

2019 Social Responsibility and Environmental, Social and Governance Report





About This Report

This report is prepared with reference to the provisions set out in the “Guidelines on Environmental Information Disclosure by Listed Companies” issued by the Shanghai Stock Exchange in May 2008 and the “Environmental, Social and Governance Reporting Guide” issued by The Stock Exchange of Hong Kong Limited in December 2015. For ease of presentation and reading, Zhengzhou Coal Mining Machinery Group Company Limited and its subsidiaries are referred to as the “Company” or “We” in this report. The Company presents its social responsibility performance for the year 2019, namely, from 1 January 2019 to 31 December 2019.

This report focuses on the activities carried out by Zhengzhou Coal Mining Machinery Group Company Limited. In consideration of a range of parameters such as sales values, business types, profits and asset values, the following entities are included in the reporting scope:

Coal mining machinery products:

Zhengzhou Coal Mining Machinery Group Company Limited, Zhengzhou Coal Mining Machinery Hydraulic Electrical Control Co., Ltd., Zhengzhou Coal Mining Machinery Comprehensive Equipment Co., Ltd., Zhengzhou Coal Mining Machinery Group Material Trading Co., Ltd. For ease of presentation and reading, these four companies are, collectively, referred to as the “coal mining machinery segment” in this report.

Auto parts products:

ASIMCO Technology, Inc., ASIMCO Shuanghuan Piston Ring (Yizheng) Co., Ltd., ASIMCO Camshaft (Yizheng) Co., Ltd., ASIMCO International Casting Co., Ltd. (Shanxi), Hubei Super Electric Auto Motor Co., Ltd. and ASIMCO NVH Technologies Co., Ltd. (Anhui). For ease of presentation and reading, these six companies are, collectively, referred to as “ASIMCO” in this report.

Starting from this year, this report covers the world-leading vehicle motor enterprise Robert Bosch Starter Motors Generators Holding GmbH (currently known as “SEG Automotive Germany GmbH”), a former subsidiary of the Germany-based Bosch Group, the acquisition of which was completed by the Company in 2018. For ease of presentation and reading, SEG Automotive Germany GmbH is referred to as “SEG” in this report.

This report is available for downloading at the website of the HKEx (www.hkexnews.hk).

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Message from the Company

Dear stakeholders,

In 2019, the Company adhered to the corporate core values of “providing value to customers and platforms to staff”. In the face of the complicated situation caused by significant increase of global risks, the Company insisted on the strategy of taking dual principal businesses as drivers by focusing on smart technology and competing for international market as an industry leader, which brought us hard-earned achievements. In the afternoon of 17 September, Xi Jinping, General Secretary of the CPC, President of China and Chairman of the Central Military Commission visited the Company and conducted survey investigation on the transformation and upgrade of the manufacturing industry and the technological innovation of enterprises. While coordinating production and operation, the Company always takes social responsibility as its key work. It raises the status of sustainable development by incorporating it into the Company’s development strategy, and actively optimizes the social responsibility system such that it becomes part of our competitive advantages, so as to lead the high-quality development of the industry.

Over the past year, we paid close attention to the needs of stakeholders including shareholders, staff, suppliers, customers and communities, and made breakthroughs in ensuring the safety and health of staff, reducing pollution emissions, and enhancing efficient use of resources. Based on the concept of “the fighter-centered”, the Company has established mid to long-term incentive schemes such as the super profit incentive scheme and the share option incentive scheme, and continues to implement scientific talent training and competitive employment systems to give staff hope and motivation. The Company continues to increase investments in the smart and environmentally-friendly transformation of production lines to relieve workload of staff and strengthen their occupational health and protection. In addition, each of our business segment continues to actively reduce water consumption through measures such as improving recycled water rate and equipment updating. In 2019, the overall utilization rate of recycled water reached approximately 91%. The major subsidiaries of the Company all obtained ISO9001/IATF16949 Quality Management System Certification,

OHSAS18001/ISO45001 Occupational Safety and Health Management System Certification and ISO14001 Environmental Management System Certification.

At or around the end of last year and the beginning of this year, the unexpected outbreak of the COVID-19 has mercilessly hit across China and even the world. As a company with global presence, the Company actively cooperated with local governments, took effective epidemic prevention and control measures, efficiently and orderly resumed work and meet production capacity, so as to ensure the production and supply of coal energy and the production resumption of the auto industry. We donated RMB2 million to the First Affiliated Hospital of Zhengzhou University as soon as possible to support the hospital to fight against the epidemic. In addition, responding to the call of the Chinese government, we formed an assembly team to support the installation of 40 mask production lines, which became the largest new production line of masks during the epidemic prevention and control period in Henan Province that effectively eased the mask shortage.

In 2020, on the premise of maintaining good epidemic prevention and control, we will carry out production and operation in an orderly manner, and perform our social responsibilities without any hesitation by continuously improving the sustainability fields such as market responsibility, responsibility toward staff, energy conservation and emissions reduction, and community feedback. Looking forward, we will keep in mind the entrustment of General Secretary Xi Jinping, continue to increase investments in independent innovation and R&D, construct smart factories, initiate a new round of transformation and upgrade process including marketization, globalization and intelligence, and strive to become the largest comprehensive coal mining technology and equipment supplier and a leading auto parts manufacturer in the world.

— Zhengzhou Coal Mining Machinery Group Company Limited
27 March 2020



About the Company

Corporate Introduction

Zhengzhou Coal Mining Machinery Group Company Limited was incorporated in the People's Republic of China (the "PRC") on 28 December 2008 as a joint stock company with limited liability. A Shares of the Company were listed on the Shanghai Stock Exchange on 3 August 2010. H Shares of the Company were listed on The Stock Exchange of Hong Kong Limited on 5 December 2012.

The Company is a leading comprehensive coal mining and excavating equipment manufacturer in the PRC. It focuses on the manufacturing and sales of hydraulic roof supports, and is the largest hydraulic roof support manufacturer in the PRC. The Company is also engaged, through its subsidiaries, in the research and development, manufacturing and sale of and servicing for auto parts, as well as the trading of steel and other raw materials. The established operating history, high quality products, strong research and development capabilities, advanced manufacturing processes and extensive sales and service network of the Company and its subsidiaries are the keys to its success and enable us to maintain its leading position in the coal mining and excavating equipment market and auto parts market.



Major Honors in 2019

Ranked 85th in the 100 Top Multinational Enterprises of China in 2019

– The China Enterprise Confederation and the China Enterprise Directors Association

Ranked 327th in the Fortune China 500 Companies in 2019

– Fortune (Chinese Version)

