



Hilong Holding Limited

(Incorporated in the Cayman Islands with limited liability)

Stock code: 1623

*For identification purpose only

2021 Environmental, Social and Governance Report



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About the Report

Hilong Holding Limited (the “Company”) (Stock Code: 1623) hereby presents the Environmental, Social and Governance Report 2021 (“the Report”) of the Company and its subsidiaries (collectively, the “Group” or “Hilong”). The Report demonstrates the concepts and practices of the Group in environmental, social and governance (ESG) areas to its stakeholders.

Reporting Scope

The Report primarily includes the Company and its subsidiaries. The reporting period is from 1 January 2021 to 31 December 2021 (“the Reporting Period”). The key performance indicators (“KPIs”) in environmental areas disclosed in the Report cover all businesses in China directly managed by the Group while the KPIs in social areas cover the Group.

Compared with Hilong Holding Limited 2020 Environmental, Social and Governance Report, there are no material changes in the reporting scope.

Reporting Principles

The Report is prepared according to the *Environmental, Social and Governance Reporting Guide* (the “ESG Reporting Guide”) in Appendix 27 to the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited. The Report complies with reporting principles below:

- “Materiality”: The Group determines material ESG issues through stakeholder engagement and materiality assessment which have been disclosed in the Report.
- “Quantitative”: The standards, methods and sources of emission factors used in reporting emissions and energy consumption have been disclosed.
- “Balance”: The Report provides an unbiased picture of the Group's environmental and social performance.
- “Consistency”: The methodology and KPIs are consistent with previous years.

Report Availability

The report is available in electronic version which can be viewed on the website of the Company (www.hilonggroup.com) and the HKEX news website (www.hkexnews.hk).

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1 Company Profile

1.1 Company Brief

The Group is a large listed entity group that provides high-end oilfield equipment and integrated oilfield technical services for oil and gas exploration. Integrating scientific research, production, and service, Hilong has established dozens of production bases and business branches around the world, with the Group headquartered in Shanghai.

Since its inception in 2002, along with horizontal expansion of drilling, mining, transmission of oil and gas exploration and vertical extension of the industrial chain, Hilong has formed five core business sectors including oilfield equipment, oilfield service, pipeline technology and service, marine engineering, and new materials.



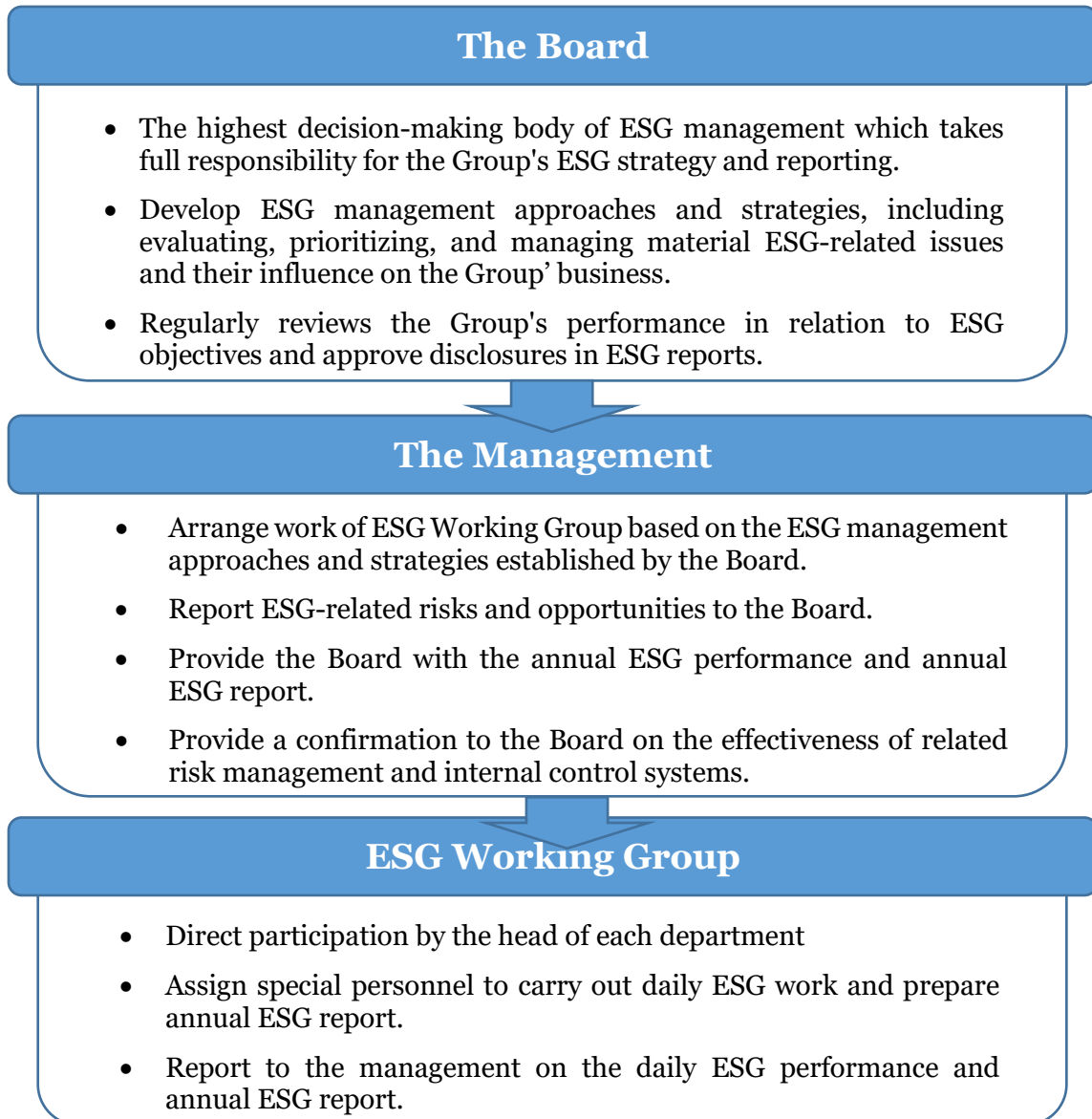
With the establishment of oil pipeline, petrochemical research institute and other professional research and development (“R&D”) institutions, Hilong has achieved integrated development of oilfield equipment products and integrated technical services.

Hilong has established a sound sales and service network in various oil-producing regions around the world, providing high-end products and integrated services for China National Petroleum Corporation, China Petrochemical Corporation, China National Offshore Oil Corporation, and many internationally energy and oil service companies such as Shell, British Petroleum Company, etc. At present, Hilong products and services have spread throughout China, Southeast Asia, South Asia, Central Asia, Russia, the Middle East, Africa, North and South America and other countries and regions.

Hilong is committed to building the world's leading oilfield equipment and service providers, always adheres to the core development strategy of innovation and internationalization, and provides high-quality, high-tech and differentiated products and integrated services, to create maximum value for global customers.

1.2 ESG Management Structure

The Group incorporates ESG governance into its governance. Hilong has established a three-tier ESG governance structure consisting of the Board of Directors (the “Board”), the Management and the ESG Working Group to assist the Board to fully consider ESG risks and opportunities in risk management, policy formulation, and strategic planning, ensuring that the ESG risks and opportunities are integrated into the Group's business strategy.



1.3 Statement of the Board

The Board of the Group takes overall responsibility for the Group's ESG management matters and attaches great importance to ESG management and report preparation, requiring the ESG report to reflect the Group's key ESG areas and actively responding to the needs of various stakeholders. The Board regularly discusses the latest developments of ESG matters to continuously improve the sustainable development management system. Looking ahead, the Group will continue to adhere to the concept of sustainable development and actively fulfil its corporate social responsibility.

1.4 Stakeholders Engagement

We are aware of the importance of communicating with significant stakeholders, have established diversified communication mechanisms to build close relationships with the Group's significant stakeholders, and actively respond to their expectations and requirements on Hilong.

Stakeholders	Expectations and Requirements	Communication Mechanisms
Government and Regulators	<ul style="list-style-type: none"> • Compliance with laws and regulations • Pay taxes according to law • Support local development • Epidemics prevent and control 	<ul style="list-style-type: none"> • Daily management • Meetings • Monitoring and inspection • Policy advice • Case reporting • Internal epidemic management
Shareholders	<ul style="list-style-type: none"> • Continued development and return to shareholders • Information disclosure and investor relations • Corporate governance and risk control 	<ul style="list-style-type: none"> • General meetings • Information disclosure • Activities promoting investor relations

Clients	<ul style="list-style-type: none"> • High-quality products • High-quality services before and after sales 	<ul style="list-style-type: none"> • Signing of contract • Business dealings
Employees	<ul style="list-style-type: none"> • Remuneration and benefits • Good work environment and development platforms • Equal opportunities for promotion and development • Epidemics management and control 	<ul style="list-style-type: none"> • Employee training • Employee activities and employee care • Performance Management • Corporate internal publications • Care for staff health • Prevention and control of epidemic
Media	<ul style="list-style-type: none"> • Performance of corporate social responsibility • Having a good knowledge of corporate significant events, activities and initiatives 	<ul style="list-style-type: none"> • Business interview • Promotion of corporate culture • Theme activities
Partners	<ul style="list-style-type: none"> • Keep promises • Equal, open, and fair procurement • Mutual benefit development 	<ul style="list-style-type: none"> • Negotiation and communication • Supplier assessment and evaluations • Open bidding and tendering • Communication and visitation
Community and Society	<ul style="list-style-type: none"> • Promote urban development • Raise public awareness 	<ul style="list-style-type: none"> • Industry-university-institute linkages • Establishment of education base

	<ul style="list-style-type: none">• Promote development of harmonious community	<ul style="list-style-type: none">• Community activities
Environment	<ul style="list-style-type: none">• Promote environmental protection• Protect eco-balance	<ul style="list-style-type: none">• Emission under standard thresholds• Energy saving and emission reduction

