

ENVIRONMENTAL, SOCIAL AND
GOVERNANCE REPORT

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**SANY HEAVY EQUIPMENT INTERNATIONAL
HOLDINGS COMPANY LIMITED**

(Incorporated in the Cayman Islands with limited liability)

Stock Code : 631

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ABOUT THIS REPORT

Sany Heavy Equipment International Holdings Company Limited (the “**Company**” together with its subsidiaries, hereinafter referred to as the “**Group**” or “**we**” or “**us**”) is pleased to present 2020 Environmental, Social and Governance Report (the “**Report**”) to summarise the Group’s policies, measures and performance on the key environmental, social and governance (“**ESG**”) issues.

Reporting Period

The Report illustrates the overall performance of the Group regarding the environmental and social aspects from 1 January 2020 to 31 December 2020 (the “**Reporting Period**”).

Reporting Scope and Boundaries

The main consideration of the scope of the Report is the importance of business sector’s revenue to the Group. The information of operations covered in this report includes the business sectors generating majority revenue of the Group, including mining equipment sector and logistics equipment sector. There was no material change in the reporting scope in 2020. If the scope and boundaries of the specific contents vary, they are noted in the relevant sections of the Report.

Reference

For ease of presentation, in this report, Sany Heavy Equipment International Holdings Company Limited is hereinafter referred to as “Sany International” or the “Company”. Sany Heavy Equipment Co., Ltd. is hereinafter referred to as “Sany Heavy Equipment”, while Sany Marine Heavy Industry Co., Ltd. is hereinafter referred to as “Sany Marine”, both of which is a major subsidiary of the Company.

Reporting Basis

The Report has been prepared in accordance with the ESG Reporting Guide as set out in Appendix 27 “Environmental, Social and Governance Reporting Guide” (the “**Guide**”) of the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited (the “**Main Board Listing Rules**”) issued by The Stock Exchange of Hong Kong Limited (the “**Stock Exchange**”) and is based on the four reporting principles — materiality, quantitative, balance and consistency. The disclosure in this report complies with the disclosure requirements of the “comply or explain” as set out in the ESG Reporting Guide.

The information disclosed herein is sourced from official documents and statistics of the Group, as well as the combined control, management and operations information provided by the subsidiaries in accordance with the Group’s relevant policies. A complete content index is appended to the last chapter hereof for quick reference. The Company undertakes that there is no false record or misleading statement in the Report, and is responsible for the authenticity, accuracy and completeness of its content.



Report Access

This Report is prepared in both Chinese and English. If there is any discrepancy between the Chinese and English versions, the Chinese version shall prevail.

The electronic version of this Report can be downloaded from the Company's official website www.sanyhe.com and the Stock Exchange website www.hkexnews.hk.

Feedback

If you have any questions or suggestions about the content of this Report, please call or write to inquire. Our contact information is as follows:

Contact person: Mr. Han Tianan

Address: No. 25, 16th Street, Kaifa Road, Economic and Technological Development Zone, Shenyang City, Liaoning Province

Telephone number: +86 24 893 18000

Email address: hantn@sany.com.cn



ABOUT US

The core business of the Group comprises mining equipment, logistics equipment, robots and smart mines. On 25 November 2009, Sany International (stock code: 631) was successfully listed on the Main Board of the Hong Kong Stock Exchange. Sany International has become one of the top domestic mining and logistics equipment manufacturing enterprises, and is moving towards becoming the best complete equipment supplier and an iconic enterprise in the international mining and logistics equipment industry.

The Group's mining equipment segment covers coal mining machinery products, non-coal mining machinery products, mining transport equipment. As the first company offering integrated mining and excavation equipment, transport equipment and comprehensive solutions in the PRC, the Group has conducted research and development on various intelligent excavators, mining machines, intelligent shearers, pure electric vehicles and intelligent driverless widebodied vehicles, thereby contributing ideas to the industry on the manufacturing of full-set solutions, as well as electrical and intelligent equipment.

The logistics equipment segment of the Group includes container equipment, i.e. front cranes, stacker cranes and shore gantry cranes, bulk materials such as grabs and overhead cranes, and general equipment such as heavy forklifts and telescopic forklifts. The Group is one of the domestic port full-set machinery equipment suppliers with the largest tonnage, the most complete series and the most advanced technology.

The robotics business of the Group will focus on the system integration, mobile robots and electric forklifts, empowering the transformation and upgrades in electric, intelligent and unmanned intelligent production.

The smart mine business of the Group covers automatic integrated mining, unmanned mining transport equipment and smart mining. The objectives of the businesses are to accelerate the R&D of equipment with intelligent technologies such as sensory perception, analysis, autonomous decision-making and automatic control, and to develop unmanned dispatching systems as well as mine operation and management systems, thereby supporting the Group's long-term strategy of developing smart mines and smart terminals.

The Group has production and manufacturing bases in Shenyang, Zhuhai and Changsha. Driven by the strategy of digitalization, the Group actively promoted the construction of pioneer factories. Four pioneer factory projects, namely widebodied vehicles, hydraulic supports, small port machinery and large port machinery, are currently under construction. The pioneer factories utilize big data, industrial internet and robotic technology to enhance automation in techniques, logistics and inspection, through which the workforce required for the manufacturing and assembling processes is minimalized and the manufacturing cycle is shortened, to achieve the rapidly growing orders for the Group's anchor products to be met. Meanwhile, the Group achieves "On-site, Realistic and Present" remote monitoring through the digital transformation; allocates resources reasonably according to production needs through intelligent assignment platforms; provides basic data for production management and energy consumption management through energy management platform in order to optimize process and reduce energy consumption; creating smart parks to achieve full computerization in office work, security, logistics and park facilities within the industrial parks.



We are determined to protect environment, implement a green development strategy, comprehensively increase investment in environmental protection, actively develop and provide green products and services, and actively committed to protecting the environment. The newly developed products in the mining equipment sector realized the transformation of traditional product towards intelligent, electric and green excavation. The pure water hydraulic supports and dry dust removal equipment and other green products, were put into production and use in mining operations, in order to create a greater value to customers, which is a major practice of Sany International's "Green mining & Clean production". The green products in the port logistic segment realized the upgrade of traditional large port machinery to intelligence, and the upgrade of traditional small port machinery to electrification; and drives the industry with less manpower or unmanned, and creates customer demand. We actively implemented energy-saving and consumption-reducing measures, carried out various intelligent transformations such as electricity meters, air compressor, welding machine, and advocated the conservation and recycling of water, paper, and packaging materials to improve resource utilization efficiency. The Group clearly stipulated the regulations on environmental protection compliance management, pollution control and emission compliance. We reduced pollutant emissions and lessened damage to the environment through measures such as welding fume rectification actions, promotion of electrostatic spraying, and replacement of water-based paint with oil-based paint to achieve sustainable development goals.

We insist on making first-class contribution, prospering along with the society, actively integrating into the local community, organizing community building activities, and continuing to move forward to the vision of "Giving back to society & Building a beautiful community". We promote the integrated development both inside and outside China, and concern about the infrastructure construction for the "Belt and Road" Initiative. We support the construction of public utilities and actively export industrial resources to society, bearing the social responsibility of "Contributing to China and striving for improvements".

Looking forward to 2021, we will firmly seize the opportunity of intelligent upgrading of the industry, with the main focus on improving operational capabilities, continuously raise the ESG governance standards, and promote the corporate sustainable development.



STATEMENT OF THE BOARD

Looking back at the past year, novel coronavirus (“**COVID-19**”) wreaked havoc on the world. On the basis of actively carried out pandemic prevention and control and efficiently resumed operation and production, the Group has not only ensured the stability of supply chain and timely delivery of orders, but also made significant progress in aspects such as digital transformation, R&D of new products and new business development. In a challenging environment, Sany International still insists on promoting the development of a green energy saving system.

“Leave to our posterity a clean and beautiful world” — Climate change has posed severe challenges to human survival and development, President of the People’s Republic of China Xi Jinping said in his speech on “For Man and Nature: Building a Community of Life Together” in April 2021. Faced with unprecedented challenges in global environmental governance, the international community needs to come up with unprecedented ambition and action. We need to discuss ways to tackle this challenge and find a path forward for man and Nature to live in harmony, act with a sense of responsibility and unity, and work together to foster a community of life for man and Nature. From a natural and ecosystem perspective, we must protect and endeavor to foster a new relationship where man and Nature can both prosper and live in harmony; be committed to systemic governance, enhance an ecosystem in sound circulation, maintain overall balance and improve the environment. We must abandon development models that harm or undermine the environment, and must say no to shortsighted approaches of going after near-term development gains at the expense of the environment. We need to upgrade our economic, energy and industrial structures, and make sure that a sound environment is there to buttress sustainable economic and social development worldwide. President Xi also announced that China will strive to peak carbon dioxide emissions before 2030 and achieve carbon neutrality before 2060.

Following the guidance of the national long-term goal of nature and ecological environment, SANY International has formulated the business strategy and development mode of green energy saving system, continuously increased the investment in the research and development of intelligent, electric and unmanned products, and intelligent control system. We started the construction of pioneer factory in accordance with the policies of the Central Government. While optimizing our asset structure and improving our business performance, we continue to pay attention to the sustainable development performance of the Company, actively assume our Environmental, Social and Governance (ESG) responsibilities, and integrate ESG concepts into corporate culture and business operation management, communicate with stakeholders, listen to their opinions and suggestions, and continue to strengthen our own management in the ESG aspects, promote the integration and symbiosis of enterprise development, social progress and ecological improvement, so as to protect the interests of shareholders, enhance enterprise value, and promote the sustainable development of enterprises and society.



We are committed to cultivating first-class talents, and regard employees as our most valuable assets. In 2020, we implemented the plan to double the number of R&D personnel, increasing the Company's internal momentum. We always insist on moving forward with employees, respecting and protecting the legitimate rights and interests of employees, and creating an equal and diversified working atmosphere for employees. We respect the development needs of employees, establish a comprehensive training system, and start customized talent training and selection models such as "Potential Talent" and "Young Eagle Plan" to help employees achieve rapid growth. We pay great attention to the physical and mental health of employees. In 2020, the Group and Sany Group Co., Ltd.* (三一集團有限公司) ("**Sany Group**") established Sany Machinery Intelligence Co., Ltd. (三一機器人科技有限公司), and acquired 70% equity interests in Sany Construction Robot (Xi'an) Research Institute Co., Ltd.* (三一建築機器人(西安)研究院有限公司) on January 2021. We will focus on three major businesses, namely system integration, movable robots and electric forklifts, which empower the transformation and upgrade of electric, smart and unmanned intelligent production. The construction of pioneer factories enhanced automation in production, and ensured work safety by improving safety production management systems and other measures, and reduced occupational health risks by reducing employee exposure to dust, noise, vibration and other hazards.

The Group established the "Sany Customer Cloud Platform", continues to carry out global activities of value services, and continuously enhances customer service satisfaction and gains customer's trust. Adhering to the principles of fairness, justice and openness, we have established a sustainable development cooperation relationship with suppliers, continuously improved supplier online management, and are committed to achieve mutual prosperity with all parties. We adhere to the philosophy of responsible operation, strictly control the internal management system, improve the internal management procedures, and adhere to the corporate style of integrity.

We sincerely produce high-quality products for our customers. The Group adheres to its service philosophy of "All for customers, All from innovations", by providing first-class service and highly efficient response to meet customers' needs and addressing any concerns of our customers. With the original intention of "Quality changes the world", we always regard product quality and safety as the core of product responsibility. Meanwhile, Sany International adheres to green development and constantly advocates green concepts in the areas of development of innovative materials and technologies, supply chain management, energy-saving and waste reduction production, logistics waste reduction and emission reduction, service, waste recycling and staff work.

Liang Zaizhong

Chairman

14 July 2021



ESG GOVERNANCE STRUCTURE

The Group is committed to integrating ESG factors into its operations, creating sustainable value for its stakeholders and fulfilling its responsibility as a corporate citizen. The Group has established an Environmental, Social and Governance Working Group (“**ESG Working Group**”). The ESG Working Group, composed of key members from different departments of the Group, is responsible for communicating with external consultants and collecting information on ESG. The ESG working group reports to management on a regular basis on the implementation of ESG initiatives and their performance.

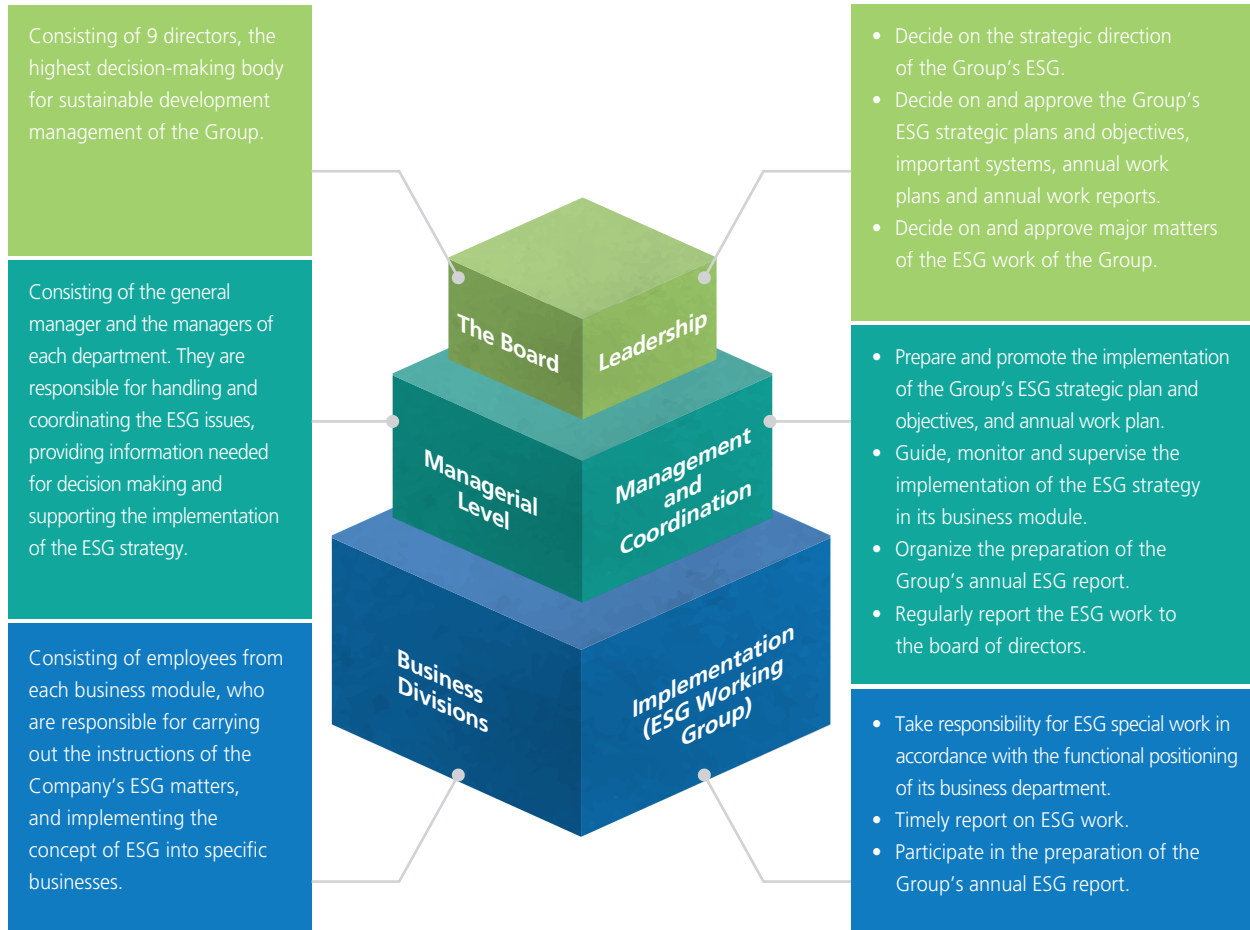
The Board is responsible for assessing and determining ESG risks to the Group and ensuring that appropriate and effective ESG risk management and internal monitoring systems are in place. Management reviews and confirms to the Board the risks and effectiveness of the internal control system in these areas.

