



Environmental, Social and Governance Report

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About the Environmental, Social and Governance Report

This is the second Environmental, Social and Governance Report (hereafter referred to as “the ESG Report”) published by Tiangong International Company Limited (hereafter referred to as “the Company”). The ESG Report mainly covers the annual performance on various aspects with regard to compliance during operation, employees’ rights, environmental protection and community investment, etc., of the Company and its subsidiaries (collectively referred to as “the Group”) in 2017. It is to be read in conjunction with “Corporate Governance Report” of *Tiangong International Company Limited 2017 Annual Report* (“2017 Annual Report”), so as to have a comprehensive understanding of the environmental, social and corporate governance performance of the Group.

ESG Reporting Scope

Unless otherwise stated, the organizational scopes of the ESG Report cover the Company and its major subsidiaries. Subsidiaries and affiliates of the Group, which are not directly engaged in production and therefore have little impacts on the overall environmental and social performance of the Group, are 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, those companies would be incorporated 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 certifies the truthfulness, accuracy and completeness of the ESG Report.

The ESG reporting period is consistent with that stated in the 2017 Annual Report of the Group, which is 1 January 2017 to 31 December 2017 (“reporting period”).

Reporting Guideline

The ESG Report was prepared based on the *Environmental, Social and Governance Reporting Guide* under Appendix 27 to the *Rules Governing the Listing of Securities* (“Listing Rules”) issued by The Stock Exchange of Hong Kong Limited (“SEHK”). Moreover, the principles of materiality, quantitative, balance and consistency were applied to determine and disclose the contents of the ESG Report.

Reporting Language

The ESG Report is published in two versions, Traditional Chinese and English. If there is any inconsistency between the Traditional Chinese version and English version, the Traditional Chinese version shall prevail.

Comments and Feedback

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



1. About the Group



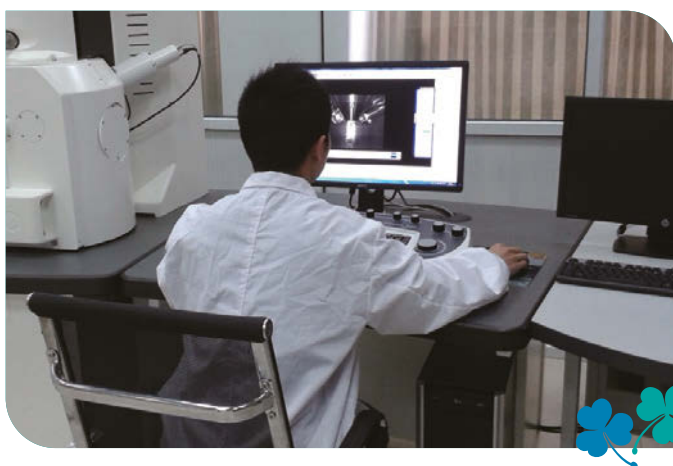
With a dream and dedication, the Group concentrates on manufacturing special steel, cutting tools and titanium alloy. The Group persists in improving the qualities of its products patiently and provides top of the line products in steel industry. The Group builds its brand with wisdom and sweat. Moreover, upholding the idea of fulfilling corporate and social responsibility, the Group increases investment in environmental and social development, and fights for the realization of sustainable development.

During the reporting period, the Group has further enhanced its environmental and social management and improved the environmental and social policies and regulations relating to environmental protection, occupational health and safety, supply chain management, employee management, etc. In addition, the Group achieved the targets set in the framework of sustainable development. The preparation of the ESG Report was made with the engagement of employees from different departments of the Group. Meanwhile, the Group devotes to communicating with each stakeholder by different means, such as e-mail, website, annual report, etc., so as to have a better understanding on the Group's current condition of sustainable development.

2. Compliance management

The production principle of the Group is “production is subject to safety, production is subject to environmental protection, production is subject to quality”.

