

CIMC 中集车辆

CIMC Vehicles (Group) Co., Ltd.

Stock Code: 301039.SZ/1839.HK



2022 Social Responsibility and
Environmental, Social
and Governance Report

About the Report

Reporting Period and Scope of Entities

The Report discloses the Group's management approaches, initiatives and performance in relation to ESG from January 1, 2022 to December 31, 2022 (the "Year" or "Reporting Period"). Some contents of the Report date back to before 2022 and extend to 2023, thereby increasing reference value of the Report. The scope of the content disclosed in the Report is the same as that of the 2022 Annual Report of the Group, while the scope of environmental data covered 25 domestic and overseas "Light Tower" plants of the Group; in the future, the scope of the Report will be continuously expanded. For further details of corporate governance, please refer to the section headed "Corporate Governance Report" in the Annual Report 2022 of the Group.

Main Reporting Guidelines

The Report has been prepared mainly by reference to the Environmental, Social and Governance Reporting Guide ("ESG Guide") as set out in Appendix 27 to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "Hong Kong Stock Exchange"), and complies with the disclosure principle and the "Comply or Explain" provisions in the ESG Guide. The Report describes the impact of the Group's businesses and operations on the environment and society, in accordance with the social responsibility requirements in the Guide on Self-supervision of Companies Listed on the Shenzhen Stock Exchange No.2 - Standard Operation of Companies Listed on Chinext Market. Unless otherwise specified, all the monetary amounts in the Report are denominated in RMB.

Preparation Principle

The report has been prepared based on the following reporting principles:

Materiality: Major ESG issues were identified through the materiality assessment, and relevant information has been disclosed in the report;

Quantitative: Quantitative environmental and social information has been presented in the ESG report with descriptions of its purpose and impact, and comparative information will be provided in subsequent ESG reports;

Consistency: The report is our fourth social responsibility and environmental, social and governance report. We will adopt a consistent approach for ESG information disclosure in future years to facilitate meaningful comparisons year by year.

Publication

The Report is available online in both Chinese and English versions. All shareholders and stakeholders can access to the Report on the website of HKEX at www.hkexnews.hk. In case of any discrepancy, the Chinese version shall prevail.

Contact Information

We highly value our stakeholders and the public's opinion on the Report. Should you have any enquiries or suggestions, please contact the Group through the following means.

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The Report is the fourth "Social Responsibility and Environmental, Social and Governance ("ESG") Report (the "Report") issued by CIMC Vehicles (Group) Co., Ltd. (the "Company" or "CIMC Vehicles", together with its subsidiaries, the "Group", "we", "our" or "us"). The Report summarizes our strategies and policies on sustainable development, ethics and good governance, and elaborates our commitment to frankly communicating with stakeholders, and our visions and contributions to the environment and society. The Board of Directors (the "Board") of the Company is aware of its responsibility for the authenticity of the Report, takes full responsibility for the Group's ESG strategies and the reporting, and has reviewed and approved the Report.



Contents

ABOUT THE REPORT

CEO' S STATEMENT

BOARD' S STATEMENT

ABOUT US

04 Company Profile

05 Intercontinental Operation,
Local Manufacturing

12 Awards and Honors

01 RESPONSIBILITY MANAGEMENT AND HONEST BUSINESS

- 20 Corporate Governance
- 21 Honesty and Integrity in Operations
- 23 Corporate Social Responsibility Management
- 23 Stakeholder Engagement
- 24 Materiality Assessment and Matrix

02 INNOVATION DRIVING AND SMART PRODUCTS

- 40 Quality Commitment and Comprehensive Assurance
- 41 Driving the Industrial Upgrading with Technological Innovation
- 47 Intellectual Property Rights and Patent Maintenance
- 52 Dedicated Service and Customer Satisfaction
- 54 Information Security and Privacy Protection
- 55 Global Supply Chain Management

03 ENVIRONMENTAL PROTECTION AND GREEN MANUFACTURING

- 28 Responsible Manufacturing and Environmental Protection First
- 30 Climate Mandate and Low-carbon Development
- 32 Emissions and Pollution Reduction
- 36 Conserving Resources and Increasing Energy Efficiency