Single champion demonstration Enterprise in the Manufacturing Industry

– The Ministry of Industry and Information Technology of the PRC

Ranked 14th in the Top 100 Auto Parts Suppliers of China in 2019

– China Automotive News

Ranked 89th in the Top 100 Global Auto Parts Suppliers in 2019

– Automotive News

Ranked 18th in the Top 100 Companies of China in the Machinery Industry in 2019

– The China Machinery Industry Federation

Financial Performance in 2019

Note: Currency data is presented in RMB

Revenue

25,721

million

Net profit

1,140

million

Payment of taxes

2,704

million

Payments to suppliers

15,700

million

Payments of staff remuneration

3,410

million

Number of In-service Employee

17,230

people

Management Approach

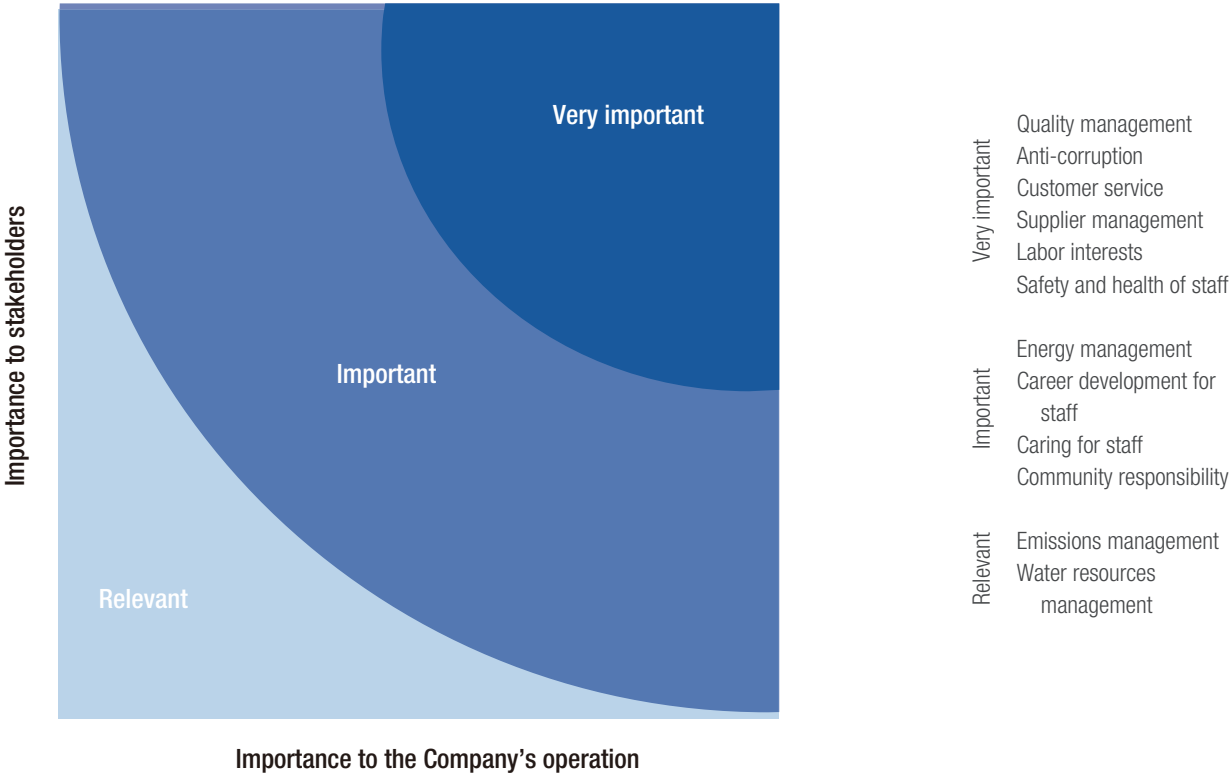
Social Responsibility Governance

The Board of Directors of the Company is responsible for our social responsibility report, including the assessment and identification of social responsibility risks, and ensuring that an appropriate and effective risk management and internal control system are in place for social responsibility. The Company has appointed our business function departments to review the Company's operations and hold internal discussions to identify relevant social responsibility issues and assess the importance of such issues to our business and stakeholders. The management has confirmed the effectiveness of risk management and internal control system for social responsibility to the Board. According to the general disclosure requirements provided in Environmental, Social and Governance Reporting Guide, the identified major environmental, social and governance issues have been included in this social responsibility report, to provide balanced disclosure of the social responsibility performance of the Company during its operations.

Key Social Responsibility Issues

Having communicated and conducted survey with the internal and external stakeholders of the Company, we have collected many suggestions. From the dimensions of both the impact on the Company's operation and the impact on our stakeholders, we have scored and ranked the social responsibility issues of the Company to reflect our material impacts on the environment and society and better respond to the expectations and demands from stakeholders.

Our matrix of key issues is as follows:



Management Approach

Stakeholders' Engagement

While adhering to the belief of creating a world-class brand and tirelessly pursuing its own development, the Company has due regard to the demands from stakeholders, including investors, the government/regulatory authorities, staff, customers, suppliers, non-government organizations and the community. By establishing channels conducive to the engagement of stakeholders, the Company brings in the views of each party to the whole decision-making and operating process of the Company.

This report provides the stakeholders with the latest information about the Company's activities and performance in environmental, social and governance areas, conveying the Company's wish to create the best value for its stakeholders.

Stakeholders	Expectations on the Company	Channels of feedback
 Investors	Protection of Shareholders' rights and interests Timely and accurate disclosure of relevant information Improvement of the corporate governance Operation in compliance with laws	General meetings News releases and announcements External reports Release of news on website of the Company Investment briefings
 Government/ Regulatory authorities	Operation in compliance with laws Safe and healthy workplace Bringing Benefits to the related communities	Compliance reports Supervision and Inspection Application for license Compliance conferences
 Staff	Competitive remuneration and benefits Safe and healthy workplace Training and capacity building	Trade unions/employee representative congress Collective negotiation agreements Safety and compliance conferences Training and career development Communication channels for corporate employees
 Customers	Customer service Quality assurance Product liability	Seminars for key customers Systematic communications Visit to plants in operation Participation in industrial organisations Sustainability report
 Suppliers	Admittance management of suppliers Evaluation of suppliers Protection of suppliers' interests Cooperation with suppliers	Tendering, seminars Admittance and evaluation of suppliers On-site inspections Meetings with senior management
 Non-governmental organisations	Investments in local development Participation in local community projects Bearing environmental responsibility Human rights Sharing benefits fairly	Annual social responsibility report Direct communications Factory visit
 Communities	Local development Bearing environmental responsibility Promoting employment Providing opportunities for local goods and service providers	Convening community meetings Focusing on group meetings Procurement demand notices Recruitment notices

Themes: Promoting Industrial Upgrade, Developing Smart Manufacturing

In order to implement the “Outline of the 13th Five-year Plan for the National Economic and Social Development” and “Made in China 2025” consistently, the Ministry of Industry and Information Technology and the Ministry of Finance of China have developed the “Intelligent Manufacturing Development Plan”, which requires the facilitation of intelligent transformation in key fields, pilot construction of digitalized workshops or smart factories, and the promotion of smart manufacturing equipment in the traditional manufacturing industry.

In September 2019, General Secretary Xi Jinping visited the Company and conducted survey investigation on the transformation and upgrade of the manufacturing industry and the technological innovation of enterprises. General Secretary Xi Jinping proposed new expectation and entrustment for the future development of manufacturing industry in China.

Insisting on Independent Innovation

Responding to the call of the State and keeping in mind the entrustment from General Secretary that developing the real economy and smart manufacturing to achieve the “Two Centenary Goals”, the Company has gradually grown into the world’s largest comprehensive coal mining technology and equipment supplier and a world leading auto parts manufacturer by continuously innovating and promoting the industrial transformation and upgrade.

The Company possesses strong R&D capacity in the manufacturing of both coal mining machinery and auto parts. In the coal mining machinery segment, we have scientific research institutions including state-accredited enterprise technology centers, post-doctoral work stations, academician work stations, and have successively undertaken research and development for various key projects on coal mining comprehensive equipment in China with our relatively sound R&D platform. Five subsidiaries of ASIMCO have set up R&D centers respectively and obtained high-tech enterprise certification, e.g. ASIMCO NVH Technologies Co., Ltd. (Anhui) has obtained CNAS17025 certification for its lab. In addition, ASIMCO has several provincial enterprise technology centers focusing on camshaft, piston ring, cylinder blocks and heads, as well as NVH. SEG has nine manufacturing bases and R&D centers, more than 600 core R&D staff and the most advanced R&D center and laboratory center in automotive motor area in the world.

While insisting on independent innovation, we also strengthened the protection on intellectual property, for example, we have formulated “Management Measures for Intellectual Property Rights” for our coal mining machinery segment, so as to reinforce the management and protection on intellectual property.



Constructing Smart Factories

In the context of “Made in China 2025” and “Industry 4.0”, the Company focused on the equipment manufacturing industry and constructed a model smart manufacturing plant for coal mining machinery in order to improve product quality. The factory has a digitally controlled processing center with the highest level of automation in the coal mining machinery industry in China, production line with the use of intelligent steel plate cutter, intelligent robotic welder, automated painting line and the most advanced hydraulic roof support inspection equipment in the coal mining machinery industry, enhancing the product quality and efficiency as a whole. We also made further intelligent transformation on the production line that produces and manufactures key parts of mining electrical products and hydraulic roof supports, and upgraded our information means by establishing information systems such as MES and SCADA to achieve the ultimate goal of constructing smart factories for comprehensive coal mining equipment.



