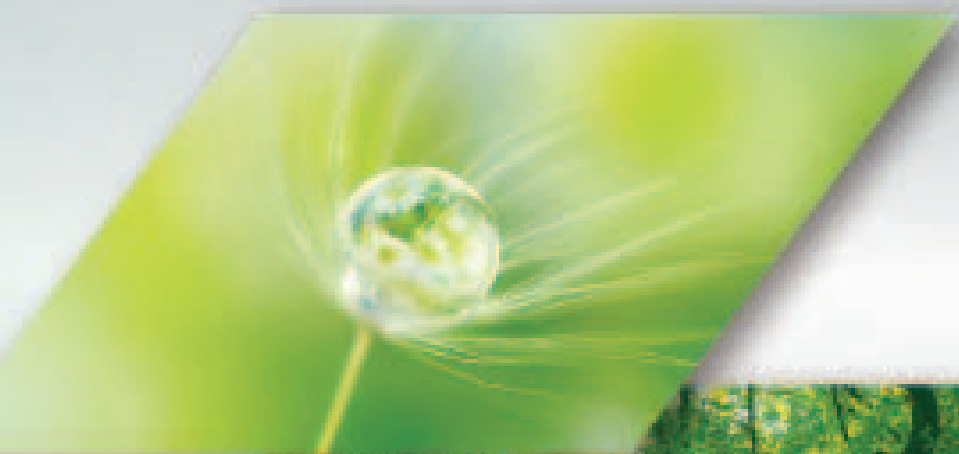


ENVIRONMENTAL, SOCIAL & GOVERNANCE REPORT



ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

About the Environmental, Social and Governance Report

This is the fourth Environmental, Social and Governance Report (the “ESG Report”) published by Tiangong International Company Limited (“the Company”) and its subsidiaries (collectively referred to as the “Group”). The ESG Report mainly covers the annual performance and progress of the Group’s environmental, social and other sustainability issues in 2019, so as to respond to relevant expectations of stakeholders. It is to be read in conjunction with the “Corporate Governance Report” of *Tiangong International Company Limited Annual Report 2019* (the “Annual Report 2019”), so as to have a comprehensive overview on the environmental, social and governance (the “ESG”) performance of the Group.

ESG Reporting Content and Period

Unless otherwise stated, the organisational scope of the ESG Report covers the Company and its major subsidiaries. Other subsidiaries and associates of the Group that are not directly engaged in production activities have relatively minor impacts on the overall environmental and social performance of the Group, and are therefore not included in the reporting scope of the ESG Report. If their operation has greater impacts on the environmental and social performance of the Group in the future, the Group would consider incorporating those companies into the scope of ESG reports in future fiscal years. All information disclosed in the ESG Report was sourced from the Group’s documents and statistics. The Group assures the truthfulness, accuracy and completeness of the ESG Report.

The reporting period of the ESG Report is consistent with that stated in the Annual Report 2019 of the Group, which is 1 January 2019 to 31 December 2019 (the “reporting period”). Where necessary, some of the content of the ESG Report goes beyond the aforesaid period.

Reporting Guideline

The ESG Report was prepared in accordance with the *Environmental, Social and Governance Reporting Guide* under Appendix 27 to the *Rules Governing the Listing of Securities* (the “Listing Rules”) issued by the Stock Exchange of Hong Kong Limited (the “SEHK”). Moreover, it was prepared based on the principles of materiality, quantitative, balance and consistency to determine and disclose its contents, and is compliant with the “comply or explain” provision set out in the *Environmental, Social and Governance Reporting Guide* by SEHK.

Form of Publication

The ESG Report is published in two language versions — Traditional Chinese and English. If there is any inconsistency between the two versions, the Traditional Chinese version shall prevail. You are welcome to access the Traditional Chinese and English versions of the ESG Report in the PDF format through the Company’s website, <http://www.tggj.cn/>, and SEHK’s HKEx news website.

Comments and Feedback

Your feedback is immensely important for the Group to keep enhancing its environmental and social performance. If you have any comments or feedback, you are welcome to contact us by email at tiangong@biznetvigator.com.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

1. About the Group

Established in 1981, the Group is a manufacturer of die steel ("DS"), high speed steel ("HSS"), cutting tools and titanium alloy. Upholding the spirit of unified and hard-working, seeking truth and being pragmatic, daring to be outstanding and excellent craftsmanship, the Group focuses on manufacturing DS, HSS, cutting tools and titanium alloy and insists to build its brand with integrity and quality. Through its unique technology, products' advantages and innovative strategy and plan, the Group was honored as one of China's top 500 private enterprises for six consecutive years and as one of the China's top 500 private enterprises in the manufacturing sector for eight consecutive years.

2. Highlight — Fighting the "Disease" Together

The epidemic of novel coronavirus pneumonia has gotten on not only the nerves of the Chinese people but also the people worldwide. It is everyone's responsibility to prevent and control the novel coronavirus pneumonia. The Group has earnestly implemented prevention and control measures of the epidemic, formulated and issued the *Emergency Plan for the Prevention and Control of the Epidemic of Novel Coronavirus Pneumonia* in time based on the principle of "discipline, limit, responsibility". Moreover, the Group has also implemented its internal



responsibilities by establishing an emergency leading team for the prevention and control of epidemic. The general manager takes the leading role of the emergency leading team, while division managers, department heads, factory managers, workshop directors, team leaders and the head of the administrative department are the principal person-in-charge. The body temperature of employees is measured and recorded twice a day. In addition, the persons-in-charge of the workshops would require the employees to declare their health conditions on a daily basis. If any abnormalities were found, the concerned people would be required to go to the hospital immediately for diagnosis. Meanwhile, the Group always cares about its employees' well-being. The Group has formulated the management measures and regulations, such as the *Notice of Providing Basic Living Allowances to Employees are Away from Work during the Outbreak of the Epidemic*, and provided basic living allowances to employees.