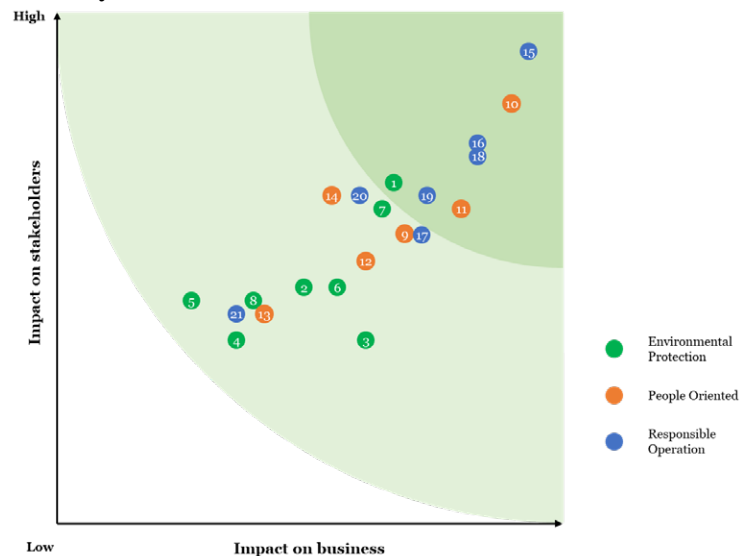
1.5 Materiality Assessment

In 2020, in order to understand the impact of different sustainable development issues on stakeholders and the Group, the Group conducted materiality assessment by benchmarking ESG-related standards and inviting internal and external stakeholders to fill in questionnaires. In this way, we identified and evaluated material ESG issues. The specific process is as follows:

- **Step 1 - Identify ESG issues:** Hilong identified ESG issues relevant to the Group in accordance with the requirements of the ESG Reporting Guide, and in line with peer benchmarking and expert research and judgement.
- **Step 2 - Determine the materiality:** In the form of an online questionnaire, Hilong invited significant internal and external stakeholders to evaluate the materiality of ESG issues. Based on the collected valid questionnaires, Hilong assessed the materiality of ESG issues from the two perspectives of "impact on business" and "impact on stakeholders", then created a materiality assessment matrix.
- **Step 3 - Verify the assessment results:** Management and the ESG Working Group reviewed and confirmed the assessment results.

In 2021, the Group reviewed the ESG issues and corresponding materiality assessment results. As there are no significant changes in the Group’s business and external environment, we will continue to use the assessment results of ESG issues from previous years. The specific ESG materiality matrix is as follows:

Materiality	No.	ESG issue
High	15	Product quality
	10	Safe production
	16	Customer service
	18	Product innovation
	11	Occupational health
	19	Partners
	1	Energy saving
Medium	17	Property right protection
	9	Legal employment
	7	Environmental emergency management
	20	Anti-corruption
	12	Employee training
	14	Prohibition of child labor and forced labor
	3	Waste-water and waste gas
	6	Solid waste
	2	Water conservation
	13	Employee activity
	8	Noise control
	21	Social welfare
	4	Greenhouse gas
	5	Packaging materials



2 Responsible Operation

2.1 Product Quality

➤ Technological Innovation

Hilong always adheres to the “Innovation-Driven” strategy, strengthens its capability of independent innovation and improves the scientific and technological innovation system to create competitive advantages in the field of scientific and technological innovation.

The R&D capability of an enterprise is the guarantee for enhancing its core competitiveness. Hilong has established several professional R&D institutions and maintained strong and professional R&D and innovation capabilities in all areas of oilfield technical services with high-end experimental equipment and good R&D conditions. Hilong also actively carries out domestic and foreign scientific research exchanges and cooperation. Hilong has established in-depth cooperation with several research institutes in many areas including key technical problem solutions, industrial processes development, high-end technological innovation talent cultivation, advanced scientific and technological information exchange, etc. Hilong has set up Post-doctoral Studio, Shanghai Enterprise Technology Center, Shanghai Engineering Research Center for Petroleum Tubular Goods, and the Academician Expert Workstation, building a strong talent team of scientific and technological innovation.

In 2021, the Group continued to increase R&D investments and developed a number of innovative products:

Case: Hilong 120S Super High-Strength Sulphur-Resistant Drill Pipe

The Group has been making efforts to develop high-strength sulphur-resistant, high-torsion-resistant, and high-efficiency drill pipe products to meet the special application requirements in exploiting oil and gas reservoirs with sulphur-containing associated gas. In 2021, based on the existing 120S sulphur-resistant drill pipe technology, Hilong continued to deepen the research on the hydrogen sulphide corrosion performance and the ability of welding area to resist sulphide stress cracking (“SSC”) of HL120S drill pipe products, optimised the production and manufacturing process, and achieved a stage breakthrough in the development of 125S high steel grade sulphur resistant drill pipe technology.



Super High-Strength Sulphur-Resistant Drill Pipe

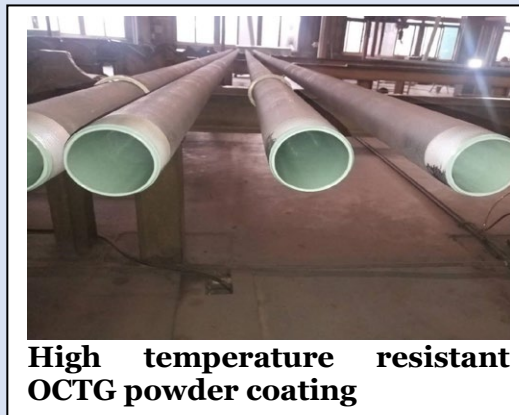
In September 2021, Shanghai Hilong Drill Pipe Co., Ltd. (“**Shanghai Drill Pipe**”), a subsidiary of the Group, won the second prize of Quality Breakthrough Achievement awarded by Shanghai Municipal Administration for Market Regulation and Shanghai Municipal Commission of Economy and Informatisation for its project of “Key Quality Performance Breakthrough of 120S High-Strength Corrosion-Resistant Drill Pipe for Drilling in Harsh Environment”. All indicators of Hilong Special Tie (“**HLIST**”) drill pipe developed by the project have reached the international advanced level and are included in **DS-1** ® **Standard**. The optimisation and upgrading of 120S drill pipe have filled the gap in the domestic high-end oilfield equipment industry, and effectively enhanced the Group’s economic benefits and its product competitiveness in the international high-end market.



Second Prize of Key Quality Performance Breakthrough Achievement of 120S High-Strength Corrosion-Resistant Drill Pipe for Drilling in Harsh Environment

Case: High Temperature Resistant Powder Coating for Oil Country Tubular Goods (“OCTG”)

The coating quality of the gathering pipelines is under higher requirements in geological exploration and in the exploitation of oil and gas fields, shale oil, and shale gas. Therefore, Hilong has developed internal powder coating for hydrogen sulphide resistant drill pipe, which can maintain high-strength under high-temperature and high-pressure while resisting the damage of corrosive media under high temperature, so as to cope with the problem of coating failure caused by different mud systems and lower the emission of volatile organic compound (“VOC”) in the coating process.

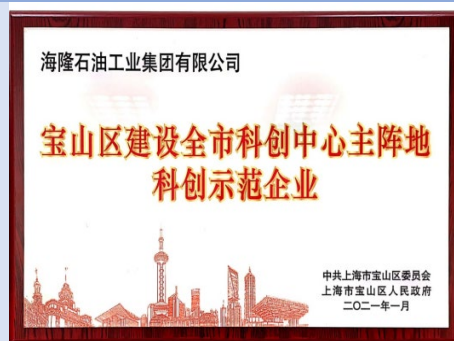


In 2021, Hilong developed a modified phenolic primer coating by optimising the synthesis formula and improving the production process, which solved the problem that the special resin for primer was no longer synthesised and improved the temperature-resistance and corrosion-resistance in an all-round way, while meeting the current green and environmental protection standards.

The Group has gained recognition from a number of international standards for its drilling and workover services, drilling tools, production tools, and other aspects, which contains permission from American Petroleum Institute (“API”) to use product monograms of multi-size rotary drill string components, including API Spec7-1 (rotary drill string component specification), API Spec 5CT (casing and tubing specification), API Spec 5DP (drill pipe specification), and also got the certification of ISO 9001 Quality Management System as well as NS-1 (quality and inspection requirements for new and refurbished drilling and well completion equipment). In 2021, the Group implemented the relevant requirements of API SPEC Q2 (quality management system specification for service providers) into the quality management system of Hilong and obtained relevant certification, ensuring reliable and stable service output.

Scientific and Technological Innovation Demonstration Enterprise for Building the Main Position of Scientific and Technological Innovation Centre in Baoshan District

In 2021, Hilong won the title of "Scientific and Technological Innovation Demonstration Enterprise for Building the Main Position of Scientific and Technological Innovation Centre in Baoshan District" issued by Shanghai Baoshan District People's Government by virtue of its hundreds of core technological achievements and relevant huge economic benefits in petroleum and petrochemical, oil and gas wells, pipelines, and marine industries for many years. This honour represents the affirmation, support, and recognition of the government and all sectors of society for Hilong's consistent practice of the concept of scientific and technological innovation and development, and also identifies the responsibility and goal of Hilong as a key builder of the main position of scientific and technological innovation.



Scientific and technological innovation demonstration enterprise for building the main position of scientific and technological innovation centre in Baoshan District

➤ **Improving Quality Management System**

Quality Principle

- Honouring contracts, perfecting quality control; relying on technology management, seeking quality improvement; building Hilong's brand image, exceeding customers' expectations

Hilong thoroughly implements the national innovation-driven development strategy and the concept of high-quality development, and strives to build the core competitiveness of its brand. We strictly comply with the *Product Quality Law of the People's Republic of China* (《中華人民共和國產品質量法》) and other relevant domestic and foreign laws and regulations, and continuously refine our quality management system and optimise our management process to strengthen quality risk identification and improve quality management level.

The Group takes measures from multiple aspects including personnel training, equipment selection management, materials, production process management, work standard formulation, production environment management, incentive mechanism, and supervision support for manufacturing to ensure product quality. In addition, Hilong has established an Enterprise Resource Planning (“ERP”) management system to control and record all key aspects of production and inspection in real time. The ERP system covers

the entire process from order inquiry review, contract review, raw material procurement, inbound inspection, production and processing, inspection and testing, packaging and delivery, etc. This can ensure that all processing and inspection information from raw materials to finished products of each drill pipe are traceable.



Elements of Control	Measures to ensure product quality
<p>Equipment and testing control</p>	<ul style="list-style-type: none"> • Possesses advanced production and inspection equipment, and establishes a complete preventive maintenance system. • Possesses a laboratory accredited by the China National Accreditation Service for Conformity Assessment (CNAS), strictly implements the measurement management policy, and regularly carries out self-calibration and third-party manufacturer calibration and verification to guarantee the accuracy of testing equipment.
<p>Material control</p>	<p>Ensures compliance with material quality requirements by conducting entry inspection, production process inspection, finished product inspection, physical and chemical performance testing, pre-shipment inspection, etc. on materials.</p>
<p>Production and inspection process control</p>	<p>Makes sure that production personnel processes such as thickening, heating treatment, and non-destructive testing of drill pipe body are completed according to the relevant process control requirements of product production and inspection.</p>

Production environment control	Effective management of production factors based on lean 5S principles.
Personnel management and incentive system control	<ul style="list-style-type: none"> • All operators shall obtain certificates before being employed to ensure personnel capability. • Establishes an inspection team and strengthens employees' self-supervision through process or discipline inspection and implementation of incentive systems.