2.1 Product Responsibility



The Group carries out quality tests for product quality by precise instruments

The Group is the manufacturer of special steel, cutting tools and titanium alloy and also a high and new tech enterprise in China. Producing quality products in the New Material industry is the goal that the Group always strives for. The Group strictly complies with the relevant laws and regulations relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress, including but not limited to the *Work Safety Law of the People's Republic of China*, the *Recommendation Concerning Safety in the Use of Chemicals at Work*, the

Advertising Law of the People's Republic of China and the *Trademark Law of the People's Republic of China*, etc. For guaranteeing quality of products, the Group has established and implemented quality control systems in accordance with the *Quality Management Systems—Requirements of National Standard of the People's Republic of China (GB/T 19001-2008, identical to ISO 9001:2008, Quality Management Systems—Requirements)* and has carried out measurement management of products according to *ISO 10012:2003 Measurement Management System*. The Group has applied strict regulations to the production processes. A series of tests is conducted for the quality of products from the acceptance of raw material to product manufacturing to guarantee that the products achieve relevant requirements regarding health and safety, labelling, environmental protection, etc., before entering into market. Due to the persistence in maintaining high quality of products, the Group is one of the enterprises in Jiangsu Province whose management is certified by Chinese Grade 1 Management and Measurement System.

During the reporting period, the Group did not receive any notice or punishment on violation of laws and regulations relating to health and safety, advertising, labelling and privacy matters relating to products and methods of redress.

2.2 Supplier Management

The Group could not achieve sustainable development without working together with its suppliers. The Group has formulated supplier assessment systems and conducted regular assessments of the environmental and social performance of suppliers. These systems guarantee the quality of raw material and equipment used in the production of the Group and strengthens the Group's relationship with suppliers so as to create a beneficial cooperation together. On-site evaluations would be conducted regularly by the Group to assess the performance of social responsibilities of suppliers. 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.

Furthermore, the Group would consider the operation location of suppliers and try to choose local suppliers to reduce the emissions of pollutants due to long-distance transportation.

2.3 Legal Management

The Group strictly abides by the applicable laws and regulations relating to bribery, extortion, fraud and money laundering, including but not limited to the *Criminal Law of the People's Republic of China*, the *Regulations of the People's Republic of China for Suppression of Corruption*, Listing Rules and fair competition rules. In addition, the Group has formulated and implemented the disciplinary measures for employees and the *Regulation for Administration of Procurement of Supplies and Price Accounting*. Both employees and business partners are required by the Group to comply with relevant regulations to ensure the implementation of legal governance. The Group requires that the procurement staff shall not leave any economic interests with suppliers and shall be honest in performing duties. During the reporting period, members of the Group have not been named in any case of corruption.

Moreover, regarding the information of the Group and its clients, the Group strictly abides by the applicable archives management measures and confidentiality rules to keep the information safe.

3. People-oriented

The Group always takes outstanding talents as its valuable asset. The Group proactively creates a working environment with mutual respect, mutual understanding, mutual trust and continuous development. The Group aims to realize the joint development of employees and the Group. The Group believes that these respect, understanding, trust and development are the bridge and bond between the Group and employees, which encourage them to pursue and achieve their goals together happily.

3.1 Employee Policies

The Group strictly complies with relevant laws and regulations relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity and other benefits and welfare, including but not limited to the *Labor Law of the People's Republic of China*, the *Labor Contract Law of the People's Republic of China*, the *Trade Union Law of the People's Republic of China* and the *Special Rules on the Labor Protection of Female Employees*. Devoting to build a professional employee team with strong coherence, the Group takes "nurturing prosperous enterprise and promoting well-being of employees" as its goal of employee management, and has formulated and implemented the *Human Resources Management Rules of Tiangong International Company Limited*. The Group has implemented reasonable working hours, sound labor contract system and recruitment system, comprehensive promotion mechanisms and remuneration and benefit policies, which enable employees to keep their mind on work. During the reporting period, the Group did not receive any notice or punishment due to serious violations of relevant national labor laws and regulations.

According to the formulated *Recruitment Policy* of the Group, the recruitment is conducted through various ways, such as online recruitment, job fair, etc., under the principle of “openness, fairness, competition, competitive selection and resource”. During recruitment, the human resources department of the Group verifies the background of every candidate by checking his/her personal documents, such as identity card, diploma and so on. The Group enters into individual employment contracts with its employees to cover matters such as wages, employee benefits and safety at the workplace and grounds for termination, etc. 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 ensures that employees are legally entitled to take paid leaves and other public holidays, and the Group prohibits forced labor.