Apart from the implementation of prevention and control measures against the epidemic, the Group cares about the society and actively fulfills its social responsibilities by donating RMB1.6 million to help win the battle of preventing and controlling the epidemic. Moreover, collaborative work is required to fight against the epidemic and get over difficulties. Therefore, the Group vigorously seized resources and donated a total of 51,000 masks to South Korea, and donated a total of 60,000 masks to its branches and customers in Italy, America, Canada and other places on 10 March 2020.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT



The Group donated materials to fight against the epidemic

3. Responsibility Management Implemented by Tiangong

3.1 Management Mechanism

Good corporate governance practices are fundamental to corporate development. The Group strives to attain and maintain high standards of corporate governance. To achieve this goal, the Group strengthens its internal policies and procedures, provides employees with continuous training, and improves its operational transparency and accountability to all shareholders. To ensure the compliance with laws and regulations, and to reduce business risks of the Group, the Group has set a good internal control and risk management system. The Board is responsible for the internal control and risk management system of the Group, and reviews its effectiveness and adequacy. How to deal with ESG risks is an issue of business risk control. In response, the Group has established a suitable and effective ESG risk management and internal control system and integrated it into the Group's risk management system¹, so as to be able to actively respond to ESG risks. The Board is responsible for assessing and determining ESG risks, ensuring the effectiveness of ESG risk management and internal control system, and is responsible for the Group's ESG strategy and reporting.

In order to effectively and systematically implement the ESG strategy, and promote developments on ESG work, the Group has built an ESG management mechanism consisting of the Company's senior management and respective functional departments with specific responsibilities. The senior management of the Company is responsible for reviewing the ESG issues of the Group and formulating corresponding action plans, while reporting ESG work to the Board in parallel. Each functional department is responsible for coordinating and implementing ESG-related work. In order to further strengthen the ESG management system, the Group has gradually improved the ESG management mechanism according to its own development status and with reference to the SEHK's guidelines and opinions on fulfilling ESG responsibilities of listed companies. Special employees are designated to ESG work and continuously promote the Group's vision in social responsibility.

¹ For details of the Group's internal control and risk management system, please refer to the relevant disclosure in the 2019 Annual Report.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

3.2 Stakeholder Engagement

Keeping smooth communication with various stakeholders is an essential part of the Group to realise sustainable development. The Group could have a better understanding of each stakeholder's expectations by multi-dimensional and regular stakeholder engagement, which enable the Group to make specific work plans and continuously improve itself.

Stakeholders	Expectations	Communication Methods	Communication Frequency	Actions in Response
Shareholders and Investors	Investment returns Corporate governance Regular communication	General meetings Company announcements Regular reports Roadshows	Annual/quarterly/ irregular	- Continuously improving risk management and internal control system; - Enhancing information disclosure and communicating regularly
Government	Compliance with laws and regulations Paying tax according to laws	Supervision and assessments Information disclosure	Regular/irregular	- Strictly complying with national laws and regulations and implementing compliance works; - Proactively cooperating with regulatory departments; - Paying tax according to laws
Customers	High-quality products Quality management Service guarantee	Contracts and agreements Customer service Service feedbacks Customer Annual Conference	Annual/quarterly/ irregular/twice a year	- Continuously improving production management system; - Promoting scientific research innovation and elevating quality and efficiency in production
Employees	Employee rights and benefits Health and safety Promotion and training	Labor contracts Employee conferences Employee activities	Regular/irregular	- Strengthening human resource management system to ensure employee rights and benefits; - Implementing measures relating to employees' occupational health and safety; - Formulating training plans and broadening employees' development path
Suppliers and Other Business Partners	Being fair and just Win-win cooperation	Contracts and agreements Supplier assessments Communication meetings Customer Annual Conference	Annual/irregular/ twice a year	- Guaranteeing the bidding and procurement process to be fair and transparent; - Fulfilling contracts and agreements
Communities	Community development Environmental protection	Community communication Charitable contribution Eco-friendly events	Regular/irregular	- Engaging in the harmonious community development; - Proactively holding charity donation events; - Implementing environmental protection measures

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

On 8 November 2019, the Group held the Tiangong International Global Customer Annual Conference 2019 with the theme of “remaining true to our original aspiration, and moving forward despite obstacles” and communicated with various stakeholders. Industry Leaders, academic experts, partners, suppliers and several news media from different countries and regions attended this conference. Participants gave speeches relating to the industry’s status and its future development.



Tiangong International Global Customer Annual Conference 2019



Tiangong International Global Customer Annual Conference 2019

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

3.3 Materiality Assessment

The stakeholders of the Group may have different focus on the Group's environmental and social performance due to their different perspectives. Therefore, the Group conducted a materiality assessment to identify, verify and review ESG topics based on its development direction and the focus of the stakeholders, so as to report the Group's major ESG performance during the reporting period more specifically and respond to the stakeholders' expectations.

There were three major steps of the materiality assessment, including reviewing the previous ESG work and ESG topics, identifying ESG topics, and verifying and reviewing ESG topics. First of all, the Group reviewed the previous ESG work and the past ESG reports. Following this, based on the Group's development status and with reference to SEHK and other sustainability reporting guidelines, the Group identified its ESG topics of this year by taking full consideration of business nature and development strategy together with stakeholders' focus. After the identification of ESG topics, the Group verified and reviewed them to determine the topics to be disclosed and the content of the ESG Report.

The ESG topics to be reported are listed as follows. The ESG Report shows the ESG performance of the Group during the reporting period according to the topics and the relevant requirements of the reporting guideline.