Hilong conducts annual internal and external audits as well as management evaluations, etc. to ensure the appropriateness, pertinence, effectiveness and operability of the system. In addition, the Group has established a complete emergency response plan and procedures to make sure that hazards and losses are controlled within the minimum range, ensuring the smooth and safe operation of customers' production activities. Once the quality management and inspection personnel have identified any safety risk in products, all the products with safety risks will be recalled immediately in accordance with the *Product Recall Policy* (《產品召回程式》) and be properly disposed. In 2021, there was no product subject to recalls for safety and health reason in the Group.

➤ **Quality Training**

In order to ensure product quality, enable relevant employees to effectively master theory and knowledge with the ability to identify and rectify quality defects, and meet the requirements of standard operation, we have developed a series of targeted trainings consisting of theoretical knowledge, operating skills, professionalism, etc. In 2021, the Group formulated training plans according to the training needs of each department and carried out corresponding trainings for sales department, equipment department, production department, maintenance team, warehouse management, quality inspectors, etc. After years of production practice, Hilong has trained a large number of skilled workers and craftsmanship technicians with drill pipe production technology and professional inspection skills.

Case: Quality Inspection Training

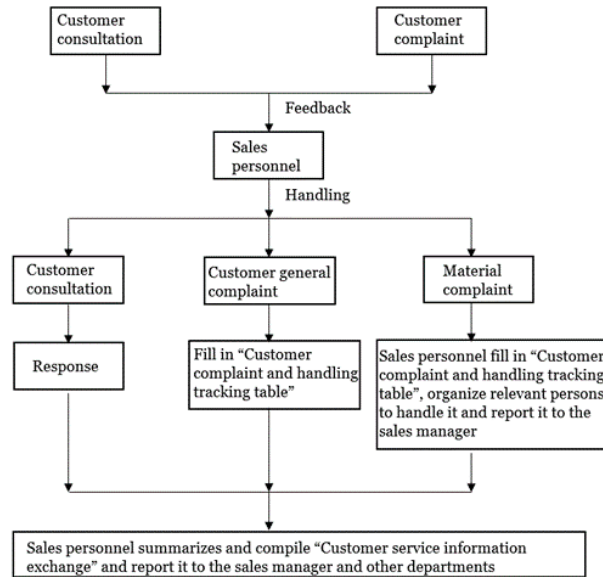
In 2021, in order to further implement the Group's high-quality requirements, the Oilfield Equipment Business Division of Hilong carried out a quality inspection training for all quality inspectors. The training strengthened the quality inspectors' understanding of the accuracy and integrity of the instrument, and better ensured the effectiveness of the quality inspectors' inspection.



Quality Inspection Training

2.2 Customer Service

The Group has established and improved the customer service information system, and strengthened the service awareness and service skill training of customer service personnel, striving to improve customer service quality. Through the *Customer Service Management System* (《客户服务管理制度》), Hilong effectively controls the customer service work by defining the service standards and handling customers' complaints in a timely manner. Each subsidiary also formulated its own handling procedures and management methods of customer complaints, including clearly specifying the responsibilities and specific operating procedures of each department. For example, Shanghai Drill Pipe requires its marketing staff to issue a *Customer Complaint Handling Form* (《客户投诉处理单》) one hour after receiving a customer complaint, for which technical quality department needs to give a reply within 3 working days. For any major complaint, a temporary remedy must be in place within 8 working hours, and a complete solution should be provided to the customer



Procedure of Customer Complaint Management

within 2 working days. Those who fail to handle any complaint within the required time shall be subject to corresponding fines or other penalties. In 2021, the Group received no complaints regarding its products and services.

In addition, the Group conducts regular customer satisfaction surveys and occasional call-back based on *Customer Satisfaction Control Procedures* (《顧客滿意度控制程序》) to collect customer opinions and thus maintain their continued satisfaction with the Group.

➤ **Protecting Customer Privacy**

Hilong always attaches great importance to privacy protection and information security of its customers and regards customer information as the Group's secrets. We stipulate that customer information should be properly kept by the sales manager, and no copying or excerpting is allowed without authorization. Hilong strengthens the confidentiality awareness training of its employees and strictly implements the Group's confidentiality system and work procedures to ensure the security of customer information. In addition, Hilong strengthens the confidentiality awareness training of its employees and strictly implements the Group's confidentiality system and work procedures to ensure the security of customer information.

2.3 Intellectual Property Protection

In compliance with relevant domestic and foreign laws and regulations, including but not limited to *Trademark Law of the People's Republic of China* (《中華人民共和國商標法》), *Regulations for the Implementation of the Trademark Law of the People's Republic of China* (《中華人民共和國商標法實施細則》), *Advertisement Law of the People's Republic of China* (《中華人民共和國廣告法》), etc. We have also formulated the *Management System for Trademark Use* (《商標使用管理制度》) to provide detailed regulations on the registration, maintenance and use, etc. of trademarks, so as to enhance the protection of the Group's intellectual property rights and reduce the risk of various intellectual property infringements that may occur in the course of the Group's operations. If there is an infringement of the Group's intellectual property rights, the Group's Legal Department will take timely action to protect the Group's intellectual property rights by applying for objections and filing lawsuits. As of 31 December 2021, the Group held 135 registered trademarks of which 61 were in China, and more than 430 authorised patents, including 89 invention patents.

To maintain the consistency and stability of corporate image while regulate and promote corporate Visual Image System (VIS), Hilong formulated the *Management Regulations on the Use of Corporate Image VI* (《企業形象 VI 使用管理規定》), *Corporate Image Visual Identity System (VI) - Basic Specification* (《企業形象視覺識別系統(VI)－基礎規範》), *Application Specification for Business Card VI* (《名片 VI 應用規範》) and *Application Specification for Business Brochure VI* (《業務宣傳冊 VI 應用規範》), etc. These regulations further specified roles and responsibilities of the Corporate Culture Department and other departments of the Group, as well as requirements of corporate image usage.

The sales of Hilong's products are mainly conducted through direct visits to customers and participation in exhibitions without advertising. After relevant policies and systems for advertising management are developed, Hilong will disclose related information and effectively manage possible advertising behaviour in the future.

2.4 Supply Chain Management

In order to strengthen supplier management, the Group complied guidance of *Supplier Management System* (《供應商管理制度》) and *Supplier Management Implementation Rules* (《供應商管理實施細則》) strictly controls the supplier selection, daily management, assessment, and dismissal of suppliers. The Material Management Department of the Group is responsible for supplier management, including the access and change of suppliers, reviewing and submitting supplier information for approval, conducting daily assessment and supervision, and creating supplier profiles.

The Group based in line with the management principle of “Differentiated Management, Dynamic Evaluation and Survival of the Fittest” to classify suppliers for management:



The Group set up a strict supplier selection and review system:

- **Strategic and key suppliers:** The selection progress includes four steps of information filling, on-site inspection, review and approval. Suppliers are required to provide business licenses, copies of production licenses, ISO 9001 (quality management system) certificates and other materials for review.
- **Cooperative suppliers:** The Group adopts a record filing system to collect and inquire the credit of such suppliers through public platforms to learn about their operating status and conducts on-site inspections when necessary.

In 2021, in order to strengthen the quality management of materials purchased by Hilong and standardise the procurement channels of materials, the Group formulated the *Measures for Quality Management of Material Procurement of Hilong Group (Trial)* (《海隆集團物資採購質量管理辦法（試行）》) to implement the accountability system for material procurement quality, further clarify procurement quality requirements, and strengthen acceptance quality control and quality objection handling level. We designate the Quality Safety and Environmental Protection Department to be responsible for the quality management and supervision of materials and require appearance inspection and internal quality inspection of materials before warehousing, and continuously track and feedback the quality of materials in the course of subsequent use.

Hilong conducts annual quantitative assessments covering production quality, contract performance, after-sales service, quotation, etc. For cooperative suppliers, Hilong adopts an exception-based assessment system. Suppliers with serious violations of laws and regulations, benefits through improper means such as bribery, and serious dishonesty announced on the official websites of state organs and authorities are disqualified by the Group. In 2021, Hilong completed the assessment and evaluation of suppliers that had business dealings with the Group and dismissed one supplier with product quality problems.

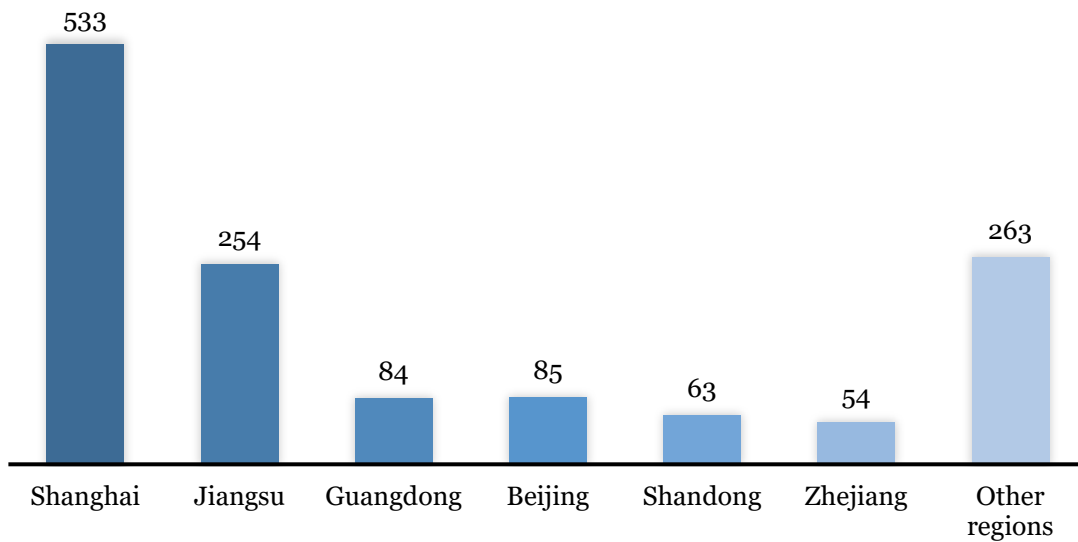
To promote sustainable and responsible supply chain construction, Hilong actively incorporates environmental and social risk factors into its supplier management and control system:

- In the contract terms, we specifically require suppliers to strictly abide by relevant national and local laws and regulations, not to pollute the environment, and to comply with occupational safety and health requirements during the production and transportation process.
- We also require suppliers to provide ISO14001 (Environmental Management System) and OHSAS18001/ISO45001 (Occupational Health and Safety Management System) certificates at the time of information submission.
- For suppliers with fraud, forgery, bidder collusion and other forms of bribery (such as providing commissions, rebates, consulting fees, intermediary fees and others to Hilong's employees), they will be disqualified by Hilong to strengthen the fair, transparent and healthy development of the industrial chain.