04 AGGLOMERATING EFFORTS AND PEOPLE FIRST

- 60 Equal Employment and Rights Guarantee
- 63 Talent Training, Promotion and Development
- 67 Occupational Safety and Staff Health
- 70 Serving People and Giving Back to Society

APPENDIXES

- 71 Appendix I: Industry Association
- 73 Appendix II: HKEX ESG Guide Content Index
- 76 Appendix III: Environmental KPIs Table
- 77 Appendix IV: Definitions

INDEPENDENT ASSURANCE AND STATEMENT OF OPINION

READERS' FEEDBACK



CEO's Statement



As at December 31, 2022, CIMC Vehicles has achieved

Revenue amounted to
RMB
23.62
billion



Net profit attributable
to the parent company
amounted to RMB
1.12 billion



25
"Light Tower"
plants



Dear stakeholders,

It is our great pleasure to share with you again the latest information on the management of sustainable development of CIMC Vehicles (Group) Co., Ltd. through the Social Responsibility and Environmental, Social and Governance Report 2022.

Ringing the old year out and the new year in, amidst an ever-changing world. In 2022, despite the impact of multiple unexpected factors at home and abroad including the pandemic, China's economy forged ahead under continuous pressure, showing strong resilience. In spite of the macroeconomic slowdown, flare-ups of the pandemic, and a sluggish specialty vehicle industry, CIMC Vehicles maintained profit growth, with a breakthrough in its overseas business, and without a loss on its domestic business.

In recent years, based on years of experience in global operation and management, CIMC Vehicles have continued to adhere to the business philosophy of "Intercontinental Operation, Local Manufacturing", so as to build good resilience in the new normal of the global economy. We continuously ranked first in the world in terms of the production volume of semi-trailers in the industry. As of December 31, 2022, the Company's revenue amounted to RMB23.62 billion; and net profit attributable to the parent company was RMB1.12 billion, representing a year-on-year increase of 24.1%.

We continued to implement low-carbon and green manufacturing by comprehensively building a Sophisticated Manufacturing System, and continuously promoting the use, upgrade and replacement of environmental protection equipment. As of the end of 2022, CIMC Vehicles has established 25 "Light Tower" plants globally. We had applied automation, intelligence, and digital environmental protection and emission reduction facilities to all production processes, creating a good foundation for a Sophisticated Manufacturing System. Meanwhile, to actively respond to the country's goal of achieving carbon neutrality, CIMC Vehicles will continue to advance the development and promotion of low-carbon products with lightweight, intelligent, modular and clean energy as the starting points.

In the future, CIMC Vehicles will continue to improve the ESG governance system. To this end, we will, under the guidance of our pursuit of high-quality development, and considering relevant regulatory guideline requirements and the issues that the stakeholders concern, give play to the Board's ESG leadership role to improve the two-way ESG management mechanism, integrate important ESG issues into the operation and management of the Group, and keep improving the ESG indicator system to realize our vision of "Made in China 2025", creating more value for stakeholders and a better life for employees!

Executive Director, CEO and President of CIMC Vehicles

Li Guiping

Board's Statement

The Board of Directors (the “Board”) of the Group is fully responsible for ESG management and reporting, including assessing and identifying the Group’s ESG risks and ensuring that the Group has appropriate and effective ESG risk management and internal control systems. The Board and all Directors warrant that the report does not contain any false records, misleading statements or material omissions and are jointly and severally liable for the authenticity, accuracy and completeness of the report.

The six major businesses or groups of the Company include: “Light Tower Pioneer Business”, “North American Business” and “European Business centering on the global semi-trailer market, as well as the “Champion Tanker Business Group”, “TB Business Group - Dump Truck Business” and “TB Business Group - Urban Truck Bodies Business” focusing on the sophisticated manufacturing of van bodies and truck bodies for specialty vehicles. At present, the Company’s businesses cover four major markets in the world, and more than 40 countries and regions. The Company has established 25 “Light Tower” plants at home and abroad to implement low-carbon and green manufacturing by comprehensively building a Sophisticated Manufacturing System, and continuously promoting the use, upgrade and replacement of environmental protection equipment. We keep firmly in mind our mission to provide our customers with high-quality, reliable and intelligent vehicle equipment and services, and our shareholders and customers with good returns, and to create sustainable value for the society.