Themes: Promoting Industrial Upgrade, Developing Smart Manufacturing

Setting Layout for Future Development

While bearing the duty of making coal mining more safe, efficient, intelligent and environmental, the Company grasped the new trends of electrification, intellectualization, networking and sharing in the global automobile industry, and planned the direction for future strategic development in accordance with the work deployment under “Made in China 2025” and the 13th Five-Year National Plan for the Development of Strategic Emerging Industries in relation to the automobile parts industry.

In recent years, we have carried out scientific and technological research on the development of new hydraulic roof supports, high reliability of support structure, big regional data and new VR display methods in the coal mining machinery segment. ASIMCO has made advance arrangement for the layout of piston ring surface treatment technology that meets the requirements of environmental protection and Euro VI vehicle emission standards to promote the modularization and high-end development of brake products. SEG made use of its own technical advantages in the fields of automobile starter motors and 48V low-voltage hybrid motors, and devotes efforts to the research of automobile energy saving and emissions reduction technologies and the layout of new energy. In 2019, the energy recovery acceleration subsystem of SEG has won the Innovative Environmental Technology Award of the European Union.

“

China must develop the real economy. The manufacturing industry is an important foundation for the real economy, and self-reliance is the basis for our fighting. At present, the scale of our manufacturing industry is the largest in the world, but we still need to improve and leverage on innovation to achieve transformation and upgrade. We must facilitate the development of industrial chain from low end to high end through technological innovation and industrial innovation. We must promote our manufacturing industry and the real economy, achieving the ‘Two Centenary Goals’ in a down-to-earth manner.

”

— Stressed by General Secretary Xi Jinping during his visit and survey investigation of ZMJ Group on 17 September 2019

Market Responsibility

As an international enterprise with integrated development of dual principal businesses, coal machinery R&D and manufacturing and auto parts manufacturing, we are committed to integrity operation and continuous efforts to provide customers with high-quality products and satisfactory services. We have established quality management system and introduced quality management tools to ensure product quality. We have established a sound sales service network to provide every customer with timely and quality services. In addition, we have strengthened the management of our suppliers. While paying attention to the quality of our suppliers' products, we also raised demand on environmental protection, business ethics and other aspects.

Quality Management System

The Company strictly abides by the laws and regulations relating to product quality in which our operation locates in, including the Law of the People's Republic of China on Product Quality and Product Safety Act, etc. It adheres to "high standards, delicacy and zero defect" quality ideal, and has taken various measures to ensure product quality.

The coal mining machinery segment has established a sound quality control system and a full-process testing and inspection system, and has gained ISO9001 quality management system certification. In the coal mining machinery industry, we took the lead in acquiring the ISO3834-2 International Welding Enterprise Certification. In addition, we have gained quality management system certification issued by China United Certification Center.

ASIMCO introduced Six Sigma management tool, kept improving product quality by using Six Sigma management projects, and combined its quality systems with Six Sigma so as to fulfill the ideal of “Zero defect”. All subsidiaries of ASIMCO have gained IATF16949 quality system certification, and Hubei Super Electric Auto Motor Co., Ltd and ASIMCO NVH Technologies Co., Ltd. (Anhui) have even gained ISO9001 quality management system certification.

SEG has established a quality management system (QMS) and corresponding product quality control processes in accordance with the requirements of the system. All subsidiaries of SEG have gained IATF16949 quality management system certification.

During 2019, the Company did not identify any recall of sold or shipped products for safety and health reasons.

Provision of Satisfactory Services

We actively protect consumers' interests and provide satisfactory services to every customer through professional sales and after-sales network covering the whole world. In addition, in response to customer complaints on products and services, we have formulated the trouble shooting process, which clearly stipulated our process of handling customer complaints and the time limit of process, etc., for effective response to customer complaints, so as to enhance customer satisfaction.



Market Responsibility

Coal mining machinery segment has set up the “coal mining machinery 4S” maintenance service center in China, radiating China’s key coal producing areas, and providing customers with networked, localized and specialized after-sales services. Meanwhile, through long-term accumulation on technology, the geological database and equipment selection scheme library owned by the coal mining machinery segment can provide our customers with the most suitable equipment solutions related to coal mining works.

ASIMCO has long-term and stable cooperative relationship with many well-known auto and auto parts manufacturers including FAW, Volkswagen, Fiat and Weichai Power. In order to guarantee the speed of supply and to secure the supply of customers’ production capacity, ASIMCO provides customers with stable just-in-time production logistics services (JIT). For the Chinese market, production factories of ASIMCO are located in several major cities of China, which possess comprehensive railway, waterway or highway transportation capabilities and are able to deliver goods to Chinese customers timely and effectively. For overseas markets, ASIMCO has established and managed various overseas warehouses in the U.S. as well as Europe to offer JIT logistics services from nearby places to international customers.

SEG has established a global marketing network to constantly provide high-quality services to customers in Europe, America, Asia and other markets through fostering local talent teams and establishing international talent teams.

Regarding the privacy protection of our customers, we sign confidentiality agreement with our customers in accordance to their requirements so as to protect the privacy of our customers to the maximum extent.

Our high-quality products and comprehensive customer service are unanimously recognized by a large number of customers. In 2019, the coal mining machinery segment was awarded the “Excellent Supplier Award

2019” from Shanxi Fenxi Mining Group. ASIMCO Shuanghuan Piston Ring (Yizheng) Co., Ltd. was entitled the “Best Supplier Award” from SDEC for 15 consecutive years. ASIMCO International Casting Co., Ltd. (Shanxi) was granted the “Best Customer Support Award” of the year from Beijing Foton Cummins. ASIMCO Camshaft (Yizheng) Co., Ltd. was granted the “Best Delivery Award” of the year from Beijing Foton Cummins. SEG was granted the “Best Supplier” award from Navistar (MWM) and the “Excellent Partner” award from Weichai.

Supplier Management

With the development of economic globalisation, the mutual growth in supply chain is the key to an enterprise’s survival. We always adhere to the operation philosophy and values of integrity and mutual benefit. While we are devoted to working on our own environment and social risk management, we urge our suppliers to fulfill their environmental and social responsibility.

We have formulated the “Measures for the Administration of Management by Grading and Classification, Approval and Appraisal for Suppliers” for the coal mining machinery segment. We regularly evaluate suppliers based on environmental protection, production safety, quality control, business ethics and other aspects. In the procurement contracts signed with the supplier, ASIMCO requests the supplier to comply with the national and local environmental protection laws and regulations, and conducts EHS audits on some suppliers. SEG monitors the environmental and social risks of suppliers through third-party companies.

When we are selecting suppliers, we priorities those who are in close proximity to where we operate. Through promoting local purchase, energy resource wastage and exhaust gas emissions during delivering process can be reduced on one hand. Work opportunities for local people can be provided while driving local economic development on the other.

Global customers of auto parts business

For Passenger Cars:



For Commercial Vehicles:



Market Responsibility

Anti-corruption

We adhere to the principles of “integrity operation, legal operation and incorruptible management”. We respect the laws and regulations of the locations where we operate, including Criminal Law of the People's Republic of China, Law on Anti-Unfair Competition, Law against Unfair Competition, Criminal Code and Money Laundering Act, etc. Through the tasks of specifying the responsibility target, conducting system establishment, implementation of daily monitoring, and publicity and training of alertness education, we strive to ensure the implementation of each task related to anti-corruption and clean governance building.

In China, we have to conduct internal supervision and internal audit of our employees and sensitive matters in accordance with the “Review Management Measures for Integrity” and other systems. We require the staff from key business departments including financial, products, infrastructure, equipment, marketing, and materials supply to sign an integrity commitment, we have also established specialized reporting procedures and anonymous hotlines to encourage employees to report violations of business ethics. We also carry out anti-corruption training and education for our employees every year, and notify all our suppliers and all units relating to our business by post that they are forbidden to bribe our employees in any manner.

Overseas, SEG has these procedures include mandatory compliance training for all employees and the establishment of a compliance officer to whom employees can report any non-compliance matters.

In 2019, we did not identify any corruption litigation cases by or against the Company and its employees.