- We review suppliers on a regular basis and dismiss suppliers that do not meet the requirements of the Group in terms of environment, health and safety, anti-corruption, etc.

Meanwhile, Hilong encourages suppliers to recycle packaging materials and promotes suppliers to produce environmentally friendly products by selecting water-based paint and solvent-free epoxy paint and other environmentally friendly products. At present, the packaging barrels of solvent materials have been recycled.

As of the end of 2021, Hilong has 1,336 suppliers, and the number of Hilong’s suppliers by geographical region is showed as below:



2.5 Anti-corruption

The Group always adheres to the concept of honest operation and adopts a zero-tolerance attitude towards any form of bribery, corruption, extortion, and embezzlement in all business dealings. Hilong strictly complies with relevant local laws and regulations, including but not limited to the *Company Law of the People's Republic of China* (《中華人民共和國公司法》), the *Tender and Bidding Law of the People's Republic of China* (《中華人民共和國招標投標法》), the *Anti-unfair Competition Law of the People's Republic of China* (《中華人民共和國反不正當競爭法》), the *Anti-money Laundering Law of the People's Republic of China* (《中華人民共和國反洗錢法》), and the *Audit Law of the People's Republic of China* (《中華人民共和國審計法》), etc.

The Board of the Group is responsible for urging management to establish an internal control system to prevent fraud. The Audit and Supervision Department of the Group is a permanent establishment for anti-fraud work and responsible for internal audit. Management of each subsidiary is responsible for publicising anti-fraud policies and reporting procedures through staff manuals, rules, and regulations, or internal network and other channels, so as to create an anti-fraud corporate culture environment. Hilong upholds the fundamental principles of “Prevention Precedes Punishment” and “Protect Whistle-blowers”, formulated strict management systems, *Management System for Audit Department* (《審計部管理制度》), *Regulations for the Implementation of the Audit Work* (《審計工作實施細則》), *Management System for Fraud and Irregularities* (《舞弊及違規行為管理制度》), *Integrity and Self-Discipline Standard* (《廉政自律規範》), and the *Anti-corruption and Reporting System* (《反舞弊和舉報制度》), to continuously strengthen internal governance and supervision. Hilong highlights the declaration and reporting of conflicts of interest and prohibits employees from soliciting any benefits from those who have business dealings with the Group, including business partners, customers, suppliers, contractors, competitors, or those who have business relations with Hilong. The Group also actively communicates relevant concepts to customers, suppliers, business outsourcers and other relevant units. During the cooperation with suppliers, Hilong strictly implements the *Tendering Management Policy* (《招標管理制度》) and purchases materials and services through an open and fair bidding process. When signing the contract with partners, Hilong signed the *Integrity Agreement* (《廉潔協議》) with them

or presented them with the *Integrity Notice*(《廉潔告知書》), requesting that no corruption be allowed in the cooperation process.

The Group has established a good internal control mechanism and set up reporting and complaint channels to prevent and detect fraud. After receiving complaints, the Audit and Supervision Department conducts an investigation and reports to management or the Board of Directors after confirmation and decides punishments in accordance with the relevant regulations of the Group. In case of violation of the laws, the case will be referred to a judicial office for further processing. Meanwhile, Hilong has established a whistleblower protection mechanism to prohibit any illegal discrimination or retaliation.

In 2021, the Group had no violations involving corruption, bribery, extortion, fraud or anti-money laundering.

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Hilong communicates the new policies to employees at all levels during regular audit process in a timely manner, highlights the risks of corruption and conflict of interest to the management and proposes measures to identify and reduce related risks. Meanwhile, the Group strengthens daily anti-corruption education, regularly organises publicity and trainings on anti-fraud policies, and reporting procedures. In December 2021, Hilong conducted an anti-fraud training for all directors to further improve the Group's anti-corruption management policy. The training focused on the updating and revision of the *Corporate Governance Code* (《企業管治守則》) and the *Listing Rules* (《上市規則》), and the interpretation of anti-corruption policies in the corporate governance guidelines of directors. All subsidiaries of Hilong also actively guide employees to conduct in-depth and thorough study of relevant anti-fraud systems. For example, Jiangsu Tube-cote Shuguang Coating Co., Ltd. ("**Jiangsu Tube**"), a subsidiary of the Group, organised all employees to conduct in-depth study of the *Anti-fraud and Reporting System* (《反舞弊和舉報制度》) and clarified the reporting methods and procedures for various fraud problems,

ensuring that employees could adhere to the code of conduct and ethical standards, and striving to build a clean, self-disciplined, and law-abiding working environment.



2021 Anti-Fraud Training

2.6 Public Welfare

For a long time, Hilong as an advanced privately operated enterprise has been committed to assuming social responsibilities and promoting the development of public welfare in various forms. Hilong also continuously encourages employees to carry forward the spirit of selfless dedication and responsible behaviour and repay the society with practical actions. Hilong has formulated *Measures for the Administration of Charity and Public Welfare Activities* (《慈善與公益活動管理辦法》), which stipulates the source and use of fund, the form of activities, summary and assessment of activities, etc. In 2021, Hilong carried out the purchase of poverty alleviation materials, sympathy, and solicitude for those in difficulties, rural revitalisation, and various voluntary services in Yunnan to actively serve the society, reflecting the social responsibility and value of Hilong.

Case: Community Service

- **Targeted poverty alleviation:** In 2021, Hilong continued to actively respond to the call of the central government and Shanghai Municipal Government to provided targeted aids to poor villages in Yunnan, including poverty alleviation materials worth RMB 34,656, to bolster the achievements made in poverty alleviation in the new era.
- **Targeted aids to realise Micro-wishes:** As a "Shanghai Public Welfare Base" unit, Hilong carries out activities advocating the virtue of respecting the elderly and provides targeted aids together with the community to assist the elderly living alone or with disabilities.



Targeted Aids to Realise Micro-Wishes

Case: Hematopoietic Stem Cell Donation and Blood Donation

Hilong encourages employees to participate in blood donation and to be a volunteer for hematopoietic stem cell donation. In 2021, 58 Hilong employees participated in the donation. The mechanical engineer Xiaowen Xie from Hilong Tube Material Research Institute successfully donated hematopoietic stem cells for a blood disease patient at Shanghai First People's Hospital in 2020, becoming the 495th non-blood relationship free hematopoietic stem cell donor in Shanghai. On 17 November 2021, the Baoshan District Red Cross Society Shanghai presented Xiaowen Xie with the 2020 "May Fourth Medal for Shanghai Youths", which was an incentive for more youths to be volunteers of hematopoietic stem cell donation. Meanwhile, the Baoshan District Red Cross Society Shanghai also fully acknowledged the humanistic care provided by Hilong after Xiaowen Xie's donation.



Blood Donation

Case: Volunteer Activities

- **Activities to learn from the virtues of Lei Feng on 5 March:** In March 2021, in order to encourage the employees to turn their lofty ideals and beliefs to pursuit of moral qualities into actions, Hilong launched various voluntary activities to learn from the virtues of Lei Feng with 35 participants, reflecting Hilong's Lei Feng spirit. Among them, 18 employees popularised the concept of environmental protection through litter picking, thus building the ecological civilisation.



Litter picking

- **Voluntary service to "Create a National Civilised Community" in Baoshan District:** In January 2021, 10 Hilong employees signed up to become volunteers of the voluntary service to "Create a National Civilised Community" in Baoshan District. They integrated "civilisation" into their work and life, striving to illustrate the voluntary spirit of "taking the initiative to help each other without seeking anything in return". A total of 30 hours were spent on this activity.

Case: Excellent Recruitment Enterprise in Baoshan District, Shanghai

- Hilong proactively participated in public welfare recruitment to provide employment opportunities for laid-off employees in difficulties within its jurisdiction. To this end, Shanghai Baoshan District Human Resources and Social Security Bureau awarded Hilong the honour plaque of "Excellent Recruitment Enterprise in Baoshan District, Shanghai", as a highly recognition on its active commitment to social responsibility.



3 People Oriented

Hilong attaches great importance to and protects the legitimate rights and interests of its employees and strictly complies with relevant domestic and foreign laws and regulations, including but not limited to the *Labour Law of the People's Republic of China* (《中華人民共和國勞動法》), *Labour Contract Law of the People's Republic of China* (《中華人民共和國勞動合同法》), *Law of the People's Republic of China on the Prevention and Control of Occupational Diseases* (《中華人民共和國職業病防治法》) and *Provisions on the Prohibition of Using Child Labour* (《禁止使用童工的規定》). We upholding the employment principles of "Fairness, Impartiality, and Openness", we continuously improve the 3-level human resources management framework including the Group, the Business Division, and the subsidiaries, to protect the rights and interests of employees with a high sense of responsibility, and promote the integrated management of employees' occupational health, physical health, and psychological health. Furthermore, we provide sound promotion channels and training system, striving to achieve the common growth of our employees and the Group.

3.1 Safety and Health

Hilong puts emphasis on occupational safety and health while insisting on giving priority to the life safety and occupational health of the employees. A number of the Group's subsidiaries have obtained relevant certification of the ISO 45001 occupational health and safety system. We set up an Occupational Health, Safety and Environmental Protection Committee ("HSE Committee") to manage the Group's safety and health issues under the safety management structure of HSE Committee - Production Safety and Environmental Protection Department - Safety and Environment Office. We set our HSE policies and goals and summarise the safety achievements of each division in the previous month and our HSE work priorities for the following month at our regular meetings on a monthly basis.

HSE Policies:

- People Oriented, All Staff Participation, Scientific Management, and Sustainable Development

HSE Goals:

- Pursuing No Accident, No Injury and No Pollution to Create First-class HSE Performance

In 2021, due to relevant laws and regulations and identification and verification of work injure standard tend to further protect the rights and interests of workers, accidents, and other reasons, the number of working days lost due to work accidents in the Group is 98 days. In view of this, the Group timely improved relevant management systems and further strengthened employees' safety awareness training and safe operation assessment. In the past three years, the Group never had any work accident that involves employee fatality.