In order to seek and cultivate outstanding management personnel, the Group takes “character is the most important, performance is the basis, seniority is the supplement” as its employee promotion standards. The Group proactively creates a positive and motivating working environment and promotes passion for work among employees. Meanwhile, the Group promotes employment policies that equality and diversity are considered, and it does not discriminate against employees because of race, nationality, colour, gender and other conditions. In order to protect employees’ rights and show how the Group treats them as one of its important stakeholders, the Group holds employee representative meeting each year and proactively listens to employees about their recent opinions on the Group. This is the way of democratic decision-making of the Group.

Regarding child labor prevention, the Group strictly complies with the applicable laws and regulations, such as the *Law of the People’s Republic of China on the Protection of Minors*, resolutely objecting to hire child labor under 16 years old.

3.2 Safety First

The Group always upholds the safety production principle of “safety first, precaution crucial” and takes full responsibilities for safety. The Group strictly complies with relevant national laws and regulations, such as the *Work Safety Law of the People’s Republic of China*, the *Law of the People’s Republic of China on the Prevention and Control of Occupational Diseases*, the *Special Equipment Safety Law of the People’s Republic of China*, the *Standards Labor Protection Articles of Jiangsu Province*, the *Interim Provisions on the Inspection, Elimination and Control of Potential*

Work Safety Risk, etc. In addition, the Group 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. During the reporting period, the Group has not been notified of any notice or punishment due to violations of relevant laws and regulations in China relating to occupational health and safety.



The fire drill of TG Tools in 2017

In order to ensure the implementation of safe production and relevant safety measures, the Group requires every employee to enter into a safety commitment after finishing relevant safety trainings and understanding all contents of the commitment. In addition, the Group has established a post-oriented work safety responsibility system, which specifies work safety responsibility of each personnel to assure the implementation of all safe-related tasks. Apart from holding regular safety meeting, the Group arranges relevant personnel to conduct workplace safety inspections and to handle issues of non-compliance. By this mean, it is able to effectively reduce the potential safety risks and resolve other related issues in the workplace. At the same time, the Group proactively improves the working environment and equipment for employees to prevent occupational diseases. Physical examination and various safety trainings are organized by the Group to raise the safety awareness of its employees.

Jiangsu Tiangong Tools Company Limited ("TG Tools") held fire drill in 20 October 2017. The purpose of the fire drill was to raise employees' awareness on fire safety and to strengthen their response capability in handling potential safety hazards.

The Group invited a teacher from Red Cross to provide employees a lesson about first aid and conducted a first aid drill, so as to raise their safety awareness and to improve their first aid skills.

3.3 Training and Development

The Group strives to continuously strengthening the training of all types of personnel. Through continuously improving the management of the employee training center, the Group has established a comprehensive and standardized training system to increase the fundamental and professional knowledge of employees as well as to lay a solid foundation of sustainable development of the Group and its employees.



First aid seminar of the Group in 2017

The Group has formulated and implemented the *Orientation Training*

Plan for New Employee of Tiangong International Company Limited to standardize the orientation training management of new employees. By doing so it is able to facilitate them to be familiar with and adapt the culture, policies and code of conduct of the Group quicker and better, and to handle the job well. The orientation training includes introductions to the Group's management philosophy and corporate culture, safe operation management, knowledge about quality management, safe operation rules and precaution, etc. In addition, aiming to cultivate talents in a better way and to enhance the cohesion between employees, the Group promotes the training of all types of personnel by the "deliver, help and teach face to face" program. The "deliver, help and teach face to face" program, also called "master-apprentice" program, is a training program that the Group implemented. Under this program, a new employee is paired with an experienced employee through a one-on-one apprenticeship agreement in which the experienced employee is 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. They could make progress together through discussion and working together.

Moreover, a teacher from external education institution was invited by the Group to teach employees lessons of *Thematic Training of Improving Management Capabilities for Middle and Senior Management*. The training topics included team building, team cooperation and communication, employee motivation, etc. Those employees who participated in the training shared their learning experience after training and hence deepened their understanding.