Responsibility towards Staff

Employees are the most valuable assets of our Company. We strive to safeguard the labor rights and interests of each employee, including equal employment, prohibition of employing child labor and compulsory labor. We organize diversified staff activities to help our staff relieve from work stress and, to achieve their physical and mental well-being, so as to strike a balance between work and personal life. We provide various training for our employees to help them improve their skills and realize career development. Meanwhile, we also value the occupational health and safety of our employees, so we adopt measures to cultivate their safety awareness and provide them with a safe working environment.

In 2019, the Company organized a collection activity named “The Most Beautiful Smile” on a global basis. A total of 255 individuals from various segments around the world participated, and 366 pictures of smile were collected.



Labor Rights and Interests

We strictly abide by local labor laws and regulations in all business segments around the world, and we have, accordingly, formulated systems such as the Staff Manual and the Management Measures for Staff Recruitment and Admission. We strictly abide by the Labour Law of the PRC, the Social Insurance Law of the PRC and other laws in the coal mining machinery segment and ASIMCO. We insist on equal employment, prohibition of employing child labor and compulsory labor, and enter into labor contracts with our employees. We also paid the premiums of various social security insurance for our employees, including medical insurance, work related injury insurance and maternity insurance. SEG has strictly complied with General Information Equal Treatment Act (AGG), as well as other laws and regulations in terms of compensation and dismissal, recruitment and promotion, working hours, equal opportunity, anti-discrimination and other benefits. In 2019, we did not identify any employment of child labor, compulsory labor or discrimination behavior.

We value the two-way communications with employees. We collect the opinions and requests from our employees on an irregular basis so as to better respond to their expectations toward the Company. The coal mining machinery segment, ASIMCO and SEG have reached collective negotiation agreements with their respective labor unions or local employment committees of where we operate. All employees have the rights to associate freely and negotiate collectively.

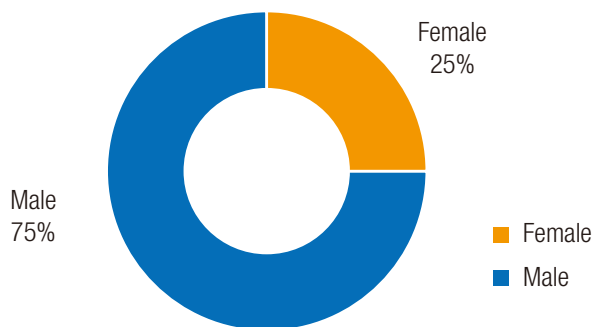


Grassroots staff representatives of our subsidiary, Zhengzhou Coal Mining Machinery Hydraulic Electrical Control Co., Ltd. attended the Workers' Congress, and actively discussed and submitted major proposals related to the Company's reform and development and the vital interests of employees.

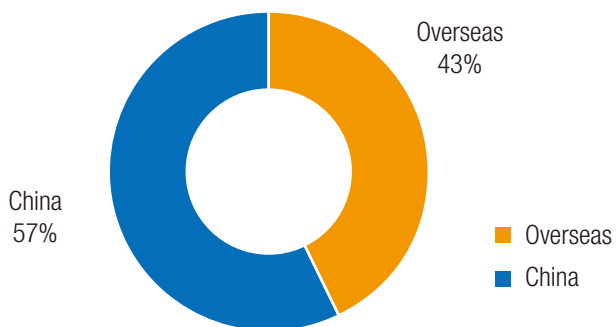
Responsibility towards Staff

We pay high attention to the diversity of the structure of employees. In this regard, we recruit more employees from different backgrounds, and encourage our employees to bring diversified thoughts and values to enhance the vitality of the Company and employees. In 2019, 16,368 employees from 17 countries around the world were included in the report, of which female employees accounted for about 25%, and employees outside China accounted for about 43%.

Structure of Employees by Gender



Structure of Employees by Geographical Region



Caring for Employees

We focus on enhancing the blissfulness of our staff. We help them strike a balance between work and personal life through organizing different leisure activities. We also provide necessary assistance to employees with difficulty and let them feel that the Company is caring for them.

Work-life Balance

Outside work, we help our staff relieve the pressure and strike a balance between work and personal life through organizing different leisure activities. In 2019, we set up seven internal culture and sports associations: basketball association, badminton association, table-tennis association, painting, calligraphy and photography association, dance association, music association, and reading and speech association to provide our staff with common hobbies and interests a platform for making friends. In 2019, more than ten culture and sports activities were organized by these associations.



In 2019, we organized a friendly "Zhengzhou Cup" Badminton Tournament, with the participation by a total of 30 employees from coal mining machinery segment, ASIMCO and SEG.



In our "First Family Day" activity, our employees and their families were engaging in funny ringtoss, and handicrafts, etc.

Responsibility towards Staff



SEG organized a drifting leadership training program in Brazil.

In addition, different forms of team building activities were carried out in all business segments. In 2019, the “First Family Day” activity was carried out by the coal mining machinery segment, participated by more than 130 people from 40 families. This activity allowed the employees who were busy with work to communicate and interact more with their families, which improved employees’ happiness index and enhanced the sense of blissfulness. ASIMCO Shuanghuan Piston Ring (Yizheng) Co., Ltd. organized the first Trailwalker activity, with a total of 50 employees actively participated to hike for 15 kilometers, enjoying the natural scenery and experiencing the fun of hiking. SEG also organized sports competitions such as drifting and tug-of-war for our employees, to train their leadership and cultivate the coordination of the teams.



SEG organized a tug-of-war in the “Staff’s Family Day” in Portugal.

Staff Help and Aid

We have established a relatively sound system to help and aid staff members in difficulty. In 2019, we improved the Management Measures for Help and Aid to Staff in Difficulty to further standardize the help and aid work for staff and the use of proceeds. We have set up a mutual aid fund for staff members to offer assistance covering clinical visits and hospitalisation for staff members suffering from major illnesses, and those in particular difficulties.

We have also set up an emergency relief fund for our staff in particular difficulties, to assist those staff and their families facing life difficulties and help them improve their living conditions and health conditions, as well as enhances their qualities and abilities. In 2019, the coal mining machinery segment carried out the warmth delivery for our staff members suffering from major diseases, and helped a total of 48 people.



We visited the family of a staff in difficulty and cared about the current situation of the elderly.

Since 2006, ASIMCO set up Li Ke Ping Scholarship Fund which provides assistance to qualified children of ASIMCO staff member, encouraging them to study in science and technology field in tertiary institutions and prepare themselves for the future technology development. Every year, Li Ke Ping Scholarship Fund Committee evaluates various factors including the results of college entrance examination of candidates, the correlation between ASIMCO’s business and the study disciplines of candidates, the needs for scholarship and will of candidates, to select the final winners. As at the end of 2019, the Scholarship Fund provided subsidies for a total of 155 children of our staff members.

Responsibility towards Staff

Career Development

We have established a relatively comprehensive career development system, which formulates career development paths and training plans for different positions, and creates a career development platform for employees for the promotion of mutual growth of individuals and the Company. We have formulated Remuneration Management System, establishing a more scientific performance assessment and evaluation system.

Talent Cultivation

We have implemented an all-rounded talent cultivation plan to build up a talent team with complete categories, reasonable structure and excellent quality, so as to support the Company's reform and development, and accelerate the Company's internationalized innovation process.

We pay special attention to the cultivation of young talents with scientific and technological specialty. We continued to build up the team of scientific and technological talents in 2019. The coal mining machinery segment has improved the professional structure and age structure of the scientific and technological team through providing training to existing talents, improving their education attainment and level, and introducing a large number of new graduates. ASIMCO has built a talent team for various units through the focus and centralized training of "high potential talents" selected internally. SEG has further strengthened the construction of the scientific research system and talent team by building up an R&D system that is more adaptable to diversified management, efficiently allocating internal R&D resources and enhancing the capabilities of existing talent teams through training.

Staff Training

We have formulated Staff Training Management Measures, and built up a team of experienced internal training specialists, forming an education and training layout by levels and categories, through multiple channels, in multiple forms, with an emphasis on results, full of energy and open to all staff members. In order to effectively realize the construction of the talent team, we increased investment in employee training through sending staff members to external institutions for study opportunities, joint initiatives between schools and enterprises and internal training.