➤ **Production Safety**

Since its establishment, Hilong has always paid great attention to the management of production safety. After continuously consolidating the foundation for safety work and improving the management methods and means of production safety, the Group has put in place a complete safety production system and created a cultural atmosphere of "Safety First".

With nearly 30 registered safety engineers in service, Hilong tried to avoid any potential safety incident by strictly implementing the production safety responsibility system, making vigorous efforts on the construction of safety teams, strictly controlling production safety work, and organising safety trainings and emergency drills. Subsidiaries of Hilong conduct independent safety inspection once a month, while the Group carries out a complete safety inspection on each subsidiary on a monthly basis to ensure that there are no dead ends in safety aspect. In 2021, we increased the frequency and expanded the scope of safety inspections, aiming to have monthly notification and 100% rectification on hidden hazards by the subsidiaries.

Case: Training on the Work Safety Law of the People's Republic of China (《中華人民共和國安全生產法》)



The Work Safety Law of the People's Republic of China (《中華人民共和國安全生產法》) came into force in September 2021. To enhance all employees' understanding of the law, Hilong organised a special study session for the subsidiaries and required all employees to pass the examination.

Case: Safety Production Month

In June 2021, Hilong launched a Safety Production Month activity themed "Implementing Safety Responsibility and Boosting Safety Development" to create a sound environment and raise employees' awareness of safety production.

Inspection for hidden hazards: The Group organised an all-round inspection on hazardous chemicals, with the focus on their use, storage, daily management and system construction. Among them, for the 165 hidden hazards identified in Shanghai, the Group had clarified rectification responsibilities, and formulated a rectification plan to perform follow-up and review.

Fire safety training and drill: The Group conducted safety knowledge publicity via banners, posters, and safety promotion videos. Meanwhile, subsidiaries carried out emergency drills which focused on training employees to deal with various accidents.

Safety knowledge competition: In order to further enhance employees' safety production awareness and self-protection ability, Hilong held a safety knowledge competition, which concentrated on knowledge of safety production, welding and cutting operations, safe electricity use and fire safety, attracting 56 participants.



Safety Knowledge Competition

➤ Occupational Health

Hilong attaches great importance to the health of its employees. Each business division and subsidiary established management systems including *Occupational Health Management Policy* (《職業健康管理制度》). According to the *Administrative Regulations on Periodic Testing of Occupational Disease Hazards by Employers* (《用人單位職業病

危害因素定期檢測管理規範》), Hilong conducts a comprehensive inspection on work sites where the occupational disease hazards exist on a yearly basis. If the test result shows that the concentration or intensity of occupational disease hazards exceeds the occupational exposure limit, Hilong would formulate proposals in a timely manner and rectify the situation immediately. For employees working in occupational disease hazard positions, Hilong informs them of the occupational disease hazard factors before onboarding, and arranges three physical examinations before, during, and after work to make fully aware of their own occupational health status. During work, Hilong has effectively reduced the impact on employees' health by distributing labour protection supplies and installing dust collectors.

In addition, Hilong pays attention to health education and training for all employees by regularly conducting occupational health trainings to popularise knowledge on prevention and treatment of occupational diseases and labour protection, as well as information about healthy lifestyle, disease prevention, and mental health.

Case: First Aider Knowledge Popularisation and Training

In November 2021, in order to disseminate first aid knowledge and help certain staff master basic first aid know-how and operation skills, the Group completed a first aid training for 66 employees, covering theoretical knowledge and practical operation on cardiopulmonary resuscitation.



First Aider Knowledge Popularisation and Training

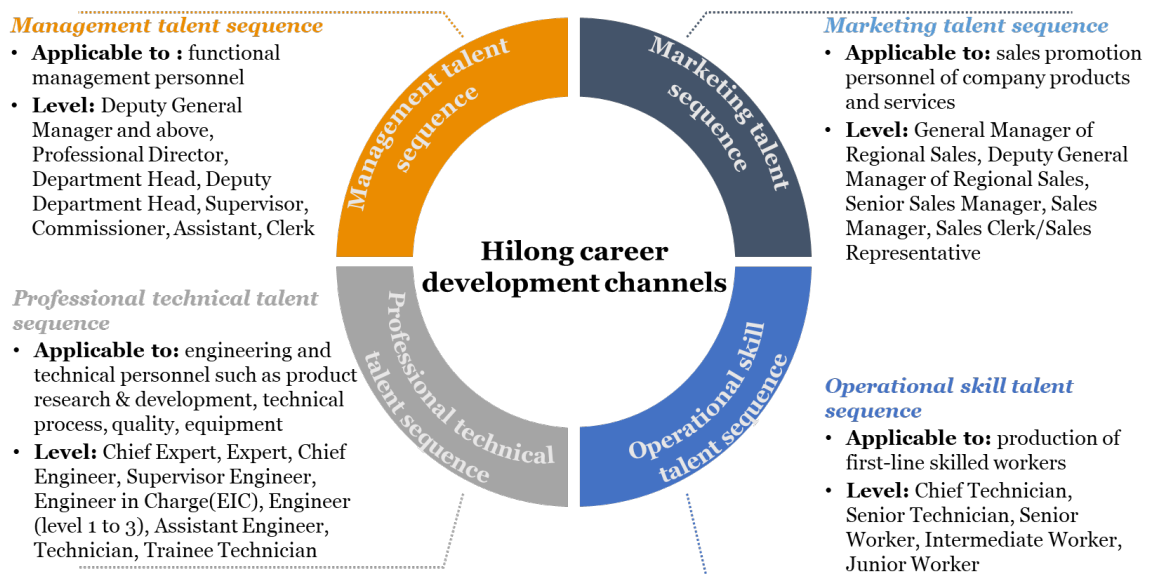
3.2 Employee Management

➤ Recruitment and Promotion

Hilong respects the basic human rights enjoyed by all employees in accordance with the law through strictly complying with relevant laws and regulations, and continuously refining the Group's internal employment management system. The Group formulated *Employment Management Policy* (《員工聘用管理制度》) and *Labour Contract Management System* (《勞動合同管理制度》) to regulate the recruitment process. Hilong explores resume resources and attracts outstanding persons through on-campus recruitment, social recruitment, recruiting websites, head-hunters, colleges and universities, talent market, and so on.

Hilong also actively defends its diversified operations and firmly believes that a diversified enterprise can remain the vitality of development. We offer fair employment opportunities to talents regardless of their gender, nationality, background, race, age, family background, ethnic heritage, religion and physical fitness. Hilong firmly opposes any act of using child labour and has established a mechanism for handling and self-inspection of child labour incidents. In the appendix of *Employment Management Policy* (《員工聘用管理制度》), *Employment Standards for New Employees*(《新員工錄用標準》), we stipulate the rules of new employees should be over the age of 18 and prohibit the use of child labour.

Sticking to employment standard of "Focusing on Morality and Capability, Giving Priority to Morality", Hilong sets up clear career development channels:



Based on *Performance Appraisal and Management Policy* (《績效考核管理制度》), Hilong implements annual employee performance appraisal and reviews development potential. The appraisal results are taken as the basis of salary and rank adjustments. For employees of different positions and ranks, the Group formulated policies such as *Implementation Measures on Level and Compensation Appraisal and Adjustment for Employees below Departmental Heads of the Group* (《集團部門長以下員工職級及薪酬核定調整實施辦法》), the *Management Measures for Accreditation and Appointment of Professional and Technical Personnel* (《專業技術人員任職資格評審及聘任管理辦法》), the *Management Measures for Skill Rating of Frontline Production Operators and Appointment of Technicians* (《一綫生產操作員工技能等級評定及技師聘任管理辦法》), and properly manage their ranks and post adjustments and gave them fair compensation and career development channels.

➤ **Compensation and Dismissal**

Hilong provides market leading compensations for core positions and provided all employees with competitive compensations that was at the upper and middle level in the market. The Group formulated the *Management Measures for Management Personnel Compensation of the Group* (《集團管理序列人員薪酬管理辦法》), *Implementation Measures on Level and Compensation Appraisal and Adjustment for Employees below Departmental Heads of the Group* (《集團部門長以下員工職級及薪酬核定調整實施辦法》) and other management policies. Hilong improve and perfect the compensation allotment system, implements the compensation system of management channel and professional and technical channel based on principles of “Equal Pay for Equal Work, Fairness and Reasonableness, Incentive and Ease of Operation.”

In order to motivate employees, give reward and punishment according to the actual situation, Hilong formulated the *Annual Evaluation Fulfilment Measures on Group, Business Division (Specialized Company) and Subsidiary Management* (《集團、事業部(專業公司)及分/子公司管理層年度考核兌現辦法》). We strengthen the link between the management’s compensation, profit and completion ratio. Hilong established compensation management system focusing on “Position, Ability and Performance”.

As for resignation, Hilong strictly complies with the *Employee Termination Management Policy* (《員工離職管理制度》), does not dismiss employees arbitrarily, and protects the legitimate rights and interests of our employees. The dismissal process starts only when

the employees meet the relevant requirements for dismissal and the dismissal is confirmed by the head of department. In addition, Hilong formulated the *Rules for Retirement Ceremony of Employees* (《員工退休歡送儀式的規定》) and will organise retirement parties and send blessings to retired employees.

➤ **Employees' Rights and Benefits**

Hilong values the development of a welfare protection system for its employees. Hilong paid social insurance premiums for employees according to law. Moreover, Hilong formulated the *Management Measures for the Haizhou • Fund of Comprehensive Arrangement for Serious Disease* (《「海洲•大病統籌基金」管理辦法》), which helps the employees with serious diseases and their families to cope with troubles. Employees of Hilong also enjoy benefits including birthday bonuses, festival bonuses, annual physical checks, free shuttle buses, communication allowance, and free work meals. In 2021, the Group also formulated and implemented the *Notice on Supplementing Benefits of Day for Respecting the Aged under the Regulations on Employee Welfare of Hilong Group in Shanghai Management* (《關於增補海隆集團上海地區員工福利管理規定之敬老節福利的通知》) to better raise care and concern for the employees and their families.

Hilong implemented a working hour system which combines standard working hours system, comprehensive working hours system and irregular working hours system, which was managed by the *Attendance Management Policy* (《考勤管理制度》). Employees who need to work overtime under special circumstances should apply to the department heads for approval. The operation staff will receive overtime pay within the same month. General management and technical employees are given extra adjusted holidays in terms of the overtime. If the aforesaid holidays couldn't be taken, overtime pay will be paid after approval. Employees are entitled to statutory holidays, annual leaves and other holidays based on the *Holiday Management Policy* (《假期管理制度》).

