

2021

SANY HEAVY EQUIPMENT INTERNATIONAL HOLDINGS COMPANY LIMITED

(Incorporated in the Cayman Islands with limited liability) Stock Code : 631

Environmental, Social and Governance Report

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

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About this Report

Sany Heavy Equipment International Holdings Company Limited (the "Company", collectively referred to as the "Group" or "we" together with its subsidiaries) is pleased to present its Environmental, Social and Governance Report 2021 (the "Report"), which summarizes the Group's policies, measures and performance on key environmental, social and governance ("ESG") issues.

Report Period

This Report sets out the Group's overall performance in environmental, social and governance aspects for the period from 1 January, 2021 to 31 December, 2021 (the "Report Period").

Reporting Scope

The reporting scope of this Report is mainly based on the importance of business income to the Group. The disclosed information covers the business sectors that are the main sources of revenue of the Group, including mining equipment sector, logistics equipment sector and robotics sector. There is no material change in the scope of this Report from that of the previous year. The different scope covered by the specific contents hereunder has been specially noted in the relevant parts of this Report if any.

Appellations

For the convenience of presentation, Sany Heavy Equipment International Holdings Company Limited is hereinafter referred to as "Sany International" or the "Company" in this Report. Sany Heavy Equipment Co., Ltd., the main subsidiary of the Company, is hereinafter referred to as "Sany Heavy Equipment", and Sany Marine Heavy Industry Co., Ltd. is hereinafter referred to as "Sany Machinery Intelligence Co., Ltd. is hereinafter referred to as "Sany Machinery".

Criteria of Reporting

This Report is prepared in accordance with the *Environmental, Social and Governance Report Guide* (the *Guide*) in Appendix 27 of *Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited* (Exchange Listing Rules) issued by The Stock Exchange of Hong Kong Ltd. ("HKEx"), and on basis of four reporting principles, Materiality, Quantitative, Balance and Consistency specified in the Guide. The contents disclosed in this Report comply with the requirements of "comply or explain" in the Guide of HKEx.

The information in this Report comes from the company's official documents and statistical data, as well as the consolidated summary of monitoring, management and operational data provided by subsidiaries in accordance with the Group's relevant systems. The final chapter of this Report includes a full content index for quick reference. The Company undertakes that this Report does not contain any false records or misleading statements, and the Company is responsible for the authenticity, accuracy and completeness of the content. This Report has been approved by the Board of Directors.

Report Acquisition

This Report is prepared in both Chinese and English. In case of any discrepancy between the Chinese and English versions, the Chinese version shall prevail.

The electronic version of this Report can be downloaded from the official website of the Company at www.sanyhe.com and the website of HKEx at www.hkexnews.hk.

Information and Feedback

The electronic version of this Report can be downloaded from the official website of the Company at www.sanyhe.com and the website of HKEx at www.hkexnews.hk.

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About this Group

Sany Heavy Equipment International Holdings Company Limited was listed on the main board of HKEx on November 25. 2009. As a top manufacturer in mining equipment, logistics equipment, and robots in China, the Group is aiming to become the best complete equipment supplier and iconic enterprise in the international mining and logistics equipment industry under the development guidance of electrification, intelligence, internationalization and the first brand strategy.

Mining Equipment

As the first company that can provide integrated mining equipment, transportation equipment and complete solutions in China, the Group vigorously promotes the innovation of mining equipment in the direction of complete set, electrification and green mining. The Group carries out intelligent upgrading of roadheaders and develops a variety of electrified products such as electric widebody loader and has the complete series of products such as light-duty supports with large mining height and high strength and digital electric hydraulic supports. We have built digital mines, inputted unmanned wide-body loaders in batches, and carried out trial operations of unmanned transportation in mining areas.

Based on the concept of "digital mining, intelligent mining and green mining" and the primary goal of realizing unmanned, automated and intelligent management, the Group's intelligent mining products cover three categories: automated comprehensive mining, unmanned driving and intelligent mining. We aim to expedite the research and development ("R&D") of equipment with smart technologies such as perception, analysis, autonomous decision-making and automatic control, and develop the unmanned driving dispatch systems and mines operation & management systems and construct the digital mines to realize the unmanned production in mines.



Logistics Equipment

As a large logistics equipment manufacturer specialized in the R&D, manufacturing and sales of port equipment and marine heavy machinery and one of China's largest suppliers of complete sets of port machinery with the largest production tonnage, the most complete series and the most advanced technology, we manufacture products covering the complete port equipment with the advanced technologies. Following the trend of electrification, unmanned operation and smart ports, we have developed products such as automated transtainers, automated quay cranes, electric reach stackers and electric stackers to meet the demands of seaport automation, remote control, energy conservation and environmental protection.







Operation principles



Robots

In the robot sector, we focus on three business sectors: intelligent production line (robot system integration), intelligent logistics (stereoscopic warehouse, AGV) and intelligent forklift (lithium battery forklift). We actively develop the intelligent application scenarios and empower the electric, intelligent and unmanned intelligent manufacturing transformation and upgrading based on the industrial practice and development demands.





Build first-class enterprises Foster first-class talents Make first-class Contribution

self-value relying on Sany.



Chairman's Statement

The year 2021 is the first year of the "14th Five-Year Plan" period, and is a crucial year for China to promote the synergy of pollution and carbon reduction, and promote the comprehensive green transformation of economic and social development. Sany International effectively promoted digitalization, electrification, internationalization and the first brand strategy, empowered the construction of green mining and green port and strengthened electrified and unmanned operations; further strengthened the company's ESG, integrated the concept of sustainable development into the company's strategic planning in 2021 and will continue to promote it steadily as key work in the future.

Under the correct leadership of the management layer, the Company abode by the development concept of compliant operation, and built a top-down scientific ESG structure. The Board of Directors is responsible for supervising ESG work and formulating ESG strategies. Meanwhile, the management layer formulated specific implementation plans and directly reported to the Board of Directors. The environmental, social and governance working groups have been set under the management layer, and each working group performed its own duties to promote the specific implementation of the company's ESG matters and guarantee the sustainable and effective development of the ESG work. Meanwhile, we strictly implemented the anti-corruption work to create a good internal control culture and compliance atmosphere.

Following the guidance of the national "carbon peaking and carbon neutrality" strategy, the Company actively focused on green intelligence and made every effort to promote digital transformation. At present, four lighthouse factory projects of a wide-body loader, hydraulic support, small port crane and large port crane have been put into operation one after another, realizing less manpower in the manufacturing process. The whole process of operation and management was empowered through the process improvement, industrial software and data applications, and operation decisions are made intelligently. Our product delivery capability and quality were significantly improved to continuously create values for customers. Meanwhile, we increased investment in research and development, and drove product intelligence and electrification upgrading with technological innovation. We developed a number of electrified products such as the electric wide-body loader, electric reach stacker, Electric Container Truck and lithium-ion forklift to meet customer demands for energy consumption reduction and boost the development of green mining and green port.

We continued to pay attention to climate change and identified and disclosed the risks of climate change and the impact on the Company's business with reference to the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). In 2021, all business sectors of the company passed the ISO 14001 environmental management system certification, and actively reduced the impact of production and operation activities on the environment. Meanwhile, we clearly quantified various environmental protection goals, and gradually reduced the impact on the environment through various measures for the first time; actively promoted green office work, strove to reduce resources consumption from daily work, passed on the concept of conservation, advocated paperless office, etc., and promoted employees to change to a green and low-carbon way in aspects of clothing, food, housing and transportation.

We adhere to quality assurance and attach importance to quality management; strictly control the quality risks of all links in the entire value chain of procurement, manufacturing and delivery, take the lead in establishing industry standards, and run the concept of sustainable development throughout the upstream and downstream of the industrial chain. Meanwhile, we stick to high-quality service, have launched 311 brand value and 188 service value commitments for our mining car to effectively solve customers' problems and achieve 100% customer satisfaction.

Our employees can realize their own values by relying on Sany. Adhering to the concept of "creating first-rate talents", we will create a value realization platform with employees. We are committed to creating an equal and diverse working atmosphere, providing rich career development channels and a comprehensive and systematic training system, continuously optimizing performance and salary incentives, and supporting employees to achieve self-value improvement. At the same time, we are committed to creating, providing and maintaining a healthy and safe working environment, setting the goal of "zero work fatalities, zero major accidents, and zero occupational diseases", and continuously improve the occupational health and safety management system. The Company strictly implements various prevention and control requirements of the government and the company, and carries out normalized prevention and control to protect the safety of employees by adhering to a series of measures such as remote office mode, strengthening park entry management and park disinfection, and implementing closed management.

The responsibility is on our shoulders and we must forge ahead vigorously. Under the global trend of promoting carbon neutrality and carbon emission reduction, Sany International will continue to practice the concept of green and sustainable development and promote the implementation of ESG strategy in 2022. We will meet the expectations of all stakeholders and strive to create comprehensive economic, environmental and social values while developing synchronously with stakeholders and the whole society, to achieve a win-win situation.

Liang Zaizhong

Chairman



Statement of Board of Directors

Responsibilities of the Board of Directors

The Board of Directors assumes overall supervision, guidance and review responsibilities for Sany International's ESGrelated work, continuously improves and deepens the management of ESG matters, regularly discusses the Group's ESG risks, opportunities and strategies, and summarizes, reviews and reports work progress and target performance. We have formulated the strategy of "Sustainable Development 2025". Our strategic pillars are quality first, management based on responsibility, human orientation, environmental and social benefits. In 2021, the Board of Directors has formulated a number of goals such as greenhouse gas emissions and water resources management based on the Group's own development status and five strategic pillars.

Supervision of ESG Matters

In order to implement the "Sustainable Development 2025" strategy, under the guidance of the Board of Directors, an ESG working group has been established at the management level. The working group promotes the implementation of various goals at the executive level, carries out sustainable development work and reports to the Board of Directors regularly. In 2021, we disclosed our ESG work progress and target performance through the "Environmental, Social and Governance Report".

Issues of Materiality

Under the guidance of the Board of Directors, the ESG Working Group maintains timely, close and transparent communication with stakeholders every year, listens to their opinions and suggestions, and identifies and evaluates stakeholders' concerns on environmental, social and governance issues. The Board of Directors discusses and reviews the assessment results, determines the Group's environmental, social and governance risks and opportunities, and supervises and manages related content.

01 Environmental, Social and Governance Responsibilities

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Material Issue

23/ Enterprise social responsibility management



ESG Governance Structure

Sany International adheres to integrating environmental, social and governance factors into its operations to create sustainable value for stakeholders. As the highest governance body of the Group, the Board of Directors is responsible for formulating the Group's ESG strategy, identifying, evaluating and managing important ESG matters, regularly listening to the management laver's reports on the Group's ESG work and performance, and listening to and reviewing the Company's Environmental. Social and Governance Report every year to monitor the progress of the implementation of ESG goals. During the Report Period, the Board of Directors and senior executives also participated in several special communications and training on ESG matters to ensure that they have relevant professional management knowledge.

In order to better manage the Group's ESG matters, we have established a governance structure of "Board of Directors -Management Layer- Working Group". As the leadership, the Board of Directors ensures that ESG factors are given sufficient attention at the decision-making level of the Group; senior managers such as the general manager and first-level department managers, as the management coordination layer, are responsible for formulating ESG work plans, tracking work progress and regularly reporting to the Board of Directors; the ESG working group composed of various business departments are responsible for implementing various ESG special tasks and promoting the realization of ESG goals.