In order to understand the world's cutting-edge industrial technology, expand the international horizon of the management members at senior and middle levels of the coal mining machinery segment and ASIMCO, and to enhance the mutual communication and business understanding among the management members of the coal mining machinery segment, ASIMCO and SEG, the Company arranged to send a total of 22 key management members of production and technology of coal mining machinery segment and ASIMCO to Germany for study and communication, to visit the Benz Museum, 2019 Hannover Exhibition in Germany, and the SEG factories in Spain in 2019.



Our employees were studying and visiting overseas.

Safety and Health

With the health and safety of our staff members as our top priority, we have established rules and regulations such as Operation Environmental Inspection System for Production Safety and Staff Health and Safety Management System and built up a relatively complete occupational health and safety management system. Our principal subsidiaries in China, including Zhengzhou Coal Mining Machinery Hydraulic Electrical Control Co., Ltd., Zhengzhou Coal Mining Machinery Comprehensive Equipment Co., Ltd., Zhengzhou Coal Mining Machinery Group Material Trading Co., Ltd., ASIMCO Shuanghuan Piston Ring (Yizheng) Co., Ltd, ASIMCO International Casting Co., Ltd. (Shanxi), Hubei Super Electric Auto Motor Co., Ltd, ASIMCO NVH Technologies Co., Ltd. (Anhui), have passed the OHSAS18001 Occupational Health and Safety Management System Certification. Our subsidiary outside of China-SEG has also passed the ISO45001 Occupational Health and Safety Management System Certification.

In 2019, there were no work-related fatalities, and the number of lost days due to work injury was 1,252.

Health and Safety Education

To reduce the occurrence of safety incidents and occupational diseases, we first need to enhance the health and safety awareness of our staff members. In 2019, we continued to carry out health and safety-related education training and emergency drills to improve employees' health and safety awareness across our global business segments.

Responsibility towards Staff

The coal mining machinery segment and ASIMCO formulated plans for education and training about health and safety. By way of experiential training, pre-work meetings, training videos and professional training courses, we actively launched a variety of training, including the standardization of operational safety and protection against occupational diseases, to effectively implement the production safety philosophy at workplace and achieve the production safety target of "zero injury". For example, ASIMCO International Casting Co., Ltd. (Shanxi) organized a total of 82 training activities on safety education for 639 actual trainees in 2019. Such training related to hazard source identification and evaluation, electrical safety management, special safety training on alcohol, factory-level safety education, etc.

SEG was committed to creating an HSE atmosphere. It holds regular annual HSE briefings and conducts HSE training, monitors and manages the production environment in real time through the SEG Hildesheim information system, and displays HSE-related information to employees at factory entrances, important intersections, indoor office areas and other premises. Each year, SEG also holds 4 HSE committee meetings to discuss health, safety and environmental risks and corresponding responses.



Our employees were participating in first aid training.

Safety Precaution

In order to effectively protect the safety of our employees, we have established a complete safety precaution mechanism for our business segments worldwide. Our safety hazards mainly relate to the use of special equipment such as cranes used in the coal mining machinery product business. Such hazards principally include mechanical pinch, heavy object contact, lifting damage and vehicle damage.

In 2019, the coal mining machinery segment began to establish a dual prevention mechanism for tiered safety control and management and accident hazards screening and treatment. We have effectively improved our ability of managing and controlling safety risks and screening hazards through measures such as formulation of construction work plans to establish a "dual prevention system", compilation of documents such as the Tiered

Control of Corporate Risks and the Hazard Screening and Treatment System, establishment of a tiered management and control system for safety risks, development of safety hazards screening and treatment, and building of the dual-prevention information platform to reduce the probability of safety accidents. Subsidiaries within the scope of reporting by the coal mining machinery segment for the year 2019 were rated as benchmark units for dual prevention construction in Zhengzhou.



Our subsidiary Zhengzhou Coal Mining Machinery Comprehensive Equipment Co., Ltd. produced 208 risk notification cards, 610 cards on essential knowhow and 530 post emergency response cards for key posts, indicating main risks, risk levels and disposal methods, with tiered management over production safety risks.

In 2019, ASIMCO continued to strengthen the safety management of employees. For example, our ASIMCO International Casting Co., Ltd. (Shanxi) added a new robotic grinding operating unit to replace manual operations, to reduce employees who operated directly and ensuring safe production. ASIMCO NVH Technologies Co., Ltd. (Anhui) launched a range of management activities such as KYT activities, safety maps, "surprise" incident management, "review" of adverse incidents, case study, etc., which has improved safety performance significantly.

In order to ensure safe production, SEG has also adopted a series of measures, including requiring each department to regularly conduct safety inspections, conduct HSE internal audits, develop and install management systems, and establish assessment on key safety performance indicators.

Health Assurance

We stress on protecting not only the lives of our employees, but also their physical health.

In China, according to the requirements of laws and regulations, such as the Law on Prevention and Control of Occupational Diseases and the Provisions on the Supervision and Administration of Occupational Health at Workplace, the coal mining machinery segment and ASIMCO have formulated the Occupational Hazard Management System, and have taken a series of measures such as annual health checkup for staff members and detection of occupational hazard factors, purchase of protective equipment, health training seminars etc., to effectively prevent the harm of occupation diseases and create a healthy workplace for staff members.

Responsibility towards Staff

In 2019, we continued to invest in the improvement of production processes and devices, to reduce the impact of occupational hazard factors on employees' health. Currently, our major occupational hazard factors are the dust and soot generated in the production process. In order to reduce the harmful dust and soot in our manufacturing workshops as well as the density and frequency of contact by our operators, we continued to modify dust removal equipment. For example, ASIMCO Camshaft (Yizheng) Co., Ltd. updated the dust removal equipment in front of furnaces, and installed dust hoods in the pouring area. ASIMCO International Casting Co., Ltd. (Shanxi) added a robotic grinding unit to replace manual operations. In addition, the Company also continued to invest in airtight renovation of painting lines in 2019. At present, the Company's painting lines have been fully switched to water-based paint spraying, with corresponding airtight renovation completed, which has reduced the exposure of employees to benzene and other harmful exhausts.

In order to better improve the drinking water of frontline production employees, the coal mining machinery segment also invested about RMB550,000 to purchase and install water purification equipment for frontline production in 2019, with design, clean-up and construction taking place at locations where water purification equipment were placed, to create a clean and hygienic environment for drinking water.

Overseas, SEG strictly abided by laws and regulations such as the Health and Safety Act, the Industrial Safety Regulation, the Hazardous Substances Ordinance, the Workplaces Regulation and the Maternity Protection Act, and actively took measures to reduce hazards of occupational diseases and improve employees' health. SEG provided employees with consultations on health issues, ergonomics, toxic and hazardous substances, etc.. Staff members are offered physical examinations, which cover blood tests, urine tests, vision, height, weight, blood pressure, etc.. They also joined fitness classes and mutual aid association for stopping smoke.



SEG regularly organized its employees stretch their bodies in Portugal every day, relaxing their muscles and bones to alleviate the effect from lengthy sitting and prevent office occupational diseases.



Environmental Responsibility

We attach great importance to environmental protection, with a robust environmental management system in place for each business segment. We have also passed the ISO14001 Environmental Management System certification. We strictly complied with environmental protection laws and regulations in the places where we operated, and formulated systems such as “Environmental Protection Management System”, “Operations Management and Supervision System of Pollution Prevention Facilities”, and “Emergency Plans of Environmental Pollution Incidents”.

In 2019, we continued to invest considerable capital in promoting clean production, improving the efficiency of resource utilization, mitigating and preventing the generation of pollutants. We carried out internal review and external monitoring of the environment, to identify and address problems in a timely manner. We offered training and education on environmental protection, energy conservation and emissions reduction, to enhance the environmental awareness of all the staff. In 2019, we did not incur any material incident of environmental pollution or ecological destruction.

Energy Management

The energy we consumed in our business operation process mainly comprised electricity, natural gas, and a small amount of diesel and gasoline. We keep enhancing our energy efficiency and adopting more clean energy, to reduce fossil fuel consumption and greenhouse gas emissions.