The Group, with harmonious and stable labour relations and well-protected employees' rights and interests, was awarded the honorary plaque of "Standard Enterprise with Harmonious Labour Relations in Shanghai" by the Shanghai Human Resources and Social Security Bureau and Shanghai Federation of Trade Unions in conjunction with relevant associations, and that of "Demonstration Enterprise for Exemplary Labour Relations of Baoshan Industrial Park" by the Management Committee of Baoshan Industrial Park.



Case: Safety Demonstration Unit

In 2021, Hilong was awarded the certificate of "Safety Demonstration Unit" by the Political and Law Commission of Shanghai Baoshan District Committee, which recognised Hilong's capabilities in corporate security prevention, investigation and resolution, population management, legal publicity, and crime prevention.

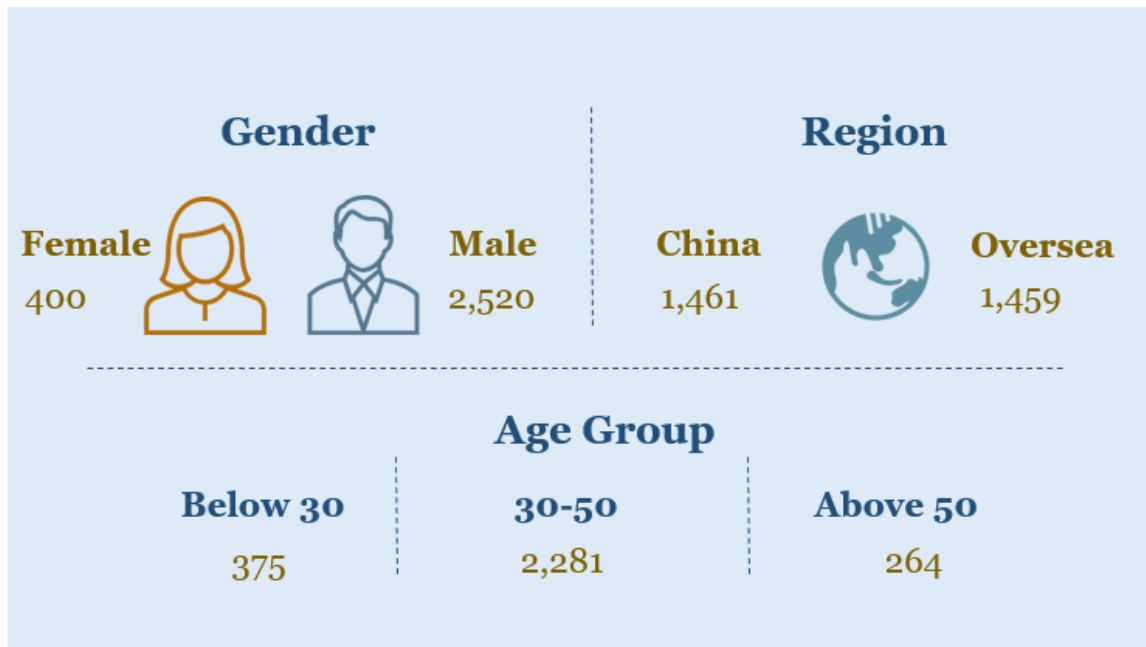


At the same time, the Group is devoted to creating a relaxed working atmosphere for the employees and organises plentiful cultural activities to emphasise team spirit and enhance employees' sense of belonging. In 2021, we successfully held a series of activities such as the short family video shooting activity to welcome the new year, the photo shooting activity to welcome May Day, the cultural activity for the Father's Day and the cultural activity of creating emoji of people facing extreme heat and high temperatures. Moreover, we took a step further to enrich the spiritual life of our employees through activities including one hour at noon and greetings to overseas permanent employees.



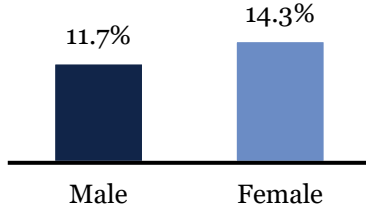
One hour at noon - Throwing darts

By the end of December 2021, Hilong had 2,920 employees, the workforce of Hilong was composed of all full-time employees and is shown by gender, age group and region as bellow:

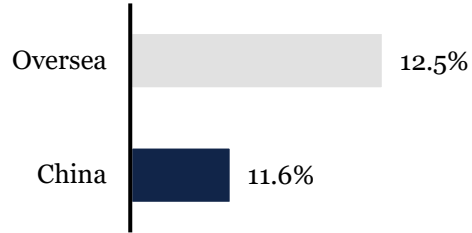


During the Reporting Period, the employee turnover rate of the Group by gender, age group, and region is shown as below:

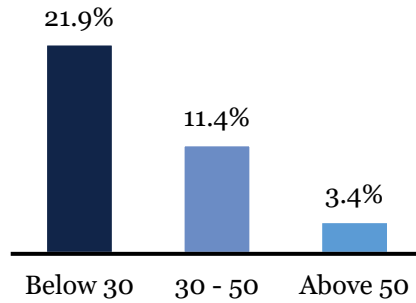
Employee turnover rate by gender



Employee turnover rate by region



Employee turnover rate by age group



3.3 Talent Cultivation

Hilong formulated the *Staff Training Management Policy* (《員工培訓管理制度》) and formed a unique hierarchical training system. Trainings are arranged for employees at all levels across the Group from three levels: the Group, business division, and subsidiary company. Hilong organizes various training such as management training, professional technician training, sales training, overseas talent training, and operational technical training each year, so as to continuously improve employees’ professional skills.

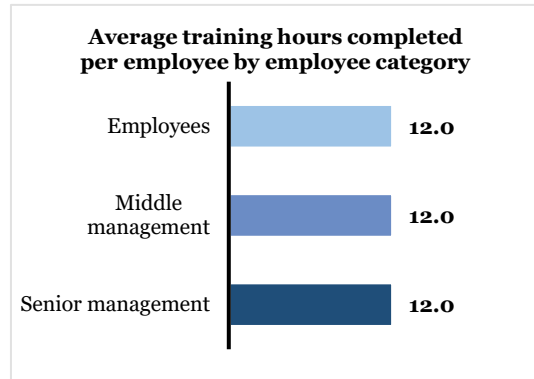
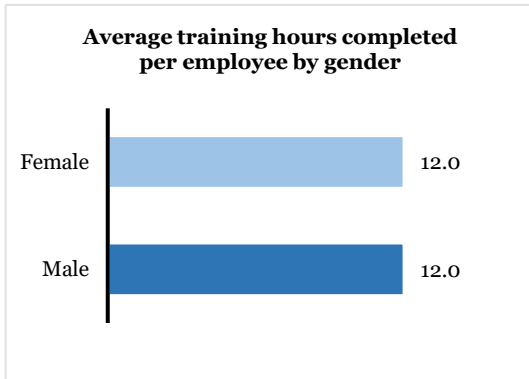
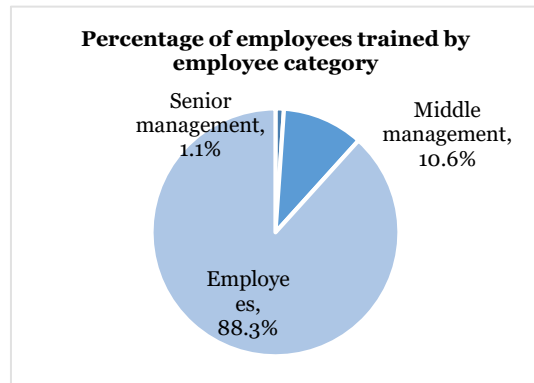
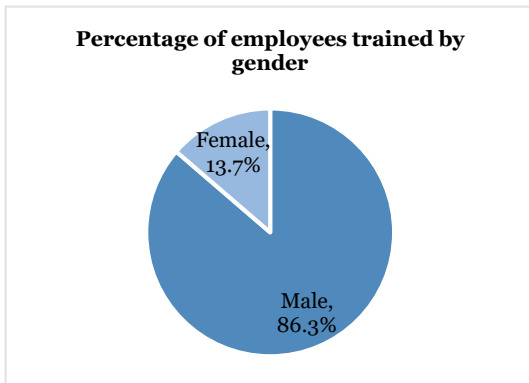
Case: Oil Industry Situation and Trend Forecast Training Activity



In December 2021, in order to help employees understand the situation of the oil industry, the Group launched a learning and training activity on the situation and trend outlook of the oil industry, which was open to all employees of the Group headquarters.

Oil Industry Situation and Trend Forecast Training Activity

In 2021, the proportion of trained employees of the Group was 100%, with the total training hours throughout the year reaching 35,040 hours.



4 Environmental Protection

Hilong complies with the laws and regulations of the countries and regions where it operates, including but not limited to the *Environmental Protection Law of the People's Republic of China* (《中華人民共和國環境保護法》), *Air Pollution Prevention and Control Law of the People's Republic of China* (《中華人民共和國大氣污染防治法》), *Water Pollution Prevention and Control Law of the People's Republic of China* (《中華人民共和國水污染防治法》), and *Law of the People's Republic of China on the Prevention and Control of Solid Waste Pollution* (《中華人民共和國固體廢物污染環境防治法》). In terms of environmental protection, Hilong aims to reduce emissions and improve resource use efficiency. According to *ISO 14001 / GB/T 24001 Environmental management system - Requirements with guidance for use* (《ISO 14001 / GB/T 24001 環境管理體系要求及使用指南》), the Group is dedicated to identifying, managing and controlling key environmental risks to minimise pollution emissions and resource consumption arising from production and operation activities. A number of the Group's subsidiaries have obtained relevant certification of the ISO 14001 Environmental Management System. Shanghai Drill Pipe, a core enterprise of Hilong with the title of Shanghai Green Manufacturing System Demonstration Unit, embodies the sustainable development principles of "Innovation, Green development, Openness, and Sharing" in terms of green material selection, use of clean production technology, resource recycling, and compliance pollutant discharge.

The HSE Committee centrally manages the Group's environmental protection, and urges the Production Safety and Environmental Protection Department to take charge of the supervision and control of energy use situation, as well as tracking and assessing progress of relate work of all subsidiaries, etc.; and the Safety and Environment Office in each business division arranges dedicated employees to implement environmental protection and energy conservation in accordance with the *Hilong Holdings' Environmental Protection and Energy Conservation Management System* (《海隆控股環保節能管理制度》).