The Group has established an ESG management organization system comprising the Board, the Audit Committee, the ESG Reporting Leading Group and the Project Implementation Team, and has clearly defined the assignment of responsibilities at all levels including governance, management, and executive levels, to promote the ESG work of the Company. The Board formulates the ESG strategy of the Group, guides the sustainable development of the Company and monitors the implementation of ESG measures by each subsidiary according to the strategic direction set by the Board. We gradually strengthen the management of objectives in terms of emissions and energy use, and summarize relevant progress every year to promote the sustainable development of the Company.

In addition, we are fully aware of the opportunities and challenges from the green, safe and sustainable development trend of the industry for the operations of the Company. In the future, we will continuously adjust our sustainable development management strategies and promotion methods based on the expectations of our stakeholders and the actual operation of the Group, so as to continuously improve our sustainable development.



About Us

Company Profile

The Company is the world's leader in the sophisticated manufacturing of semi-trailers and specialty vehicles, a pioneer in the high-quality development of road transport equipment in China, and an explorer and innovator in new energy specialty vehicles in China. According to the 2022 Global OEM Ranking List published by Global Trailer, the Company ranks first among semi-trailer manufacturers in the world, for ten years in a row.

The Company has six major businesses or groups, namely "Light Tower Pioneer Business", "North American Business" and "European Business" engaged in the global semi-trailer market, "Champion Tanker Business Group" with a focus on sophisticated manufacturing of truck bodies for specialty vehicles and van truck bodies, "TB Business Group - Dump Truck Business" and "TB Business Group - Urban Distribution Van Truck Bodies Business", covering four major markets in the world, more than 40 countries and regions, and has 25 "Light Tower" Plants at home and abroad.

Under the business model of "Intercontinental Operation, Local Manufacturing", the Company accelerates the construction of the "Light Tower Manufacturing Network"; actively made arrangements for the LTP production center and the LoM manufacturing plant; promoted the digital upgrade of the LTL "Light Tower" logistics, LTS "Light Tower" sourcing center and LoP local procurement; utilizes high-end manufacturing production lines and capacity; achieves mutual complementation of superior resources and efficient synergy; enabled industrial upgrading through digitalization; reduces the production costs; realized comprehensive production automation, intelligentization and digitalization of processes; increases orders and improves the fulfillment; effectively combined the six major businesses or groups in the long run, so as to guarantee high-quality development.

In the global semi-trailer market, Light Tower Pioneer Business deeply engaged in seven series of semi-trailer products in the semi-trailer market, and operated well-known brands including "CIMC Light Tower", "Pioneer Series", "Tonghua", "Huajun", "Liangshan Dongyue" and "Vanguard Trailer Rental." Light Tower Pioneer Business continuously increase its share of the domestic semi-trailer market and ranks first in China for the fourth year in a row. North American Business focused on refrigerated trailer, van trailer and container chassis trailer products in the North American market, and operated well-known local brands including "Vanguard" and "CIE". North American Business develops rapidly and has won long-term recognitions from major customers in North America. The refrigerated trailer market share in North America had constantly increased. European Business focuses on semi-trailer products in the European market, and operated "SDC" and "LAG" brands. SDC ranks first among the market in the UK. LAG, an over-70-year-old company, ranks first in the European tank trailer market, with its high commercial value, low fuel consumption and low weight.