ESG Governance Structure

Level	Organization	Personnel	Management responsibilities
Leadership	Board of Directors	Composed of 8 directors, the highest decision-making body for the EGS management in this Group.	 Identifying potential ESG opportunities and risks; Developing an ESG strategy; Assessing ESG performance and tracking ESG-related indexes and progress.
Management coordination layer	Management personnel	Composed of the general manager and managers of various first-level departments, responsible for communicating with the leadership on ESG matters, providing information required for decision-making, and supporting the implementation of ESG strategy.	 Formulating and promoting the implementation of the Group's ESG strategic planning and objectives, and annual work plan; Guiding, supervising and monitoring the implementation of ESG strategies in this business module; Organizing the preparation of the Group's annual ESG report; Regularly reporting ESG work to the Board of Directors.
Implementation layer	ESG working group	Composed of various operating departments, implementing the Company's instructions on ESG matters, and implementing the ESG theory into the specific matters.	 Bearing the responsibility for ESG special work according to the functional positioning of the operating department; Timely reporting ESG work; Participating in the preparation of the Group's annual ESG report.

Sustainable Development Strategy

We are committed to development while benefiting the environment and society. We have formulated the "Sustainable Development Strategy 2025", and have established five strategic pillars: quality first, operation based on responsibility, human orientation, environmental and social benefits and corresponding sustainable development goals.



Sustainable Development 2025 Strategy

Goal and path: We aim to provide customers with a full range of high-guality products with stable performance and reliable quality that meet the needs of industrial development through high-quality production and technological innovation.

Strategy: The development of cooperation and win-win is our most basic operation

Goal and path: We adhere to legal compliance and honest operation, provide firstrate services to customers, and work with suppliers to achieve mutually beneficial partnerships, and aim to become an excellent enterprise trusted by employees, making customers satisfied and allowing partners to obtain win-win results.

Strategy: Talent is the source of power for the Company's development, and

Goal and path: We aim to create a working environment that allows employees to work happily and efficiently, and give full play to their talents, and is committed to providing a good career development platform to achieve the common development

Strategy: Environmental protection and green development are our consistent

Goal and path: We aim to expedite the application of green technology and contribute green, energy-saving and efficient products to the industry; save resources and reduce emissions, and promote the production and construction of

Strategy: As an enterprise with the sense of social responsibility, the Group is committed to promoting local economic development and contributing to local

Goal and path: We aim to create a first-class enterprise, make first-rate Contribution, actively promote the industrial development and are committed to the community construction and volunteer services to achieve the unification of

Stakeholders Engagement

While continuously pursuing sustainable development, we fully incorporate the demands of various stakeholders into consideration in the company's operating decisions. The Group's stakeholders include customers, government /regulatory organizations, investment organizations / shareholders /analysts, suppliers /partners, employees, academic /research institutions, industrial associations /professional organizations, media, NGOs/ public service organizations and local communities, etc. We have established a good and efficient mechanism for communication with stakeholders, collected and responded to the requirements of all parties in a normalized and targeted manner, committed to completing environmental and social control with high standards, and established a corporate image for actively undertaking social responsibilities.

List of Communication between Stakeholders

Stakeholders	Expectations and requirements	Communication and response
Customers	 Providing cost-effective services and products Improving product quality and service level Product after-sales service and guarantee Environmentally friendly low carbon products 	 Customer satisfaction investigation Survey questionnaire New product introduction meeting Regular visit
Government and regulatory organizations	 Paying taxes according to law Compliance operation Complying with laws and regulations Supporting local development Promoting local employment Protecting the local environment 	 Daily email and telephone communication Working conference, training Irregular visit, supervision and inspection
Investment organizations/ shareholders/ analysts	 Information disclosure and transparency Corporate operation status Strengthening risk management and control Creating economic value 	 Annual report and overdue report Annual general meeting of stockholders Performance release conference Announcement Investor's hotline and mailbox Road show of investor relations
Suppliers/ partners	 Transparent and honest cooperation Win-win and mutual benefit Continuous operation Fair trade 	 Regular communication Regular visits Supplier training Supplier audit



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ns and ents	Communication and response
and interests of ing environment oment platform ion channels	 Direct communication Employees' mailbox Employee satisfaction survey Employee training Annual meeting/ Team building activities
collaboration nt opportunity l exchanges	VisitDaily email and telephone communication
development ct quality consibility	VisitSpecial sessionsTraining
ts trends ponsibility pe	Public reportingInterview to related personnel
nefits sponsibilities	Holding public benefit activitiesSpecial sessions
ent ty value elopment	 Holding public benefit activities Media report Daily email and telephone communication

Materiality Assessment

With reference to the requirements of the Environmental, Social and Governance Report Guide, we continuously improve the process for defining the report contents. Key issues of ESG are selected through seven main communication channels: corporate management layer, internal and external expert analysis, multimedia information analysis, benchmarking study on companies in the same industry home and abroad, supplier feedback and community opinion collection. During the report period, we conducted interviews with executives and distributed online questionnaires to assess and determine the importance of ESG issues from the perspectives of corporate development and stakeholders, thereby drawing a matrix of material issues. In addition, the issues are fully elaborated in this report to respond to the concerns of stakeholders.

Material Issues Matrix for Sany International's Sustainable Development in 2021



Importance to enterprise development

Issues of high importance	Issues of moderate importance
1 Employees' rights and Soci interests guarantee	ety 9 Atmospheric pollutants Environmen emission management
2 Product quality and Soci safety	ety 10 Employee diversification Societ and equal opportunities
3 Climate change Environme	ent 11 Technological innovation Econom
4 Employees' safety and Soci heath	ety 12 Honest and faithful Econom operation
5 Customers' privacy and Soci information safety	ety 13 Energy conservation Environmen and consumption reduction
6 Customer service and Soci satisfaction	
7 Compliant operation Econo and risks control	my 15 Wastes management Environmen
8 Employee training and Soci development	ety

Issues of low importance

16	Supply chain management	Society
17	Sewage discharge management	Environment
18	Water resource management	Environment
19	Promoting industr development	rial Economy
20	Enterprise social responsibility management	Economy
21	Green office	Environment
22	Employee communication	Society
23	Social participatio	on Society



Compliant Operation 02

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Material Issue

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16/ Supply chain management

- 12/ Honest and faithful operation
- 14/ Intellectual property protection
- 7/ Compliant operation and risks control

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In 2021, the Group held 2 general meetings of shareholders



During the Report Period, 100% of all our directors and employees received trainings on business ethics.

Corporate Governance

Sany International strictly complies with laws and regulations such as Company Law of the People's Republic of China, Securities Law of the People's Republic of China, Criminal Law of the People's Republic of China, Anti-Unfair Competition Law of the People's Republic of China and Interim Provisions on Prohibition of Commercial Bribery, strictly abides by "Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited" and carries out the standard operation according to the governance structure of the general meeting of shareholders, the Board of Directors, and the board of supervisors. We continue to improve the corporate governance system, continuously improve the Articles of Association and other internal management systems. regulations and requirements, detail various management measures, promote the institutionalization and standardization of the company, enhance compliance awareness, and strengthen compliance operations to deal with various risks and challenges faced by the company in the process of operation and business development, establish a good atmosphere and ensure the compliance of the company's operation.

Corporate Governance Structure



The Board of Directors adheres to the principles of corporate governance and has adopted good corporate governance practices, focusing on areas such as internal control, fair disclosure and accountability to all shareholders to ensure the transparency of the Company's business. The Board of Directors reviews and improves governance practices from time to time. In 2021, the Group held 2 general meetings of shareholders and 11 meetings of the Board of Directors

The members of the Board of Directors have relevant background and work experience in operating management, corporate management and finance, etc., and have formulated a diversity policy for the company's operation, operation type and development needs, including but not limited to gender, age and educational background. The company plans to hire an additional female independent director in 2024.

We focus on investor relationship management work, and conduct allround communication through various channels and forms for investors of different professional levels and types, having won the trust of investors. The Company provides abundant convenient communication channels, and actively communicates with investors through channels such as the official website, telephone, email, roadshow and investor special activities to achieve two-way communication between the Company and investors, and has formed a positive interaction and established a stable and high-guality investor basis.

Honesty and Integrity

Sany International strictly abides by various laws, regulations and policies, adheres to operating in compliance with laws and regulations, establishes and improves its risk management system, regularly organizes internal anti-corruption training, and continuously improves the anticorruption awareness of all employees. During the report period, 100% of all our directors and employees received 4 special trainings on business ethics.

We improve the management system, formulate internal systems such as the Commercial Personnel Behavior Management Regulations, prevent employees from participating in any activities related to bribery, extortion, fraud and money laundering, and formulate corresponding internal procedures for evaluation, consultation, investigation and punishment to supervise employees' illegal behaviors. We require all employees to accept and pass the Negative List of Fraudulent Behaviors in Coping with Assessment and Accountability Examination, and completely eradicate all behaviors for counterfeiting, altering, tampering records or vouchers, distorting administrative policies and systems, hiding or covering up facts, artificially manipulating or adjusting the performance appraisal indexes causing the operating management information distortion, etc. For employees who violate the regulations, according to the severity of the specific incident and their roles, they will be subject to classified punishments such as fines, salary reductions, dismissals and submitting to relevant judicial agencies for investigation.

We continuously improve our management functions. Under the guidance of the Board of Directors and audit committee, the board of supervisors, Finance Department and Human Resources Department work together to jointly promote the Company's anti-fraud work and investigate any suspicious or illegal conducts related to bribery, extortion, fraud and money laundering to guarantee the integrity and lawful operations.

We have established a whole-process system to prevent major risks, and identify, evaluate and manage major risks to comprehensively strengthen risk management and control. In order to improve the efficiency of internal control, we constantly improve the internal control system and working mechanism, and actively accept the supervision of all parties. In 2021, with the assistance of the risk management and internal audit departments, the company's Board of Directors and audit committee will review the effectiveness of the company's risk management and internal control systems, and no major violations were found.

Reporting and Consulting Channels

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During the report period, 100% of all our directors and employees received 🖊 special trainings on business ethics.



We established a monitoring mechanism and joined the Chinese Enterprise Anti-Fraud Alliance; established a smooth reporting channel and set up a suggestion box and a reporting hotline; simplified the reporting route and provided two forms (oral and written) of reporting directly to supervisors and the management layer; protected the rights and interests of the whistleblower, maintained the personal information of the whistleblower and all the reporting information provided by the whistleblower strictly in confidentiality, and make every effort to protect the legitimate rights and interests of the whistleblower from being infringed.

Meanwhile, we strictly implemented the anti-corruption work in the supply chain, held integrity meetings with all suppliers on a quarterly basis, signed integrity agreements with suppliers, and signed integrity clauses in the annual supplier access contract. Suppliers who violate the law and integrity provisions will be punished according to 100 times the amount of the bribe, and they will be included in the backlist that will never have future cooperation.