Board engagement

In order to manage sustainable development issues more effectively, the Group has established an ESG governance structure with the Board as the leader, the management personnel responsible for managing and coordinating, and the business divisions (including ESG working group consisted of members from different departments) responsible for implementation, to ensure that, during the process of the Company’s management of ESG, the instructions of the Board can be conveyed to the whole company effectively; the intended objectives can be realized within the specified time; the difficulties and challenges faced in the daily operation process can be promptly reported and be resolved effectively; the responsibilities are undertaken by the individual/department/team on an organized and orderly manner; and the important proposals, regulations and missions in relation to ESG issues can be realized and be integrated into the major business strategies of all subsidiaries. In 2020, the Group also organized ESG training for management to comprehensively enhance the Company’s ESG management capabilities.



Governance structure for ESG





SUSTAINABLE DEVELOPMENT STRATEGY

We have consistently advocated and adopted a philosophy of pursuing working together for mutual benefit, strived to balance environmental, social, and economic benefits across development. Thus, the Group has formulated a five-year sustainable development strategy — the sustainable development 2025 strategy. Our sustainable development 2025 strategy is based on five strategic pillars, which includes: Quality First, Responsible Operation, People-oriented, Environmental Benefit and Social Benefit.



Quality First: Objectives:	Quality is the core of our long-term development. To provide customers with a full range of high-quality products with stable performance and reliable quality that fulfills the needs of industry development. In response to the above objectives, we determined the key areas are: quality production and technological innovation.
Responsible Operation: Objectives:	Development of working together for mutual benefit is our most basic business philosophy. To operate legally and compliantly, and become an excellent enterprise that entrusted by employees, with satisfied customers and achieved win-win development with partners. In response to the above objectives, we will adhere to honest operation, provide customers with first-class services, and join hands with suppliers to achieve mutually beneficial partnership.



<p>People-oriented:</p> <p>Objectives:</p>	<p>Employee is the source of the Company's development, and it is our one of the important visions to foster first-class employees.</p> <p>To create a working environment that allows employees to pleasantly work with high efficiency and utilize their full potential, and to strive to provide a good career development platform that achieves mutual development of employees and the enterprise.</p> <p>In response to the above objectives, we determined to focus on the management of these areas: recruiting and cultivating employees, and caring for employees' health.</p>
<p>Environmental Benefit:</p> <p>Objectives:</p>	<p>Protecting the environment and green development has been our consistent policy for sustainable development.</p> <p>To contribute green, energy-saving and high-efficient products to the industry, and promote the production and construction of enterprises with the principle of sustainable development.</p> <p>In response to the above objectives, we will accelerate the implementation of green technology application, energy-consumption saving and emission reduction.</p>
<p>Social Benefit:</p> <p>Objectives:</p>	<p>As an enterprise with social responsibility, the Group is committed to promote local economic development and to make contribution for the local people's livelihood and harmony.</p> <p>To create a first-class enterprise, make first-class contribution, and achieve the unity of economic and social benefits.</p> <p>In response to the above objectives, we will actively promote the industry development and commit to community building and voluntary services.</p>



STAKEHOLDERS ENGAGEMENT

Stakeholders of the Group include customers, governments and regulatory agencies, investment institutions/ shareholders/analysts, suppliers/partners, employees, academic/research institutions, industry associations/ professional institutions, media, non-governmental institutions/non-profit organizations and local communities. We have established a good and efficient stakeholder communication mechanism to collect and respond to the demands of all parties in a normalized and targeted manner.

The table below shows a list of the Group's stakeholders and our methods to communicate with them.

Stakeholder communication mechanism

Stakeholder Groups	Expectations and demand	Communication and Responses
Customers	<ul style="list-style-type: none"> • Provide cost-effective services and products • Improve product quality and service level • Product after-sales service and guarantee • Low carbon and environmental friendly products 	<ul style="list-style-type: none"> • Customer satisfaction survey • Questionnaire survey • New product introduction meeting • Regular visits
Governments and Regulatory agencies	<ul style="list-style-type: none"> • Pay taxes according to law • Operation compliance • Compliance with laws and regulations • Support local development • Promote local employment • Protect local environment 	<ul style="list-style-type: none"> • Daily mail and telephone communication • Work meeting and training • Unscheduled visits, supervision and inspection
Investment institutions/ Shareholders/ Analysts	<ul style="list-style-type: none"> • Open and transparent information • Business operation status • Strengthen risk control • Create economic value 	<ul style="list-style-type: none"> • Annual Report and periodic reports • Annual general meeting • Performance conference • Announcement • Investor hotline and mailbox • Investor relations roadshow
Suppliers/ Business partners	<ul style="list-style-type: none"> • Transparent and honest cooperation • Mutual benefit • Continuing operation • Fair trade 	<ul style="list-style-type: none"> • Regular communication • Regular visits • Supplier training • Supplier audit



Stakeholder Groups	Expectations and demand	Communication and Responses
Employees	<ul style="list-style-type: none"> • Protect the rights of employees • Safe and healthy working environment • Good career development platform • Competitive salary package • Internal communication channels 	<ul style="list-style-type: none"> • Direct communication • Employee mailbox • Employee satisfaction survey • Employee training • Annual meeting/Team building activities
Academic/ Research institutions	<ul style="list-style-type: none"> • Carry out research cooperation • Provide employment opportunities • Technical exchange 	<ul style="list-style-type: none"> • Visit • Daily mail and telephone communication
Trade associations/ Professional institutions	<ul style="list-style-type: none"> • Promote industry development • Improve product quality • Corporate social responsibilities 	<ul style="list-style-type: none"> • Visit • Feature conference • Training
Media	<ul style="list-style-type: none"> • Services and products • Future development trends • Corporate social responsibilities • Financial performance 	<ul style="list-style-type: none"> • Public reporting • Interview related personnel
Non-governmental institutions/ Non-profit organizations	<ul style="list-style-type: none"> • Support social welfare • Perform social responsibilities 	<ul style="list-style-type: none"> • Organize charity activities • Feature conference
Local communities	<ul style="list-style-type: none"> • Promote employment • Enhance community value • Promote local development 	<ul style="list-style-type: none"> • Charity activities • Media public reporting • Daily mail and telephone communication



MATERIALITY ASSESSMENT

The Group has selected key issues for sustainable development from 7 main aspects including company management, internal and external expert analysis, multimedia information analysis, benchmarking research at home and abroad, social responsibility standard guidelines, supplier feedback and community opinion solicitation. Through executive interviews and online survey questionnaires, we fully understood the judgment of stakeholders on the importance of issues, and analyzed the importance of the sustainable development issues from two dimensions of corporate development and stakeholders, combining with the Company's focus on materiality content, and finally drew a materiality matrix for sustainable development issues. Among them, "Technological Innovation", "Customer Service and Satisfaction", "Protection of Employee Rights", "Product Quality and Safety", "Integrity and Honest Operation", "Intellectual Property Protection", "Energy Conservation and Consumption Reduction", "Employee Training and Development", "Employee Safety and Health" and "Compliant Operation and Risk Management" are the highly important issues, which would be fully elaborated in this report to respond to the concerns of stakeholders.

Materiality matrix for sustainability issues

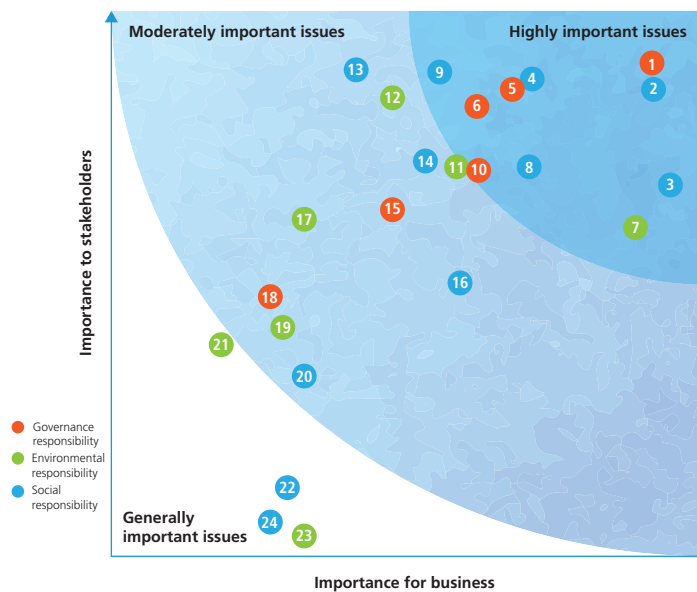


Figure 1 Materiality issue matrix



ESG issues of Sany International

Ranking	Importance	Issues	Category
1	★★★★★ Highly important	Technological innovation	Governance responsibility
2		Customer service and satisfaction	Social responsibility
3		Protection of employee rights	Social responsibility
4		Product quality and safety	Social responsibility
5		Integrity and honest operation	Governance responsibility
6		Intellectual property protection	Governance responsibility
7		Energy conservation and consumption reduction	Environmental responsibility
8		Staff training and development	Social responsibility
9		Employee safety and health	Social responsibility
10		Compliance operation and risk management	Governance responsibility
11	★★★★ Moderately important	Water resource consumption and water saving	Environmental responsibility
12		Management of air pollutant emissions	Environmental responsibility
13		Guarantee customer privacy and information security	Social responsibility
14		Employee diversity and equal opportunities	Social responsibility
15		Promote industrial development	Governance responsibility
16		Employee communication and complain mechanism	Social responsibility
17		Waste management	Environmental responsibility
18		Corporate social responsibility management	Governance responsibility
19		Sewage treatment	Environmental responsibility
20		Supply chain management	Social responsibility
21	★★ Generally important	Climate change	Environmental responsibility
22		Local community communication	Social responsibility
23		Green office	Environmental responsibility
24		Community charity activities	Social responsibility



HIGH-QUALITY PRODUCTS

As a practitioner of “Quality changes the world”, Sany International keeps in mind the “Craftsmanship Spirit”, constantly polishes its products, and has a persistent insistence and pursuit of product excellence. We continue to deepen quality management and provide the society with a wealth of products such as mining equipment and logistics equipment.

Provision of a wide range of products

In recent years, the supply-side reform of the coal industry has achieved remarkable results, fixed assets investment increased substantially and the coal industry accelerated its intelligent development. On the other hand, automated terminal has become the main development direction of the terminal in the future. The relevant equipment is upgraded and replaced towards automation, unmanned and motorization, and the demand for logistics equipment upgrade has also increased significantly. In order to meet the needs of the market, Sany International has seized the opportunities of the times and developed into a leading equipment manufacturer in the field of domestic mining equipment and logistics equipment.





Case study

Mining equipment manufacturing

The mining equipment of Sany International mainly covers coal mining machinery products, non-coal mining machinery products and mining transport equipment. Coal mining machinery products include roadheaders (all types of soft rock, hard rock roadheaders and integrated drilling and anchoring equipment, bolting and self-protection machinery) and mining equipment (shearers, hydraulic supports, scraper conveyors, etc); non-coal mining machinery products include tunnel roadheader and mining machine; mining transport equipment include mechanical drive off-highway dump truck and electric drive off-highway dump truck and widebodied vehicle and other relevant products.

As the first company in China that can provide integrated mining equipment, transportation equipment and a full set of solutions, the coal and rock tunneling machine, integrated drilling and anchoring equipment, combined coal mining units and mining transportation vehicles that we have vigorously promoted have fundamentally changed the mode of single-machine purchase of manufacturing equipment by Chinese coal enterprises, which has led the products in the industry to accelerate development towards the complete set, unmanned and intelligent direction.





Case
study

Logistics equipment manufacturing

In the logistics equipment field, Sany International mainly covers technologically advanced, complete port machinery equipment. We are a large-scale logistics equipment manufacturing enterprise that researches, develops, manufactures and sells port equipment and offshore heavy machinery, and is one of the domestic port machinery complete equipment suppliers with the largest tonnage, the most complete series and the most advanced technology. We provide products including container equipment such as front cranes, stacker cranes and shore gantry cranes, bulk materials such as grabs and overhead cranes, and general equipment such as heavy forklifts and telescopic forklifts.



Case
study

Robots

The Group's robotics business will focus on three major businesses, namely system integration, movable robots and electric forklifts, which empowers the transformation and upgrade of electric, smart and unmanned intelligent production. System integration business focuses on smart factory and smart production line planning, providing overall solutions for smart manufacturing, focusing on blanking, molding, welding, heat treatment, machining, spraying, assembly, commissioning eight process applications. Movable robots business is mainly to meet the unmanned logistics needs of smart factories. We have developed a number of heavy-load backpack AGVs and a series of forklift AGVs. The electric forklift business provides different series of balanced electric forklift products to meet the customers' needs for environmental protection and heavy load scenarios.