4. Implementing Environmental Protection



The Group implements the principle of “production must be subject to safety, production must be subject to environmental protection, production must adhere to green development”. Taking sustainable development as its target, the Group strictly complies with relevant environmental laws and regulations, comprehensively strengthens environmental management, environmental protection technology and education, and promotes clean

production. During the reporting period, there was no occurrence of major environmental pollution accident and environmental violation.

4.1 Protecting Environment

The Group strictly abides by relevant laws and regulations relating to air and greenhouse gas (“GHG”) emissions, discharges into water and land, and generation and disposal of waste, as well as complies with policies on minimising the issuer’s significant impact on the environment and natural resources. Those laws and regulations include but are not limited to the *Environmental Protection Law of the People’s Republic of China*, the *Water Pollution Prevention and Control Law of the People’s Republic of China*, the *Law of the People’s Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste*, the *Law of the People’s Republic of China on Prevention and Control of Pollution from Environmental Noise* and the *Interim Measures of Jiangsu Province on Administration of Hazardous Wastes Management*. Moreover, for implementing the management of environmental protection in production and operation, the Group has formulated the *Environmental Protection Management Measures* according to the applicable national laws and regulations relating to environmental protection listed above and it strictly complies with and has conducted management relating to water pollution prevention, air pollution prevention and control, noise prevention and control, waste and use of resources.

The air emissions and GHG emissions generated from the operation of the Group are mainly due to natural gas burning and electricity consumption. The Group has accomplished the renovation of boilers and furnaces, which replaced coal with natural gas as their fuel source and reduced air pollutant emissions during their operation. In addition, there are dust and oil mist generated from the operation of the Group. Dust and oil mist collection devices have been constructed on-site accordingly to reduce their impacts on environment. Regular maintenance has been conducted by the equipment maintenance department of each production line to ensure the well operation of equipment and prevent fugitive emissions due to equipment malfunction.

As of 31 December 2017, the data of the major air emissions and GHG emissions from the Group in the reporting period is listed as follows:

Parameter	Unit	2017
Productivity (steel and titanium alloy)	Metric tons	159,658.56
Air pollutant ¹		
SO ₂ emissions	Metric tons	0.49
NO _x emissions	Metric tons	59.72
GHG ²		
Scope 1: direct emissions	Metric tons	69,017.28
Intensity of scope 1 emissions	Metric tons/metric tons of productivity	0.43
Scope 2: indirect emissions	Metric tons	271,090.42
Intensity of scope 2 emissions	Metric tons/metric tons of productivity	1.70

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 reaches relevant standards.

During the operation of the Group, the solid wastes generated by the Group mainly are non-hazardous wastes, including grinding swarfs, smelting slag, food waste, domestic waste, etc., and hazardous wastes, including spent lubricating oil, etc. The Group has implemented environmental protection according to relevant national and local environmental protection standards to ensure that the solid waste disposal complies with relevant requirements. As for hazardous wastes, they are properly stored in strict compliance with dangerous good management regulations and are handed over to qualified third-parties for treatment. As for non-hazardous wastes, the Group divides them in recyclable and non-recyclable wastes and they are collected separately according to the principles of reduce, reuse and recycle ("3R Principle"). 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 tile factor and cement plant for brick and cement production. Furthermore, the grinding swarfs would be reused in steel production. During the reporting period, the amount of recycled steel reused in steel production of the Group was approximately 51,783.09 metric tons. In addition, the spent lubricating oil produced from operation of the Group is reused after being treated in the spent lubricating oil treatment plan to reduce its generation. Since the data collection of hazardous wastes of the Group is developing, a full set data of hazardous wastes produced during the reporting period could not be disclosed temporarily. The Group would keep developing the data collection system and disclose the full dataset as soon as possible.

¹ The data used in the calculation in air pollutant emissions was based on the recorded data of the Group and best conservative estimates were made based upon historical performance or benchmarking with similar facilities.

² The calculation of GHG emissions were set out based on the *Guideline of the Greenhouse Gas Emissions Accounting and Reporting for the Chinese Steel Production Enterprise (Trial)*. The data used in the calculation was based on the recorded data of the Group and conservative estimates were made based upon historical performance data or benchmarking with similar facilities.