4.1 Emission Management

Hilong is committed to sustainable management throughout the operation. The Production Safety and Environmental Protection Department conducts unified inspection

on all production units in Shanghai every year, monthly inspection on Baoshan Industrial Zone, and unscheduled on-the-spot inspections. It also requires the Safety and Environment Offices of subsidiaries to conduct independent environmental inspections to ensure up-to-standard discharge. Hilong has set up specific environmental protection indicators in the appraisal indicator system for members in various business divisions and their management to encourage each business division to put more emphasis on emission management. Meanwhile, Hilong regularly invites local environmental supervision department to monitor the emissions and form monitoring reports to ensure that the emissions are discharged in compliance with regulations.

➤ **Waste Gas and Wastewater**

Hilong's waste gas emissions mainly include Volatile Organic Compounds ("VOCs") generated in the coating production process, NO_x and SO₂ from natural gas combustion in boilers for pipe heating, particulate matters from powder coating, and waste gases from diesel consumption in diesel engines for well drilling.

According to the requirements of relevant laws, Hilong has set up corresponding purification treatment equipment in process links that can generate exhaust gas, to collect and process the generated exhaust gas, and only discharges them into the atmosphere after reaching the emission standard. In 2021, Hilong added dust removal bags in front of the small line activated carbon device to reduce dust pollution. In the same year, Hilong Pipeline Engineering Technical Services Limited ("Pipeline Engineering") carried out a trade-in for diesel forklifts to ensure that the emissions met relevant national standards.



Dust Removal Scheme for Activated Carbon Device

In order to further reduce the VOCs emissions of coating products, Hilong has independently developed a variety of low-VOC coating products, and the measured emissions of which are far lower than those specified under national standard GB/T

38597-2020 *Technical requirement for low-volatile-organic-compound-content coatings product* (《低挥发性有机化合物含量涂料产品技术要求》). It was certified as a demonstration project of low VOC raw material and product substitution in key industries by the Shanghai Municipal Bureau of Ecology and Environment. Besides, the Group's eco-friendly epoxy paint with good corrosion and water resistance was awarded the bronze prize for outstanding innovations in the "Shanghai Excellent Invention Competition" by the Shanghai Federation of Trade Unions, and recognised by the Science and Technology Commission of Shanghai Municipality as a high-tech achievement transformation project of Shanghai, enjoying corresponding special financial support funds and talent support policies, and Hilong's eco-friendly and long-lasting ocean antifouling coating also won the silver medal for outstanding innovations in the "Shanghai Excellent Invention Competition" awarded by the Shanghai Federation of Trade Unions, both of which show Hilong's independent innovation capability, core competitiveness and strength in research and development of green products to the society.



Wastewater generated from Hilong includes domestic wastewater and production wastewater from general production processes and oilfield services. Hilong discharges domestic wastewater directly into the municipal sewage network. General production wastewater is recycled without external discharge and wastewater generated by oilfield services is treated in accordance with the laws and regulations of the host country. Hilong and its subsidiaries all have the *Permit to Discharge Urban Sewage into the Drainage Networks*(《城镇污水排入排水管网许可证》), ensuring that the number and location of drains, water discharge, variety and concentration of major pollutants discharged, etc. comply with the *Urban Drainage and Sewage Treatment Regulations*(《城镇排水与污水处理条例》) and other regulations.

During the Reporting Period, the types of emissions generated by the Group and the emission data are shown as below:

A1.1 Emissions	2021	2020	2019	Unit
VOCs	0.3	0.4	0.4	tonnes
NO _x	4.9	3.7	5.5	tonnes
SO ₂	0.24	0.06	0.07	tonnes
Particulate matter	6.7	7.4	10.3	tonnes
Wastewater	72,807.2	67,634	91,820.7	tonnes

➤ Greenhouse Gases

Hilong's greenhouse gas emissions primarily include fuel used in heat treatment processes, gasoline and diesel burning of vehicles, and indirect emissions from purchased electricity. Since greenhouse gas emissions mainly come from energy consumption, Hilong actively encourages green office and green production, carries out energy-saving renovation projects, and adopts energy-saving measures to reduce energy consumption, so as to reduce greenhouse gas emissions.

During the Reporting Period, the greenhouse gases emissions in total and intensity are shown as below:

A1.2 Greenhouse gases	2021	2020	2019	Unit
Scope 1: Direct emissions	7,768	7,602	12,437	tCO ₂ e
Scope 2: Energy indirect emissions	26,869	24,217	36,290	tCO ₂ e
Total emissions	34,637	31,820	48,727	tCO ₂ e
Emission intensity	11.9	12.1	13.4	tCO ₂ e/ million RMB revenue

Note: Greenhouse gas emissions are presented in CO₂ equivalent. Greenhouse gas emissions from electricity purchased in Shanghai are calculated based on the electricity emission factors adjusted by the Shanghai Municipal Bureau of Ecology and

Environment in 2022, while other accounting method and conversion factors come from the *Accounting Methods and Reporting Guide for Greenhouse Gas Emissions from Mechanical Equipment Manufacturing Enterprises* (《機械設備製造企業溫室氣體排放核算方法與報告指南》) issued by the National Development and Reform Commission (NDRC).

➤ **Solid Waste**

Solid waste generated by Hilong mainly includes domestic waste, general industrial waste, and hazardous waste generated from production process. Among them, the hazardous waste mainly includes oily wastewater, waste mineral oil, paint packaging, paint waste, etc.

In 2021, the Group further reinforced management on general industrial solid waste in accordance with the amended *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste* (《中華人民共和國固體廢物污染環境防治法》) and the targeted approach of "Full Coverage based on Different Levels and Categories with Traceable Destination". In addition, we updated the *General Industrial Solid Waste Management Policy* (《一般工業固廢管理制度》) to optimise the classification system of general industrial solid waste and clarified main responsibilities of the generating units, thus forming a closed loop management from source to end by filling in the management status throughout the whole process of generation, storage, collection, utilisation and disposal.

- **Domestic waste:** In addition to entrusting the municipal environmental sanitation department to collect and dispose of garbage, Hilong formulated the *Management Measures for Environmental Sanitation with in Hilong Industrial Park* (《海隆工業園區環境衛生管理辦法》) in accordance with the *Administrative Measures for Living Garbage of Shanghai* (《上海市生活垃圾管理條例》). Hilong set assessment methods on domestic waste classification that are designed to promote domestic waste classification within the park, and organized employees to participate in special lectures and trainings related to waste classification and actively carried out waste classification works. In order to reduce the generation of domestic waste from the source, Hilong actively implements the "Empty Plate Initiative" through various publicity activities, and its employees are called upon to cherish food and eliminate waste.
- **General industrial waste:** According to *Waste Disposal Measures* (《廢舊物資處理辦法》) formulated by the Group, Hilong sells the recyclable solid wastes like scrap steel pipes, and other waste materials and idle assets to qualified enterprises

for recycle and reuse. Hilong stores other unrecyclable non-hazardous industrial wastes in a specific place and entrusts qualified professional bodies to deal with them.

- **Hazardous waste:** Hilong established *Hazardous Waste Management Policy*(《危險廢物管理制度》) and *Accountability Mechanism for Staff of Hazardous Waste Related Positions*(《危險廢物崗位人員責任制》) and other regulations. It also set up assigned storage sites to store hazardous wastes and employed qualified professional bodies for unified treatment. In 2021, in order to reduce the hazardous wastes generated, Hilong changed the 200L packaging drums for solvents and resins in the liquid coating production line in the Class A workshop into tankers and used closed pipes for material transportation during batch feeding, which had significantly reduced the frequency of touching when employees using the materials, as well as volatilisation of volatile organic compounds and generation of hazardous waste. In 2021, the production efficiency was improved by over 30% while the disposal cost of hazardous waste and the annual procurement cost were saved by approximately RMB 400 thousand and RMB 1.5 million respectively.

During the Reporting Period, the hazardous and non-hazardous wastes produced, and their respective intensity are shown as bellow:

A1.3&A1.4 Hazardous / Non-hazardous wastes	2021	2020	2019	Unit
Total hazardous wastes produced	91.0	15.3	99.3	tonnes
Intensity of hazardous wastes	0.031	0.006	0.027	tonnes/million RMB revenue
Total non-hazardous wastes produced	1020.7	410.0	853.1	tonnes
Intensity of non-hazardous wastes	0.350	0.156	0.234	tonnes/million RMB revenue

4.2 Use of Resources

➤ Energy Saving

The energy used by Hilong mainly includes natural gas used in the production, petrol and diesel consumed by forklifts, electricity used in production, office and life in the factory, natural gas, diesel, petrol and electricity used in the drilling process of oilfield service and marine engineering services, etc.

According to Hilong's *Environmental Protection and Energy Conservation Management Policy* (《環保節能管理制度》), the energy-saving effort within the Group is managed in a unified manner by the Production Safety and Environmental Protection Department, including monthly statistics of energy usage, vigorously promoting green office and green production, and actively carrying out energy-saving renovation projects to reduce energy consumption. Each business division sets up an Energy Office that is responsible for their respective energy-saving work.

During the Reporting Period, the direct/indirect energy consumption in total and intensity are shown as bellow:

A2.1 Energy	2021	2020	2019	Unit
Natural gas	345	342	560	10,000 m ³
Diesel	62	49	79	tonnes
Gasoline	33	13	18	tonnes
Liquefied gas	5	6	8	tonnes
Total direct energy consumption	38,529	37,801	61,856	MWh
Electricity	42,839	31,945	46,970	MWh
Total indirect energy consumption	42,839	31,945	46,970	MWh
Total energy consumption	81,368	69,746	108,826	MWh
Energy consumption intensity	27.9	26.6	29.8	MWh /million RMB revenue

Note: Total energy consumption is calculated based on the consumption of natural gas, diesel, gasoline and liquefied gas and the amount of electricity purchased. Conversion factors come from Appendix 1: default values of fossil fuel and Appendix 2: default density of fuel oil of the *Accounting Methods and Reporting Guide for Greenhouse Gas Emissions from*

Mechanical Equipment Manufacturing Enterprises (《機械設備製造企業溫室氣體排放核算方法與報告指南》) issued by the NDRC.

➤ **Water Saving**

Hilong uses municipal water and applicable local water sources. Hilong has developed its *Environmental Protection and Energy Conservation Management Policy* (《環保節能管理制度》) and *Management Rules on Water Utilisation* (《用水管理制度》), which are implemented under the supervision of relevant functional departments, so as to ensure that its water usage and water conservation work are carried out in an effective and orderly manner.