Case study

Smart Mine

The smart mine business of the Group covers automatic integrated mining, unmanned mining transport equipment and smart mines. The objectives of the businesses are to accelerate the research and developments of equipment with intelligent technologies such as sensory perception, analysis, autonomous decision-making and automatic control, and to develop unmanned dispatching systems as well as mine operation and management systems, thereby supporting the Group's long-term strategy of developing smart mines and smart terminals.

Technological Innovation Highlights in 2020 (Mining equipment)

Creating a greater value to customers with the transformation of traditional product towards intelligence, electrification and green excavation.

Technological Innovation Highlights of Sany International in 2020 (Mining equipment)



Pure water hydraulic supports: underwent technical upgrades, bringing about improved performance and reduced costs; second set of pure water hydraulic supports at China Energy Investment Group has pushed 847 meters, producing 1.8 million tons of coal.



Intelligent roadheader makes a breakthrough in remote intelligent control technology, realizing beyond visual range intelligent cutting, roadway 3D forming, precise positioning and fewer people.

MINING EQUIPMENT



Pure electric widebodied vehicles: it has been commercially operated in Tibet and Qinghai. It runs continuously for 30,000 kilometers at an altitude of 5 kilometers without any trouble. It saves 75% energy consumption compared with the fuel-powered vehicle, realizes green environmental protection and uses more clean energy.



Intelligent unmanned widebodied vehicles: complete continuous operation at the mine transportation site, and realize the sales and operation of the first complete set of driverless mine equipment in China. Realize the mine unmanned operation, reduce the safety accidents due to the driver fatigue driving in the mine area.



Technological Innovation Highlights of in 2020 (Logistic equipment)

Large port machinery to intelligent upgrade, traditional small port machinery to electric upgrade; Driven the industrial smart port to a full transformation of less manpower, unmanned, create customer demand and provide greater value for customers

Technological Innovation Highlights of Sany International in 2020 (Logistic equipment)



Electric front loader: Development of high efficiency motor electronic control technology, multi-in-one controller technology, double motor +AMT control technology.



Electric trucks: Electric trucks were sold in bulk at Port of Xiamen and Port of Guangzhou, and the company has become the largest supplier of electric truck in domestic ports.

LOGISTIC EQUIPMENT



Telehandler: Completed development of 3 models of telehandler, achieved sales in North America, and was highly recognized by the market.



Large port machinery: Successfully developed automation technologies such as the function of automatic grab and release containers, electronic anti-roll, large vehicle anti-collision, trolley/lifting positioning, and the automated terminal project was delivered.



SANY'S GREEN ENERGY SAVING SYSTEM

The Group's green energy saving system includes eight aspects, through green innovation, green products, green manufacturing, green procurement, green logistics, green recycling, green services and green future, to create green value, promote the establishment of green culture, and actively fulfill corporate social responsibility. The green energy saving system is highly consistent with the Group's high standard quality management system and its future development direction, that is, to intelligent, unmanned, digital and electric development.

Green innovation

Adhering to the original concept of "Quality changes the world", Sany International takes the mission of providing high-quality and reliable equipment and services, and always regards product quality and safety as the core of product responsibility. We adhere to technological innovation, continue to increase investment in scientific R&D and technological innovation, and strive to make progress and breakthroughs in manufacturing level, process innovation and green innovation. We actively develop intelligent products, to realize green, efficient, safe and intensive mining, to realize a shift from a labor-intensive to a technology-intensive process, to realize intelligent integrated mining and remote unmanned mining, and to provide reliable, economical, safe and efficient automated yard integrated solutions for ports.

Sany International regards technological R&D and product innovation as one of the most important competitive strengths, actively improves the enterprise's subjective initiative, adheres to technological innovation, and persists in taking the path of digital and intelligent transformation. In 2020, Sany International invested a total of RMB450 million in R&D, accounting for 6.1% of its sales revenue.

The Group strives to build a digital green innovation system, reshapes its business model through efficient and synergetic research and development model, online visual management platform, and digital research and development means of virtual and real interconnection. In the life cycle of product planning and definition, scheme design, product design, prototype verification, small batch production, to the product launch of the whole research and development, through the use of advanced top-down design, parametric design, knowledge component library collaboration, three-dimensional modeling, load spectrum, digital simulation and other digital technologies, we strive to realize the digitization of R&D design, R&D elements and R&D results. The Group has been solidly promoting green development in 2020, to realise one key to make the core parts modeling and drawing, 100% to establish three-dimensional model, L3 digital simulation ability full virtualization alternative, more than 60% of the physical experiment. Through the green digital research and development efforts, the Group not only effectively save the R&D test material, but also reduced product design redundancy with the effective collaborative R&D model, achieved the goal of doubling the R&D capacity, shortening the design cycle by 50%, shortening the test cycle by 50%, and accelerating the launch of new products by 50%. Through this green innovation, the company actively digitalized the R&D result, by focusing on the 7 major C-section interconnected products, such as predictive maintenance, utilization, assignment and fuel consumption. The Group strives to upgrade the traditional products into digital digital products, and realize the upgrade of electric, unmanned and intelligent products in the field of mine and port logistics.



Green product

Sany International takes the “Green Development” as its core principal to practice clean production, and adheres to the green development path of low input, low consumption, low emissions and high efficiency, actively promote clean technologies and create green products.

The Group introduces energy conservation, green environmental protection, resources recycling and other concepts into its own products and business development, actively promotes clean and environmentally friendly technologies, develops and produces green products, and strives to achieve a harmonious coexistence of economic growth and the ecological environment.

Green product development

Coal mining companies in China consume approximately 3 to 4 million tons of emulsion each year. In the past ten years, tens of millions of tons of waste emulsion have been discharged directly into coal mines, causing serious permanent large-scale water pollution. Starting from environmental and green protection needs, Sany International organized research groups, and spent months visiting more than 120 mines and environmental protection departments, interviewing 350 persons and conducting detailed research on emulsion discharge and water pollution across the country.

According to the investigation, Sany International R&D personnel innovatively proposed to use pure water instead of emulsion as the hydraulic medium as an attempt to solve the problem of underground mining pollution. Through in-depth research on pure water hydraulic technology, the Company’s research and development team has developed sealing components and new materials suitable for pure water transmission. It has undergone 30,000 loading tests and 40,000 endurance tests under rated pressure. Pure water hydraulic technology was tested on the hydraulic support, and its successful test has filled the gap in the use of pure water medium for hydraulic supports in fully mechanized mining face domestically and abroad.

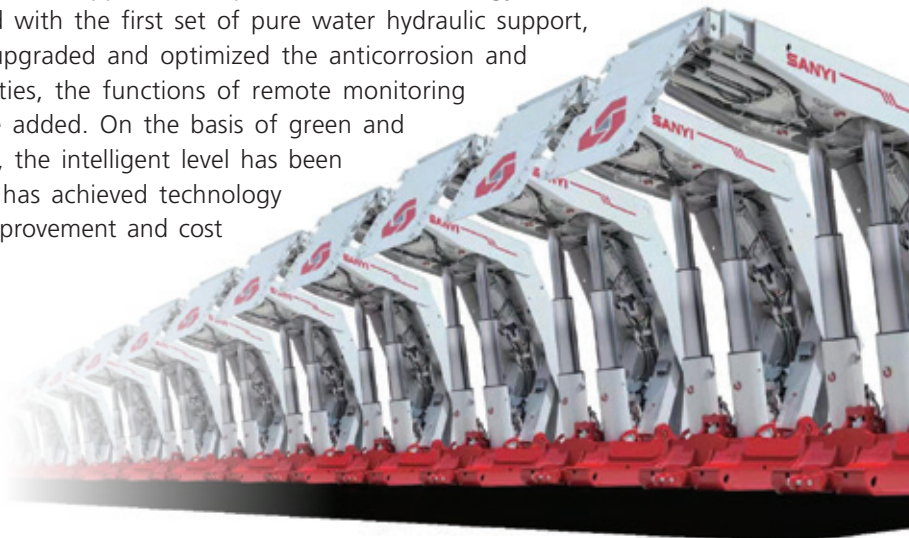
This green and environmentally-friendly product not only reduced impact to ecosystem from coal mining, achieved zero consumption of emulsion and zero pollution to underground water resources, but also reduced coal mining costs, controlled the failure rate of spare parts, extended the useful lives of hydraulic supports and enhanced production efficiency.



Case study

Pure water hydraulic support

- Green and environmental protection: tap water, groundwater and mine water can be used as water sources to produce pure water. Pure water replaces emulsion as working medium, with zero pollution discharge and no ecological impact on underground water and soil, which comply with the national environment protection requirement and thus realized green, efficient, intelligent and environmentally friendly coal mining practice.
- Operation of Sany International's second set of pure water hydraulic support: the company's second set of water pressure support was operated in China Energy Investment Group's mine. Compared with the first set of pure water hydraulic support, this set of support has upgraded and optimized the anticorrosion and water production properties, the functions of remote monitoring and remote control were added. On the basis of green and environmental protection, the intelligent level has been greatly improved, and it has achieved technology upgrade, performance improvement and cost reduction.



Sany International's automated yard and electrification strategy will be comprehensively developed to provide customers with customized, reliable, economical, safe and efficient automated yard integrated solutions. New electric products, such as electric stacking machine, electric steel and material grippers, second generation electric truck and unmanned electric truck, have been put into use in mainstream ports such as Qingdao Port and Xiamen Port to assist the establishment of green ports.



Case study

Pure electric container tractors of Sany International delivers in bulk

- In November 2020, the first batch of Sany's "zero-emission" pure electric container tractors purchased in bulk by Xiamen Port Transport Group Limited were officially delivered. They were the latest developed transport vehicle fitted with a 4x2 heavy-loading rolling chassis, with a maximum tractive tonnage of 70 tonnes. The tractors adopt a dualmotor drive system, and are equipped with dual charge ports and a kinetic energy recovery system. With features of strong dynamic power, fast charging, and low energy consumption, the tractors have vastly improved port transport services.



Clean technology development

Coal intelligent green mining and ecological construction are not only related to the sustainable development of the coal industry, but also to the overall situation of accelerating ecological civilization and mine construction. A large amount of dust is generated during the operation of a coal mine roadheader, especially when the hard rock roadheader is under operation. According to statistics, the dust concentration of the broken roadway when the roadheader is working is as high as 100 to 500mg/m³. The high concentration of dust not only directly affects the sight of miners, resulting in low work efficiency and high accident rate, the dust particles also directly threaten the health of coal miners. The annual incident rate of pneumoconiosis in coal mines directly exposed to dust is 9.7%.

In order to reduce the dust concentration in the tunnel and increase the permeability in the tunnel, Sany International has cooperated with scientific research institutes to conduct years of research on the tunnel boring machine and dust removal technology, optimized the matching relationship between the dust intake and exhaust air for the tunnel flow field, and designed and developed dry dust removal equipment. This kind of equipment removes the limitation of industry dust removal water, improves the roadway dust removal effect without consuming water resources; and the unique pleated filter cartridge structure effectively increases the dust adsorption efficiency, lifting the filtration efficiency up to 99%, and extends the life of filter material.



Green Manufacturing

the Group and Sany Group Co., Ltd.* (三一集團有限公司) (“**Sany Group**”) established Sany Machinery Intelligence Co., Ltd. (三一機器人科技有限公司), and acquired 70% equity interests in Sany Construction Robot (Xi’an) Research Institute Co., Ltd.* (三一建築機器人(西安)研究院有限公司). Upon completion of the acquisition, the Group’s robotics business will focus on three major businesses, namely system integration, movable robots and electric forklifts, aims to promote the intelligent upgrading of China’s discrete production and manufacturing, and strive to become the power of intelligent and green manufacturing in China.

Sany International has started the construction of four lighthouse factories of widebodied vehicles, hydraulic supports, large and small port machinery. By utilizing big data, industrial Internet and robotic technology, the manufacturing process reduced manpower, the production automation rate has been improved and the production capacity has doubled. Take the widebodied vehicles lighthouse factory as an example, the container welding island, frame welding island and automatic painting production line were already formed. The overall automation rate of the welding island was over 80%, realizing unmanned automatic transport and robot automatic welding, which effectively solved the problems of high manufacturing cost and unstable welding quality of manual welding, rapidly improving the welding automation rate, reducing the manufacturing cost and optimizing the design structure. The robot spraying rate of the coating line reaches 90%, and the production line is upgraded by using advanced technologies such as infrared catalyst drying and dry spray room. All materials in the lighthouse factory are distributed by AGV, realizing unmanned and intelligent distribution, and the AGV distribution rate reaches 95%. The material sorting and storage adopts the intelligent storehouse scheme to realize automatic sorting, automatic distribution and automatic storage to realize the automation, less manpower and green of the production process.

Fully promote digital transformation:

The Group considers digitalization as a main contribution to its competitiveness and driving force for development. In 2020, the Group continued to promote digital transformation and upgrade, and has made certain progress.

We conform to the development trend of the industry, seize the window period of the combination of big data and the real economy, open up the flow of information and material object, establish the Sany International Digital Ecosystem, through the application of digital platforms such as Customer Relationship Management (CRM), integrated production and sales Supply Chain Management (SCM) and Product Lifecycle Management (PLM) in R&D, marketing, aftermarket, supply chain, finance and other business areas in order to comprehensively improve the capabilities of R&D innovation and collaboration, marketing management, supply chain management, business and financial integration, and data forecasting.

We have established an intelligent monitoring and data analysis platform, the Enterprise Command Center (ECC), to achieve the “On-site, Realistic and Present” remote monitoring through production equipment and intelligent monitoring networking, and has achieved total coverage of production area, increased the operating rate by 10%, increased the utilization rate by more than 50%, and reduced the defective rate by 14%.



Energy conservation and resource utilization

The Group strictly abides by the laws and regulations such as the *Energy Conservation Law of the People's Republic of China*, continuously improves the efficiency of energy use and energy performance. At the same time, the Group advocates resource conservation, improves resource utilization efficiency, and turns itself into a resource-saving enterprise.

Energy management

The Group has formulated management systems such as the *Environmental Management Regulations and the Power Saving Management Regulations* to regulate energy use and management. We establish an energy management platform through intelligent means, upload data in real time, and monitor various energy usage in real time to minimize waste. The Company completed the installation of more than 500 production equipment digital tables, realized automatic data collection, automatic upload, and implemented monitoring. Through monitoring indicators of all production equipment, the production equipment online rate and utilization rate have been comprehensively improved, and bottleneck equipment and redundant equipment are processed to reduce energy consumption when the equipment is idle.