In 2019, we continued to adopt a series of measures for lowering energy consumption. For the coal mining machinery segment, high-quality professionals such as postgraduates and undergraduates majoring in environmental protection were recruited to join the environmental management team and strengthen its environmental management capacity. An environmental management team was organized to participate in multiple special trainings in areas such as environmental protection for the electroplating industry, hazardous wastes and exhibitions of national-level environmentally friendly equipment. At the same time, we launched an activity to solicit solutions to improving energy conservation and emissions reduction throughout the coal mining machinery segment, with 20 solutions selected which underwent feasibility study by experts. Currently, such solutions are under experiment.

ASIMCO International Casting Co., Ltd. (Shanxi), a subsidiary of ASIMCO, has transformed its operation mode to use the waste heat from its neighboring plant for heating, in place of its original natural gas boilers, thus saving about 175,000 cubic meters of natural gas in 2019. ASIMCO Shuanghuan Piston Ring (Yizheng) Co., Ltd. has renovated its chromium plated capacitor compensation cabinet to improve power factor and reduce line loss, saving about 200 MWh in 2019.

SEG studied the power consumption for gas emissions of its styrene-free fuel injection stations. By controlling the leakage of compressed air, the exhaust power consumption has been cut by approximately 50%. In addition, SEG’s “Saving Energy – Green” project in Brazil was conferred with the “Sustainable Development Information Disclosure Project” award by the Brazilian Auto Parts Industry Association.

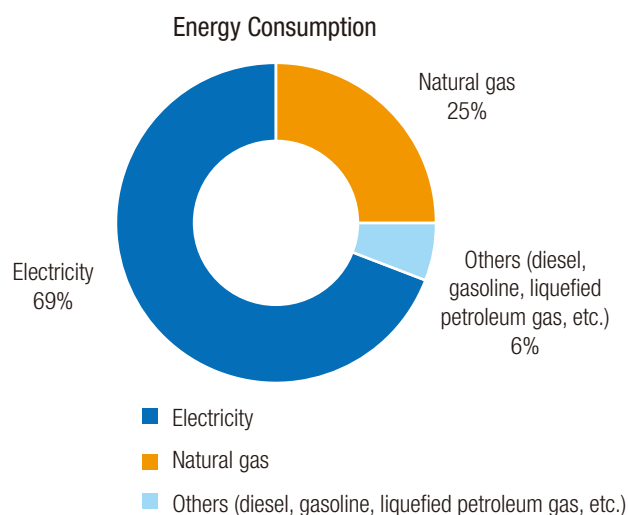
In 2019, we consumed a total of 432,789.71 MWh of energy, comprising 298,504.64 MWh of electricity and 110,025.18 MWh of natural gas.

In 2019, our total greenhouse gas emissions equivalent amounted to 175,406.47 tons. Our scope 1 direct greenhouse gas emissions were mainly



SEG was conferred with the “Sustainable Development Information Disclosure Project” award by the Brazilian Auto Parts Industry Association.

generated from burning natural gas, gasoline, diesel, etc., while scope 2 indirect greenhouse gas emissions were mainly from purchased power. In particular, carbon dioxide neutral power invariably comprised the purchased power of SEG under the scope of this report in 2019. The total amount of greenhouse gas emissions within China decreased by approximately 6% in 2019 as compared with last year.



Environmental Responsibility

Emissions Management

We strictly comply with the laws and regulations related to emissions management in the places where we operate, carefully identify the sources of various pollutants during our operation, and strictly monitor the management and discharge of exhaust and wastes.

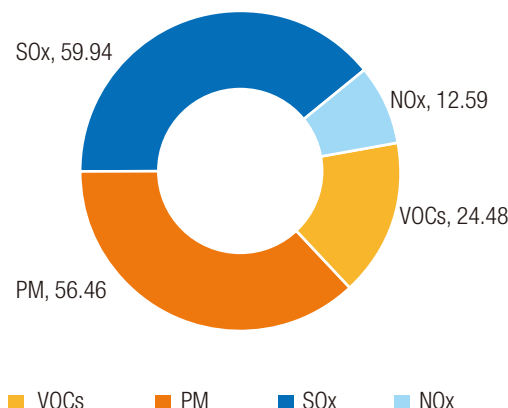
Exhaust

Our main sources of exhaust include the exhaust from fossil fuel combustion, paint, dust and soot during the production process. The main pollutants in our exhaust include NOx, SOx, PM and VOCs. In 2019, our main exhaust emissions totaled 153.47 tons.

In 2019, the coal mining machinery segment replaced oil paint with water paint with lower organic solvents content. At the same time, both the coal mining machinery segment and ASIMCO completed the transformation of spray painting lines, recycling the exhaust from paint and reducing emissions of VOCs. Our VOCs emissions decreased by approximately 84% compared with 2018.

In China, the coal mining machinery segment and ASIMCO strictly comply with the Atmospheric Pollution Prevention and Control Law of the People's Republic of China (《中華人民共和國大氣污染防治法》). Overseas, SEG strictly complies with the Federal Immission Control Act. We employ different measures to target exhaust emissions from different production procedures, to ensure that our exhaust emissions meet local regulatory requirements:

Exhaust Emissions (ton)



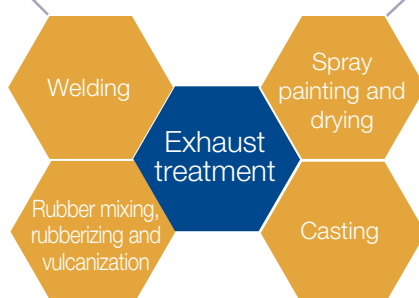
In China, we also took emergency measures of exhaust emissions reduction for special situations such as heavily polluted weather conditions in 2019. For instance, ASIMCO International Casting Co., Ltd. (Shanxi) prepared the implementation plan of "One Policy for One Plant" for emergency emissions reduction in heavily polluted weather conditions, which enabled an annual emissions reduction of approximately 10 tons of NOx, approximately 20 tons of SOx, approximately 7 tons of PM and approximately 3 tons of VOCs.

Soot constitutes the main pollutant in the welding exhaust from our welding process.

We have adopted partial exhaust hoods, air ducts, soot purification systems and ventilation and dust removal units, to achieve a soot purification rate of 99%.

Regarding the exhaust from our rubber mixing, rubberizing and vulcanization processes, the main pollutants are VOCs, sulfur compounds, soot, etc.

We have adopted various exhaust processing devices and the corresponding air intake and exhaust systems to meet the testing standardization of exhaust emissions.



Paint mists and VOCs constitute the main pollutants of exhaust from our spray painting and drying process.

We installed a paint exhaust treatment device to collect paint exhaust for unified treatment. Meanwhile, we gradually replaced oil paint with water paint with lower organic solvents content, to reduce VOCs volatilization.

Dust and soot comprise the main pollutants of exhaust during our casting process.

We adopted bag filters for dust removal.

Environmental Responsibility

Wastes

Wastes from our operation process are divided into hazardous and non-hazardous wastes. We have engaged a qualified third-party professional treatment firm to carry out centralized treatment of hazardous wastes which mainly comprised emulsion, paint slag and chromium slag. Our non-hazardous wastes mainly include scrap mixed steel, scrap steel and household refuse. We landfill, reuse or sell wastes to third parties for recycling based on the nature of wastes. In 2019, we generated 1,721.29 tons of hazardous wastes and 98,632.34 tons of non-hazardous wastes.

In China, the coal mining machinery segment and ASIMCO strictly comply with the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste, with systems such as Hazardous Waste Management formulated and a dynamic management mechanism established for hazardous wastes, to monitor the clean-up, storage and transport of hazardous wastes on a real time basis. Overseas, SEG strictly complies with laws such as the Soil Protection Act, with collection, storage and centralized processing of hazardous wastes taking place.