During the report period, the Group did not have any major litigation cases arising from bribery, extortion, fraud, money laundering and other fraudulent acts, nor had there been any proposed or concluded corruption litigation cases

During the report period, the Group did not have any major litigation cases arising from bribery, extortion, fraud, money laundering and other fraudulent acts

Responsible Procurement

Sany International is committed to building a responsible supply chain. In accordance with the Company Law of the People's Republic of China, Contract Law of the People's Republic of China and E-commerce Law of the People's Republic of China, we have formulated the internal systems such as Regulations on Management of Global Supplier Portal, Production Type Supplier Full Life Cycle Management System for Compliant Operation, Production Type Supplier Management System and Production Type Supplier Admission Process, manage the suppliers in classification, regularly evaluate the environmental and social performance of suppliers in safety of labor services, safeguarding the rights and interests of migrant workers, environmental protection and product quality, etc., and we are committed to working with suppliers to develop together and build sustainable collaborative relationships.

We have established a standardized supplier management process, built a Good Supply Practice (GSP) information management platform, and required suppliers to upload and update relevant information and gualification files (including guality, environment and occupational health system certification, etc.) on the system platform in a timely manner according to the multidimensional assessment of registered merchants' qualifications, capabilities, equipment, operations, certification systems, etc., to achieve online classification management of suppliers.



Classification of Suppliers by channels



parts for manufacturing the products, including the auxiliary materials and consumables for production

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Classification of Suppliers by Product/Service Purpose

Select potential supplier	For suppliers that have been registered in the qualifications and the suppliers will become poter
Approve temporary supplier	The development application is submitted by t Business Department. The suppliers will becor
Become certified supplier	The supplier manager organizes Business D Department (or Process Department) to joint site system review, it will be submitted to the E Manager. Upon approval by the board of directo certified manager.

Supplier Management Process





Special suppliers

The suppliers who have the experience of working with Sany International



Accessories suppliers

Other suppliers who need to be treated specially or need special attention before carrying out related business

he system, the system manager preliminarily reviews the ential suppliers after passing the preliminary review;

the Quality Manager and approved by the Director of the ome potential suppliers upon approval;

Department, Quality Assurance Department and R&D ntly carry out the system review. After passing the on-Board of Directors for certification review by the Quality ctors, the supplier manager can apply for changing it to a



Sany International provides suppliers with capacity building activities through performance evaluation, monitoring, change management, training and relationship research, etc., and has established long-term partnerships for sustainable development. We provide GSP online operation guide training for newly contracted suppliers, conduct on-site guidance on group quality requirements standards, and ensure suppliers can accelerate their integration into the supply chain. We help outsourcing companies purchase steel, welding consumables, labor protection equipment, etc. through the cooperation of Yigongpin, reduce the procurement cost of suppliers, and promote the common development of the industrial chain. We regularly conduct online and offline GSP system knowledge training with suppliers. hold capacity planning meetings and year-end summary meetings with suppliers every year, and organize suppliers to participate in the Group's "Excellent Peers" project to select the suppliers who have the willingness and potential for improvement to help them comprehensively improve the system, site, equipment, and production process, helping to improve the business capacity and management level of the entire industry chain and make the channels of communication with suppliers smooth.

We are committed to improving the level of sustainable development of the supply chain, and regularly and strictly implement supplier performance evaluation and inspection of all certified suppliers. The evaluation indicators are based on the energy conservation and environmental protection. While ensuring stable resources and efficient supply, we further prevent environmental hidden dangers and risks, and promote the development of the green supply chain. In 2021, we also added constraint indicators such as labor service safety, protection of migrant workers' rights and interests, and environmental protection, and required suppliers to strictly implement safe production and protect the rights and interests of employees. For suppliers who have been evaluated as unqualified, we conducted training and rectification in a timely manner, and resolutely resisted suppliers that seriously violated the principle of cooperation.

During the report period, the Group had a total of 812 gualified suppliers in Mainland China, and a total of 17 overseas suppliers and suppliers from overseas regions and Hong Kong, Macao and Taiwan.

Total 829



Number of Suppliers Divided by Regions in 2021

During the report period, the Group had a total of 812 qualified suppliers in Mainland China, and a total of 17 overseas suppliers and suppliers from overseas regions and Hong Kong, Macao and Taiwan.



Taiwan

Intellectual Property Protection

Sany International actively builds an intellectual property model enterprise, actively creates a good intellectual property and innovation culture, and strictly abides by the laws and regulations such as Patent Law of the People's Republic of China. Intellectual Property Law of the People's Republic of China. Tort Liability Law of the People's Republic of China and Enterprise Intellectual Property Management Regulations in production and operation activities; builds a "three-in-one" intellectual property protection strategy system of enterprise business strategy, research and development strategy, and intellectual property strategy; has formulated R&D Patent Work and Management Regulations and Foreign Patent Application Operation Guide and other intellectual property systems; standardizes the product patent management in accordance with the intellectual property management policy "Incentive Creation, Effective Application, Legal Protection and Scientific Management", protects the invention and creation results, and avoids the risk of patent infringement. During the report period, the Group did not have any intellectual property infringement lawsuits.



Mediumterm goal

Apply for 550 invention patents and obtain 270 authorized invention patents:

Establish a sound intellectual property management system and obtain relevant certifications, expand the contribution of patents to business operations and product

Development Route and Goals

brand value:

Established the R&D Management Leading Group Office

processing support and supervision

Patent risks analysis

patent risk analysis, and must sign a letter of commitment and report it to the R&D Management Office for filing to avoid patent risks.

Establish a full-time position of patent engineer

The R&D Management Office publishes the patent engineer qualification standards. The patent engineer needs to undergo qualification training and examinations and can start working only after passing the examination

Conduct patent training

New R&D personnel must pass the patent training given by the patent engineer

Submit an application for international patent

patent layout has covered countries and regions such as Russia, Australia and South Africa.

Intellectual Property Management Module





03 Digital and Intelligent Innovation

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Material Issue

WORKING

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REF.

2/ Product quality and safety
6/ Customer service and satisfaction
5/ Customers' privacy and information safety
11/ Technological innovation





In 2025, it is expected that the annual investment in clean technology research and development will be no less than RMB

290 million.

Green R&D

Sany International regards technological innovation as the foundation for the corporate development, plans the research and development route of green and intelligent products as a whole, takes "actively creating clean technology products and solutions" as the development direction of corporate research and development strategy, and has formulated the Company's future research and development strategy for our core products such as mining equipment and logistics equipment. We are committed to building the company into a leader in smart clean technology industry in the future.

R&D Strategy

Mining equipment

- **Business vision:** Provide complete sets of equipment for green, safe, efficient and intelligent mining of global mineral resource manufacturers.
- Strengthen the first brand of roadheader: Complete the intelligent upgrading of products, expand mining and excavation products, and make breakthroughs in rapid excavation and hard rock cutting technologies;
- **Tackle comprehensive mining product problems:** Promote pure water and high-strength hydraulic supports, develop high-reliability smart coal cutter and create high-wear-resistance/low-energy-consumption scrapers;
- Focus on wide-body loaders/large-tonnage mining cars: Research and develop brand new large-tonnage wide-body loaders and multipower electric wheels to achieve a comprehensive upgrading of large electrified and unmanned products;
- **Build an unmanned and intelligent mine sample project:** Realize the unmanned driving of open-pit mining cars and the unmanned mining of underground mining equipment;
- Enter new fields and expand new varieties: Develop new products such as road repair machines, shovel cars, monorail cranes, etc., and fully enter the field of sand and gravel aggregate crushing equipment.





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Logistics equipment

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Business Vision: Spare no efforts to promote digitization, automation and intelligence, and become a global intelligent logistics equipment and service overall solution provider;

Develop container equipment: Improve the yard automation, break through the quay crane automation technology, and form an overall solution for terminal automation; take the opportunity of water-rail combined transportation and railway transportation containerization to develop railway transtainers, reach stackers and other equipment;

Sany International firmly promotes the research and development strategy, actively carries out industrial and university-industry cooperation, and continuously increases investment in scientific and technological research and development and technological innovation. A number of technological breakthroughs have been made in the direction of intelligence, cleanness and unmanned operation relying on the advanced research and development platforms such as symbolic test bench and product intellectualized design platform, and a number of electric products such as electric wide-body loader, intelligent roadheader, electric reach stacker, electric fork lift truck and electric truck. Among them, the intelligent roadheader is at the leading level in the industry. As the continuous improvement of product competitiveness and automation rate, we continuously provide solutions for the smart mines and ports.

Sany International plans to continue to increase investment in clean technology research and development to realize the progressive increase of R&D investment in electrified and intelligent products and the progressive increase of talents in electrification and intelligent R&D every year in the future. In 2025, it is expected that the annual investment in clean technology research and development will be no less than RMB 290 million.



Build a smart port: Take the yard automation as a breakthrough, and propose an automated storage yard/transtainer solution with Sany characteristics; use cost-effective unmanned trucks to realize a fully automatic horizontal transportation solution; gradually form an automation system solution for seaports and land ports;

Expand bulk cargo equipment: Improve the whole-series spectrum of existing products.



Intelligentized, **Electrified and Clean Upgrading of Products**

The Group practices the concept of green continuously contribute values to our customers, the whole industry and society. As a leading equipment manufacturer in the field of mining equipment and logistics equipment in China, Sany International adheres to the development strategy of "Electrification, Intelligence, Internationalization and the First Brand", continues to enrich its product system, and is committed to providing customers and the society with a full spectrum of mining equipment, logistics equipment and robotics products and solutions. In addition, we adhere to the research and development and innovation of new products and new technologies, continuously apply clean technology, and run the concept of intelligent and electrified products throughout the entire industrial chain.



• Intelligent roadheader

- Intelligent mining machine
- Hydraulic system of pure water medium
- Automated trainstainer
- Remote-control quay crane
- Unmanned tractor
- Intelligent Production line and Logistics
 - Electrified Products



• Purely electric wide-body vehicle

• Large-tonnage hybrid mining car

· Electric, hybrid reach stacker

• Purely electric AGV

• Intelligent electric forklift

Case

SKT90E pure electric wide-body vehicle, with zero emissions, high energy recovery, high dynamic performance, high transportation efficiency, low operating cost, optimized power configuration, and optimized handling performance, creates a green environment for mine production and contributes to global ecological security.

Meanwhile, we developed new products of large-tonnage electric wide-body vehicle such as SKT100E and SKT105EC, upgraded the battery capacity and power supplementing method, and greatly reduced the operating costs. During the trial operation stage, the heavy-load downhill cost can be saved by more than 90%, the power recovery rate is improved, and the annual CO₂ emission can be reduced by more than 100 tons.



Electric Wide-body Vehicle





Electric Reach Stacker Case

The pure electric operation of the electric reach stacker, equipped with a C-terminal interconnection system, provides customers with big data support for electric products, and real-timely displays electric quantity, power consumption, total power consumption and operation amount, which helps customers better arrange operations. The energy consumption cost of a single loader is 68% lower than that of a fuel loader, and the energy consumption cost of the range extender operation is reduced by 40%. The comprehensive operation can save more than RMB250,000 in energy costs and reduce carbon dioxide emissions by nearly 200 tons per year.



Second-Generation Electric Reach Stacker

Sany Machinery's Intelligent Lithium Battery Counterbalanced Forklift Case

Sany Machinery Technology Co., Ltd. has launched a new generation of intelligent forklift, 3-ton high-voltage lithium battery counterbalanced forklift. We take the operating conditions of fuel forklift as the design criteria, surpass the test standards of related organizations home and abroad and have initiated a new era of "1+1+1" intelligent warehousing and logistics.