Electricity Conservation

- Install electric meters at the equipment terminals to monitor the working rate and operating rate of the equipment in real time to avoid waste of electricity.
- Arrange high-power equipment processing as much as possible to reduce peak time electricity consumption according to the task requirements.
- Replace the lighting of plants and administrative offices with energy-saving products.
- Strictly manage electricity consumption in offices, the desktop of the office computer is automatically locked, and the screens is turned off after 10 minutes of inactivity.



Natural Gas Conservation

- Monitor and upload usage data in real time to prevent energy waste.
- Hire professional operation and maintenance company to inspect the pipelines and pressure regulating stations in the park 24 hours a day in 3 shifts to prevent the risk of leakage.
- Windproof doors are added to office administrative areas and dormitories in winter to reduce heat loss and reduce the amount of natural gas used for heating.



In addition, we control the room temperature and implement intermittent heating to reduce heat consumption; strictly manage the use of commercial vehicles and promote new energy vehicles to reduce gasoline consumption; increase the use of non-fuel-consumption transfer tools and regular maintain fuel-efficient forklifts to reduce diesel consumption and increase the utilization rate of electric forklift.



Case study

Notification of electricity consumption during peak hour:

Through the analysis of electricity meter data, the Company controls the peak hour electricity consumption in the plants, and automatically notifies the hourly electricity consumption rate through the company's online operation system.



Case study

Energy saving of digital welding machine:

Through the application of digital welding machine, the power consumption per unit welding wire is reduced from 1.6 to 1.2 degrees.



Case study

Waste heat recovery of air compressor:

The recovery of waste heat by air compressor can be utilized for heating in winter and hot water in plants of lighthouse factories, to realise energy conservation.



Energy Consumption and Intensity

The energy consumption of the Group is shown in the table below.

Energy	Unit	2020	2019	2018
Direct energy consumption				
Natural gas	Cubic meter	1,880,643	1,564,512	1,393,916
Natural gas intensity	Cubic meter/RMB10,000 of revenue	2.55	2.77	3.16
Heat externally purchased	Gigajoule	35,057	40,657	33,912
Heat intensity	Gigajoule/RMB10,000 of revenue	0.05	0.07	0.08
Petrol	Liter	127,027	123,879	153,743
Petrol intensity	Liter/RMB10,000 of revenue	0.17	0.22	0.35
Diesel	Liter	796,780	821,052	659,113
Diesel intensity	Liter/RMB10,000 of revenue	1.08	1.45	1.49
Indirect energy consumption				
Electricity externally purchased	Kilowatt-hour	47,968,507	44,293,060	43,244,324
Electricity intensity	Kilowatt-hour/RMB10,000 of revenue	65.14	78.31	97.91



Water resources management

The Group has formulated the *Water Saving Management Regulations* and has arranged special personnel to monitor the water meter situation every day to monitor the operation in compliance with the system management regulations. During the Reporting Period, the water used by the Group all came from municipal water supply, and no major risk of water shortage was found in obtaining suitable water sources. We actively promote and guide employees to cultivate water-saving awareness, and brainstorm ideas among employees to obtain more water-saving measures. We have taken a series of water saving measures within the Group:

- Install a hierarchical table on the energy-saving faucet, implement real-time data upload, monitor the phenomenon of running and leaking, and reduce waste.
- Install rainwater collection system to collect rainwater in the plant area for landscape irrigation.
- Post water-saving posters in conspicuous places to remind employees to save water at all times.

Raw materials

In order to standardize the use of raw materials and improve the utilization rate of raw materials, the Group has formulated the *Material Unloading Center Programming Design and Remaining Material Management System*, which allocates the management of raw materials at different stages to the relevant responsible personnel to rationally use and manage the raw materials. We also reward or punish relevant personnel according to their completion of management responsibilities.



Case
study

Steel capacity utilization rate increased cost reduction

The utilization rate of steel capacity is improved by analyzing daily layout drawing, integrating surplus material and edge material, and optimizing layout drawing.

Office paper

We also advocate environmental protection and efficient use of paper, choose more environmentally friendly paper suppliers in the office, and choose recycled paper instead of plain paper if conditions permit. We remind employees to consider environmental issues before printing emails, and encourage employees to implement double-sided printing when printing documents and to reuse as much as possible. We have created an electronic system to operate online to replace unnecessary use of paper and directly reduce paper consumption.



Packaging materials

The packaging materials used by the Group are mainly wooden boxes for the packaging of raw materials and components. Without affecting the performance of packaging materials, we actively advocate recycling to reduce wood loss.

The resources consumption of the Group is shown in the table below:

Resources	Unit	2020	2019	2018
Total water consumption	Ton	498,297	529,586	508,589
Intensity of water consumption	Ton/RMB10,000 of revenue	0.68	0.94	1.15
Steel	Ton	144,003.6	133,993.8	/
Intensity of steel consumption	Ton/RMB10,000 of revenue	0.20	0.24	/
Papers	Ton	24.8	26.7	13.5
Intensity of paper consumption	Ton/RMB10,000 of revenue	0.000034	0.000047	0.000031
Packaging wood	Kilogram	1,336,300	1,160,440	299,100
Intensity of packaging wood consumption	Kilogram/RMB10,000 of revenue	1.81	2.05	0.677

Emission control and pollution reduction

Company's approach, relevant law and regulations on emission

Sany International strictly abides by laws and regulations such as the *Environmental Protection Law of the People's Republic of China*, and has formulated the *EHS (Environment, Health, Safety) Management Manual*, the *Environmental Protection Management System*, the *Environmental Protection Responsibility System*, the *Environmental Risk Prevention Management System*, and the *Environmental Emergency Preparedness Plan*, which clearly stipulates the regulations on environmental protection compliance management, environmental protection and supervision, pollution control and emission compliance. The Company has established a comprehensive environmental management system. In 2020, Sany Heavy Equipment and Sany Marine, both subsidiaries of the Group, have passed the certification of ISO14001:2015 Environmental Management System.



In 2020, the Company complied with applicable laws and regulations related to exhaust gas discharge, sewage discharge to water and land, and disposal of hazardous and non-hazardous waste, and effectively operated an environmental management system to ensure the standardized discharge of pollutants such as wastewater, exhaust gas, and solid waste.

Exhaust gas management

The Group strictly follows the requirements under the laws and regulations such as the *Law on the Prevention and Control of Atmospheric Pollution of the People's Republic of China* to process the exhaust gas and ensure that it meets the emission standards.

For the fumes generated from the welding operation, we have set up suction hoods at each welding station in the workshop, and the welding fumes are pumped by the fan to the central fume purification system of the dedusting device for processing and later discharged. For shot blasting dust, we arrange cloth dust collector in the closed shot blasting room for purification treatment. For the spray paint mist produced in different spray booths, we deal with it by setting filtering equipment, activated carbon adsorption and electrocatalytic combustion. At the same time, in accordance with the requirements of *the Emission Standards for Catering Industry Fume (GB18483-2001)*, electrostatic fume purifiers are used to process the fume in canteen, so that the fume purification rate is higher than 85%, and the fume emission concentration is less than 2mg/m³.



The Group's exhaust emissions in 2020 are shown in the table below:

Exhaust emissions	Unit	2020	2019 (Restated)
Nitrogen Oxides (NOx)	Kilogram	60,317.49	61,392.37
Sulfur oxides (SOx)	Kilogram	3,744.27	3,846.26

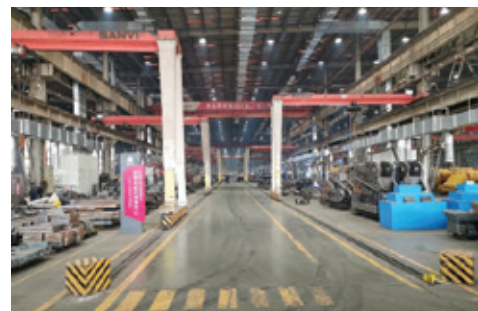


Removing welding smoke and fumes

To tackle the problem of welding smoke and fumes, the Group manages the welding smoke dust removal system by using the Siemens WINCC software, setting up the industrial level monitoring computer system. Through the communication interface with dust removal unit PLC controller connected network, we realize the centralized monitoring of all units. The system automatically control the activation timing of dedusting unit in the plant by referencing to the dust concentration detector.



Outdoor hosting machine operation



Indoor hosting machine operation



Wastewater management

The Group strictly abides by the requirements under the laws and regulations such as the *Water Pollution Prevention and Control Law of the People's Republic of China*. The domestic wastewater of the Group includes wastewater generated by administrative offices, dormitories and canteens. The wastewater is directly discharged into the municipal drainage system. Since the amount of domestic wastewater depends largely on the water consumption, the Company has taken various measures to reduce the amount of domestic water consumption in offices, dormitories and other places. For specific measures, please refer to the detailed description in the section headed "Water resources management" of the previous section headed "Energy conservation and resource utilization". The wastewater produced by the Group includes painting wastewater, emulsion-containing wastewater, vehicle-washing wastewater from the paint shop, and wastewater from the finished product warehouse before delivery. The production plant is equipped with a complete set of treatment equipment for waste emulsion and painting wastewater, and strict internal discharge standards have been formulated. The wastewater from production is intermittently discharged to the wastewater treatment station in the plant area for treatment in accordance with *the Comprehensive Wastewater Discharge Standard (GB8978-1996)* and provincial and municipal wastewater discharge standards, and then discharged into the urban sewage pipeline system and finally transported to the municipal sewage treatment plant. During the Reporting Period, the Group installed a new wastewater treatment system, to reduce the level of Chemical Oxygen Demand (COD) and ammonia nitrogen by 90% compared to last year.

The wastewater discharge of the Group is shown in the table below:

Wastewater discharge	Unit	2020	2019
Chemical Oxygen Demand	Milligram	80,000	790,000
Ammonia nitrogen	Milligram	1,220	19,300

Noise

The Group strictly abides by the laws and regulations such as *the Law on Environmental Noise Pollution Control of the People's Republic of China*, and has formulated the Noise Protection Management Regulations to strictly control the noise generated by air compressor operations, shot peening operations, various welding machines and machine tool operations, in order to maintain the noise level within the scope of national standards.

The Group has adopted the following noise reduction measures: installing a silencer at the air inlet of the air compressor and a vibration reduction device between the equipment and the foundation; keeping all noise sources within the workshop, opening windows and other unprotected openings as little as possible, and using the greenery outside the workshop to block the propagation of sound.



Climate Change and greenhouse gas emissions data

Greenhouse gas emissions are an important cause of climate change. The Group's greenhouse gas emissions include direct greenhouse gas emissions and indirect greenhouse gas emissions of energy. Direct emissions of greenhouse gas mainly include petrol and diesel combustion emissions from vehicles, while indirect emissions mainly include emissions from purchased electricity and heat.

Sany International's strict management of energy and resources has effectively reduced greenhouse gas emissions. In addition, we have planted more trees in the factory area to absorb carbon dioxide. As the management of the Group pays more and more attention to energy conservation and mitigation of global climate change, and all employees obey corresponding policies and measures, the Group is expected to lower the greenhouse gas emission intensity in the production process year by year.

The Group's greenhouse gas emissions in 2020 are shown in the table below:

Greenhouse gases emissions	Unit	2020	2019
Scope 1	Tons of carbon dioxide equivalent	6,434.97	5,807.64
Scope 2	Tons of carbon dioxide equivalent	52,395.43	49,783.42
Total emission	Tons of carbon dioxide equivalent	58,830.39	55,591.06
Emission intensity	Tons of carbon dioxide equivalent/output value of RMB10,000	0.0799	0.0983

Hazardous and non-hazardous waste management

Solid waste management

The Group strictly abides by the laws and regulations such as *the Law on the Prevention and Control of Solid Waste Pollution of the People's Republic of China* and has formulated the Hazardous Waste Management System to regulate management.

- *Non-hazardous solid waste*

The non-hazardous solid waste generated by the Group includes domestic solid waste and industrial solid waste. Domestic solid waste is collected and processed by the hygiene department; industrial solid waste, such as leftovers or metal scraps, is sorted and recycled by the Company's full-time staff, and then sold to a professional recycling company for recycling. We educate employees on environmental protection, enhance their environmental awareness, and paper saving, and reduce the generation of domestic waste; by improving the production and cutting process, we reduce the waste of steel in production and the amount of scrap metal produced.



- *Hazardous solid waste*

We have established a strict storage system for hazardous wastes. We classify, collect, and store hazardous solid wastes such as waste oil, waste paint residue, and waste paint buckets in hazardous waste storage warehouses with warning signs, and implement strict declaration and registration management. We also have personnel responsible for the supervision and management of hazardous wastes, and follow the principle of “Unified collection, Classified disposal & Elimination of hidden hazards” to achieve reduction, recycling, and harmlessness of hazardous wastes. We regularly send the hazardous waste generated to a professional company with disposal qualification for disposal. We reduce the generation of hazardous waste from the source by developing water-based paints and high-solids environmentally friendly paints.

Waste discharge of the Group is shown in the table below:

Hazardous waste	Unit	2020	2019
Waste paint bucket	Ton	240	219
Paint residue	Ton	104	70
Waste mineral oil	Ton	80	76
Total hazardous waste	Ton	424	365
Intensity of hazardous waste	Ton/RMB10,000 of revenue	0.0006	0.0006

Non-hazardous waste	Unit	2020	2019
Steel and iron scrap	Ton	31,911	28,744
Household garbage	Ton	401	388
Total non-hazardous waste	Ton	32,312	29,132
Intensity of non-hazardous waste	Ton/RMB10,000 of revenue	0.04	0.05

Green Logistics

The Group integrated loading rate optimization with routing optimization, strive to reduce the environmental impact from business operations, and to create shared value of sustainable logistics and carbon reduction target. Through the “On-site, Realistic and Present” monitoring data analysis, we had optimized product distribution by widebodied vehicles from on-site packaging, tooling, and production auxiliary material to achieve packaging reduction.



Green Procurement

The Group determined to adopt green procurement as its core principal in supply chain management. We cooperating with suppliers with honesty and integrity, aiming to achieve mutual prosperity and proactive communication. We committed to bearing the social responsibility with the suppliers. The Group continuous working towards our green procurement goal. During the procurement process, priority is given to suppliers (who attach importance to resources conservation, environment-friendly products, caring for employees) in the Sany's Supplier System, in order to implement Sany's social responsibilities and show our care to the community.