Aspects	Reported ESG topics
Environmental	Emission management Use of resources Environmental protection
Social	Employee rights and benefits Labor standards Health and safety Employee development and training Supplier management Product responsibility Scientific research and innovation Anti-corruption Community investment

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

4. Compliant and High-quality Products Produced by Tiangong

4.1 Producing High-quality Products

As a manufacturer of DS, HSS, cutting tools and titanium alloy, the Group upholds the development concept of “building a well-established Tiangong with a reputable brand”, adheres to the spirit of excellent craftsman to manufacture high-quality products, and makes unremitting efforts to create excellent and high-quality products through innovation and higher standards. The Group has formulated and implemented quality control systems in accordance with the *Quality Management Systems — Requirements of National Standard of the People’s Republic of China (“PRC”)* (GB/T 19001-2016, identical to ISO 9001:2015, *Quality Management Systems — Requirements*) and has carried out measurement management for product quality and other aspects according to the standards of GB/T 19022-2003/ISO 10012:2003 *Measurement Management System-Requirements for Measurement Process and Measurement Equipment* to guarantee its product quality comprehensively.

The Group’s high-quality products are attributed to the Group’s meticulous and strict control over the entire manufacturing process. The Group formulated operating procedures for each process and quality control manuals for various types of products, such as the *Management Procedure for New Product Development*, the *Control Procedure for Self-made Unqualified Product* and the *Enterprise Measurement Management Regulation*. A series of quality inspection is conducted during production process from receipt of raw materials until the products are finished. After receiving raw materials, the Group examines them and takes samples for chemical tests to ensure that their quality meets the specified requirements. During the production process, semi-finished products of each stage of production are subject to strict physical and chemical analyses to ensure their production quality. The technology department and quality inspection department of the Group are responsible for obtaining the accreditation of safe technology of the design of new products, new techniques and equipment, and supervising the implementation of the safety technology operation regulations of the production safety procedure of each product to ensure production safety and product quality. A series of quality tests is conducted by the Group for the finished products to guarantee that they meet relevant requirements regarding health and safety, labeling, environmental protection, etc., before entering into the market. As a result of unremitting efforts for high-quality products. The Group has become one of the enterprises in Jiangsu Province which are certified to be in compliance with Chinese Grade 1 Management and Measurement System.

During the reporting period, Jiangsu Tiangong Technology Company Limited successfully obtained the certificate of AS9100 Aviation and Aerospace Quality Management System, marking that a full range of its titanium and titanium alloy products including titanium ingots, titanium plates, titanium tubes, titanium rods and wires, and titanium forgings have the technical strength and qualification to compete in the international aviation and aerospace market.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Gaining the trust and support of customers not only depends on the Group's high-quality products, but also requires good after-sales service, and timely feedback and communication with customers. The Group attaches great importance to customers' feedback and provides pre-sales and after-sales services to them. Additionally, the sales team will visit customers regularly for discussion to understand their opinions. The Group proactively responds to customers' comments and suggestions on the Group's products and services. Personnel is arranged timely to collect customers' opinions, such as sending customer satisfaction questionnaires through emails on an annual basis, in accordance with the formulated customer service management measures. In addition, through the product authenticity checking system established by the Group, customers can check the authenticity of products through QR codes, digital security query system, and product serial number query system, which not only protects the rights of customers to purchase authentic products, but also safeguards the Group's reputation.

4.2 Driving Innovation and Vitality

The Group believes that innovation and upgrading are the best way to stay competitive and realise the true value of the business. In an increasingly competitive market environment, how to achieve and maintain high-quality development is an important issue that companies need to deal with. In order to tackle this issue, the Group is committed to technological innovation, continuously develops new technologies and new products required by the market, strives to improve its internal management, and stimulates innovation and vitality. The Group encourages its employees to be innovative and open up a new phase of innovation by accelerating the work on research and development of new products, technique innovation, quality control and market services. To further stimulate the continuous innovation among employees, the Group held the 2019 Annual Conference of Technology Innovation Work and Commendation of the Outstanding Worker of the Technology and Innovation Department in November 2019, to summarize and commend the achievement of innovation in 2019. During the reporting period, the Group's "Development and Application of Key Technologies for High-quality Die-casting Die Steels" project won the first prize of the "Metallurgical Science and Technology Award" in 2019 issued by the China Iron and Steel Industry Association and the Chinese Metal Society.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT



The Group won the first prize of the 2019 “Metallurgical Science and Technology Award” by the China Iron and Steel Industry Association and the Chinese Metal Society with its “Development and Application of Key Technologies for High-quality Die-casting Die Steels” project



2019 Annual Conference of Technology Innovation Work and Commendation of the Outstanding Worker of the Technology and Innovation Department

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Powder metallurgy plays a pivotal role in the development of new materials and is a high-end technology in the international metallurgical industry. In November 2019, after more than 20 months of development, China's first powder metallurgy industrial production line and the first domestic powder metallurgy research institute were established in the Group and formally put into production. The Group's powder metallurgy intelligent factory is the only production line in the domestic new materials industry that is capable of scaled production and reaches the level of international high-end new materials. "Constantly improving and overcoming difficulties" is what the Group's powder metallurgy intelligence factory team is doing. In order to manage more systematically, the team has undertaken innovative management for production activities and daily operations on the basis of ensuring that the implementation of the Group's regulations and systems. The team has formulated a fundamental and sound management approach to effectively divide tasks into small pieces for further implementation.



The Company's powder metallurgy intelligent factory team



The Company's powder metallurgy intelligent workshop project (corporate's cloud map)

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

4.3 Strengthening Supply Management

The Group's procurement mainly includes raw materials such as metals and equipment. Suppliers are not only providers of the Group's procured materials, but also its business partners. It is an essential work in the Group's business development to implement effective supply chain management and to maintain a good cooperative relationship with suppliers so as to reduce supply chain risks. To this end, the Group has formulated and implemented the regulations for bidding and long-term management mechanisms in materials procurement, such as the *Regulation for Administration of Procurement of Supplies and Price Accounting* and the *Management Regulation of Bidding*, to standardize the Group's bidding and material procurement management system so as to ensure the biddings are fair, just and transparent. The Group has established supplier assessment systems and made a supplier list. Regular supplier assessments regarding their environmental and social performance are conducted, including their management level, product quality, after-sale service, and whether environmental and social management measures are in place, etc. By doing so, it is able to safeguard the quality of raw materials and equipment that the Group uses in production, as well as to manage the environmental and social risks posed by suppliers in a better way.