In order to reduce exhaust emissions, our business segments took a series of measures in 2019: ASIMCO NVH Technologies Co., Ltd. (Anhui) adopted non-phosphorus converter for pre-treatment of phosphine slag and phosphine sludge, reducing the amount of sludge by approximately 30 tons. ASIMCO Shuanghuan Piston Ring (Yizheng) Co., Ltd. performed a drying process on sludge, with the moisture content of dried sludge down to approximately 15% from the original 85% and the amount of sludge down by approximately 100 tons. ASIMCO Camshaft (Yizheng) Co., Ltd. recycled and filtered all the used cutting oil, reducing the discharge of such oil by approximately 967 tons. SEG replaced the lead-acid batteries of its forklifts with lithium batteries, which not only slashed energy consumption by approximately 40%, but also lessened the generation of hazardous waste batteries. ASIMCO International Casting Co., Ltd. (Shanxi) invested RMB23 million to build a waste molding sand recycling workshop, capable of producing 80,000 tons of recycled molding sand per year.

Water Resources Management

We attach importance to the management of water resources and take measures to minimize its consumption. Our water supply is mainly from tap water and river water. In 2019, we used a total of 14.28 million cubic meters of water resources, of which 12.97 million cubic meters comprised recycled water with a recycling rate of 91%.

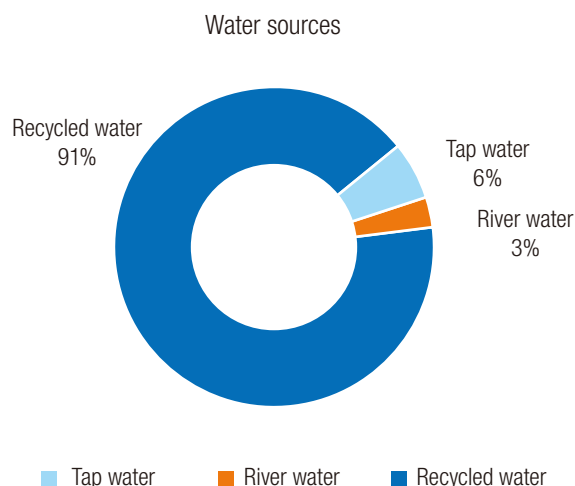
In 2019, our business segments across the globe continued to actively reduce water consumption through measures such as improving water recycling rate and updating the equipment. ASIMCO NVH Technologies Co., Ltd. (Anhui) took such measures as pipe network transformation, leakage and wastage management, and constant-pressure water supply to achieve a 70% reduction in the consumption of water resources compared with 2018. ASIMCO Shuanghuan Piston Ring (Yizheng) Co., Ltd. installed a sensing controller on the finished product phosphating cleaning line to discharge water during cleaning, which solved the problem of sustained water leakage before transformation, saving approximately 40,000 cubic meters of water in the whole year. ASIMCO Shuanghuan Piston Ring (Yizheng) Co., Ltd.



Our waste molding sand recycling workshop completed its construction in October 2019.

installed infra-red control devices to its flushing system to address the sustained water leakage prior to such transformation, with 10,000 cubic meters of water saved for the entire year. SEG installed independent reverse osmosis water-saving devices, which reduced the water consumption of its central reverse osmosis system by approximately 67%. In addition, SEG installed pressure reducers in all its washrooms, reducing water consumption by 87 cubic meters per month.

Our wastewater mainly comprises domestic and production wastewater. The former mainly comes from the water discharged by office restrooms and kitchens, without poisonous, hazardous and special substances. Industrial wastewater mainly includes the wastewater from electroplating and paint. We adopt different treatment systems for the wastewater from electroplating that contains different heavy metals, to ultimately recycle all the heavy metal wastewater. In terms of wastewater from paint, we process and discharge such water in strict accordance with local environmental protection requirements, by installing integrated industrial wastewater processors. SEG distilled and recycled part of wastewater to clean the ground and equipment.



Community Responsibility

A good community environment provides the foundation for the survival and development of an enterprise. While improving service quality and pursuing the growth of our enterprise, we are closely connected with communities, actively giving back to them and fulfilling community responsibilities. We support educational development, care for the growth of children and the life of senior citizens, and help people in need to improve their living conditions, in a bid to share the result of our development with our communities. Amidst the COVID-19 epidemic in 2020, we actively responded to the call of the Chinese government by quickly arranging human and material resources for the country's epidemic prevention.

Poverty Alleviation

Due to historical and natural reasons, economic development proves quite uneven among and within regions in China, with impoverished areas still in existence. In response to the government's poverty alleviation policies, we have actively taken supportive measures to help poor areas and households improve their lives and promote the economic development of such areas.

Mizhi County, Yulin City, Shaanxi Province, is an underdeveloped area in northwest Shaanxi and home to many lonely elders. In 2019, we provided RMB410,000 for the happy home project for the elderly in Guanjiazui Village, Yangjiagou Town, Mizhi County, Yulin City, Shaanxi Province after we learned of a major shortage of funds for the project. Upon completion, the project will provide venues of dining, recreation and bathing for the lonely elders in Guanjiazui Village.

In addition, we continued to donate RMB45,000 to the neighboring Huaixi Village, with rice and edible oil distributed to 50 rural households with living difficulties to help them improve their livelihood.

Education

We remain attentive to the development of education. In 2019, we continued to host various charitable activities in support of education and teaching, to promote the development of education.



About 260 primary and secondary school students in Zhengzhou visited our production lines, machinery and equipment, and the environment of the factory area.



SEG focuses on local education and organizes students to participate in various activities.

In 2019, the coal mining machinery segment continued to organize primary and secondary school students to visit the Company's production sites to stimulate their enthusiasm for scientific knowledge and improve their practical ability and social responsibility. In addition, the coal mining machinery segment also provided RMB50,000 to help 4 outstanding poor college students pay for their study expenses.

ASIMCO NVH Technologies Co., Ltd. (Anhui) sponsored 9 local kindergartens and primary and secondary schools with RMB148,000 to improve campus environment and purchase teaching equipment. SEG also donated approximately EUR155,000 in total to local institutions, including schools and emergency centers.

Environmental Protection

We pay attention to community environment and ecological environment, and actively use the Company's resources to help local communities in improving the environment.

In 2019, we appointed two environmental protection experts for a survey of 22 electroplating enterprises in Henan Province organized by the Department of Ecology and Environment of Henan Province, and offered support of environmental protection technologies to these enterprises to help them better manage environmental protection. On every Arbor Day, the coal mining machinery segment also organizes staff members and their families for tree planting activities, with nearly 100 participants in total.

Community Responsibility



Our staff members and their families are participating in tree planting activities.

Volunteer Activities

We encourage our staff members to actively participate in various voluntary activities, and organize them to go to nursing homes, children's welfare homes and other places to carry out a series of activities to express their care.

In 2019, we visited the elderly and retired employees in adjacent communities of our headquarters during the Spring Festival, sending them New Year's blessings. The staff of ASIMCO NVH Technologies Co., Ltd. (Anhui) visited the Nursing Home of Zhongxi Town with fruit and food for the elderly, as well as a donation of RMB20,000 to the Nursing Home.

Staff of Zhengzhou Coal Mining Machinery Comprehensive Equipment Co., Ltd. reached children's welfare homes to express solicitude. They brought daily necessities, toys and snacks to the children, talked with workers there, learn about the children's living conditions, and played games and chatted with the children.

In 2019, 45 members of our staff also participated in road snow removal activities in Zhengzhou Economic and Technological Development Zone to alleviate the impact of snow on road traffic.



Our staff members were removing snow on the roads to help to restore traffic order.

Combating Epidemic

At the beginning of 2020, the COVID-19 epidemic broke out in China. Facing the severe situation of the epidemic spread, the Company responded to the call of local governments and supported epidemic prevention and control with concrete actions.

After receiving the relevant notice from the Department of Industry and Information Technology of Henan Province, the Company quickly responded to national epidemic prevention by organizing a team of engineers, electricians and fitters to support the installation of anti-epidemic production equipment of Changyuan Esound Medical Device Co., Ltd.. After more than ten days of hard work, we successfully cooperated with Changyuan Esound Medical Device Co., Ltd. to assemble 40 masks production lines with a full production capacity of up to 2 million pieces of masks per day, the largest newly built mask production line during the epidemic prevention and control period in Henan Province. The production line has effectively alleviated mask shortage.