According to the national (local) water conservation regulations and the specific requirements of the Shanghai Municipal Water Planning Office, Hilong has made the following management and rectification efforts to improve water-saving efficiency, and successfully obtained the certificate for establishing a water-saving enterprise:

- Carry out water-saving related publicity and education works and encourage employees to participate in water-saving activities.
- Arrange regular maintenance for pipelines, valves and other facilities in the water supply system, check for leaks, solve problems detected in a timely manner, and repair the sudden failures of water pipes, valves and other facilities within regulated time limit, to reduce water loss to the minimum.
- Use water saving appliances for all domestic water facilities, organise inspections and maintenance, to ensure that water facilities function well.
- Carry out statistical and dynamic analysis of water consumption for the purpose of ensuring rational water use.

During the Reporting Period, the Group's water consumption in total and intensity are shown as below:

A2.2 Water	2021	2020	2019	Unit
Water Consumption	81,043	75,149	102,023	tonnes
Water Consumption Intensity	27.8	28.7	28.0	tonnes/million RMB revenue

➤ Packaging Materials

The packaging materials used by Hilong primarily include packing frames, iron packing belts, pipe protection ropes, wooden cases, paper cases, etc. the Group reused recyclable packaging materials and effectively reduced the consumption.

During the reporting period, the total amount of packaging materials used in the Group's finished products is shown as below:

A2.5 Packaging Materials	2021	2020	2019	Unit
Packaging materials used	215.0	268.2	350.2	tonnes
Packing material density	73.7	102.2	95.9	Kg/million RMB revenue

4.3 Environment and Natural Resources

Noise from Hilong primarily includes operation noise from machinery and equipment, aerodynamic noise from machines like blowers and air compressors, and transient high-decibel metal collision noise from loading and unloading of steel pipes. In order to reduce the impact of noise on employees, the Group provided them with personal protective equipment and controlled the sources of noise pollution through adoption of low-noise equipment, proper layout of equipment in workshops, installation of vibration pads or vibration dampers, equipment of blower silencers and wrapping of ducts etc. In 2021, isolation measures were taken by Pipeline Engineering, a subsidiary of the Group, for air compressors to achieve noise reduction in the workshop, which had successfully reduced the noise from 95 decibels to 77 decibels.

Except for those disclosed above, Hilong won't cause any other major environmental impacts or make significant use of other environmental and natural resources in its operations.

4.4 Climate Change

In recent years, climate change has intensified its impact on the world. Based on the assessment results, the occurrence of extreme weather events such as typhoons and floods will have an impact on the normal business operations of the Group. Therefore, Hilong has strengthened its employees' knowledge reserve and capability related to extreme weather prevention and emergency handling in the daily work, and the subsidiaries of the

Group have formulated specific emergency plans based on local climate conditions, and set up relevant leading groups for emergency handling and responding and preparing in advance, so as to ensure that they can respond quickly when encountering extreme weather and achieve effective control and proper treatment.

Case: Emergency Plan Drill Against Extreme Weather

In June 2021, the Group launched a special emergency plan drill against flood and typhoon. During the drill, the on-site safety personnel reported the current weather and flooding to the commander; the personnel participating in the drill transported the flood and typhoon prevention materials to the scheduled drill site; the rescue team cleaned the rubbish and floor drain filters in the drainage ditch, used sandbags to block the roller shutter door to prevent the water from spreading into the warehouse, and applied steel pipes to reinforce the roller shutter door to fight against typhoon. Meanwhile, electricians inspected low-lying charged objects in the warehouse. Through this drill, the Group had strengthened the employees' emergency handling against extreme weather, thereby better coping with extreme weather in the future and minimise the Group's losses.



Emergency Plan Drill Against Extreme Weather

Appendix I: ESG Reporting Guidance Index

Aspect	Requirements	Chapter
A1 Emissions	<p>General Disclosure</p> <p>Information on:</p> <ul style="list-style-type: none"> (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer <p>relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.</p> <p><i>Note: Air emissions include NOx, SOx, and other pollutants regulated under national laws and regulations.</i></p> <p><i>Greenhouse gases include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride.</i></p> <p><i>Hazardous wastes are those defined by national regulations.</i></p>	4.1 Emission Management
KPI A1.1	The types of emissions and respective emissions data.	
KPI A1.2	Greenhouse gas emissions in total (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	
KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	
KPI A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	
KPI A1.5	Description of measures to mitigate emissions and results achieved.	
KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved.	

A2 Use of Resources	<p>General Disclosure</p> <p>Policies on the efficient use of resources, including energy, water and other raw materials.</p> <p><i>Note: Resources may be used in production, in storage, transportation, in buildings, electronic equipment, etc.</i></p>	4.2 Use of Resources
KPI A2.1	<p>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).</p>	
KPI A2.2	<p>Water consumption in total and intensity (e.g. per unit of production volume, per facility).</p>	
KPI A2.3	<p>Description of energy use efficiency initiatives and results achieved.</p>	
KPI A2.4	<p>Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved.</p>	
KPI A2.5	<p>Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.</p>	
A3 The Environment and Natural Resources	<p>General Disclosure</p> <p>Policies on minimising the issuer's significant impact on the environment and natural resources.</p>	4.3 Environment and Natural Resources
KPI A3.1	<p>Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.</p>	
Aspect A4: Climate Change	<p>General Disclosure</p> <p>Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer.</p>	4.4 Climate Change
KPI A4.1	<p>Description of the significant climate-related issues which have impacted, and those which may</p>	

	impact, the issuer, and the actions taken to manage them.	
B1 Employment	<p>General Disclosure</p> <p>Information on:</p> <ul style="list-style-type: none"> (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer <p>relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.</p>	3.2 Employees' Rights and Benefits
KPI B1.1	Total workforce by gender, employment type (for example, full- or part-time), age group and geographical region.	
KPI B1.2	Employee turnover rate by gender, age group and geographical region.	
B2 Health and Safety	<p>General Disclosure</p> <p>Information on:</p> <ul style="list-style-type: none"> (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer <p>relating to providing a safe working environment and protecting employees from occupational hazards.</p>	3.1 Safety and Health
KPI B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	
KPI B2.2	Lost days due to work injury.	
KPI B2.3	Description of occupational health and safety measures adopted, and how they are implemented and monitored.	

B3 Development and Training	<p>General Disclosure</p> <p>Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.</p> <p><i>Note: Training refers to vocational training. It may include internal and external courses paid by the employer.</i></p>	3.3 Talent Cultivation
KPI B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	
KPI B3.2	The average training hours completed per employee by gender and employee category.	
B4 Labour Standards	<p>General Disclosure</p> <p>Information on:</p> <ul style="list-style-type: none"> (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer <p>relating to preventing child and forced labour.</p>	3.2 Employees' Rights and Benefits
KPI B4.1	Description of measures to review employment practices to avoid child and forced labour.	
KPI B4.2	Description of steps taken to eliminate such practices when discovered.	
B5 Supply Chain Management	<p>General Disclosure</p> <p>Policies on managing environmental and social risks of the supply chain.</p>	2.4 Supply Chain Management
KPI B5.1	Number of suppliers by geographical region.	
KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored.	
KPI B5.3	Description of practices used to identify environmental and social risks along the supply	

	chain, and how they are implemented and monitored.	
KPI B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	
B6 Product Responsibility	<p>General Disclosure</p> <p>Information on:</p> <ul style="list-style-type: none"> (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer <p>relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.</p>	<p>2.1 Products Quality</p> <p>2.2 Customer Service</p> <p>2.3 Property Right Protection</p>
KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	
KPI B6.2	Number of products and service related complaints received and how they are dealt with.	
KPI B6.3	Description of practices relating to observing and protecting intellectual property rights.	
KPI B6.4	Description of quality assurance process and recall procedures.	
KPI B6.5	Description of consumer data protection and privacy policies, and how they are implemented and monitored.	
B7 Anti-corruption	<p>General Disclosure</p> <p>Information on:</p> <ul style="list-style-type: none"> (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer <p>relating to bribery, extortion, fraud and money laundering.</p>	2.5 Anti-corruption

KPI B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	
KPI B7.2	Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored.	
KPI B7.3	Description of anti-corruption training provided to directors and staff.	
B8 Community Investment	<p>General Disclosure</p> <p>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.</p>	2.6 Public Welfare
KPI B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	
KPI B8.2	Resources contributed (e.g. money or time) to the focus area.	

Appendix II: Reader's Feedback Form

Thank you for reading 2021 Environmental, Social and Governance (ESG) Report of Hilong Holding Limited. In order to provide more valuable information to the Group's stakeholders and improve its ability and level of fulfilling social responsibilities, we would welcome any feedback or suggestions you might have about this report.

You can send this form to any of the following:

Fax: +86-21-33851886

Postal address: No.1825, Luodong Road, Baoshan Industrial Zone, Shanghai, PRC

1. How would you rate your opinion of the Hilong Holding 2021 ESG Report?

Very High High Neutral Low Very Low

2. How would you rate your opinion of the economic, social and environmental responsibilities of Hilong Holding?

Economic responsibility	<input type="checkbox"/> Very High	<input type="checkbox"/> High	<input type="checkbox"/> Neutral	<input type="checkbox"/> Low	<input type="checkbox"/> Very Low
Social responsibility	<input type="checkbox"/> Very High	<input type="checkbox"/> High	<input type="checkbox"/> Neutral	<input type="checkbox"/> Low	<input type="checkbox"/> Very Low
Environmental responsibility	<input type="checkbox"/> Very High	<input type="checkbox"/> High	<input type="checkbox"/> Neutral	<input type="checkbox"/> Low	<input type="checkbox"/> Very Low

3. Please rate the effectiveness of this Report in reflecting the economic, social and environmental impact Hilong Holding has brought about through its social responsibility practices?

Excellent Good Fair Poor Terrible

4. How would you rate your opinion of the clarity, accuracy and completeness of the information, data and indicators this Report has disclosed?

Clarity	<input type="checkbox"/> Very High	<input type="checkbox"/> High	<input type="checkbox"/> Neutral	<input type="checkbox"/> Low	<input type="checkbox"/> Very Low
Accuracy	<input type="checkbox"/> Very High	<input type="checkbox"/> High	<input type="checkbox"/> Neutral	<input type="checkbox"/> Low	<input type="checkbox"/> Very Low
Completeness	<input type="checkbox"/> Very High	<input type="checkbox"/> High	<input type="checkbox"/> Neutral	<input type="checkbox"/> Low	<input type="checkbox"/> Very Low

5. Do you find this Report in easy-to-read contents and formatting?

Yes Neutral No

6. Feel free to share any comments or suggestions you may have on Hilong Holding and this report:

Thank you very much for your gracious gesture and valuable time!