-institute co-operation and upstream/downstream industry co-operation, and promote industry development and innovation</li> <li>Steadily promote the high-quality grade-keeping and comprehensive utilisation project of recycled aluminium, as well as the green and sustainable development of aluminium processing industry based on the advantages of complete industrial chain</li> </ul>
	<ul style="list-style-type: none"> <li>Formulate a detailed training plan for employees, continuously optimise the training mode and content and promote the employee capacity building</li> </ul>		<ul style="list-style-type: none"> <li>Insist on the corporate culture of "diversity and equality" and eliminate all workplace discrimination</li> <li>Focus on living conditions of the needy employees and assist for them to solve problems</li> </ul>
	<ul style="list-style-type: none"> <li>Refuse gender discrimination and insist on equality of men and women for employment</li> <li>Formulate the <i>Management Procedures for Protection of Women Employees</i>, and guarantee the gender equity in many ways such as defining the exclusive benefits for female employees and setting convenient places for women</li> </ul>		<ul style="list-style-type: none"> <li>Avoid, protect and transfer the rights and interests of indigenous residents, ancient cultural sites and religious shrines to fully display the responsibility of a responsible enterprise</li> <li>Empower the community development with enterprise resources and continuously enhance the sense of happiness and belonging of community residents</li> </ul>
	<ul style="list-style-type: none"> <li>Promote reasonable utilisation of water resource through technical transformation and recycling</li> <li>Continuously optimise the environmental protection facilities and management system of wastewater, and reduce the adverse effect of water pollutants on human health and environment</li> </ul>		<ul style="list-style-type: none"> <li>Constantly optimise the quality management system and strictly control the product quality</li> <li>Respond to the after-sales service and customer needs in current day and improve the responsible consumption performance</li> </ul>
	<ul style="list-style-type: none"> <li>Release the <i>Greenhouse Gas Emission Targets and Implementation Plan</i>, and realise low carbon production through direct emission reduction, electric power decarbonisation and recycling</li> <li>Construct photovoltaic generation projects and improve the energy structure through clean energy significantly</li> <li>Actively consume renewable energy resources through green electric power transaction and green electric power certificate purchasing</li> </ul>		<ul style="list-style-type: none"> <li>Identify and evaluate the climate change risk issues, take corresponding measures for the identified risks and continuously improve the response to climate change risk level</li> <li>Define the decarbonisation target and continuously carry out carbon neutrality practices</li> </ul>

# Reader Feedback Form

**Dear readers,**

Thanks for your attention and support to the ESG of Nanshan Aluminium. In order to provide more professional and valuable information in environment, society and governance and further improve the ESG report quality, please answer the questions in feedback form.

1. Are you satisfied with the report? Please write down your comments.

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2. Do you think our social responsibility has been fully disclosed?

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3. Is the information you wish to know fully disclosed in the Report?

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4. What improvement suggestions do you have for the Report?

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