The Group looks forward to cooperating with the strategy partners who working toward common goals in nurturing green living, including the research and development and application of new products, new technologies, new equipment, and new materials. The suppliers' effort in energy conservation, and eco-friendly products are the most important criteria in supplier selection process.

The Group has established anti-corruption and punishment policies and procedures, the bestowing and receipt of gifts from suppliers is prohibited, to suspend workplace bribery and corruption. Besides, the Group also requires the sales department staff to sign off letter of undertaking of integrity, and develop the channels for suppliers' complaints. When bribery or other violations of business code of conduct is found, they can appeal.

Going forward in the future, the Group also considers adding binding clauses to the suppliers' contract, in relation to employee safety and health, protecting employee rights and interests, and environmental, etc., requiring suppliers to actively implement occupational safety and health protection measures for the safety and health protection to their own employees in workplaces. In addition, the Group is also considering adding clauses that the Group can terminate the contract if the supplier violates the policy of corporate social responsibility or has a significant negative impact on the environment and society.

Green Recycling

The Group is committed to promoting green recycling, through sorting, transportation, dismantling, processing, recycling, waste disposal and resource recovery to study how to effectively control in every stage, realize resource recycling, renewable, environmental protection, safety and health quality of comprehensive promotion, active integrate circular economy industrial chain and green manufacturing system. The group also emphasizes the design and recycling of product packaging to reduce the waste of resources.

The Group utilizes the recovered waste heat by air compressor for heating in winter and of hot water in plants of lighthouse factories, also through the in-depth analysis of natural gas data, combined with production value, weather condition, indoor temperature, we adjust the consumption of fuel to achieve conservation of energy.



Green Services

In providing services to customers, the Group strictly adhere to save resources, reduce consumption, minimize pollution, reducing the negative effect on the ecological environment and human health as much as possible via service process, and try our best to protect the ecological environment, to reduce the service cost and improve the economic benefit at the same time, adhere to meet the actual needs of customers. The group implements green services through the following methods:

- Implements “On-site, Realistic and Present” goods control for the overseas warehouse, realizes 30% materials are delivered directly to the central warehouse, and uses digital means to control the accessories, the overseas warehouse and logistics are 100% transparent and visible, and quick processing for after-sale service.
- Provide customers with product operation statistical analysis reports, and achieve a significant improvement in customer experience.
- Constantly improve and optimize product performance according to C-section data, perform predictive maintenance on equipment, and provide remote service to reduce call times and energy saving, etc.

Green Future

Climate Change

The Group puts strong emphasis on the impact that climate change may have on cities, communities, supply chains and its daily operations. We have revisited our climate change policy and disclosures were made in accordance with recommendations of the “Task Force on Climate-Related Financial Disclosure (TCFD)”, including identifying risks related to climate changes and developing risk mitigation measures.

In response to global climate change, our climate change policy aims to adapt and to mitigate the impact of climate change on the operations. We progressively incorporate the risk of foreseeable climate change and extreme weather events into the current business continuity plans to monitor and review the impact of climate change on the operations. Our action plan includes but not limited to continuous identification and assessment of related potential financial and operation risks, establishment and implementation of long-term carbon emissions reduction targets, encouraging employees, suppliers and customers to reduce carbon emissions in their daily operations wherever practicable, adopting industry beset practices to improve energy efficiency in daily operations and putting the climate-related risks into consideration in selecting location for new operation facilities.



Under the framework provided by the TCFD, financial risks from climate change can arise from two primary channels namely physical and transition risks. Physical risks resulting from climate change can be event driven (acute) or longer-term shifts (chronic) in climate patterns. Acute physical risks refer to those that are event-driven, including increased severity of extreme weather events (e.g. super typhoons, floods, droughts). Chronic physical risks refer to longer-term shifts in climate patterns that may cause sea level rise or chronic heat waves. Transition risks refers to risks arise in policy, legal, technological, and market changes during the transition to a lower-carbon economy, in order to minimize and adapt to the impact brought by climate change. These changes may affect the operation of different industries, for examples, shifts in consumer preferences and potential climate-related regulations changes during economical transition may affect companies’ revenue and fluctuation in supply and price of raw material may affect cost of production.

According to Stock Exchange guidance on ESG reporting and TCFD recommendations, the Group has analyzed the potential impact of climate risks as follows:

Risk Type	Impact Analysis and Mitigation Practice
Transition Risks — Policy and Legal Risks	<p>The PRC has been actively participating in fulfilling the commitments of the Kyoto Protocol and the Paris Agreement. In 2020, the PRC scaled up its nationally determined contributions, and pledged to achieve carbon neutrality by 2060. With the tightening of relevant policies and the expectations on the disclosure of the identification of climate risk by the Stock Exchange and other institutions, it expected that the Group will be subject to restrictions on greenhouse gas emissions by regulatory authorities.</p> <p>With the Ministry of Ecology and Environment announced the implementation of <i>the Administrative Measures for Carbon Emission Trading (Trial)</i> from 2021, the climate-related policy and legal risks include charging of greenhouse gas emissions, enhancement of emissions reporting obligations and mandates on and regulation of existing products and services. The potential effects of those risks include increase of compliance cost such as investment involved in upgrades of existing greenhouse gas treatment system and deploying more efforts in emission monitoring and reporting.</p> <p>Our Group has been monitoring our greenhouse gas emissions and air pollutant emissions to meet locally enforced environmental requirements. We have adopted the ISO 14001 Environmental Management System and set emissions reduction targets to avoid sudden increase relevant compliance cost when the emission standard being tightened in the future.</p>



Risk Type	Impact Analysis and Mitigation Practice
Transition Risks — Market Risks	<p>In the transition to lower-carbon economy, the production cost and energy cost of different industries may face unexpected fluctuation when they deal with the rapid changing market, not to mention the tightening of related emission requirements. Moreover, there has been an ever increase of market demand for green product with low carbon footprint and high energy efficiency in production. The related financial risks include increase of raw material cost and shift of customer preferences.</p> <p>Increase of price of raw materials will affect the bargaining power of companies in the short-term, and may even change the common practice of the industry in the long-term. As a large-scale company, we benefit from the scale effect. Thus our strategic inventory and supply chain management capabilities are superior than small-scale enterprises. For instance, we have strong bargaining power with suppliers in the upstream of the supply chain, and we also have the flexibility to shift costs to the downstream as price of raw materials rises. The Group is also actively seeking more cost control methods. Taking steel as an example, we strive to increase the utilization rate of steel in order to counteract the operation pressure created by its increasing price. Regarding the changes in customers' preference for green products in the market, in the previous chapters we have introduced a variety of energy-efficient, intelligent and unmanned innovative products to fully meet the diverse needs of customers.</p>
Physical Risks	<p>Under the effect of climate change, it is predicted that extreme weather events such as heavy rainstorm, strong typhoon and flood will occur more frequently and increased in severity. In long-termed, we observed changes in precipitation pattern and extreme variability in weather patterns, as well as global rising mean temperatures and sea levels which may lead to damage of production facilities and thus increases in operating cost, decrease in productivity and even production suspension.</p> <p>Under detailed assessment, the Group believes that little influence (created by long-termed climate change and extreme weather event) on our business operations and production facilities is expected. Going forward in the future, we will continue to monitor and assess related risks brought by extreme weather event and climate, and they will be treated as high priority in our consideration when selecting new operation sites.</p>



CULTIVATING TALENTS

The success of Sany International depends on the talents and efforts of employees. Through diversified and humanised management, the Group has established a close relationship of mutual trust and support with employees, creating a positive corporate culture and a safe and healthy working environment for employees. We actively improve our own employment system, commit to cultivating first-class teams, and strive to realise the corporate vision of “Cultivating first-class talents”.

Employment and Labour Standard

Sany International is committed to creating a fair, respectful and diversified working environment, strictly abide by international labour standards and related national labour laws and regulations, maintain and practice fair and just employment regulations, to respect and protect employees’ rights and interests.

The Group strictly abides by *the Labour Law of the People’s Republic of China, the Contract Law of the People’s Republic of China and the Regulations on the Prohibition of the Use of Child Labour*, and has formulated the *Recruitment Management System* to clarify recruitment responsibilities, standardise employment standards and procedures, and strictly prohibits employment of child labour. The Company’s human resources department is responsible for recruitment procedures such as job posting and recruitment, initial interview, and coordinating the employment department for professional interviews, final interview, and background investigation. At the same time, the Group strictly prohibits any unfair or unreasonable dismissal. Any termination of employment contract must be based on reasonable and lawful grounds.

Sany International strictly prohibits all kinds of discriminatory behaviours and regulations to ensure a fair and equal employment environment. The Group respects every employee and does not allow any discrimination during the recruitment, training, Key Performance Indicators assessment, selection for promotion and salary review procedures regarding their race, religion, colour, gender, nationality, age, disability and any other factors. We continue to follow the latest national and regional labour laws and regulations, conduct risk analysis on the Company’s labour situation, adjust labour policies in a timely manner, and prohibit forced labour.

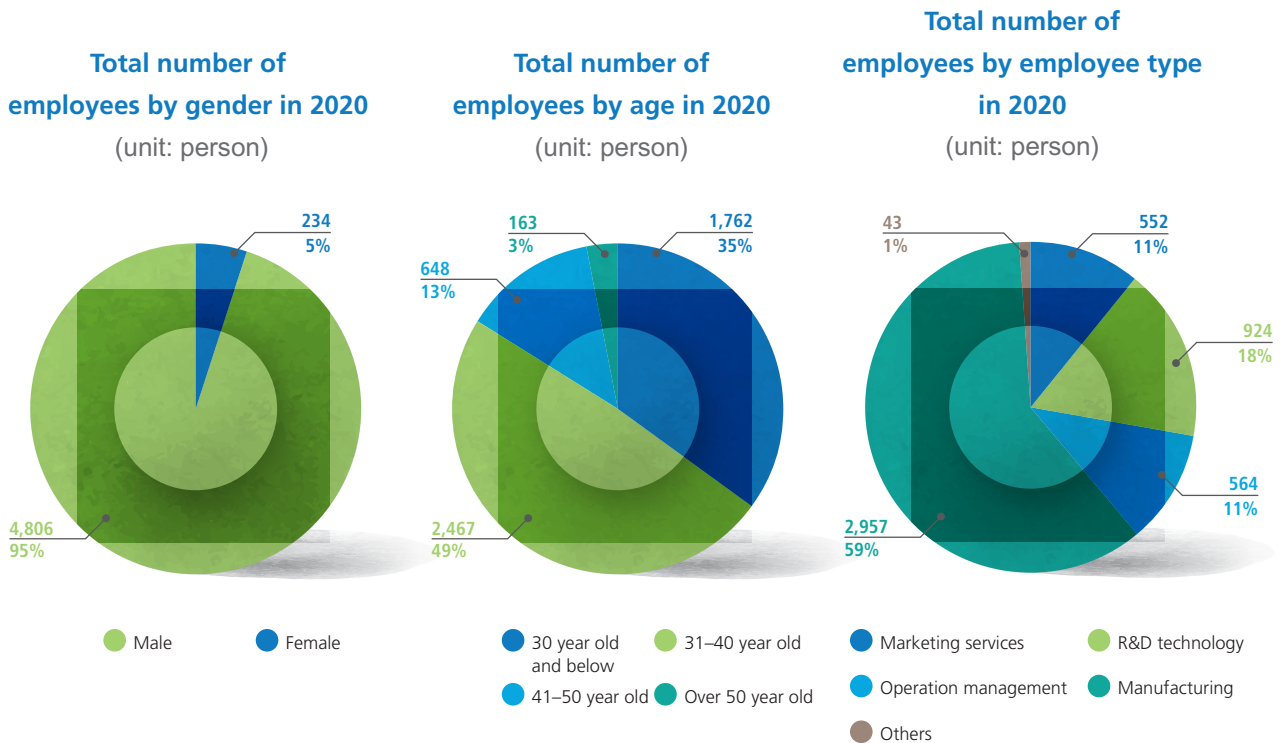


The Group continuously optimises and improves its recruitment system by replenishing talents through various channels such as internal recruitment, open recruitment and campus recruitment. The Group supports local employment and campus recruitment. In 2020, we continued to step up efforts in recruiting talents, among the newly recruited employees, most of whom are local citizens, in doing so, we have made contributions to ease the local employment problem. At the same time, according to internal systems such as *the Joint School Management System*, *the Recruitment Channel Optimisation Management Method* and *the Recruitment Channel Optimisation Management Process*, we cooperate with colleges and universities to conduct campus recruitment job fairs, and introduce new students in batches to join us every year.





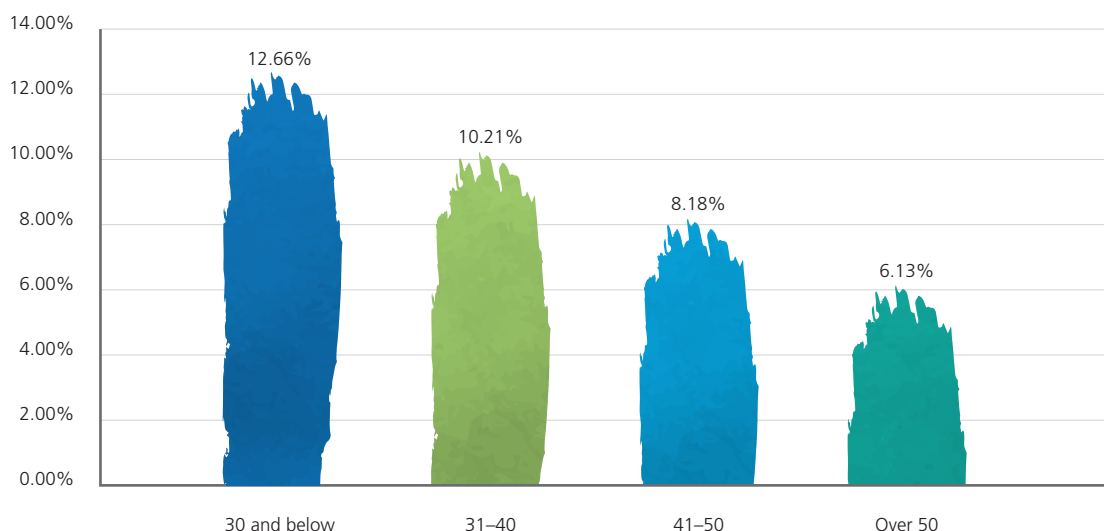
As of the end of the Reporting Period, including the robots business, the total number of employees recruited by the Group worldwide was 5,040, including 4,950 in Mainland China and 90 overseas, in Hong Kong, Macau, and Taiwan, with 4,806 male employees and 234 female employees. The overall turnover rate was 10.7%, in which the turnover rate of employees in Mainland China was 10.7% whilst that for overseas, Hong Kong, Macau, and Taiwan employees was 11.1%. The turnover rate for male employees was 10.5% whilst that for female employees was 13.2%. The distribution of all employees according to age, gender, and function is illustrated below.