The Group's procurement department holds regular meetings with suppliers to ensure a stable supply of raw materials and in good quality. In addition, The Group will have regular on-site assessments to evaluate suppliers' social responsibility performance. For instance, if suppliers have violations of labor regulations, including employment of child labor, forced labor, etc., the Group would immediately terminate the cooperation with them. Additionally, the Group would consider the operation location of suppliers and opt to choose local suppliers to reduce the emissions of pollutants due to long-distance transportation.

4.4 Strictly Upholding Compliant Operations

The Group implements the business philosophy of "business starts with integrity" and upholds compliant operations. The Group strictly complies with the applicable laws and regulations, promotes and implements national laws and regulations timely. The Group has formulated and implemented the disciplinary measures for employees and would seriously handle the employee who may be involved in corruption and bribery. The cases shall be transferred to judicial authority under serious circumstances. The Group also regulates bidding to ensure that its process is transparent and open.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

The Group requires that employees shall comply with national laws, regulations and policies, and strictly execute the Group's regulations, measures and fundamental rules. By implementing the reward and punishment system, the Group rewards those who comply with laws and regulations, and takes disciplinary actions against those who violate relevant regulations in accordance with the rules. Moreover, the Group requires that business partners shall comply with relevant regulations to ensure the implementation of legal governance, and the employees responsible for procurement shall not have any economic interests with suppliers and shall be honest in performing duties. During the reporting period, in order to further standardize and improve the Group's sales, delivery, invoicing, and payment collection and other related processes, and to eliminate management loopholes, the Group has formulated the *Regulations on Improving Sales, Delivery, and Invoicing Related Processes* and established a finance-warehouses mutual supervision system, whose system procedure is improved by the information center.



The Group launched the education activity with the theme of “remaining true to our original aspiration and keeping our mission firmly in mind”, and revisited the “original aspiration”, which refers to upholding the spirit of craftsmanship in doing business, managing by applying rules and regulations, strengthening thoughts, and awareness in disciplines and rules.

Regarding the information of the Group and its customers, the Group complying with the relevant archive management measures and confidentiality system for its proper management, and implements network information security to ensure the data and information is secured.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

5. Environmental Protection and Clean Production of Tiangong

5.1 Promoting Energy-saving Production

Promoting energy conservation, advancing the development of a water-saving society, and actively responding to global climate change are missions listed in the *13th Five-Year Plan for the National Economic and Social Development of the PRC* ("13th Five-Year Plan"). It put forward the need to establish a resource-saving and centralized recycling philosophy, strengthening whole process management, and greatly improving comprehensive resource utilization efficiency, and effectively controlling carbon emissions from the power generation and steel industries.

During the operations, the major resources used by the Group include electricity, natural gas, water resource, and scrap steel and other raw materials for production. The Group actively responds to national policies on energy conservation, environmental protection, and climate change, and strictly abides by laws and regulations on resource utilization, such as the *Cleaner Production Promotion Law of the PRC* and the *Energy Conservation Law of the PRC*. The Group continues to strengthen the establishment of internal energy-saving management systems and regulations. Assessments and evaluation for the responsibility of energy-saving targets are actively carried out. The Group systematically records and analyses its energy usage so as to formulate energy-saving plans and assigning specific energy-saving tasks to teams. In order to raise employees' awareness of energy conservation and environmental protection, the Group organises education on water saving and electricity conservation.

Energy saving and emission reduction are important practices to control greenhouse gas ("GHG") emissions and to actively respond to climate change. The Group's GHG emissions are mainly generated from the combustion of natural gas and the use of electricity. In addition to the energy-saving measures mentioned above, the Group advocates reasonable use of electricity and has formulated the *Management Measures of Saving Electricity* to strengthen electricity management. The Group is equipped with lighting fixtures according to the specific lighting needs in different areas, replaces the current lights with energy-saving lights gradually so as to avoid wasting electricity and decrease electricity consumption per unit of production. In addition, the Group requires employees to properly operate equipment in accordance with operating procedures to prevent equipment from idling and reduce energy loss, and the GHG emissions caused by it. During the reporting period, the Group's total GHG emission intensity decreased by 3.00% compared to the previous reporting period.

In addition, during the reporting period, the Group entered into the *Strategic Framework Agreement* of Comprehensive Energy Service with Danyang Power Supply Company of the State Grid. By adopting the advance energy and information technologies, a modern comprehensive energy service system has been established in the Group. Moreover, by implementing the renovation project of wind turbines, approximately 660,000 kilowatt-hours electricity can be saved on an annual basis.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

In terms of water sourcing, the Group takes full consideration of water sourcing during projects' design stage and investigates the richness of local water resources. The Group's water consumption mainly comes from municipal water supplies and wells, and there are no difficulties with water sourcing. In order to increase water utilization efficiency, a proportion of wastewater treated by biochemical measures at the wastewater treatment plant is reused as cooling water in production facilities. A water recycling system is also adopted by the Group. During the reporting period, the recycled water was approximately 110,010.00 metric tons.

Regarding the use of raw materials for production, the Group mainly uses scrap steel and grinding swarfs for steel smelting and production. Grinding swarfs are recycled and reused for steel production of the Group, which greatly increases the utilization rate of the raw materials. During the reporting period, the Group reused about 55,437.41 metric tons of grinding swarfs.

5.2 Strictly Implementing Emission Management

Building a beautiful China is an aspirational goal for Chinese people, and it requires well-planned green development. To this end, China has continuously increased its efforts to address environmental issues. Through the issuance of the *Opinions of the Central Committee of the Communist Party of China and the State Council on Strengthening the Ecological and Environmental Protection in All Aspects and Firmly Winning the Battle of Preventing and Controlling Environmental Pollution*, and the *Three-Year Action Plan to Win the Blue Sky Defence Battle* and other relevant requirements, plans and arrangement were made to strengthen ecological environmental protection and resolutely fight against pollution. In addition, in order to promote the steel industry's high-quality development, to promote industrial transformation and upgrade, and to help win the blue sky defense battle, five ministries and commissions, including the Ministry of Ecology and Environment of the PRC, jointly issued the *Opinions on Promoting the Implementation of Ultra-Low Emissions in the Steel Industry* in 2019, which sets targets of ultra-low emission transformation for iron and steel enterprises, and formulates requirements for organised and fugitive emissions of air pollutants from iron and steel enterprises.