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As of 31 December 2017, the data of major nonhazardous waste of the Group during the reporting period is listed as follows:

Parameter	Unit	2017
Major nonhazardous waste ³	Metric tons	51,783.09
Intensity of major nonhazardous waste	Metric tons/metric tons of productivity	0.32

The Group has formulated the *Administrative Procedures on Prevention and Control of Noise Pollution*. A series of measures to mitigate noise impact has been taken, such as choosing quiet equipment first, to ensure the noise from the production of the Group complies with the *Emission Standard for industrial Enterprises Noise at Boundary*.

4.2 Use of Resources

The Group strictly complies with relevant laws and regulations relating to use of resources, such as the *Cleaner Production Promotion Law of the People's Republic of China*, the *Energy Conservation Law of the People's Republic of China*, etc. In addition, the Group has formulated and implemented waste and power saving management measures accordingly and used resources and energy reasonably in accordance with the "3R Principle". By doing so, it is able to elevate water and power use efficiency of the Group and save resources and energy.

The Group uses steel scrap and grinding swarfs, which are mainly sourced from the process of steel production, for new steel smelting and production. Grinding swarfs are recycled and reused for steel production of the Group, which greatly increases the utilization of the raw material. During the reporting period, the Group reused about 51,783.09 metric tons of grinding swarfs. The Group advocates using power reasonably, including using adequate power equipment in the specific areas according to their need for lighting and replacing traditional lighting devices by energy-saving one gradually. Furthermore, the Group requires to avoid power wasting from idling equipment.

As for water sourcing, water used by the Group is mainly sourced from municipal fresh water supplies and wells. In order to increase water efficiency, some wastewater is used as cooling water for production facilities after biochemical treatment in wastewater treatment plant.



³ The major nonhazardous waste refers to the recycled steel that could be reused in steel production, such as grinding swarfs, metal in the smelting slag, etc.

Materiality assessment has been conducted and the Group found that the major resources used by it was electricity, water and steel. Therefore, the amount of packaging material used by the Group was not disclosed temporarily according to the principle of materiality.

As of 31 December 2017, the data of major energy consumption and water consumption of the Group during the reporting period is listed as follows:

Parameter	Unit	2017
Water consumption	Metric tons	170,593.00
Intensity of water consumption	Metric tons/metric tons of productivity	1.07
Purchased electricity	Million-watt hours	515,675.13
Intensity of purchased electricity	Million-watt hours/metric tons of productivity	3.23
Natural gas	Ten thousand cubic meters	3,192.01
Intensity of natural gas	Ten thousand cubic meters/metric tons of productivity	0.02

5. Focusing on Community Investment

Fulfilling social responsibilities is not only the fundamental requirement of the realization of sustainable development of the Group, but also its duty. While developing its business, the Group still devotes itself to community investment and fulfilling its social responsibility by community investment and advocating traditional Chinese virtues. The Group made donation to Nanjing Normal University Education Development Foundation in the reporting period in order to support and promote higher education development.



The signing ceremony of donation agreement with Nanjing Normal University Education Development Foundation

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General Disclosures and KPIs	Description	Relevant Chapter(s) 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.	4.1
KPI A1.1	The types of emissions and respective emissions data.	4.1
KPI A1.2	Greenhouse gas emissions in total (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	4.1
KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	4.1
KPI A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	4.1
KPI A1.5	Description of measures to mitigate emissions and results achieved.	4.1
KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved.	4.1
Aspect A2: Use of Resources		
General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials.	4.2
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).	4.2
KPI A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	4.2
KPI A2.3	Description of energy use efficiency initiatives and results achieved.	4.2
KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved.	4.2
KPI A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	4.2
Aspect A3: Environment and Natural Resources		
General Disclosure	Policies on minimising the issuer's significant impact on the environment and natural resources.	4.1
KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	4.1

General Disclosures	Description	Relevant Chapter(s) or Explanation
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, antidiscrimination, and other benefits and welfare.	3.1
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.	3.2
Aspect B3: Development and Training		
General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	3.2 and 3.3
Aspect B4: Labour 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 labour.	2.2 and 3.1
Aspect B5: Supply Chain Management		
General Disclosure	Policies on managing environmental and social risks of the supply chain.	2.2
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, labelling and privacy matters relating to products and services provided and methods of redress.	2.1
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.	2.3
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.	5