Employee turnover rate by age in 2020

(unit: %)



Remunerations and dismissal

Sany International has formulated internal regulations such as *the Employee Welfare Management Regulations*, *the Paid Annual Leave Management Process*, *the Striver Management Process* and *the Reward and Penalty Management Process* to ensure the rationality and fairness of the Company's remuneration and welfare system. In accordance with the Performance Management Process and *the Performance Management System*, we implement a mechanism that links performance and remuneration so that employee income is linked to company performance and individual performance. We actively explore diversified salary incentive mechanisms, strive to provide employees with highly competitive remunerations and benefits, and increase employees' sense of mission, accomplishment and belonging. The Group strictly prohibits any unfair or unreasonable dismissal. Any termination of employment contract must be based on reasonable and lawful grounds.

Share option scheme and restricted share award scheme were adopted so that outstanding employees may be awarded with shares of the Company to share the growth of the Company. Pursuant to the restricted share award scheme, 5,242,199 shares in aggregate were granted to more than 400 selected participants (grantees) on 18 December 2020 to recognise and reward the contribution of the grantees to the Group's development and to maintain long-term stability of the core management team so as to enhance the Group's competitiveness and sustain the Group's future development.



Recruitment and promotion

To strengthen the development and training of talents, the Group sets up a multi-dimensional and diversified development path. According to the principle of matching employees' personal development with their job capabilities, it provides employees with professional, technical, and management development channels, and is committed to providing a broad platform for the growth of employees.

We have established a series of customised talent training and selection including "Potential Talent", "Elite Training Camp", "Young Eagle Plan" and "Reserve Echelon Cadre" to help employees achieve rapid growth, thereby creating a diversified and high-quality talent echelon. Among them, the "Young Eagle Program" is for young students who are competing within the Company. It is the most effective way for middle and entry level employees to join the management of the Company. Young employees who are interested can first apply to join the training class of the "Young Eagle Plan" for full time learning. We select candidates based on training achievements and other factors, who will then be eligible to attend a new round of interview. Once the candidates are selected, they will be directly appointed to the corresponding leading positions, or will be promoted to the level above the original position. Through the selection of young and promising talents to join the management team, we can inject new vitality into the development of Sany International, and realise the mutual development of employees and the enterprise.

Staff welfare and benefits

To create a comprehensive welfare protection system, we provide employees in mainland China with five insurances and a housing provident fund, which gives employees in Hong Kong, China with medical insurance, mandatory provident fund and year-end bonuses, interns with employer liability insurance, foreign experts with foreign expert health insurance, and employees going abroad for business with overseas personnel accident insurance. The Group recognises the high importance of work-life balance of our employees; abide by statutory requirements, they are entitled to marriage leave, bereavement leave, maternity leave, paternity leave, breastfeeding leave, work injury sick leave, etc. We also provide employees with a variety of benefits including housing benefits, festive treats benefits, birthday benefits, clothing benefits, heatstroke prevention and cooling benefits, catering benefits, transportation benefits, paid special leave, health checkups, and schooling for children of employees. For employees with outstanding performance, the company continues to implement a studying abroad mechanism, we cooperate with famous domestic and foreign universities, selects and sends employees with outstanding performance to study and training in domestic and foreign universities.

We organise various staff recreational activities from time to time to enrich staff's recreational cultural living and enhance staff's art and sports ability and cultural standards, the company held a series of staff activities in 2020, such as basketball game, badminton game, tug of war, swimming game and other sports etc.



HEALTH CARE AND SAFETY SECURITY

Sany International takes “Safety First” as its operating principle, continuously improves work safety, process safety and environmental safety, guarantees production safety, guards employees’ health, creates a safety culture throughout the Company, and minimises safety risks.

Production safety guarantee

The Group strictly abides by the requirements of the laws and regulations such as *the Law on Safety in Production of the People’s Republic of China*, upholds the belief of “Safety first, Prevention first & Comprehensive governance”, attaches great importance to safety production management, continuously improves the safety production management system, and implements various measures of safety production.

Safe management system construction

The Group established the HSE (Occupational Health, Safety, and Environment) management department, which is responsible for overall planning, coordination and guidance of the Group’s production safety, including the formulation of annual HSE goals and management plans in accordance with the Safe Production Responsibility System, research on the Group’s HSE issues and perform major deployment. In 2020, both Sany Heavy Equipment and Sany Marine, subsidiaries of the Group, have passed the certification of OHSAS18001:2007 Occupational Health and Safety Management System.



Safe production risk control

In order to control safety risks and ensure the safety of operations, the Company regularly checks for hidden safety hazards in various areas according to the *Hazard Identification and Risk Assessment and Control Procedures*. According to the requirements, we select the hazard evaluation method (scoring evaluation method), Job Hazard Analysis (JHA) method and Safety Checklist Analysis (SCL) as the hazard identification methods. Hazard identification and risk assessment control procedures are coordinated by the Company's business departments, environmental safety management departments and lean quality headquarters. Each business department is responsible for raising risk factor identification requirements, and a team is established for the identification, evaluation and verification; each environmental safety management department plans, integrates, grades and identifies risks, and formulates measures; lean quality headquarters is responsible for approving, filing, and monitoring major accident hazards, progressing from the hazard identification stage to the risk assessment stage.

At the same time, we conduct a safety review of all production equipment, including checking whether the equipment meets the requirements of relevant national standards, whether there are safety protection measures, and whether there are equipment safety operating procedures. According to the *Equipment Installation and Acceptance Management System*, the equipment must have safety verification as required before entering the field; during equipment installation and acceptance, HSE personnel is responsible for acceptance of safety and environmental requirements raised by the equipment project. In the process of using the equipment, a regular inspection by the commissioner is arranged, and mechanics are required to perform preventive maintenance regularly to reduce the safety risk of the equipment.

In 2020, we also actively carried out safety risk investigation and treatment activities in accordance with the Safety Inspection System, focusing on inspecting the high-power electrical appliances of each plant and staff dormitory, our safety officer also carried out strict inspection in all aspect of production site in order to prevent fire hazard.



In addition, in order to ensure the safety of the contractor’s construction and production, avoid and reduce accidents as much as possible, we have formulated the Contractor Safety Management System to strictly supervise the contractor’s qualification preview, operation supervision and safety measures during operation.

Creating an atmosphere of safety culture

The company attaches great importance to the health and safety of employees and provides them with a safe, healthy and comfortable working environment. The company has established a safety production management system and promulgated a system of rewards and punishments for safety management, which specify the safety production responsibility system and evaluation mechanism, state the classification and accountability of safety accidents clearly and integrate the mission of safety production into the departments and the group’s comprehensive performance management to reinforce the importance of production safety implementation. The participation in regular fire drill organised by the quality assurance office can also enhance employee’s safety awareness and thereby ensure their safety.



Fire drill



Dormitory building fire drill

During the Reporting Period, the Group did not have any major work-related injuries or deaths due to work. The number of employees deceased due to work was 0, and the total number of days lost due to work-related injuries was 3,235.

	2020	2019	2018
Employees who died due to work	0	0	0
Total number of days lost due to work-related injuries	3,235	2,648	N/A



Caring on employee health

We always put the health and safety of employees in an important position in the operation process, and strive to reduce the operational risks of the enterprise and protect the safety of employees. The Group strictly abides by relevant laws and regulations such as the *Occupational Disease Prevention Law of the People's Republic of China* and the *Work Injury Insurance Regulations*, and has formulated internal systems such as the *Occupational Health Management System*, the *Occupational Disease Hazard Prevention Management System*, the *Occupational Health Monitoring and Archives Management System*, in order to protect the physical, mental and occupational health of employees.

The Group actively reduces the occupational hazard factors such as onsite dust, noise and vibration or the chance of exposure to hazards through technological innovation, equipment upgrades and process substitution in order to improve the working environment of employees. At the same time, in strict accordance with relevant national and local regulations, we provide employees with personal protective equipment that meets safety and health standards, grant special job allowances, establish and keep employee occupational health records, regularly carry out occupational health checks, timely adjust job positions, and post warnings and publicity signs and take other multiple measures to minimise the occurrence of occupational diseases and ensure a healthy and safe working environment.

DEVELOPMENT AND TALENT TRAINING

Sany International regards employees as partners for mutual growth and is committed to improving the Company's internal training programs and promotion channels, creating opportunities for employees, and helping employees achieve their self-worth.

Comprehensive staff training

Sany International attaches great importance to the cultivation of employees and combines the Company's development strategy and business objectives to formulate training systems such as the Training Management Process, the Training Management System and the Talent Development Management System to implement the Company's talent training program to promote the common development between employees and the Company. In 2020, the total number of trained employees was 116,278.

Comprehensive training system

We respect the development needs of employees, and each department determines the annual training goals of employees in accordance with the Training Demand Analysis and Management Methods and the Training Demand Analysis and Management Process. We provide employees with ample training resources, including professional training and general training. Courses of different systems can be studied via the Company's SHR system. At the same time, the system can record the employee's learning content and learning duration, so that the department can understand the employee's learning situation.



Training System for the Group:

R&D

- R&D personnel training
- Professional knowledge orientation training
- Electrical technology training
- Field and bridge component knowledge training
- Patent knowledge training
- Pro-e parameterized training
- Standardized knowledge training
- ANSYS training, etc.

Business

- Product knowledge
- Process courses
- Component knowledge
- Supplier management training
- Outsourcing business management training
- Procurement budget planning training
- Customer training
- New marketing representative training
- Semi-annual marketing training, etc.



Manufacturing quality

- Safety and job skills training
- 6S safety training
- QC training
- SCM blueprint training
- SCM manufacturing process training
- On-site quality improvement training
- System knowledge and auditing skills training
- Supplier quality management training and
- Skill level certification training, etc.

Human resources

- Human resources professional training
- Leadership training, etc.

Implementation of training management

For newly recruited employees, the Group has formulated regulations such as the *Management Process for New Employees*, the *Management Process for Joining the Company* and the *Management Measures for Joining the Company* to ensure that new employees can receive comprehensive orientation training to help them quickly integrate into the new family. For existing staff, in accordance with the Credit System Training Management System, each employee must obtain certain credits in selective and compulsory courses.

To ensure the training effect, according to the *Training Effectiveness Assessment Management Method and the Training Effectiveness Assessment Management Process*, after the training is completed, we communicate with the training staff in a timely manner and obtain the employee's feedback and suggestions on the training through various methods such as sample interviews in order to improve the Company's training mechanism and clarify the future direction of improvement.

In addition, we conduct performance appraisals on the lecturers in accordance with management methods such as the *Lecturer Title Evaluation Management Method*, the *Lecturer Title Evaluation Management Process*, the *Excellent Lecturer Selection Management Method* and the *Excellent Lecturer Evaluation Management Process*, and monitor the lecturers to complete training tasks in a better way.



Utilisation of external resources

In terms of hiring external lecturers, we strictly follow the *Lecturer Management Measures* and the *Lecturer Management Process*, and appoint a designated person in charge to develop training plans with the hired senior lecturers, and require the lecturers to abide by the *Tutorial System Management Measures*. At the same time, we select excellent employees to go out for further education in accordance with the *Management Methods for Sending Out Excellent Employees for Education* and the *Management Process for Sending Out Excellent Employees for Education*, and regularly carry out cooperation with external high-quality educational resources to further accelerate talent cultivation.

Highlights for training and development

We pay great attention on staff nourishment and development, and provide our staff with good career development channels, and assist our staff in their career planning from organisational and personal aspect. We organise vocational training of various level to our staff including onboarding training, pre-job training, on-the-job training (professional skills), leadership training, potential talents training, executives lectures according to the staff's career development path.

1. On the basis of our traditional training system, we have built an online learning platform in the cloud platform, which provide our staff with abundant learning resources, and allow them to study in fragmented time by attempting the training videos anytime and anywhere.
2. Core Talents training in 9 major aspects: We will carry out a series of training activities for core talents from the 9 major aspects (including operations, research & development (“R&D”), marketing, servicing, finance, human resources, business, manufacturing, quality assurance, IT system), the training comprise of centralised training, seminars with senior management etc.
3. Cadre on-boarding training: we organise training courses to improve the cadre's professionalism and management skills. Trainees who passed the training assessment will be officially appointed.
4. R&D project manager certification training: The Group applies the practice of validation before appointment, we conduct all-round training and assessment to our R&D project manager in the following six aspects, including R&D process, project management knowledge, related business knowledge, project manager professionalism, product professional knowledge and product operation.
5. Marketing & servicing personnel training: Regularly organise external training for marketing and servicing personnel. The training contents include marketing strategy, marketing mindset, customer psychology, digitalised marketing risk management, service skills and case sharing, etc. We also organise exchange and visit with our partners during the training.
6. Robot programming training: The Group set up a robot programming training site to carry out programming training for our robot craftsmen in batches.



Training and Development Statistics

2020

TOTAL NUMBER OF TRAINED EMPLOYEES

Integrated

By gender	
Male	110,959
Female	5,403
By types of employees	
Marketing Services	33,482
Technology R&D	31,285
Operation Management	6,777
Manufacturing	44,818

ESTIMATED AVERAGE TRAINING HOURS¹ (HOURS/STAFF)

Integrated

By gender	
Male	23.1
Female	23.1
By types of employees	
Marketing Services	60.7
R&D Technology	33.9
Operation Management	12.0
Manufacturing	15.2

RESPONSIBLE OPERATION

Sany International insists on operating in compliance with laws and regulations, strengthening honest and self-disciplined operations, improving internal control mechanisms and comprehensive risk management systems, so as to ensure the Company's orderly and stable operation. We always keep in mind the service philosophy of "All for customers" and continuously enhance customer service satisfaction and the degree of trust. At the same time, we uphold the principle of fairness, justice and openness, and work together with all parties to achieve win-win results, to help our partners to achieve supply with responsibility. We strive to provide services that satisfy our customers based on compliant operations.