The Group actively responds to relevant national policies on emission management, continuously strengthens safety and environmental protection works, and implements specific environmental protection management tasks. The Group has established a leading group of environmental protection management to advance safety and environmental protection work with the strictest standards and highest requirements, and conducted a comprehensive and thorough investigation of possible pollution sources. The leading group consists of various cadres of the Group, forming a "supervisor-deputy supervisor-team members" management structure, and formulates optimization and rectification measures for possible pollution sources such as dust, solid waste, spent oil, wastewater, and noise to ensure compliance with the relevant national and provincial environmental protection standards without sparing any efforts.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

In order to implement the management of environmental protection matters in production and operation, the Group has formulated the *Environmental Protection Management Measures* in accordance with the applicable national laws and regulations relating to environmental protection, which includes the management procedures about prevention and control of water pollution, air pollution, noise, and wastes, and the use of resources. Moreover, Tiangong Aihe Company Limited and Jiangsu Tiangong Tools Company Limited have been certified with GB/T 24001-2016/ISO 14001:2015 *Environmental Management System-Requirements with Guidance to Use* in 2017.

5.2.1 Air pollutants

The air pollution generated from the operation of the Group is primarily due to natural gas combustion. The Group has completed the renovation of boilers and furnaces, where coal is replaced with natural gas as the fuel source, reducing air pollution during their operation. Efficient pollutant treatment equipment is also installed to ensure emissions meet the relevant national and steel industry emission standards. In addition, dust and oil mist are generated from the operation of the Group. Highly efficient dust treatment and oil mist collection devices have been installed on-site accordingly to reduce their impacts on the environment and employees' health. Regular maintenance has been conducted by the equipment maintenance department of each workshop to ensure the good operation of equipment and prevent fugitive emissions and extra energy consumption due to equipment malfunction.

In pursuance of reducing its environmental impacts, the Group enhanced dust treatment efficiency through the following practices: corrective measures are fully implemented to the dust removal equipment in workshops to improve dust removal efficiency; enclosing ash yards in workshops to prevent fugitive dust emission; investigating whether discharge outlets of exhaust gas and leak-proof measures meet environmental protection requirements; ensuring the normal operation of the dust removal equipment and the tightness of the dust removal system, and repairing it if any fugitive dust emission is found; improving and renovating the exhaust system to enhance oil mist treatment efficiency.

5.2.2 Wastewater

The Group has formulated and implemented the *Administrative Procedures on Prevention and Control of Water Pollution*. All wastewater from production is collected and transferred to the wastewater treatment plant of the Group for treatment, which ensures that the discharge of treated wastewater complies with relevant standards, such as the *Integrated Wastewater Discharge Standard* (GB8978-1996). The supervision and monitoring of wastewater discharge are implemented by the Group in accordance with the *Implementation Procedure of Monitoring and Measurement*. Through timely monitoring of wastewater, the Group follows specific indicators of pollutant discharge in wastewater for confirming the status of compliance. If the indicators exceed the levels specified by the standard, the reasons for the exceedances will be investigated immediately, and corrective measures will be formulated. Verification and monitoring will be conducted at the same time until the discharge meets the standard. Moreover, both the wastewater discharge pipeline and treatment facility have adopted leakage prevention measures to prevent wastewater leakage and thus their impacts on the surrounding.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

5.2.3 Solid Wastes

During operation, the solid wastes generated by the Group include non-hazardous wastes, such as melting slag, waste paper, etc., and hazardous wastes, such as spent oil (including spent lubricating oil and waste mineral oil), the dust collected by the dust collection (removal) device during production, acidic and alkaline waste, etc. The Group has implemented environmental protection measures in accordance with relevant national and local environmental protection standards to ensure the solid waste treatment meets relevant requirements. Under the leadership of the leading group of environmental protection management, specific personnel are arranged to handle wastes and a complete waste ledger is established in accordance with relevant requirements, and the waste data collection system is improved. At the same time, specific personnel are responsible for the implementation of anti-corrosion and leakage prevention measures in the waste storage areas and ensures compliance with relevant environmental requirements.

The waste disposal methods of the Group are listed as follows:

	Hazardous wastes	Non-hazardous wastes
Treatment principle	Reduce, reuse and recycle	
Treatment methods	Hazardous wastes are properly stored in strict compliance with dangerous goods management regulations and handed over to qualified third parties for treatment. The spent lubricating oil produced from operation of the Group is reused after being treated in the spent lubricating oil treatment plant to reduce its generation.	Non-hazardous wastes are divided into recyclable and non-recyclable wastes. For instance, the metal in the smelting slag generated from production of the Group could be reused in steel production, while other parts could be transferred to brick factories and cement plants for brick and cement production. Domestic wastes are collected and treated by the third parties entrusted by the Group.