HV Lithium Battery Forklift

Hydraulic System Of Pure Water Medium Case

Sany Heavy Equipment launched the industry's first pure water medium hydraulic system and has been adopted by many coal mines. Use pure water medium instead of traditional emulsion to achieve zero pollution of underground water resources and help coal mines achieve green and efficient mining.



Hydraulic system of pure water medium

Intelligent Manufacturing

Sany International deeply implements the digital strategy, explores the deep integration of digital technology and the industrial field, and uses big data, industrial Internet and robotics technology to realize the intelligent manufacturing process, improve the production automation rate, and create a "Lighthouse Factory".

Sany Marine Carried Out The Comprehensive Digital Transformation Case

Sany Marine adheres to the digital transformation route, and has carried out the intelligent management system application, equipment interconnection platform application, energy management platform application and intelligent manufacturing execution system application.

> The interconnection construction for **295** in the plant has been

Through more than 1.000 high-definition cameras, the remote monitoring of "scene, reality, and physical objects" has been realized, and the monitoring coverage rate of the production area has reached 100%;

In 2021, the first "lighthouse factory" in the port machinery industry was officially put into use, which will accelerate the development of the industry in a safer, more efficient, greener and smarter way.

Through a series of digital construction applications, **100%** information coverage of the whole production process is achieved, the equipment operation rate is increased by **15%**, while the product production cycle is

increased by **40%**.

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Sany Machinery Boosted The Construction Of The First "Global Lighthouse Factory" In The Heavy Equipment Industry

Sany Machinery helped Sany Pile Machine successfully construct the first global "lighthouse factory" in the heavy industry replying on the technological innovation results of digitization, automation and intelligence. We have overcome industrial problems such as automated group but welding of mast troughs and intelligent assembly and upgrading for mast and power head box, and have initiated multiple solutions such as steel plate raw material stereoscopic warehouse, 5G-based heavy load dual-AGV linkage realizing the synchronous moving and automatic feeding and blanking of 27-meter super long and super heavy materials and full-automatic group butt welding in a narrow and small space, increasing the labor productivity by 85% and reducing the production cycle from 30 days to 7 days.



Case

Sany Heavy Equipment Construction Of Automatic Blanking Production Line At The Blanking Workshop

We have introduced an automatic blanking production line in the factory to realize functions such as automatic code spraying, automatic cutting and conveying, automatic sorting and palletizing, and improved the degree of factory automation.

Automatic code spraying The code spraying graph is automatically generated and the edge is found automatically. The QR code and character meaning

code size are automatically

of the entire board;

® HANTIN

adjusted to complete the printing

SANY



The steel plate is cut by air, and the cutt steel plate is automatically transported to the cutting station by the conveyor line, and automatically transferred to the sorting station. The utilization rate of the cutting machine is increased from the traditional 50% to 70%: Automatic sorting and palletizing

With the robot handle stacking gripper, the production efficiency and material utilization rate are improved, and the utilization rate of the workbench and equipment has increased to 95%. Adhering to the construction concept of "digitalization and intelligence", Sany International takes "safety, experience and efficiency" as its construction goal. It applies 5G network, Internet of Things, artificial intelligence and other information means, and adopts the high-grade, precision and advanced technologies such as intelligent equipment, intelligent building and intelligent traffic to create the efficient "production + life collaborative intelligent park" featuring production energy conservation, consumption reduction, and service intelligence.





Intelligent Park Construction Effect



Quality Control

Our products have a wide range and are oriented to the global market, with extremely high requirements on product safety and reliability. Therefore, Sany International has always regarded product quality control as the top priority of sustainable operations. We abide by the laws and regulations on product liability at the place of operation, implement the current quality standards of the operation place and the industry, have formulated internal management systems such as the *Quality Management System*, have improved the construction of the quality system, and strictly control the quality risks in the full value chains of procurement, manufacturing and delivery. All subsidiaries of the Group, including Sany Heavy Equipment and Sany Marine, have passed professional audit and certification, and the design and manufacture of product and equipment meet the requirements of the ISO 9001:2015 quality management system standard.

Product Quality Improvement Program

Establish corresponding measurement standards and goals for product qualification rate, failure rate and other quality data.

Continuously follow up the specific work progress and completion of the quality improvement plan, and make effective summaries and optimized adjustments.

Strictly follow the inspection plan of each product category, comprehensively inspect the quality of products in each process from incoming material to delivery, and keep quality inspection records.



Supplier Quality Management

Internally formulate such as Incoming Material Control System, Parts Access (Approval) Procedure, Technical Transformation Project Management System, Sporadic Equipment Declaration and Procurement Management System, Equipment Installation Acceptance Management System and other relevant regulations.

Strictly implement the supplier access mechanism according to the internal management regulations, and arrange the procurement reasonably in strict accordance with the quality standards.

Timely update the inspection benchmarks of warehousing inspection and in-process inspection to ensure that the relevant information is clear, carry out warehousing inspection on all incoming materials and parts, implement strict control over new product parts, and retain detailed testing data such as sample size and performance test for future reference.

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Product Production Quality Management

The operation based on engineering drawings is the standardized system, and the *Management System for Non-conforming Products* is formulated. Relying on comprehensive quality management and preventive control measures, as well as a quality inspection system centered on automation technology and error-proofing system, non-conforming products are prevented from flowing into the next process.

Optimize the training system, strengthen the management of personnel qualifications, and clarify the key steps to be controlled in the production process based on the inspection benchmark, formulate documents such as *Regulations on Map* of *Error-Prone Problems in the Production Process* and publicize them to all employees to ensure that all personnel from persons in charge of production to inspectors are familiar with the quality control points in the production process, and ensure that the product quality is fully compliant.

Continuously carry out research and make investment in the field of product safety technology, actively learn and implement safety concepts and technologies with international advanced level, and implement them in the product manufacturing process.

Product After-sales Management

Regularly collect product quality suggestions from customers, and regularly arrange on-site supervisors to follow up quality management.

Internally formulate the "Product Recall Management System" to conduct timely investigations on problematic products in a standardized and effective manner, uphold the principle of openness and transparency, timely give feedback on product defects and correct them, and formulate preventive measures to minimize the dangers and hidden dangers that products bring to customers.



During the report period, the Group **did not have** any product recalls caused by product quality problems, and zero percent of total products sold or shipped subject to recall for product safety or quality reasons.

Customer Service

Service Improvement

Sany International adheres to the core idea of "all for the customers, all comes from innovation", provides the best solutions from the perspective of customers, and uses intelligent services to achieve rapid response to customers' needs. We strictly comply with the laws and regulations such as *Law of the People's Republic of China on the Protection of the Rights and Interests of Consumers*, optimize service quality and ensure that customers' rights and interests are fully protected.



Product Manufacturing Carry out preventive maintenance to avoid product faults

The Group has established 26 service branches, 103 offices, 75 parts warehouses home and abroad, with more than 20,000 types of parts in stock, more than 320 service engineers, 260 service vehicles with complete tools and accessories. We have formulated varying service radius for different products, so we can rapidly respond to customers' demands. We have built "Sanv Customer Cloud Platform" with the service concept of digital, networked, intelligent smart ecology cloud service to efficiently serve customers. We have established a response mechanism for upstream and downstream participants such as equipment agents, users, maintenance providers and operators that are seamlessly connected, provide "one-click quick call" service, automatically match service engineers and provide customers and partners with efficient management solutions covering the whole life cycle of equipment.

Comprehensive Services

Coal Machine Lecture Hall	We build an online communication online learning, live teaching, online
Remote Service	We realize remote service visual back-end experts and front-line se solve tricky faults efficiently and qu
Smart Call Center	We realize smart voice navigation video communication between cus
Accessories Mall	Relying on the Sany's customer cl mall where customers can place or
Logistics Visualization	We realize online query of the w logistics status.

User Demand-Oriented Business Model



tion platform for learning and training, which can realize line examination and message interaction, etc.;

alization, real-time sharing of fault scene vision between service personnel, and support service engineers in need to quickly;

on, visualized IVR and real-time online three-way calling or ustomers, customer service personnel and engineers;

cloud platform, we have established an online accessories orders online to purchase accessories;

whole process of spare parts delivery, and visualize the



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The First "8011" Service Commitment In The Wide-body Loader Industry, Leading The Industry's Service Standard

- 8 loaders and services at the mine We purchased 8 sets of SKT90S wide-body and above SKT90S loaders for a single time and we allocated service engineers stationing at the mine.
- **O distance** Accessories, personnel, vehicles and equipment are allocated at the mine to provide quality services for accessories "0" distance.
- One-stop type The engine, gearbox and axle supporting service resources are integrated to provide one-stop service.
- 1-year warranty The vehicle warranty period I extended from half a year to one year.



Case

Sany Intelligent Mining Technology Co, Ltd. Received High Recognition From The Customer

On July 17, Gaocheng Coal Mine of Zhengzhou Coal & Electric Co., Ltd. sent a letter of thanks, expressing its high recognition for the fully mechanized mining automation transformation project served by Sany Intelligent Mining Technology for Gaocheng Coal Mine and praised the excellent products and high-quality services of Sany Intelligent Mining Technology. On August 5, Xiongda Coal Mine in Fuyuan County also sent a pennant, affirming the excellent products and high-quality services of Sany Intelligent Mining Technology.



Case

Periodic After-sales Maintenance Activity

Sany International organizes the aftersales activity across the country during the Spring Festival and in winter every year to checks hundreds of items on thousands of pieces of equipment across the country. As long as customers have needs, no matter what difficulties we face, we can always solve problems for customers as soon as possible, and provide the ultimate service to win the trust and respect of customers.



In order to ensure the service quality, the Group has established a periodic customer satisfaction survey mechanism and conducted customer satisfaction surveys through online platforms, corporate self-media platforms, and follow-up phone calls. The satisfaction survey questionnaire is updated once a month. The Group has formulated the *Guide on the Follow-up Work of Customer Satisfaction Survey*, and has replied to all customer feedback and complaint information with reference to the process standards of the guidance document. For all complaint information, the Group will reply to customers within two hours after receiving the information and will reach a consensus, achieving a 100% processing rate.

We firmly advocate accountable marketing, and formulated the *Administrative Measures for Fair Marketing Competition*, requiring all business units, branches and agents to sign a letter of commitment and conduct training and publicity, and promise not to exaggerate facts or discredit competitors when promoting products, strictly abide by the bottom line of industry competition, and prohibit unfair competition. For the personnel and units who violate the regulations, the Group imposes administrative penalties such as economic punishment, demotion, suspension or even dismissal. In case of constituting a crime, the violators shall be handed over to the judiciary authority for handling. In addition, in order to ensure that the product information provided to customers is accurate, all advertising copies and related data must be jointly reviewed by the Company's legal counsel and the research institute before being released.

In the Report Period, the Group did not receive any complaints on products and services.



Information Security

Sany International strictly abides by laws and regulations such as Law of the People's Republic of China on the Protection of the Rights and Interests of Consumers, the Personal Data (Privacy) Ordinance and Consumer Council Ordinance of the Hong Kong Special Administrative Region, and comprehensively protects the rights and privacy of customers. All customer information is strictly kept in confidentiality by the Group, and unauthorized persons cannot obtain any information. The Group has opened up and granted customers the authority to review and modify their own data, and respect every customer's right to choose to participate in any direct marketing activities.