¹ Estimated Average Training Hours = Total number of training hours during the reporting period/total number of staff at the end of the reporting period



RESPONSIBLE SUPPLIERS ARE OUR PARTNERS

A stable supply chain is prerequisite for the Group to maintain normal operations. In order to further ensure the stability of the supply chain system, standardise cooperation with suppliers, and ensure that supplier quality, cost, delivery, service, environment, and social responsibility meet the requirements of the Group, the Group has formulated internal systems such as the Global Supplier Portal Management Regulations, the Production Suppliers' Full Lifecycle Management System, the Production Suppliers Management System and the Production Suppliers Access Process in accordance with the Company Law of the People's Republic of China, the Contract Law of the People's Republic of China and the E-commerce Law of the People's Republic of China, and implemented supplier selection procedures and standards, in order to select suppliers in a fair, just and open manner and conduct supplier management.

Supplier classification

The Group helps and nurtures suppliers through activities such as performance evaluation, inspection, management movement, training and relationship research, and establishes a long-term cooperative relationship with them.

Suppliers by channel





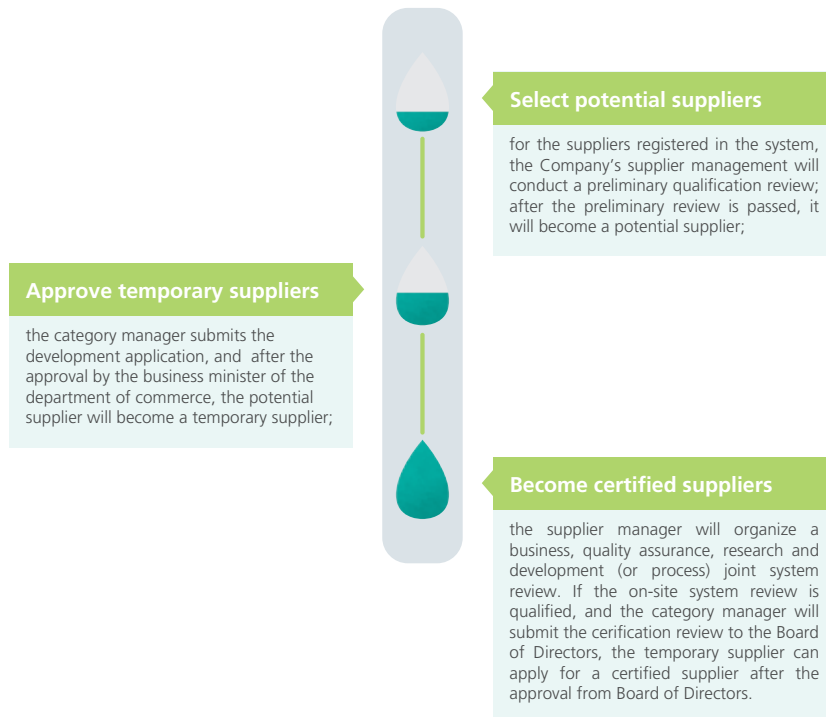
Suppliers by product/service



- Provide components used in the product itself, including suppliers that provide production auxiliary materials and consumables
- Supplier shareholders having Sany international work experience
- Other suppliers who need special treatment or care to conduct business

Supplier Management

The Group implements online supplier management through the integration of information systems such as Good Supply Practice (GSP). We require merchants who are willing to cooperate with the Company to upload and update relevant information and qualification files (including business license, tax registration certificate, organisation code certificate, mandatory product certification, quality, environment and occupational health and other certificates) on the system platform. We advocate survival of the fittest and fair competition. Through multi-dimensional evaluation and assessment of the qualification, capability, equipment, operations, and certification systems of registered merchants, we conduct supplier development certification and management according to the following process:





For new suppliers, the Company's department of commerce will organise a GSP online operation guide training, and the quality assurance department will arrange personnel to go to the supplier's site to guide the quality requirements and standards for smooth cooperation. For certified suppliers, in the process of cooperation, the Company's department of commerce and department of quality assurance will arrange each supplier's docking positions to perform supplier performance evaluation and inspection. Any suppliers that failed in the evaluation, the department of commerce will organise and provide training to help rectification for them; those who seriously violated the cooperation principle will be blacklisted. Energy conservation and environmental protection is one of the most important criteria for our supplier selection. In order to identify and manage the environmental and social risk associated with the supply chain, we actively consider adding the binding clause of ensuring labour safety, safeguarding the rights and interests of peasant workers and protecting the environment into the contract terms in the future. Suppliers are required to actively implement occupational safety and health protection measures, and continue to improve safety equipment and facilities to provide a safe employment environment for the workers.

During the Reporting Period, the Group had a total of 983 qualified suppliers in Mainland China and a total of 19 suppliers in overseas and Hong Kong, Macau and Taiwan regions.

Region	2020	2019
Hong Kong, Macau, Taiwan and Overseas	19	10
Southern China	128	145
Eastern China	466	444
Northern China	91	110
Central China	207	167
Northeast China	74	108
Southwest China	9	9
Northwest China	8	7
Total	1,002	1,000



PRODUCT RESPONSIBILITY

Product safety and Quality Management

The Group strictly abides by the laws and regulations such as the *Product Quality Law of the People's Republic of China* and formulates internal management systems such as the Quality Management System. Sany Heavy Equipment and Sany Marine, being the subsidiaries of the Group, have been reviewed and certified by professional third-party companies, and their design and manufacturing of product equipment have met the requirements of the ISO 9001:2015 quality management system standard.



The Group has an extensive range of products aiming at the global market, with strict requirements on safety and reliability. Despite the wide variety of products and the different production processes, we strictly abide by the laws and regulations on product liability in the country or place where we are located, and strictly control all aspects of the entire value chain of product design, procurement, manufacturing, inspection, market and service, and through measures such as optimising the training system, improving personnel qualification management, strengthening quality responsibility subjects, enhancing team construction and promoting production self/cross/special inspections, to ensure that products and services are fully compliant.

We have developed quality management system evaluation standards, covering over 40 modules including product quality improvement, management review procedures, process standard management, key process management, etc. Every year, we formulate a quality improvement plan, set corresponding goals and measurement standards for quality data such as the pass rate and failure rate, and regularly track, supervise and manage the specific work items of the quality improvement plan, and have progress summary and abnormal explanations and adjustments. At the same time, we prepare annual inspection plans according to product categories, covering the whole process of incoming materials, blanking materials, cold work, welding, partial assembly, final assembly, commissioning and delivery. The technology department is required to formulate a self-inspection plan for key control points. The manufacturing department is supposed to maintain complete self-inspection records at the key control points. The quality assurance department needs to keep the patrol inspection and special inspection records corresponding to the self-inspection plan.



We have formulated management systems such as *Parts Access (Approval) Procedure* to implement strict management and control of new product parts, and retain detailed information such as sample size and performance test results. In addition, we conduct physical and chemical tests such as tensile, impact and chemical analysis on raw materials such as steel plates, and sample test reports are issued by third-party testing companies.

To pursue the goal of excellent quality system, we have established an operation standardisation system based on engineering drawings, and a quality inspection system with non-conforming product control and corrective action control procedures as the core to prevent non-conforming products from flowing into the next manufacturing process. Our total quality management and preventive control measures, as well as automation technology and error prevention system, can effectively avoid the occurrence of non-conforming products.

We also strongly support research and investment in the field of product safety technology, and actively apply safety concepts and technologies with international advanced levels to raise the quality and safety performance of products to a higher level. The Company improved product quality and safety performance through a series of measures such as column, jack and structural optimisation design, robot crowdsourcing, mechanical processing process optimisation, and formation of supplier alliance.

We also attach importance to strengthening the culture of construction quality. Through quality meetings, we create an atmosphere where all employees create quality projects, set off a quality revolution, and co-ordinately improve the quality management level. In addition, we continue to carry out quality special training in accordance with business needs through the combination of theoretical learning, academic exchanges and practical exercises to improve the overall quality of the Company's quality personnel.

We actively collect product quality suggestions from customers, and arrange customers and supervisors to follow up on quality management on-site to promote product quality improvement. We have formulated a standardised and effective *Product Recall Management Procedure* to promptly investigate problematic products, eliminate product defects in an open, transparent and rigorous manner, and take corrective and preventive measures to minimise the harm or hidden dangers caused by products to customers.

In 2020, the Group did not have any product recalls due to product quality issues. The percentage of total products sold or shipped that had to be recovered due to safety and health reasons was 0.



Dedicated service for customer satisfaction

With the vision of “Creating maximum value for customers”, Sany International strictly abides by the laws and regulations such as the Consumer Rights Protection Law of the People’s Republic of China, insists on providing the best solutions for customers from their perspective and taking advantage of smart services for speedy and convenient response to customer needs, resolutely eliminates misleading advertising, and protects customer rights.

In order to ensure the quality of products and services, we fully consider customer needs in the product design process; perform preventive maintenance and repairs to avoid the occurrence of product failures; and continuously conduct global tour service activities, customer training and on- site inspections at the same time. We have 26 service branches, 103 offices, 75 parts warehouses, more than 20,000 kinds of component inventory, more than 320 service engineers and 260 service cars with complete tools and accessories in China, and we provide service within a radius of 150 kilometers for our mining equipment, and a radius of 200 kilometers for our logistics equipment so that we can quickly respond to customer service needs.

In order to allow customers to call for service with one simple click, we have established the “Sany Customer Cloud Platform”, which automatically matches the most suitable service engineer to realise the visualisation of the entire service process. The Cloud Platform seamlessly connects upstream and downstream equipment agents, users, repairers, operators and other industries, and builds a fully digital, networked and intelligent Zhihui Ecological Cloud to provide customers and partners with performance management solutions covering the entire life cycle of equipment.

In addition, to ensure that the correct product information is provided to customers, all the Company’s advertising plans must be reviewed by our legal consultant before authorising the media to publish, in order to prevent contents from being untrue and exaggerated. In addition, we formulated *the Administrative Measures on Marketing Competition without Exaggeration and Degrading*, which strictly requires that all business units, subsidiaries, agents to strictly observe the bottom line of fair competition in market competition. Unfair competition is strictly prohibited to protect the legitimate rights and interests of customers. Individuals and units violating regulations will face administrative penalties ranging from economic punishment to demotion/ suspension or even dismissal, and will be hand over to judicial bodies if the violation constitutes crime.

The Group has established a comprehensive customer satisfaction survey mechanism. It conducts satisfaction surveys with value customers via SMS and WeChat. Customers can make online evaluations of Sany products and after-sales services. Customer satisfaction questionnaires are issued monthly, and no questionnaire will be sent to customers who have responded within half a year. The customer evaluation method adopts five levels of Likert scale, of which 10 points are very satisfied, 8 points satisfied, 5 points neutral, 3 points dissatisfied and 1 point very dissatisfied. The opinions and suggestions put forward by the customers are all implemented and responded to in accordance with the process standards in the Guidance Documents on the *Handling of Follow-up Work on Customer Satisfaction Investigations*.



To effectively handle customer complaints, the Group has formulated the *Customer Complaint Management Rules*. Customers can make complaints through various channels such as telephone, SMS, email, customer cloud, official website and WeChat. The complaint handling process is circulated online by the Business Process Management (BPM) system. The service staff spots the complaint reason within 1 hour and responds with handling plan within 4 hours. After the complaint has been dealt with, the Company requires the receiver to return to the customer and report the issue.

During the Reporting Period, All complaints have been dealt with in time and were held accountable.

Intellectual property rights protection

The Group fully understands that intellectual property rights are critical to the Company's sustainable business growth. Protecting intellectual property rights is a must choice for us to take the path towards an innovative enterprise and achieve leapfrog development, and is also a strong support for us to maintain our competitive advantage and achieve sustainable development.

Sany International strictly abides by relevant laws and regulations such as the Patent Law of the People's Republic of China, the Intellectual Property Law of the People's Republic of China, the Law on Tort Liability of the People's Republic of China and the Regulations on the Management of Enterprise Intellectual Property Rights. In order to standardise product patent management, protect inventions and creations, and avoid the risk of patent infringement, we have formulated the *R&D Patent Work and Management Regulations* to stipulating requirements for personnel responsibilities and capabilities.

1. R&D management leading group office is established, which is responsible for patent application, patent risk analysis and coordination, patent information sharing, key patent risk processing support and supervision.
2. Before the products are exhibited and exported, the research institute of each business department should undergo a patent risk analysis and sign a commitment letter to the R&D management of office for record to avoid patent risks.
3. A full-time position of patent engineer will be set, and the R&D management office will issue the qualification standards for patent engineers. Patent engineers need to undergo qualification training and examination before starting the work.
4. Newly recruited R&D personnel must pass a patent training course taught by a patent engineer.

In addition, Sany International also submits international patent applications through the Patent Cooperation Treaty (PCT). Our overseas patents cover countries and regions such as Russia, Australia and South Africa.



Innovative technology for future development

Sany International continuously develops and improves the technological innovation system, carries out innovation strategy upgrade and business transformation, promotes the R&D of patent and industrialisation of achievements, improves the maintenance and management of intellectual property rights, and brings long-term driving force for the sustainable development of the enterprise and the industry through innovation.

To create an atmosphere of innovation, the Group has formulated the Patent Work Reward Measures, which grants patent inventors, patent engineers and related patent workers annual patent work rewards. Our R&D team takes the core concept of “Safety, High efficiency, Reliability & Humanisation”, and catches up with the benchmark enterprises as the design goal, and constantly exceeds the industry standards. In 2020, including robot industry, the Group has newly authorised 221 patents, including 58 invention patents, 133 utility model patents, 10 design patents and 20 Copyrights.

Customer privacy protection

Sany International strictly abides by law and regulations such as the Law on the Protection of Consumer Rights of the People’s Republic of China and the Personal Data (Privacy) Ordinance and the Consumer Council Ordinance in the Hong Kong Special Administrative Region to ensure that the privacy and rights of customers are fully protected. All customer information of the Company is strictly confidential, and only authorised personnel can access restricted information. At the same time, the Company’s *Business Personnel Behaviour Management Regulations* requires relevant staff to be responsible for keeping business secrets, and it is strictly forbidden to provide customer personal information to third parties without customer authorisation. We grant clients the right to review and modify their data and reserve their right to exit any direct marketing activities.