5.2.4 Noise

The Group has formulated the *Administrative Procedures on Prevention and Control of Noise Pollution* and conducted noise assessment in the workshops. A series of measures to mitigate noise impact has been undertaken, such as prioritising the use of quiet equipment, to ensure the noise from the production of the Group complies with the *Emission Standard for Industrial Enterprises Noise at Boundary* and the *Hygienic Standards for the Design of Industrial Enterprises*. The Group shall arrange the operations with high noise levels in the daytime as far as possible to avoid affecting residents' daily life in the evening.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

5.3 Environmental Key Performance

As of the end of the reporting period, the main environmental key performance of the Group is listed as follows:

Indicators	Units	2019 ²	2018
Amount of products (steel and titanium alloy)	Metric tons	201,136.90	196,015.68
Air pollutants ³			
Sulfur oxides emissions	Metric tons	0.70	0.51
Nitrogen oxides emissions	Metric tons	64.88	66.45
GHG ⁴			
Scope 1: direct emissions	Metric tons	74,878.59	76,813.56
Scope 2: indirect emissions	Metric tons	429,286.91	429,708.61
Total GHG emissions	Metric tons	504,165.50	506,522.17
GHG emissions intensity	Metric tons/metric tons of products	2.51	2.58
Non-hazardous wastes ⁵			
Melting slag	Metric tons	29,856.00	34,604.86
Waste paper	Metric tons	151.48	149.40
Total amount of non-hazardous wastes	Metric tons	30,007.48	34,754.26
Intensity of non-hazardous wastes	Metric tons/metric tons of products	0.15	0.18
Hazardous wastes			
Acidic and alkaline wastes	Metric tons	24,581.00	28,087.00
Other hazardous wastes ⁶	Metric tons	684.34	26.28
Total amount of hazardous wastes	Metric tons	25,265.34	28,113.28
Intensity of hazardous wastes	Metric tons/metric tons of products	0.13	0.14

² The data of the main environmental key performance of 2019 were sourced from the production factories of the Group located at Danyang City and Jurong City.

³ The calculations of air pollutants were set out based on the *Pollution Generation and Discharge Coefficient Manual of Industrial Pollution Sources in the First National Census of Pollution Sources* and the *Road Vehicles Air Pollutant Emission Inventory Preparation Technical Guide (Trial)*. The data used in the calculation were sourced from the recorded data of the Group and conservative estimates were made based upon historical performance data or benchmarking with similar facilities.

⁴ The GHG emissions are calculated based on the Group's use of natural gas, gasoline and electricity, based on the *Guideline of the Greenhouse Gas Emissions Accounting and Reporting for the Chinese Steel Production Enterprise (Trial)* and the *2011 and 2012 Chinese Regional Grid Average Carbon Dioxide Emission Factor* published by National Development and Reform Commission of the PRC. The data used in the calculation were sourced from the recorded data of the Group and conservative estimates were made based upon historical performance data or benchmarking with similar facilities.

⁵ The data of waste paper and total amount of non-hazardous waste of 2018 were revised. The data of waste paper of 2018 were recalculated based on the calculation scope of the data of 2019. The data shall be subject to those listed here.

⁶ The data of 2019 included the dust collected by the dust collection (removal) device during production, spent lubricating oil, waste mineral oil, oily sludge and other hazardous wastes.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Indicators	Units	2019 ²	2018
Use of resources			
Water consumption	Metric tons	275,512.00	356,519.00
Intensity of water consumption	Metric tons/metric tons of products	1.37	1.82
Electricity consumption	Megawatt hours	610,215.93	610,815.37
Intensity of electricity consumption	Megawatt hours/metric tons of products	3.03	3.12
Natural gas consumption	Ten thousand cubic meters	3,458.45	3,549.80
Intensity of natural gas consumption	Ten thousand cubic meters/metric tons of products	0.02	0.02
Packaging materials used	Metric tons	2,905.87	2,820.00

6. A Talent Team Built by Tiangong

6.1 Protecting Employees' Rights and Benefits

To ensure the standardization, discipline, and efficiency of the human resources management of the Group and to protect the rights and interests of employees, the Group have formulated and implemented the *Human Resources Management System*, which includes recruitment management, new employee onboarding process, promotion management regulations, employee turnover management measures, employee benefits, staff training management measures, etc. The Group aims to build a high-quality, united team basing on the employment concept of "pragmatism, loyalty, responsibility, success, innovation, shouldering". Moreover, the Group has built an environment that has reasonable working hours, sound labor contract system and recruitment system, comprehensive promotion mechanism and remuneration and benefits policy, for employees to have a good sense of stability.

The Group advocates equality and diversity in the employment policies, and it does not discriminate against employees because of race, nationality, colour, gender and other conditions. The Group established a sound talent selection mechanism by standardizing recruitment management according to the *Recruitment Policy* under the principle of "openness, fairness, competition, competitive selection and voluntary". During recruitments, the human resources department of the Group verifies the information of every candidate by checking his/her documents, such as identity card, diploma and strictly abides by the applicable laws and regulations such as the *Law of the PRC on the Protection of Minors* to prevent hiring minors under 16 years old. The Group enters into individual employment contracts with its employees according to laws to make provision of wages, employee benefits and workplace safety and grounds for termination, etc.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

The Group has formulated the *Promotion Management Regulations* to standardize the management procedures for personnel rank promotion, so as to provide employees with a fair, just and standardized promotion opportunity and competition platform, which creates a positive working atmosphere for employees. In order to fully inspire every employee's motivation in different positions, the Group established and enhanced the qualification-based job management system and compensation system. The Group has formulated the *Compensation Management Regulations for Technical and Management Position* and the *Compensation Management Regulations for Administrative Management Position*, which stipulate the compensation structure and its adjustment standard of employee's position. In addition, the Group has paid the contributions to employees' social insurance funds (including medical insurance, unemployment insurance, pension insurance, work-related injuries insurance, and childbirth insurance) and housing provident funds for its employees. The Group has also formulated the *Regulations on Employee Leaves* to ensure that employees are legally entitled to take paid leaves and other public holidays and they are also entitled to take marriage leaves, maternity leaves, and bereavement leaves. Also, the Group has formulated the attendance management system, which legally stipulates the working hours of employees and reasonable production arrangements to ensure their rest, and strictly prohibits the occurrence of forced labor. When a contract of employment is terminated, the termination follows relevant procedures according to the *Management Measures of Termination of Employment* and the labor contracts.

In order to protect the rights and benefits of employees, the Group holds employees' representatives conference every year to proactively acquire comments of employees' representatives to the current status of the Group. On 26 March 2019, the Group held the Second Meeting of the Second Employees' Representatives Conference of Tiangong International and proactively communicated with employees' representatives. By doing so, it is able to fulfil employees' rights to know and to speak.