In February 2020, on behalf of the Company, Chairman Jiao Chengyao donated RMB2 million to the First Affiliated Hospital of Zhengzhou University whose medical staff reached Wuhan to complete the national medical emergency rescue assignment and undertook the important task of fighting against the COVID-19 epidemic in Henan Province. In addition, the Company also organized all staff members for a charitable donation. As of the mid-February, donations totaling approximately RMB580,000 were received from about 4,000 members of the Company.



On behalf of the Company, Chairman Jiao Chengyao made a donation to the First Affiliated Hospital of Zhengzhou University.

Appendices to This Report

The appendix section to this report includes an overview of social responsibility data of ZMJ for the year, providing a quantitative perspective of the Company's environmental and social performance over the past three years, together with a content index based on the ESG Reporting Guide.

Overview of Social Responsibility Data

Overview of Social Responsibility Data for the Year ¹			
Data indicators	2019	2018	2017
Emission			
Total greenhouse gas emissions equivalent (scopes 1&2) (tons)	175,406.47	135,377.51	118,580.96
Emissions under scope 1	17,554.26	21,217.52	10,617.77
Emissions under scope 2	157,852.21	114,159.99	107,963.19
Greenhouse gas emissions equivalent per RMB million in revenue (tons/RMB million)	6.82	11.28	15.81
Total exhaust emissions (tons)	153.47	238.24	166.75
Total disposal of hazardous wastes (tons)	1,721.29	2,046.81	1,887.57
Hazardous waste disposal per RMB million in revenue (tons/RMB million)	0.07	0.17	0.25
Total non-hazardous waste disposal (tons)	98,632.34	88,529.06	73,013.66
Non-hazardous waste disposal per RMB million in revenue (tons/RMB million)	3.83	3.40	9.67
Water Resources			
Total water consumption (million cubic meters)	14.28	16.44	15.68
Fresh water	1.31	1.88	2.27
Recycled water	12.97	14.56	13.41
Water consumption per RMB million in revenue (million cubic meters/RMB million)	0.0006	0.0006	0.0021

Appendices to This Report

Overview of Social Responsibility Data for the Year ¹			
Data indicators	2019	2018	2017
Energy			
Total energy consumption (MWh)	432,789.71	283,335.57	221,662.43
Electricity	298,504.64	185,998.37	174,011.20
Natural gas	110,025.18	66,595.12	41,520.36
Diesel and gasoline	4,573.95	3,498.84	2,076.82
Liquefied petroleum gas ²	17,077.26	27,243.24	4,054.05
Energy consumption per RMB million in revenue (MWh/RMB million)	16.83	10.89	29.37
Packaging Materials			
Total consumption of packing materials (tons)	7,392.00	854.22	1,268.73
Employment			
Total workforce	16,368	8,657	9,056
By gender			
Male	12,287	6,421	6,871
Female	4,081	2,236	2,185
By age group			
Below 30	3,820	2,194	2,713
30 to 50	9,947	5,491	5,422
Above 50	2,601	972	921
Staff turnover ratio	14%	15%	13%

Notes:

- 1 Data for 2017 and 2018 were adjusted, including total exhaust emissions, total non-hazardous waste disposal, fresh water and recycled water, to ensure the comparability of the data.
- 2 Disclosure of liquefied petroleum gas data was added in 2019, with the data of total liquefied petroleum gas and energy consumption for 2017 and 2018 adjusted to ensure the comparability of the data.

Appendices to This Report

Content Index Based on the ESG Reporting Guide

Aspect	Description	Position/Remarks
A. Environment		
A1 Aspect: Emissions		
General disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to exhaust and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste	Environmental Responsibility
A1.1	Types of emissions and relevant emissions information	Emissions Management
A1.2	Total greenhouse gas emissions (in tons) and (if applicable) density (e.g. per unit of production volume, per facility)	Energy Management Overview of Social Responsibility Data
A1.3	Total amount of hazardous waste produced (in tons) and (if applicable) density (e.g. per unit of production volume, per facility)	Emissions Management Overview of Social Responsibility Data
A1.4	Total amount of non-hazardous waste produced (in tons) and (if applicable) density (e.g. per unit of production volume, per facility)	Emissions Management Overview of Social Responsibility Data
A1.5	Description of measures for emissions reduction and the results achieved	Emissions Management
A1.6	Description of measures for hazardous and non-hazardous waste treatment, reduction initiatives and the results achieved	Emissions Management
A2 Aspect: Resource utilization		
General disclosure	Policies on the efficient use of resources, including energy, water and other raw materials	Environmental Responsibility
A2.1	Total consumption of direct and/or indirect energy (in 000'kWh) by type (e.g. electricity, gas or oil) and density (e.g. per unit of production volume, per facility)	Energy Management Overview of Social Responsibility Data
A2.2	Total water consumption and density (e.g. per unit of production volume, per facility)	Water Resources Management Overview of Social Responsibility Data
A2.3	Description of energy usage efficiency initiatives and the results achieved	Energy Management
A2.4	Description of any problem in seeking available water sources, water efficiency enhancement initiatives and the results achieved	Water Resources Management
A2.5	Total consumption of packaging materials for finished goods (in tons) and (if applicable) volume attributable to per production unit	Overview of Social Responsibility Data
A3 Aspect: Environment and natural resources		
General disclosure	Policies on minimizing the issuer's significant impact on the environment and natural resources	Environmental Responsibility
A3.1	Description of the significant impact on the environment and natural resources due to business activities and the actions adopted to manage such impact	Environmental Responsibility

Appendices to This Report

Aspect	Description	Position/Remarks
B. Society		
B1 Aspect: Recruitment		
General disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare	Responsibility towards Staff
B1.1	Total number of staff by gender, employment type, age group and region	Labor Rights and Interests Overview of Social Responsibility Data
B1.2	The turnover ratio of employees by gender, age group and region	Overview of Social Responsibility Data
B2 Aspect: Health and safety		
General disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards	Responsibility towards Staff
B2.1	Number and ratio of work-related fatalities	Safety and Health
B2.2	Lost working days due to work injury	Safety and Health
B2.3	Description of occupational health and safety measures adopted and how they are implemented and monitored	Safety and Health
B3 Aspect: Development and training		
General disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities	Responsibility towards Staff
B3.1	Percentage of trained employees by gender and employee category (e.g. senior management, middle management, etc.)	Not Disclosed
B3.2	Average training hours completed per employee by gender and employee category	Not Disclosed
B4 Aspect: Labor standards		
General disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labor	Responsibility towards Staff
B4.1	Description of measures for reviewing recruitment practices to avoid child and forced labor	Labor Rights and Interests
B4.2	Description of steps taken to eliminate the relevant violations when discovered	Not Applicable

Appendices to This Report

Aspect	Description	Position/Remarks
B5 Aspect: Supply chain management		
General disclosure	Policies on managing environmental and social risks of the supply chain	Supplier Management
B5.1	Number of suppliers by region	Not Disclosed
B5.2	Description of practices relating to the engagement of suppliers, the number of suppliers to which the practices are implemented and how they are implemented and monitored	Supplier Management
B6 Aspect: Product responsibility		
General disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labeling and privacy matters relating to products and services provided and methods of redress	Quality Management System
B6.1	Percentage of recalled products for safety and health reasons among the total products sold or delivered	Quality Management System
B6.2	Number of complaints received for products and service and relevant solutions	Provision of Satisfactory Services
B6.3	Description of practices relating to maintenance and protection of intellectual property	Insisting on Independent Innovation
B6.4	Description of quality inspection process and product recall procedure	Quality Management System
B6.5	Description of consumer data protection and privacy policy and how they are implemented and monitored	Provision of Satisfactory Services
B7 Aspect: Anti-corruption		
General disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.	Anti-corruption
B7.1	Number and results of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period	Anti-corruption
B7.2	Description of precautions and reporting procedures and how they are implemented and monitored	Anti-corruption
B8 Aspect: Community		
General disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities interests	Community Responsibility
B8.1	Focus areas of contribution (e.g. education, environmental affairs, labor demands, health, culture, sports)	Community Responsibility
B8.2	Resources (e.g. money or time) contributed to the focus area	Community Responsibility



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