We also have strict requirements for internal information management, and have formulated internal systems such as the Information Security Management System and Employee Information Security Management System to conduct the security management and control of information, regularly monitor the sending and filing of emails, and prevent the leakage of secrets. We formulate the Administrative Regulations on Commercial Personnel's Behaviors, maintain confidentiality training for employees every two months, and require all employees to participate in information security training activities and examinations to ensure that the responsibility for keeping business secrets is implemented to all relevant staff. If documents are leaked or information security incidents are found, the Group will notify them and punish them accordingly. If any illegal acts are involved, we will pursue legal responsibilities. During the report period, we had no violations of customer privacy and internal data leakage.



Information Security Behavior Red Line

We define information security "Ten Prohibited" red line behaviors to deal with and mitigate the risks of information security hidden dangers, including the following behaviors: Without approval, it is strictly prohibited to transfer any form of corporate confidential information to the outside of the group through USB copy, email, WeChat, etc.; it is strictly prohibited to use the classified information such as internal documents, drawings, craftsmanship, marketing and financial reports for personal commercial activities; it is strictly prohibited to lend and share others' domain accounts and information system accounts. Violations of the information security red line will be punished with reference to the Accountability Management System.



Information Security Training for Employees

The information security training is carried out for employees covering multiple course modules of password security, email security, terminal security, data security and smart phone security, and suggestions are put forward for the safe use or protection against potential information security issues to improve employees' information security awareness in multiple dimensions and standardize the employees' information security behavior.

Information Security Intelligent Management System

We have installed an intelligent security system to manage the approval process for daily visitors and vehicles entering and exiting the park. For all vehicles and personnel entering the park, the business contact person must make a reservation in advance, and they can enter the park after verification during entry. We set up clear responsible departments and responsible personnel to carry out targeted management and control for the intelligent security system. The Administrative Department, Security Department, Manufacturing Department and the Director of the center are responsible for the operation and maintenance of the system, and the digital department is responsible for the construction of the intelligent security system.



 Material Issue
 10/ Employee diversification and equal opportunity

 4/ Employees' safety and health

 8/ Employees' training and development

 1/ Employees' rights and interests guarantee

 22/ Communication with employees

(11)





285 employees were granted stock option incentives

Talents Introduction and Retention

Employees are the most valuable asset of Sany International. The Group actively improves its own employment system, creates a diverse, free, healthy and safe working platform for employees, establishes a close relationship of mutual trust and support, and is committed to cultivating a first-rate team and achieving the corporate vision of "creating first-rate talents".

Compliant Employment

Sany International supports the core conventions of the International Labor Organization, complies with the relevant laws and regulations of each operating place such as *Labor Law of the People's Republic of China* and *Labor Contract Law of the People's Republic of China*, and formulates the internal management systems such as *Recruitment Management System*, *Recruitment Channel Optimization Management Measures and Process* and *Management System for Jointly Running a School*, standardizes the recruitment process and corporate employment standards and improves the quality of recruitment.

During the recruitment process, the Group strictly abides by various antidiscrimination laws and regulations, respects the diverse backgrounds of employees, and resolutely eliminates discrimination due to differences in religion, race, gender, nationality and age, etc. In terms of employee employment, performance benefits, etc., we adhere to the principle of fairness and openness to ensure that employees enjoy fair working conditions. At the same time, the Group also responds to the legal provisions in the *Prohibition on Employment of Child Laborers*, prohibiting any employment of minors as laborers. According to the actual employment situation of the Company, the Company timely adjusts the employment policy to prohibit the phenomenon of forced labor. We respect employees' rights of free association and collective bargaining, and establish a corporate labor union as an effective bridge for communication between employees and between employees and the company.

We attract talents through channels such as internal competition, social recruitment and campus recruitment, strengthen cooperation with many excellent colleges and universities, and focus on exploring technical talents in the fields of Internet and technology, so as to use emerging technologies such as software and data to drive the Company's intelligence development.

Up to the end of the Report Period, the Group employed a total of 5,763 employees worldwide(including contractors), including 5,708 employees in Mainland China and 55 employees in overseas regions, Hong Kong, Macau and Taiwan; 5,520 male employees and 243 female employees. During the report period, the overall employee turnover rate was 19.1%, of which the employee turnover rate in mainland China was 19.2%, and the employee turnover rate of male employees was 18.6%, and the turnover rate of female employees was 19.9%.

		2021	2020	
	Total number	5,763	5,040	
	By gender			
	Male	5,520	4,806	
	Female	243	234	
	By employee type			
	Marketing service	683	552	
	R&D technology	1,126	924	
	Operating management	633	564	
	Manufacturing type	3,143	2,957	
Number of Employee	Other types	169	43	
	By Age Group			
	Below 30	1,935	1,762	
	Age 31-40	2,975	2,467	
	Age 41-50	683	648	
	Above 50	170	163	
	By Region			
	Hong Kong, Macau, Taiwan and Overseas	55	90	
	Mainland China	5,708	4,950	
	Total number	19.1%	10.7%	
	By gender			
	Male	18.6%	10.5%	
	Female	19.9%	13.2%	
	By Age Group			
	Below 30	16.7%	12.7%	
Turnover rate	Age 31-40	13.3%	10.2%	
	Age 41-50	15.7%	8.2%	
	Above 50	5.2%	6.1%	
	By Region			
	Hong Kong, Macau, Taiwan and Overseas	0.0%	11.1%	
	Mainland China	19.2%	10.7%	

Salary and Welfare

The Company has formulated internal welfare policies such as *Paid Annual Leave Management Process, Employee Welfare Management Regulations* and *Reward and Punishment Management Process*, forming a comprehensive rights protection system. Meanwhile, we provide employees with a diversified performance-based remuneration system that includes equity incentives to increase their income levels, share the company's development results with employees, enhance employees' work enthusiasm, enhance their sense of work achievement, and further enhance employees' information on the future development of the Company.



Welfare System



Case

The 12th Badminton Competition

The Company's labor union held the 12th Badminton Competition on June 4, with men's singles, women's singles, men's doubles, mixed doubles and team competition items to activate the amateur cultural life of the Company and employees, strengthen colleagues' exchanges and enhance cohesion.



Case

Sany Marine Heavy Industry's Gourmet Festival

The Administrative Department and labor union of Sany Marine jointly organized the Gourmet Festival, with multiple interesting links such as experiencing cuisines from different regions, food appreciation and fun activity. 42 kinds of snacks and various delicacies are provided free of charge, broadening employees' horizons and satisfying their appetite.





Career Development

The professional employee training model is not only a way to improve the quality of employees, but also the foundation of the Company's vigorous development. Adhering to the concept of "build first-class enterprises, foster first-class talents, make first-class contribution", the Group provides employees with a comprehensive training system ranging from new hires entry to professional skills improvement, so that employees can always tap their unlimited potential and continuously realize their self-value.

We have formulated internal management systems such as Training Management Process and Training Management System, established an online learning platform "Sany Online College" developed for all employees, and built a training course system covering R&D, business, quality, career development and leadership improvement, providing opportunities for employees to realize their self-value.

Training Course System







Quality

- Quality control tools
- Quality management system and eyeball
- Operation safety training

Career development

- Human resources management
- Leadership training

In accordance with the internal management measures such as the *Entry Training Management Process, Entry Training Management Measures* and *Credit System Training Management System*, we require new employees to complete comprehensive induction training during the probationary period, and in-service employees must complete learning certain-credit courses every year. During the report period, we provided a total of 121,742 person-times of training, and the average training time for all employees was 42.9 hours.

Training of Sany International

		2021	2020		
	Total numbe	121,742	116,362		
	By gender				
	Male	116,122	110,959		
	Female	5,620	5,403		
Number of trained	By employee type				
employees	Marketing service	34,502	33,482		
	R&D technology	33,033	31,285		
	Operating management	7,232	6,777		
	Manufacturing type	46,693	44,818		
	Other types	282	/		
	By gender	•			
	Male	95.4%	95.4%		
	Female	4.6%	4.6%		
	By employee type				
The percentage of employees trained	Marketing service	28.3%	28.8%		
	R&D technology	27.1%	26.9%		
	Operating management	5.9%	5.8%		
	Manufacturing type	38.4%	38.5%		
	Other types	0.3%	0.0%		
	Total training hours	42.9	23.1		
	By gender				
	Male	42.8	23.1		
	Female	44.1	23.1		
Average training hours	By employee type	•			
(hours/employee)	Marketing service	101.8	60.7		
	R&D technology	58.7	33.9		
	Operating management	22.1	12.0		
	Manufacturing type	30.9	15.2		
	Others	2.4	/		

Case

Sany Heavy Equipment "Eagle Plan"

On October 4, the third-stage training of the "Eagle Plan" was started. The trainees went to the Kulun Desert to complete extreme hike training and special course training and comprehensively improve their willpower and leadership. During the two-day extreme hiking training, the trainees constantly challenged their physical limits, tested their will, and discovered new limits. In the special course training, the external lecturers interacted deeply with the trainees. Through theoretical knowledge lectures, typical case analysis and real-time data interpretation, they carried out the training on four specialized courses: *Business Supply Chain Whole Process Management, Non-Human Resource Human Resource Management* and *Promoting Lean Management and Realizing Corporate High-Quality Development*.

Meanwhile, we provide continuing education and vocational qualification recognition support programs for all employees to encourage employees to further improve their academic qualifications and vocational skills. We provide junior high school and senior promotion training for front-line technicians, carry out skill development projects, organize relevant welders to obtain international welder certificates and organize technicians for external study and training to obtain relevant certificates upon passing the examinations.

Case Ro

Robot Operation Skills Training

In 2021, we established a robot training base in Changsha Sany Institute of Technology, and formulated the incentive policy to encourage employees to learn robot operation knowledge. For workers who completed the training, we gave a bonus of RMB 10,000 and encouragement to increase their salary by one level. More than 90% of the onsite production workers passed the training, which significantly improved the skill level of workers and the efficiency of factory operations.

Health and Safety

We take creating, providing and maintaining a healthy and safe working environment as the core concern of health and safety management, adhere to the occupational health and safety management policy of "total involvement, prevention first, safety and health, law-abiding and continuous improvement and have established an occupational health and safety management system. We have established the Occupational Health, Safety and Environment (HSE) Management Department and each subsidiary has established the Safety, Environmental and Occupational Health Management Committee, with the general manager of each subsidiary as the director and the manufacturing director as the deputy director. The safety health awareness is strengthened in the daily production and office work and the management responsibility is implemented to strive to provide a safe and reliable working environment for employees.

All subsidiaries of the Group have passed ISO 45001:2018 occupational health and safety management system certification and conduct external audit every year.



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Complete Management Systems

The Group has formulated a series of safety management systems covering employees and contractors, and issued the *Incident* Assessment Regulations to clarify the incident punishment measures for internal employees. Meanwhile, we formulated the Supplier Safety Management System, requiring contractors to sign the Safety and Environmental Protection Agreement, abide by the safety production rules and regulations formulated by the Company, timely organize employees to learn the safety management requirements, purchase accident insurance with the insured amount \geq RMB 500 thousand for the construction personnel and determine the person in charge of safety production at the operation site. Serious incidents shall be reported to the Commerce Department for supplier qualification evaluation if any.