A group photo of the Second Meeting of the Second Employees' Representatives Conference of the Group

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT



The Second Meeting of the Second Employees' Representatives Conference of the Group

6.2 Safeguarding Health and Safety

The responsibility for safety in production is of great importance. Safe production is not only a top priority for the Group's production but also a major issue that relates to the safety of employees' lives. The Group always upholds the safety production principle of "safety first, prevention oriented" and has formulated and implemented the occupational health and safety management systems, the plans for inspection, elimination and control of potential risks, the safety operation manuals for each equipment, and the emergency response plans to ensure safe production. Tiangong Aihe Company Limited and Jiangsu Tiangong Tools Company Limited have been certified with GB/T 28001-2011/OHSAS 18001:2007 *Occupational Health and Safety Management System-Requirements* in 2017.

In order to ensure work safety of the Group and implementation of safety measures, the Group takes full consideration of relevant safe production regulations to build an occupational health and safety management system of the Group, which is formed by the formulated work safety responsibility system, safety management system, safety inspection system, labor equipment management system, fire control management system, protection regulation for female workers, potential hazards control measure, accident investigation and handling management measure and other safety management measures. The Group has also established a work safety responsibility system to clarify each person's work safety responsibility and implement safety management. Other than holding meetings for safety management discussion, specific employees are in place for the workplace safety inspection and eliminate workplace hazards or other problems by regular inspections and handling non-compliance. The Group has formulated hazards investigation work plans to discover and identify unsafe factors in production and prevent accidents from occurring. Various kinds of safety inspections, including comprehensive, professional, seasonal, holidays, and daily inspections, are implemented to protect employees' lives and keep their properties safe.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

On 1 April 2019, the *Regulations on Emergency Response to Production Safety Incidents* came into effect in China, which strengthens the leading position of emergency preparedness in emergency management, and establishes the responsibilities of relevant parties involved in emergency production safety incidents. In response, the Group strengthened emergency management in production operations by establishing a responsibility system for providing emergency response to safety accidents during production. The Group has formulated emergency rescue plans according to the *Work Safety Law of PRC*, the *Fire Protection Law of the PRC* and other laws and regulations and stipulated that the safe production leading group shall uniformly command the emergency rescue work. Moreover, the responsibilities of the emergency rescue teams such as the safety production leadership team, fire rescue team, crowd evacuation team, external communication team, and traffic security team, etc., have been stipulated at the same time. Fire drills are held to improve employees' emergency responsiveness on a regular basis.

In addition, the Group requires that each employee must enter into a safety production commitment after receiving relevant safety education and being familiar with all contents in the safety production commitment in accordance with the requirements of the safety education system. At the same time, employees must abide by the Group's safe operating procedures for various equipment's operation, such as safe operating procedures for electrician and heating furnace safe operating procedures, which provide safety guidance to operators to ensure operation safety. The Group has also provided complete and reliable safety facilities in operating sites and has set up warning signs for occupational hazards to strengthen the safety management of the operating environment.

The Group actively improves the working conditions of employees and distributes labor protection equipment to employees to prevent occupational diseases. For example, the Group has equipped employees with qualified masks or dust prevention respirators. Those working in workplaces that have high concentration of smoke and dust are required to wear them. In addition, the Group has organised health checks for employees and carried out various forms of safety education and training activities to strengthen employees' safety awareness.

6.3 Strengthening Team-building

To build a "skilful, capable, and successful" team requires a positive working environment and an effective employee training mechanism. Therefore the Group is committed to providing employees with a dynamic and progressive working environment with clear development pathways by constantly improving employee training mechanisms, and organizing various training activities to enhance employees' basic and professional knowledge so as to broaden their career development paths.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

For new employees, the Group has formulated and implemented the *Orientation Training Plan for New Employee of Tiangong International Company Limited* and the *Interim Measures for "Master-apprentice" Programs* to facilitate new employees to be familiar with and adapt to the culture, policies, and code of conduct of the Group quicker and better, and are able to do the job. The orientation training includes introductions to the Group's management philosophy and corporate culture, technology and application of tools, safe production management, knowledge in quality management, and safe operation rules and necessary precautions, etc. The Group actively organises excellent training teams. The Human Resources Department organises and implements the training of new employees, and the team of trainers is composed of senior employees of the Group and external experts hired by the Group. Moreover, the Group equips each training class with a part-time class teacher, so that employees can better develop their professional knowledge and skills.

In addition, the Group promotes employees' development and makes full use of the human resources in the Group by formulating the *Interim Measures for "Master-apprentice" Programs* in the way of "deliver, help and teach face to face". Under this program, experienced employees are obligated to deliver and share experiences and methods with new employees. The experienced employees take full responsibility of drawing up the "deliver, help and teach face to face" training plan according to actual circumstances and provide guidance and assistance to his/her apprentice. Both the masters and apprentices could make progress together through discussion and working together.

On 14 April 2019, the Group held a training with the theme of "responsibility goes beyond capability" for the management in accordance with the training plan, where the Group taught the employees how to manage and the division and cultivation of management responsibilities by a large number of cases.



The Group held a training with the theme of "responsibility goes beyond capability"



The Group held a training with the theme of “responsibility goes beyond capability”

7. Community and Partners that Tiangong Works with

7.1 Creating Colourful Life

Apart from holding training of professional knowledge and skills, the Group always pays attention to employees’ physical and mental health. In order to enrich employees’ mental life, the Group holds various employee activities and lectures on general knowledge to create a colourful working and living atmosphere so as to enhance the team’s cohesion.

In the afternoon of 18 July 2019, the Group grandly held the “Tiangong International First Poetry Competition”, in which more than 500 employees from various positions of the Group participated. This event not only enabled the employees of the Group to further understand the “Chinese spirit and Tiangong spirit behind poetry”, but also further promoted the construction of corporate culture.