For internal information security management of the Company, in accordance with internal systems such as the *Information Security Management System* and the *Employee Information Security Management Regulations*, we take necessary precautions during the information management and transfer process to prevent the leakage of confidential information and control information security. We regularly inspect the documents sent by mail and will notify and evaluate the person in charge if any confidential document is leaked. All employees must participate in information security training activities and examinations as required. The Company will punish those who miss or fail the exams, as well as those who have incurred an information security incident.

During the Reporting Period, the Group did not have any accident customer privacy infringement and customer data leakage.

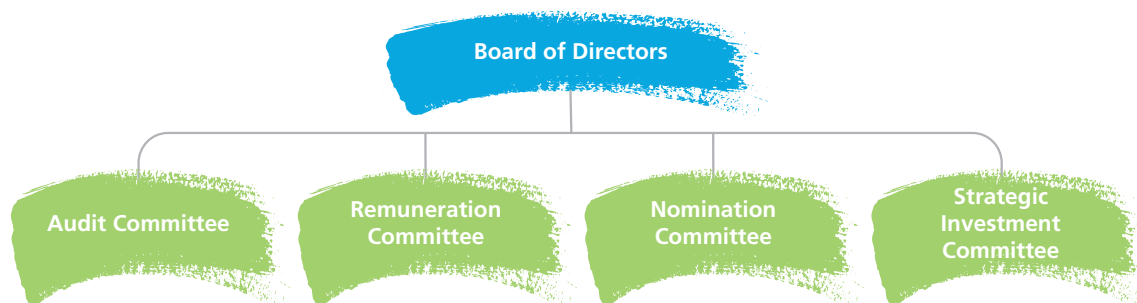
Integrity and compliant operation

Sany International has established a standardized corporate governance structure, continuously improved its risk management system, raised the awareness of all employees on anti-corruption and integrity, and adhered to legal and compliant operations to lay the foundation for the Group’s comprehensive and sustainable development.



Abiding by compliant operation

The Group strictly abides by the laws and regulations such as the Company Law of the People's Republic of China, Securities Law of the People's Republic of China, the Main Board Listing Rules on The Stock Exchange and Securities and Futures Ordinance, promotes the standard operation of the general meeting, the Board of Directors and the Board of Supervisors in accordance with regulatory requirements, improves the system of corporate governance, enhances corporate governance and ensures corporate's compliant operation.



The Company's Board of Directors strictly abides by 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 2020, the Group convened 2 general meeting, 19 meetings of the Board of Directors, 4 meetings of the Audit Committee, 1 meetings of the Remuneration Committee and 1 meetings of the Nomination Committee.

In order to comprehensively strengthen risk management and control and ensure compliant operation, the Group has established procedures for identifying, evaluating and managing major risks, established and improved internal control systems and working mechanisms, improved the efficiency of internal control, and actively accepted supervision from all parties, in order to provide a strong guarantee for the continuous creation of the value for the Company. In 2020, with the assistance of the risk management and internal audit departments, the Company's Board of Directors and Audit Committee reviewed the effectiveness of the Company's risk management and internal control systems, and no major issues were found.



Adhering to integrity

In order to establish a fair, honest and efficient working environment, the Group strictly abides by the laws and regulations of the Criminal Law of the People's Republic of China, the Anti-Unfair Competition Law of the People's Republic of China and the Interim Provisions on Prohibition of Commercial Bribery, and implements a series of measures within the Company to establish a good atmosphere and ensure legal and compliant operation.

All group employees must accept and pass "the negative listing and accountability measures for the dishonest behaviors examinations" 《弄虛作假應付考核行為的負面清單及問責辦法考試》. The goal is to let the Group staff identify and avoid any forged, altered, falsified records or vouchers, slanting administrative policy and system, conceal or cover up the fact, manipulate or adjust assessment index to distort management information. In addition, the examination materials also explain the details of accountability and punishment in case of violation. According to the severity and the role of the violator in the incident, the Group will deal with the matter from fine, salary reduction to immediate dismissal, and any serious cases will be referred to the relevant judicial bodies for further investigation.

Improve the management system. The Group has formulated and strictly implemented internal systems such as the Business Personnel Behavior Management Regulations, requiring all employees to perform their duties in good faith and self-discipline, and to refrain from any activities related to bribery, extortion, fraud and money laundering. At the same time, the Group has formulated corresponding internal procedures for assessment, consultation, investigation and punishment to prevent any illegal acts from occurring.

Improve management functions. The responsibilities of the Company's Board of Supervisors, finance department and human resources department are clear, whose division and cooperation have built up the Company's "sword" and three lines of risk defense for anti-fraud. They are responsible for investigating any suspicious or illegal behaviors related to bribery, extortion, fraud and money laundering to ensure the good operation of the Group.

Establish a monitoring mechanism. The Group has set up a suggestion box and a hotline so that employees or external personnel can report any improper behavior in a timely manner. At the same time, we set up a confidentiality mechanism to protect whistleblowers, who can report and provide evidence to department heads and management orally or by letter in an anonymous manner. The Group guarantees that the whistleblower's personal information and all the materials provided by the whistleblower will be kept strictly confidential, and makes every effort to protect the whistleblower's legal rights from infringement.

Join the Anti-Fraud Alliance. Sany International has joined the Anti-Fraud Alliance of Chinese Enterprises since 2015. It has always adhered to the conventions of the alliance, avoided any frauds, and jointly created a clean and good business environment to promote the healthy development of the industry.

During the reporting period, the Group had no major litigation cases due to bribery, extortion, fraud and money laundering and other frauds, and no corruption litigation cases filed or concluded.



CONTRIBUTING TO THE SOCIETY

As a socially responsible company, the Group makes every effort to contribute to the local economy, the people's livelihood and harmony. We actively support various public welfare activities, support regional economic development, and strive to build a harmonious community. In 2020, Sany International invested a total of RMB1,687,000 in the public domain of the community.

Industry empowerment

Sany International is committed to exploring the machinery and equipment industry, supports the construction and development of smart mine and smart port with its technological advantage, and deploys its own advantages to promote the domestic and overseas integrated development, so as to empower the equipment with intelligence, empower the enterprise with value, and empower the industry with capacity.

Participating in the formulation of standards

The Group actively participates in the drafting and formulation of industry standards for machinery and equipment, strengthened cooperation with other enterprises, and contributes wisdom to promote the development of the entire industry and technological innovation.

Sany International has participated in drafting the national and industry standards such as the Technical Conditions for Non-Highway Mechanical Transmission Mine Dump Trucks, the Technical Conditions for Non-Highway Electric Transmission Mine Dump Trucks, the Test Methods for Non-Highway Mechanical Transmission Mine Dump Trucks and the Test Methods for Non-Highway Electric Transmission Mine Dump Trucks, which provides scientific insights into requirements, test methods, inspection rules, signs, packaging, transportation and storage of related equipment. We have also participated in the drafting of the industry standard of the Drilling and Anchorage Unit for Coal Mine Rock Lane, which provides a strong guarantee for promoting green mining and intelligent and efficient mining.

Cooperation for win-win development

The Group has always adhered to the concept of "Quality changes the world", striving to be a company model of "Made in China", providing quality services to society, and driving the domestic and overseas development of the industry.



Promotion of the domestic and overseas integrated development

A port is an important window for a region to connect with the rest of the world. Sany International is continuously increasing its support for port construction in order to serve the real economy. The Group strives to promoting the port intelligence, and has successfully developed automation technologies such as fully automatic container grabbing and releasing system, electronic anti-sway technology, vehicle collision avoidance, and lifting and positioning, which have been applied in the products. During the reporting period, we have completed and delivered the designs of 8 automated terminal projects at the Port of Tianjin, Taicang, Yueyang, Ningbo, and COSCO (中遠), and contributed to the promotion of the development of connections locally and abroad.

Community care and harmonious development

While achieving its own stable development, the Group has not forgotten to contribute love, care for society, and continue to contribute its own strength. We actively participate in community construction, organize employees to send warmth to the community, devote themselves to public welfare, and promote the harmonious development between enterprises and communities.

1. Organizing community activities

We actively carry out community activities, strengthen interaction with employees' families and community members, and invite them to participate in activities organized by the Company's labor union. During the year ended 31 December 2020, the Group launched activities to help staff mitigate their financial stress. The management visited staff with family difficulties and provided them with consolation money and necessities. In addition, the Group organised staff health check regularly, raised funds for staff requiring assistance and spread love and care to staff who were in need of support.

2. Volunteering in epidemic prevention and control

Sany International cares about society, insists on interpreting eternal love with faith, and boundless love with action. Sany International fulfilled its social responsibilities and made contributions to the victory in the prevention and control of the pandemic. During the pandemic, the Group donated 3,000 protective suits to the Department of Commerce of Liaoning Province, and 50,000 masks to the Shenyang Development Zone Council. The management and staff of the Group actively provide manpower and material resources to help and support local community development.



FUTURE PROSPECT

Looking forward to 2021, Sany International will continue to promote the mining equipment and logistics equipment manufacturing industry in China, upgrade the newly developed robots and smart mines industry, and contribute our wisdom in achieving green, safe, efficient and intelligent mining and logistics port construction. We will follow the development trend of the industry, strengthen research and innovation, and contribute ideas to the industry to accelerate the development of products to the direction of integration, unmanned, intelligent.

In the future, we will continue to improve the quality of the Group's environmental, social and governance report and comprehensively promote sustainable development management. The Group will further strengthen the analysis and management of issues related to sustainable development on the basis of the existing management mechanism and work process to achieve the sustainable development goals.

We will continue to fight for the belief of "Quality changes the world", and continue to move forward to the dream of "Contribute to a world-class brand"!



HKEX ESG REPORTING GUIDE INDEX

Scope, Aspect, KPI	Corresponding Section
A. Environmental	
Aspect A1: Emissions	
General disclosure*	<p>General Disclosure Information on:</p> <ul style="list-style-type: none"> (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.
KPI A1.1*	<p>The types of emissions and respective emissions data.</p> <p>Emission control and pollution reduction — Exhaust gas management</p>
KPI A1.2*	<p>Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).</p> <p>Emission control and pollution reduction — Climate Change and greenhouse gas emissions data</p>
KPI A1.3*	<p>Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).</p> <p>Emission control and pollution reduction — Hazardous and non-hazardous waste management</p>
KPI A1.4*	<p>Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).</p> <p>Emission control and pollution reduction — Hazardous and non-hazardous waste management</p>
KPI A1.5*	<p>Description of emission target(s) set and steps taken to achieve them.</p> <p>Emission control and pollution reduction — Hazardous and non-hazardous waste management</p>
KPI A1.6*	<p>Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.</p> <p>Emission control and pollution reduction — Hazardous and non-hazardous waste management</p>



Scope, Aspect, KPI	Corresponding Section
Aspect A2: Use of Resources	
General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials. Energy conservation and resource utilization
KPI A2.1*	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in'000s) and intensity (e.g. per unit of production volume, per facility). Energy conservation and resource utilization — Energy Consumption and intensity
KPI A2.2*	Water consumption in total and intensity (e.g. per unit of production volume, per facility). Green Manufacturing — Water resources management
KPI A2.3*	Description of energy use efficiency target(s) set and steps taken to achieve them. Energy conservation and resource utilization
KPI A2.4*	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them. Green Manufacturing — Water resources management
KPI A2.5*	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced. Green Manufacturing — Packaging Material
Aspect A3: The Environment and Natural Resources	
General Disclosure*	Policies on minimising the issuer's significant impacts on the environment and natural resources. Sany's Green Energy Saving System
KPI A3.1*	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them. Sany's Green Energy Saving System
Aspect A4: Climate Change	
General Disclosure*	Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer. Green Future
KPI A4.1*	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them. Green Future



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



Scope, Aspect, KPI	Corresponding Section
Aspect B3: Development and Training	
General Disclosure*	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities. Cultivating Talents — Development and Talent Training
KPI B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management). Cultivating Talents — Development and Talent Training
KPI B3.2	The average training hours completed per employee by gender and employee category. Cultivating Talents — Development and Talent Training
Aspect B4: Labour Standards	
General Disclosure*	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour. Cultivating Talents — Employment and Labour Standard
KPI B4.1	Description of measures to review employment practices to avoid child and forced labour. Cultivating Talents — Employment and Labour Standard
KPI B4.2	Description of steps taken to eliminate such practices when discovered. Cultivating Talents — Employment and Labour Standard
Operating Practices	
Aspect B5: Supply Chain Management	
General Disclosure*	Policies on managing environmental and social risks of the supply chain. Responsible Operation — Responsible Supplier Are Our Partners
KPI B5.1	Number of suppliers by geographical region. Responsible Operation — Responsible Supplier Are Our Partners



Scope, Aspect, KPI		Corresponding Section
KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored.	Responsible Operation — Responsible Supplier Are Our Partners
KPI B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	Responsible Operation — Responsible Supplier Are Our Partners
KPI B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	Responsible Operation — Responsible Supplier Are Our Partners Sany's Green Energy Saving System — Green procurement
Aspect B6: Product Responsibility		
General Disclosure*	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	Responsible Operation — Product Responsibility
KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	Responsible Operation — Product Responsibility
KPI B6.2	Number of products and service related complaints received and how they are dealt with.	Responsible Operation — Product Responsibility
KPI B6.3	Description of practices relating to observing and protecting intellectual property rights.	Responsible Operation — Product Responsibility
KPI B6.4	Description of quality assurance process and recall procedures.	Responsible Operation — Product Responsibility
KPI B6.5	Description of consumer data protection and privacy policies, and how they are implemented and monitored.	Responsible Operation — Product Responsibility



Scope, Aspect, KPI	Corresponding Section
Aspect B7: Anticorruption	
General Disclosure*	<p>Information on:</p> <p>(a) the policies; and</p> <p>(b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.</p>
KPI B7.1	<p>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.</p>
KPI B7.2	<p>Description of preventive measures and whistle blowing procedures, and how they are implemented and monitored.</p>
KPI B7.3	<p>Description of anti-corruption training provided to directors and staff.</p>
Community	
Aspect B8: Community Investment	
General Disclosure*	<p>Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.</p>
KPI B8.1	<p>Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).</p>
KPI B8.2	<p>Resources contributed (e.g. money or time) to the focus area.</p>

Note: * is the "comply or explain" provisions in the Guidelines, the remaining are "proposed disclosure".