Safety Environmental Protection Agreement (Abstract)

II. Party B shall abide by the safety production and environmental protection rules and regulations formulated by Party A when operating within the scope of Party A's premises. Party A shall inform Party B of the relevant rules and regulations of Party A, and urge Party B to abide by them. Party B shall organize Party B's staff to timely study Party A's relevant rules and regulations.

IV. Party B shall establish and improve Party B's safety production responsibility system and safety production rules and regulations in accordance with relevant laws and regulations. It shall be clear that Party B is responsible for environmental protection and safe production at the operation site, and report to the safety management department of Party A for the filing.

Strengthening Management by Objectives

The Manufacturing Department of each subsidiary of the Group is responsible for the daily operation and management of HSE. The HSE work of the Manufacturing Department of each subsidiary is reported to the members of the Board of Directors. Each subsidiary has established an HSE team, and the head of the Manufacturing Department leads the HSE team to carry out HSE-related work. The heads of various departments and subsidiaries of the Company ensure that each HSE management system objective is included in the annual performance objectives of the relevant functions and levels according to the requirements of objective setting and performance review. We constantly improve the internal HSE management system and strengthen the system construction to ensure that the Company achieves the HSE management system goals.

We strictly control the safety risks in all production processes, and the Manufacturing Department of each subsidiary formulates annual HSE goals and management plans, and regularly conduct internal audits and rectifications for the Group's HSE omissions. The Occupational Health, Safety and Environment (HSE) Management Department regularly organizes each subsidiary's Business Department, Safety Management Department and Lean Quality Head Office to participate in coordination according to the "Hazardous Sources Identification and Risks Assessment Control Procedure", select the risk assessment method for operating conditions as required (score evaluation method), job hazard analysis method (JHA) and safety check analysis method (SCL), identify and evaluate the safety hazards in various production links and areas such as blanking, welding, hoisting, painting, assembling, shipping and transshipment, and establish the targeted management goals and adopt management measures to guarantee the safety of the working environment.

We have formulated a series of health and safety management goals covering contractors, involving employee safety, fire safety, personal protective equipment, special operations and special equipment. During the Report Period, all subsidiaries achieved their safety and health goals in 2021. We will continue to manage the Company's and contractors' health and safety management work with annual goals to further improve the Group's health and safety performance.

Health and safety		Goals in 2021		
management dimension	Management index	Sany Heavy Equipment	Sany Marine	
	Fatal accident rate	0	0	
Employees' health and	Thousand-person serious injury rate	≤ 3‰	-	
safety	Thousand-person injury rate	≤ 5‰	≤ 3‰	
	Occupational disease rate	0	0	
Fire safety	Explosion accident, major fire	0	0	
	Large fire 10k ≤ Loss ≤ 100k	0	0	
	Normal fire (Loss ≤ 10k)	≤ 5‰	0	
Personal protective equipment	The wearing rate and correct use rate of labor protection equipment for employees working on site	100%	100%	
Special type of operation	The employment rate of special operators with certificates	100%	100%	
Special equipment	Effective use and scheduled verification rate	100%	100%	
Occupational health and safety training	Proportion of employees receiving safety training	100%	100%	

During the Report Period, the Group did not have any major work-related injuries or work-related deaths. The performance of occupational health and safety management is as follows:

	Unit	2021	2020	2019
Work-related Deaths	Person	0	0	0
Total days of loss due to work- related injury	Day	3,343	3,235	2,648

Creating a Safety Culture

We have established a safety training system to provide new employees, on-the-job employees and contractors' employees with necessary safety knowledge training. All trainees are required to complete the relevant courses and pass related examinations before they can start relevant work.

We require new employees to complete special safety training for no less than 24 hours, including process safety operation training, safety training provided by the Quality Assurance Department, and safety publicity and implementation activities at the morning meeting of the team; we have established training plans for on-the-job employees according to job positions to provide at least one special safety training for each position every year; For contractors' employees, we have formulated a systematic 5S and safety training system for the main person in charge of engineering construction and construction personnel, so that they can fully understand the safety management requirements of the Group.

Case

Safety Training And Assessment For Langiao Outsourcing Team

On April 15, 2021, Hunan Port Machinery Company conducted safety training for the contractor Langiao Outsourcing Team, introduced the basic knowledge of safety and the knowledge on eight hazardous operations (working at heights, hot work, working at the limited space, hoisting work, temporary operation with electricity, ground breaking operation, circuit breaking operation and blind plate extraction and blocking operation) and conveyed the Company's safety management requirements. In terms of training, the company organized an outsourcing team to study safety accident cases, emphasizing the importance of safe operation. After the training, all members of the outsourcing team passed the 5S and safety assessment and obtained the qualification for on-site operation.



Figure 5S and Safety Examination Site of Langiao Outsourcing Team

We regularly organize safety drills for firefighting, electrical fires and dangerous chemical leakage, etc. to help employees practice their abilities to respond to safety accidents and improve the Company's emergency rescue level.

Case

Sany Marine Carried Out Chemical Leakage Drill

In November 2021, Sany Marine organized relevant departments and personnel to carry out a drill on emergency response plan for hazardous chemical leakage. During the drill, employees were proficient in the use of rescue equipment and calmly dealt with the rescue work of hazardous chemical leakage, effectively improving the emergency response capability for hazardous chemical leakage.



Figure Simulated Drill Site

Case

In March 2021, the Heavy Equipment Manufacturing Department and the labor union jointly organized employees to conduct a forklift safety skills competition. After 2 hours of fierce competition, all 17 contestants completed the competition items, creating a good safety atmosphere, enhancing employees' forklift driving safety awareness, and showing the benchmark for safe driving techniques to employees.



Figure Simulated Drill Site

Prevention of Occupational Disease Risks

The Group strictly abides by the relevant national and local regulations such as the Law of the People's Republic of China on the Prevention and Control of Occupational Diseases, and has formulated internal systems such as the Occupational Health Management System, Occupational Disease Hazard Prevention Management System and Occupational Health Monitoring and Archives Management System. We minimize the probability of occupational diseases through multiple measures such as providing employees with personal protective equipment conforming to the safety and sanitation standards, issuing allowances for special job positions, establishing employee occupational health files, conducting regular occupational health inspections, adjusting the job positions where appropriate, posting warnings and publicity signs and proving psychological counseling services . At the same time, according to the "Technical Specifications for Occupational Health Monitoring", employees are provided with occupational health examinations covering pre-employment to pre-leave to minimize the probability of occupational diseases to ensure a healthy and safe

We have formulated an annual plan for employees' safety and occupational health, including monthly implementation plan, training, inspection, and subsequent implementation. We regularly conduct workplace tests and generate the Detection Report of Occupational Disease Hazard Factors at the Workplace, in which the job positions settings and exposure to occupational disease hazard factors are described in detail, to ensure that employees are aware of the dangerous factors in the working environment and pay attention to the prevention of such factors.

Forklift Skills Safety Competition Of Heavy Equipment Manufacturing Department







Material Issue

- 9/ Atmospheric pollutants emission management
- 3/ Climate change
- 17/ Sewage discharge management
- 15/ Waste management
- 13/ Energy conservation and consumption reduction
- 18/ Water resources management
- 21/ Green office

GHG emission intensity of CO₂/10k Rmb

year-on-year decrease 14.4%



In 2021, **100%** of solid wastes have been recycled and disposed of.

Set pollutant discharge management targets such as factory boundary waste gas, industrial wastewater environmental testing compliance rate, environmental protection equipment operating well rate, solid waste classification recycling and disposal rate of 100%, etc., and gradually reduce waste discharge.



Pollution Control

We strictly abide by the Environmental Protection Law of the People's Republic of China, Law of the People's Republic of China on Prevention and Control of Pollution by Solid Waste, Water Pollution Prevention and Control Law of the People's Republic of China, and Law of the People's Republic of China on Prevention and Control of Solid Waste Pollution, have established internal management systems such as Pollution Prevention and Control Punishment, Hazardous Wastes Management Procedure, Exhaust Gas and Wastewater Management Manual, Environmental Risks Prevention and Management System and Environmental Emergency Plan and have set various pollutants discharge management goals such as exhaust gas of the plant and plant boundary, standard reaching rate of industrial wastewater environmental testing, running conformity rate of environmental protection equipment and classified collection rate 100% of solid wastes, to reduce the impact on environment and gradually reduce the discharge of wastes. We pay close attention to the operation of environmental protection facilities with the electricity monitoring system to ensure that the environmental protection facilities operate synchronously with the main production facilities, and regularly replace auxiliary materials such as activated carbon, filter cotton, and filter elements to improve the operation efficiency of environmental protection facilities.

We regularly accept external audits and inspections by external agencies. At the end of the report period, all subsidiaries of the Group have passed the ISO 14000 environmental management system certification. In 2021, 100% of solid wastes have been recycled and disposed of.

Exhaust Gas

In strict accordance with the Exhaust Gas and Wastewater Management Manual, we adopted the exhaust gas treatment technology and improved the process flow for different production processes, reduce waste gas emissions as far as possible and ensure that the exhaust gas was discharged after treatment meets the emission standards.

Case

Sany Heavy Equipment invested RMB 9.6 million to add and renovate the welding fumes and dust removal systems at Support Lighthouse Plant No. 3 and Wide-body Loader Lighthouse Plant No. 8. The intelligent management software was used, and an industrial monitoring calculator was equipped. It was connected to the communication interface of dust removal unit PLC controller for networking to realize the centralized monitoring of all units, and the start and pause of the dust removal unit at the automatic control workshop were controlled through the dust concentration detector. After the system renovation is completed, it is estimated that the welding fume concentration below 4 meters in the workshop will be reduced to ≤ 4 mg/m³, and the concentration of gas dust discharged into the air after purification will be <30mg/m³.



Sany Heavy Equipment invested RMB 9_6 million to add and renovate the welding fumes and dust removal systems.



hood, and the welding fume is pumped by the fan to the central fume purification system of the purification and dust removal device for treatment and then discharged.

in the closed shot blasting room for purification treatment.

The electrostatic fume purifier is used for treatment, so that the fume purification rate is higher than 85%, and the fume emission concentration is less than 2mg/m³.

Renovation Of Welding Fumes And Dust Removal Systems At The Plant Of Sany Heavy Equipment







The proportion of water-based paints is increased, the source emission of VOCs is reduced, and the mist is treated correspondingly by the filter equipment provided, activated carbon adsorption and electro-catalysis combustion, etc.



During the Report Period, the exhaust gas management performance of the Group is as follows:

Exhaust gas emission	Unit	2021
Particulate matter	kg	1,822.00
Particulate matter emission density	kg/10k RMB income	0.0018
VOCs	kg	28,106.91
VOCs emission density	kg/10k RMB income	0.0276

Waste Water

The Group properly treats both production wastewater and domestic wastewater. Production wastewater includes painting wastewater, wastewater containing emulsion, vehicle cleaning wastewater in the painting workshop and used vehicle cleaning wastewater. It can be discharged to the wastewater treatment station in the plant area for further treatment by waste emulsion and painting wastewater treatment equipment and then reaching the internal discharge standard. When the treatment effect meets the Integrated wastewater discharge standard (GB 8978-1996) and the provincial and municipal wastewater discharge standards, it will be transported to the municipal wastewater treatment station through the urban sewage pipeline system. The domestic wastewater, including wastewater from administrative offices, staff dormitories and staff canteens, will be discharged to the municipal sewage treatment station through the municipal drainage system.