The first poetry competition of the Group

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

On 4 May 2019, the Group organised a series of activities for the Youth Day, such as enabling employees of the Group to know more about history, culture and nature, and holding team-building activities. These activities not only let employees of the Group feel the charm of art and culture, but also actively unified the youth of the Group by establishing a platform for making contact and communication.



Walking into the Zhuzi Culture Museum, one of the Youth Day activities of the Group



A team-building activity in Nanshan, Zhenjiang, one of the Youth Day activities of the Group

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

7.2 Delivering Enterprise's Care

The Group, as a part of the society, keeps in mind its corporate social responsibility during development, and always proactively fulfills its social responsibility, and contributes to the society. For many years, the Group has actively participated in charitable activities such as social donations and has established an assistance fund for those employees suffered from severe illness. Moreover, the Group has donated RMB500,000 to Nanjing Normal University Education Development Foundation every year to students in poverty since 2007. During the reporting period, the Group was honoured in the second “Danyang Charity Award — the Most Outstanding Caring Enterprise for Charitable Donation”.

In addition, the Group strongly supports local sports events in Hong Kong. The Group sponsored a football friendly match held on 12 January 2019, and supported the printing of commemorative scarves and their delivery to the senior citizens.



A photo of the football friendly match



Commemorative scarves of the football friendly match.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

8. List of Complied ESG-related Laws and Regulations

Aspects of the ESG Reporting Guide	The laws and regulations that have a significant impact on the Group that the Group complies with (including but not limited to)	The performance during the reporting period
Environmental		
Aspect A1: Emissions	The <i>Environmental Protection Law of the PRC</i> , the <i>Atmospheric Pollution Prevention and Control Law of the PRC</i> , the <i>Water Pollution Prevention and Control Law of the PRC</i> , the <i>Law of the PRC on the Prevention and Control of Environmental Pollution by Solid Waste</i> , the <i>Law of the PRC on Prevention and Control of Pollution from Environmental Noise</i> , the <i>Environmental Protection Tax Law of the PRC</i> , the <i>Law of the PRC on Appraising of Environment Impacts</i> , and the <i>Interim Measures of Jiangsu Province on Administration of Hazardous Wastes Management</i>	No violation of laws and regulations that have a significant impact on the Group relating to air and GHG emissions, discharges into water and land, and generation and disposal of waste
Social		
Aspect B1: Employment	The <i>Labor Law of the PRC</i> , the <i>Labor Contract Law of the PRC</i> , the <i>Trade Union Law of the PRC</i> and the <i>Special Rules on the Labor Protection of Female Employees</i>	No violation of laws and regulations that have a significant impact on the Group relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, other benefits and welfare
Aspect B2: Health and Safety	The <i>Work Safety Law of the PRC</i> , the <i>Law of the PRC on the Prevention and Control of Occupational Diseases</i> , the <i>Special Equipment Safety Law of the PRC</i> , the <i>Standards Labor Protection Articles of Jiangsu Province</i> and the <i>Interim Provisions on the Inspection, Elimination and Control of Potential Work Safety Risk</i>	No violation of laws and regulations that have a significant impact on the Group relating to providing a safe working environment and protecting employees from occupational hazards
Aspect B4: Labor Standards	The <i>Labor Law of the PRC</i> and the <i>Law of the PRC on the Protection of Minors</i>	No violation of laws and regulations that have a significant impact on the Group relating to the prevention of child labor and forced labor
Aspect B6: Product Responsibility	The <i>Work Safety Law of the PRC</i> , the <i>Recommendation Concerning Safety in the Use of Chemicals at Work</i> , the <i>Advertising Law of the PRC</i> and the <i>Trademark Law of the PRC</i> , and the <i>Law of the PRC on the Protection of Consumer Rights and Interests</i>	No violation of any laws and regulations that have a significant impact on the Group relating to health and safety, advertising, labeling and privacy matters relating to products and services provided and methods of redress
Aspect B7: Anti-corruption	The <i>Criminal Law of the PRC</i> , the Listing Rules and fair competition rules	No violation of laws and regulations that have a significant impact on the Group relating to bribery, extortion, fraud and money laundering

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

SEHK's ESG Reporting Guide Index

General Disclosures and KPIs	Description	Relevant Chapter(s) in the ESG Report or Explanation
Environmental		
Aspect A1: Emissions		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste	5.1, 5.2 and 8
KPI A1.1	The types of emissions and respective emissions data	5.3
KPI A1.2	Greenhouse gas emissions in total (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	5.3
KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	5.3
KPI A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	5.3
KPI A1.5	Description of measures to mitigate emissions and results achieved	5.1 and 5.2
KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved	5.2
Aspect A2: Use of Resources		
General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials	5.1
KPI A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility)	5.3
KPI A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility)	5.3
KPI A2.3	Description of energy use efficiency initiatives and results achieved	5.1
KPI A2.4	Description of whether there are any issues in sourcing water that is fit for purpose, water efficiency initiatives and results achieved	5.1
KPI A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced	5.3

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

General Disclosures and KPIs	Description	Relevant Chapter(s) in the ESG Report or Explanation
Aspect A3: Environment and Natural Resources		
General Disclosure	Policies on minimizing the issuer's significant impact on the environment and natural resources	5.1 and 5.2
KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them	5.1 and 5.2
Social		
Aspect B1: Employment		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare	6.1 and 8
Aspect B2: Health and Safety		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards	6.2 and 8
Aspect B3: Development and Training		
General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities	6.3
Aspect B4: Labor Standards		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labor	6.1 and 8
Aspect B5: Supply Chain Management		
General Disclosure	Policies on managing environmental and social risks of the supply chain	4.3

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

General Disclosures and KPIs	Description	Relevant Chapter(s) in the ESG Report or Explanation
Aspect B6: Product Responsibility		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labeling and privacy matters relating to products and services provided and methods of redress	4.1, 4.4 and 8
Aspect B7: Anti-corruption		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering	4.4 and 8
Aspect B8: Community Investment		
General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests	7.2