During the Report Period, the Group carried out substantial renovation of the sewage treatment station to improve the sewage treatment capacity and treatment efficiency, and regularly replaced the activated carbon, filter cotton, filter element and other accessories in daily operation to ensure that the daily water can be continuously and timely filtered, thus improving the operating efficiency of environmental protection facilities.



During the report period, the wastewater management performance of the Group is as follows:

Wastewater discharge	Unit	2021
Chemical oxygen demand	mg	332,030,000
Chemical oxygen demand emission density	mg/10k RMB income	325.69
Ammonia nitrogen	mg	82,251,164
Ammonia nitrogen emission density	mg/10k RMB income	80.68

Wastes

The Group actively abides by the laws and regulations such as Law of the People's Republic of China on Prevention and Control of Pollution by Solid Waste, and formulates regulations such as Hazardous Waste Management Procedure" and "Hazardous Chemicals Management System in a targeted manner to clarify procedures and measures to prevent hazardous waste pollution. In addition, we plan to continue to reduce waste emissions.

General Solid Wastes

The general solid wastes of the Group include domestic solid wastes and industrial solid wastes. Among them, domestic solid wastes are collected and treated by the health department; industrial solid wastes, such as leftovers and scrap metal, are sorted and recycled by full-time personnel, and then sold to professional recycling companies for recycling.

During the report period, the waste management performance of the Group is as described in the table below:

Index	Unit	2021	2020		
	Hazardous wastes				
Waste paint bucket	Ton	319	240		
Paint slag	Ton	138	104		
Waste mineral oil	Ton	65	80		
The total amount of hazardous waste	Ton	522	424		
Hazardous waste density	Ton/10k RMB income	0.0005	0.0006		
	Non-hazardous waste	es			
Iron and steel waste	Ton	41,008	31,911		
Domestic waste	Ton	1,047	401		
The total amount of Non-hazardous waste	Ton	43,270	32,312		
Non-hazardous waste density	Ton/10k RMB income	0.04	0.04		

Hazardous Solid Wastes

The Group strictly controls hazardous solid wastes through a detailed warehouse entry and exit system, requiring that hazardous solid wastes such as waste oil and waste residues must be placed in a special warehouse with warning signs, declared and registered, and managed uniformly. We distributed paint in a fixed amount, controlled the amount of paint in each process, avoided paint waste, and reduced the generation of hazardous solid waste in 2021.

Resources Conservation

Energy

The Company complies with related laws and regulations such as Law of the People's Republic of China on Conserving Energy, standardizes the energy management system and tracks the Group's energy consumption through the digital energy management platform. We advocate energy conservation, implement various energy management measures and will continue to improve energy efficiency and reduce energy consumption in the long term.

Digital energy management, multiple measures to improve quality and efficiency

Sany International has many product categories and complex production processes, involving electricity, oil, gas and other energy sources. The overall energy management is complex. We carry out continuous and comprehensive reviews of existing products from design and manufacturing to comprehensively reduce waste in production and improve the efficiency of resource utilization.



Resource waste is reduced in R&D by promoting part standardized design, project cost control, structural optimization, materials and processing redundancy elimination, materials utilization rate improvement and VAVE (Value Analysis and Value Engineering), etc. to reduce resource waste, improve quality and reduce costs;

Intelligent manufacturing is comprehensively carried out in manufacturing. The production capacity efficiency and manufacturing automation are improved by the lighthouse factory and digital construction to greatly improve personnel efficiency and reduce the process and manufacturing waste in the whole line.

In order to better standardize energy use and management, we adhere to the digital transformation route, adopt 5G and industrial Internet technologies and apply an energy management platform to connect the manufacturing equipment and digital instruments in the plant to the platform, covering all production processes and real-time data collection and monitoring to realize the intelligent monitoring of water, electricity, oil and gas in the plant. Meanwhile, we have visualized the energy consumption and history through the digital billboard of the energy topology map, and improved the online rate and utilization rate of production equipment based on intelligent analysis and suggestions.

Case

Sany Heavy Equipment Realized The Digital Management Of Welding Protective Gas

Sany Heavy Equipment invested RMB 201 thousand in three installments and installed the digital gas flow detectors for all 134 welding machines in the plant. The gas utilization is tested and monitored through the digital interconnection. The parameters of specific welding machines were adjusted, and the gas consumption for the original technological process is reduced from 32.7L/min to 25.0L/min, realizing the targeted and refined costs reduction, and reducing the gas wastes and emissions.



Figure Installation of Supporting Gas Flow Monitor for Welding Machine

Carry out energy conservation actions and advocate green office

We have always advocated the green concept in production, operation and daily office work, and achieved remarkable results in energy conservation and consumption reduction.



During the report period, the energy consumption of the Group is as described below:

Index	Unit	2021	2020		
	Direct energy consumption				
Natural gas	Cubic meter	2,553,025	1,880,643		
Natural gas use density	Cubic meter/ 10k RMB income	2.50	2.55		
Purchased heat supply	GJ	34,520	35,057		
Heat use density	GJ/ 10k RMB income	0.03	0.05		
Gasoline	Liter	94,797	127,027		
Gasoline use density	Liter/ 10k RMB income	0.03	0.17		
Diesel	kg	944,062	796,780		
Diesel use density	Liter/ 10k RMB income	0.93	1.08		
Indirect energy consumption					
Purchased electric power	KWH	60,059,392.79	47,968,507		
Use density of electric power	KWH/10k RMB income	58.91	65.14		

Water Resources

The Group has formulated the Water Conservation Management System to regularly publicize the awareness of water conservation and promote the effective implementation of water conservation measures. We plan to gradually reduce the level of water consumption. Up to 2030, the water consumption per 10k RMB of operating income will be reduced by 15% compared to that in 2019. We draw water from municipal water supplies, and have not found any risks of shortage in obtaining suitable water resources.



We have taken a series of water conservation measures in the Group:



Rainwater collection and

Rainwater collection systems are installed at each plant area, and the collected rainwater is used as water for landscape irrigation in the park;

Advocating water conservation

The water conservation reminders are posted at relevant places, and the phenomenon of water waste is checked at various areas from time to time every week.

During the report period, the consumption of water resources in the Group is as described in the table below:

Index	Unit	2021	2020
Total water consumption	Ton	665,144	498,297
Water use density	Ton/10k RMB income	0.65	0.68

Raw Materials and Packaging Materials

In order to standardize and improve the utilization rate of raw materials, the Group has formulated management systems such as the Blanking Center Program Design and Remaining Materials Management System to improve the management of raw materials in all aspects, optimize the utilization rate of raw materials, and implement the responsibility for raw materials management to the relevant personnel.

The Group actively optimizes the packaging and auxiliary materials of products, and strives to achieve the goal of reducing the amount of packaging materials. We continue the practice of using wooden boxes as the packaging of raw materials and components, and reduce wood wastage as much as possible while maintaining operational performance.

During the Report Period, the resources consumption for raw materials and packaging materials in the Group are as described below:

Index	Unit	2021	2020
Steel consumption	Ton	160,773.20	144,003.60
Steel use density	Ton/10k RMB income	0.16	0.20
Paper	Ton	24.81	24.80
Paper use density	kg/10k RMB income	0.0243	0.0340
Packaging wood	Ton	1,295.93	1,336.30
Packaging wood use density	kg/10k RMB income	1.27	1.81

Addressing Climate Change

Greenhouse Gas

Climate change caused by greenhouse gases has become a global concern. We actively assume our due corporate responsibilities, actively implement energy management measures, and reduce corporate greenhouse gas emissions. We have established emission reduction targets, and plan to reduce greenhouse gas emissions per 10k RMB of operating income by 25% in 2030 compared with that in 2019. The Group's greenhouse gas emissions mainly include direct emissions from the combustion of gasoline and diesel in transportation vehicles, and indirect emissions from purchased electricity and heat.

We strengthen energy management and control in the production process, and also strengthen the management of commercial and transportation vehicles, reduce unnecessary vehicle dispatch, repurchase electric forklifts to replace the original small-tonnage forklifts and reduce the proportion of fuel consumption.

In the report period, the greenhouse gas emissions of the Group are as described in the table below:

Index	Unit	2021	2020 ¹
Scope 1 greenhouse gas emissions	Metric ton of carbon equivalent	8,200.00	6,434.97
Scope 2 greenhouse gas emissions	Metric ton of carbon equivalent	38,691.71	33,121.86
Scope 1 and 2 greenhouse gas emissions	Metric ton of carbon equivalent	46,891.72	39,556.82
Greenhouse gas emission density	Metric ton of carbon equivalent/ 10k RMB income	0.0460	0.0537

Climate Risks

The Group is deeply aware that climate change may bring various risks and opportunities to the Company's business and each value chain link of the supply chain. According to the recommendations of the "Task Force on Climate-Related Financial Disclosure (TCFD)", we have identified entities, transformation risks and opportunities and made targeted responses. We gradually incorporate the foreseeable future risks of climate change and extreme weather events into the Board's consideration for the business continuity plan, and monitor and review the impact of climate change on our operations.

We have planned to formulate and implement long-term carbon emission reduction goals based on the national action line of "carbon peak in 2030 and carbon neutrality in 2060" so as to improve the energy efficiency of daily operations. We encourage employees, suppliers and customers to cooperate in emission reduction activities, develop clean technology products and solutions, establish contingency plans based on local risks of climate change and extreme weather events and include them into the consideration for selection of new operating facility locations.

Impact:

China has updated its nationally determined contribution targets, made a commitment to "reach the carbon emission peak prior to 2030 and realize carbon neutrality prior to 2060", and launched the national carbon market for reasonable pricing of corporate greenhouse gas emission costs. With the release of national and regional policies and management objectives for addressing climate change, it is expected that the Group's operating energy consumption and greenhouse gas emissions will be further restricted by regulatory requirements, and it may be necessary to strengthen the monitoring of energy and greenhouse gas emissions data, resulting in higher operating management costs.

Solution:

We have established greenhouse gas emission reduction objectives, and actively monitor greenhouse gas emissions and carry out energy conservation and emissions reduction in accordance with ISO 14001 environmental management system requirements.

Impact:

Under the global response to climate change, the demand of consumers and customers for clean and low-carbon products continues to grow, and products with high energy consumption and high carbon will gradually lose market share, which may further lead to a decline in corporate revenue. Meanwhile, due to the needs of product and business transformation, the costs of raw materials to be purchased have increased.

Solution:

We actively carry out research and development of clean technology products and solutions, and have formed a series of electric transportation products with international competitiveness, and plan to further expand the product line.

Impact:

Under the background of global climate change, the frequency and density of extreme weather such as heavy rain and tropical cyclones will increase. Sany International's operating locations will generally be affected by disruptions in production, transportation and supply chains, which may lead to increased operating costs, productivity decline and equipment loss, etc.

Solution:

We formulate contingency plans for severe weather, strengthen daily maintenance and management of facilities and equipment, and take relevant risks into account when selecting new operating locations in the future.



¹In order to enable meaningful comparison and monitoring of changes in GHG emissions from purchased electric power, this report adopts the unified and applicable emission factor of purchased electric power (0.5810 kg CO₂/kWh) issued by the Ministry of Ecology and Environment of the People's Republic of China to traceably revise the historic data of greenhouse gas emissions (scope 2) in 2020, and the GHG emission-related density indicators are also revised.

06 Empowering Society

Material Issue 23/ Social participation







36 Technical innovation



developed 7 brand new products



and made breakthroughs on 7 key

Industrial Win-win

As a pioneer in the industry, the Group actively participates in the drafting and formulation of industrial standards, promotes the optimization and upgrading of the industrial structure orderly, strives to build a solid industrial foundation, actively promotes the development of the entire industry, and makes Contribution to strengthening the manufacturing industry.

As of the end of the report period, Sany International participated in the drafting of national and industrial standards such as Earth-moving machinery-Nonroad mechanical drive mining dumpers- Technical specifications. Earth-moving machinery-Non-road electrical drive mining dumpers- Technical specifications, Earth-moving machinery-Non-road mechanical drive mining dumpers-Test methods and Earth-moving machinery-Non-road electrical drive mining dumpers-Test methods, providing scientific insights into the requirements, test methods, inspection rules, marking, packaging, transportation and storage of related equipment. We also participated in the drafting of the industrial standard Drilling, Loading and Anchoring Units in Coal Mine Rock Gangway, which provides a strong guarantee for promoting green, intelligent and efficient mining.

We actively promote the technological innovation and development of the industry. Our subsidiary, Sany Heavy Equipment, took the lead to establish the "Technical Innovation Strategic Alliance for Intelligent Mining Equipment Industry", and conducted technical cooperation with colleges such as the Institute of Metal Research, Chinese Academy of Sciences, Northeastern University and Shenyang University of Technology to organize and promote independent innovation of key technologies and key products. During the report period, members of the alliance carried out 36 cooperation projects, developed 7 brand new products, and made breakthroughs on 7 key core technologies.

In December 2021, "China Mobile Robot (AGV/AMR) Industrial Development Annual Conference 2021" (the "Annual Conference") organized by Mobile Robot and AGV/AMR Industry Alliance, undertaken by New Strategy Mobile Robot Industry Research Institute and sponsored by Sany Machinery Intelligence Co., Ltd. was held in Beijing. As one of the largest and most influential conferences in the industry, the annual conference gathered more than 300 top AGV companies and more than 500 guests, including government leaders, industrial experts and media. The conference carried out in-depth exchanges on the current development status of the industry, and put forward more new ideas and suggestions for the future development direction of the industry. As an outstanding representative of the AGV leading enterprises and a council member unit of Mobile Robot and AGV/AMR Industry Alliance, Sany Machinery fully supports the work of the Alliance, actively participates in activities of the Alliance, and promotes the high-quality development of the industry.





China Mobile Robot (AGV/AMR) Industrial Development Annual Conference 2021



Contribution to Society

Social development is the foundation of the Group's development, and social responsibility is also Sany's mission. We care deeply about society. While realizing our own development, we uphold the spirit of "continuous self-improvement and Contribution to society" and love for the family and the country. During the report period, we invested a total of RMB 23,000 to promote the harmonious development of enterprises and communities.



Sany International Donated Masks To Partners Overseas

Under the impact of the pandemic, Sany International took the initiative to donate more than 20,000 masks and other medical supplies to agents, customers and other partners in southeast Asia, eastern Europe and Africa, alleviating the shortage of masks and other medical supplies.





SANYI's Reach Stacker Booted The Operation Of Special Line Of Lhasa Railway

Sany International provides equipment such as reach stackers for the first special enterprise railway line with the complete independent property right in Lhasa, and trains local employees, which can effectively improve the efficiency of railway transportation, loading and unloading, reduce warehousing and logistics costs and promote the economic development in Ali, Lhasa, Shigatse and Shannan.



Future Prospects

In 2022, the world will still face many uncertainties, but Sany International will continue to seize global and Chinese development opportunities, forge ahead with determination from top to bottom, continue to deepen digital transformation, strengthen R&D innovation, adhere to the internationalization strategy, lead the industry for intelligent and digital upgrading and updating and create the "first brand" in the mining equipment and logistics equipment manufacturing industry.

Sustainable development is the main theme of future global development. While creating value, we will continue to carry out environmental, social and governance work, improve corporate sustainable development strategies, achieve sustainable development goals, and innovate sustainable products and solutions, join hands with excellent partners to jointly solve common global problems and contribute to the construction of a community with a shared future for mankind.



电池位 禁止碰撞



Content Index of HKEx's "ESG Reporting Guide"

Main scopes, levels and key performance indicators

Sections/Statement

Main scope A- Environment Level A1: Emissions Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste. Green operation-Pollution General disclosure control Note: Air emissions include NOx, SOx, and other pollutants regulated under national laws and regulations. Greenhouse gases include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride. Hazardous wastes are those defined by national regulations. Key performance Pollution control- Exhaust The types of emissions and respective emissions data. indicator A1.1 das Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas Addressing the climate Key performance emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of indicator A1.2 change- Greenhouse gas production volume, per facility). Key performance Total hazardous waste produced (in tonnes) and, where appropriate, Pollution control- Waste indicator A1.3 intensity (e.g. per unit of production volume, per facility). Key performance Total non-hazardous waste produced (in tonnes) and, where Pollution control- Waste indicator A1.4 appropriate, intensity (e.g. per unit of production volume, per facility). Key performance Green operation-Description of emissions target(s) set and steps taken to achieve them. indicator A1.5 Pollution control Key performance Description of how hazardous and non-hazardous wastes are handled, Pollution control- Waste indicator A1.6 and a description of reduction target(s) set and steps taken to achieve them. Level A2: Resources Utilization Policies on the efficient use of resources, including energy, water and other rawmaterials. Green operation-General disclosure Note: Resources may be used in production, in storage, transportation, in Resource conservation buildings, electronic equipment, etc. Key performance Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in Resource conservationindicator A2.1 total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility). Energy

Main scopes, levels and key performance indicators	Se
Key performance indicator A2.2	Water consumption in total and intensity (e per facility).
Key performance indicator A2.3	Description of energy use efficiency ta achieve them.
Key performance indicator A2.4	Description of whether there is any issue purpose, water efficiency target(s) set and
Key performance indicator A2.5	Total packaging material used for finish applicable, with reference to per unit produ
Level A3: The Enviro	nment and Natural Resources
General disclosure	Policies on minimising the issuer's signific and natural resources.
Key performance indicator A 3.1	Description of the significant impacts of a natural resources and the actions taken to
Level A4: Climate Ch	ange
General disclosure	Policies on identification and mitigation of which have impacted, and those which may
Key performance indicator A 4.1	Description of the significant climate-related those which may impact, the issuer, and the
Main scope B- Social	
Employment and Lab	oour Practices
Level B1: Employme	nt
General disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and re- impact on the issuer relating to remuneration and terminatio working hours, vacation, equal opportunit and other welfare and benefits.

ctions/Statement e.g. per unit of production volume, Resource conservation-Water resource arget(s) set and steps taken to Green operation-Resource conservation e in sourcing water that is fit for Resource conservationsteps taken to achieve them. Water resource Resource conservationned products (in tonnes) and, if Raw materials and uced. packaging materials cant impacts on the environment Green operation-Resource conservation activities on the environment and Green operationmanage them. Resource conservation Green operationsignificant climate-related issues Addressing climate ay impact, the issuer. change issues which have impacted, and Addressing climate actions taken to manage them. change- Climate risks egulations that have a significant Growth in harmony-Talent introduction and on, recruitment and promotion. retention ities, diversity, anti-discrimination

Main scopes, levels and key performance indicators	Sections/Statement	
Key performance indicator B1.1	Total workforce by gender, employment type (for example, full- or part-time), age group and geographical region.	Talent introduction and retention- Compliant employment
Key performance indicator B1.2	Employee turnover rate by gender, age group and geographical region	Talent introduction and retention- Compliant employment
Level B2: Health and	Safety	<u>.</u>
General disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer	Growth in harmony- Health and safety
Key performance	relating to providing a safe working environment and protecting employees from occupational hazards. Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	Health and safety- Strengthening management
Key performance indicator B2.2	Lost days due to work injury.	by objectives Health and safety- Strengthening management by objectives
Key performance indicator B2.3	Description of occupational health and safety measures adopted, and how they are implemented and monitored.	Growth in harmony- Health and safety
Level B3: Developme	ent and Training	<u>.</u>
General disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities. Note: Training refers to vocational training. It may include internal and external courses paid by the employer.	Growth in harmony- Career development
Key performance indicator B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	Growth in harmony- Career development
Key performance indicator B3.2	The average training hours completed per employee by gender and employee category.	Growth in harmony- Career development

Main scopes, levels and key performance indicators	Sec	
Level B4: Labor Standards		
General disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and significant impact on the issuer relating forced labor	
Key performance indicator B4.1	Description of measures to review emplo child and forced labor.	
Key performance indicator B4.2	Description of steps taken to eliminat discovered.	
Operating Practices		
Level B5: Supply Chai	n Management	
General disclosure	Policies on managing environmental and chain.	
Key performance indicator B5.1	Number of suppliers by geographical regio	
Key performance indicator B5.2	Description of practices relating to engage suppliers where the practices are being in are implemented and monitored.	
Key performance indicator B5.3	Description of practices used to identify or risks along the supply chain, and how th monitored.	
Key performance indicator B5.4	Description of practices used to promote e products and services when selecting sup implemented and monitored.	
Level B6: Product Res	ponsibility	
General disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and significant impact on the issuer relating to health and safety, advertisir matters relating to products and services redress.	

ections/Statement

d regulations that have a ng to preventing child and	Talent introduction and retention- Compliant employment
loyment practices to avoid	Talent introduction and retention- Compliant employment
ate such practices when	Talent introduction and retention- Compliant employment
d social risks of the supply	Compliant operation - Responsible procurement
ion.	Compliant operation - Responsible procurement
aging suppliers, number of implemented and how they	Compliant operation - Responsible procurement
/ environmental and social they are implemented and	Compliant operation - Responsible procurement
environmentally preferable uppliers, and how they are	Compliant operation - Responsible procurement
d regulations that have a sing, labeling and privacy s provided and methods of	Quality excellence- Quality control

Main scopes, levels and key performance indicators	Sections/Statement		
Key performance indicator B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	Quality excellence- Quality control	
Key performance indicator B6.2	Number of products and service related complaints received and how they are dealt with.	Customer service - Service improvement	
Key performance indicator B6.3	Description of practices relating to observing and protecting intellectual property rights.	Compliant operation -Intellectual property protection	
Key performance indicator 6.4	Description of quality assurance process and recall procedures.	Quality excellence- Quality control	
Key performance indicator B6.5	Description of consumer data protection and privacy policies and how they are implemented and monitored.	Customer service - Privacy protection	
Level B7: Anti-corrup	tion		
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.	Compliant operation - Honesty and integrity	
Key performance indicator 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.	Compliant operation - Honesty and integrity	
Key performance indicator B7.2	Description of preventive measures and whistleblowing procedures, related implementation and monitoring methods.	Compliant operation - Honesty and integrity	
Key performance indicator B7.3	Description of anti-corruption training provided to directors and staff.	Compliant operation - Honesty and integrity	
Community			
Level 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.	Empowering society- Contribution to community	
Key performance indicator B8.1	Focus areas of contribution (e.g. education, our contribution to environmental concerns, labor needs, health, culture and sport)	Empowering society- Contribution to community	
Key performance indicator B8.2	Resources contributed (e.g. money or time) to the focus area.	Empowering society- Contribution to community	