The Company leads the development trend of road transport equipment in the market of truck bodies for specialty vehicles and van truck bodies. Champion Tanker Business Group produced and sold tank trailers and concrete mixer trucks, and operated brands including "Ruijiang Tanker", "Tonghua Tanker", "Lingyu Vehicles" and "Shandong Wanshida". Champion Tanker Business Group ranks first in terms of sales volume of concrete mixer trucks in China for the sixth year in a row, and maintained a leading position in the tank trailer market. TB Business Group - Dump Truck Business produces and manufactures dump truck and cargo truck products and is a pioneer in the business of retrofitting of truck bodies for specialty vehicles in China; TB Business Group - Urban Distribution Van Truck Bodies Business produces and manufactures refrigerated van truck bodies, dry van truck bodies, and operates the "TB" brand, with an innovative spirit and leading technology research and development level. TB Business Group provides customers with high-quality products and services that lead the development of urban distribution and cold chain logistics industries.

In new energy specialty vehicles, in line with the trend of electrification and intelligentization, the Company embarked on the path of exploration and innovation. The Company produced and sold innovative products including new energy lightweight urban dump trucks, pure electric mining trucks, concrete mixer trucks with battery charging and swapping, and new energy refrigerated vans. The Company developed innovative business models under new energy and self-driving scenarios. As a result, the Company got ahead in development in the new energy specialty vehicle market.



Intercontinental Operation, Local Manufacturing

Results of Operations in 2022



In 2022, CIMC Vehicles adhered to the philosophy of “Intercontinental Operation, Local Manufacturing”. The Company continued to upgrade the Sophisticated Manufacturing System by building 25 “Light Tower” plants at home and abroad. We have applied automation, intelligence, and digitized environmental protection and emission reduction facilities to various production links, laying a solid foundation for the Sophisticated Manufacturing System.

Deepen the development of “Light Tower Manufacturing Network” to boost the establishment of a national unified market

In its continuous efforts to improve the “Sophisticated Manufacturing System”, the Company has established 25 “Light Tower” plants around the world. In the new development stage of its pursuit of the third transformation through internal changes, the Company, against the background of creating a national unified market, the Company will deepen the construction of “Light Tower Manufacturing Network” and actively prepare well-designed plan to develop LTP production center and LoM manufacturing network. The Company will also promote the digitization upgrading of LTL “Light Tower” distribution network, the sourcing of LTS “Light Tower” outsourcing, and LoP local procurement process. Leveraging high-end manufacturing production lines and production capacity, the Company will achieve complementary resource advantages and efficient synergy. At the same time, the Company empowers industrial upgrading through digitalization to reduce production costs, and realizes fully automatic and intelligent production to remove resource segmentation and geographical restrictions, which can improve our orders and delivery, thus providing assurance for our high-quality development.

Speed up innovation and exploration in new energy area, focus on the research and development of new energy products, and seize market opportunities

Following the trend of electrification and intelligence in the automobile industry, the Company promotes the development and innovation of new energy and intelligent products, and boosts the high-quality development of the road transportation equipment industry to transform to low-emission orientation. In terms of the innovation in new energy products, the Company deepens the joint research and development with automotive manufacturers with its leading advantages in aspects such as light weight, intelligence, adaptability, etc. Its products are well recognized by the market.



The Company gains a deep insight into product demand and development, and cooperates closely with end customers, leading to an industrial chain integrating technology, business and investment and an innovative business model. We became an explorer and innovator in the area of new energy specialty vehicles, seizing the development opportunities in the market of new energy commercial vehicles.

Introduction to products of six businesses or groups

The world's leader in sophisticated manufacturing of semi-trailers and specialty vehicles

Pioneer in the high-quality development of China's road transportation equipment

Explorer and innovator in the area of new energy specialty vehicles of China

Engaged in the manufacture, sale and after-sales services for seven categories of semi-trailers in major markets in the world. Ranked first for 10 consecutive years.

Light Tower Pioneer Business

"Tonghua", "Huajun", "Pioneer Series", and "CIMC Light Tower", etc.



① Container chassis trailer



② Flatbed trailers and relevant derivative types



③ Curtain side semi-trailer

In the market of specialty vehicles truck bodies and van truck bodies, the Company leads the development trend of road transportation equipment in the industry

Champion Tanker Business Group

"Ruijiang Tanker", "Tonghua Tanker", "Shandong Wanshida" and "Lingyu Vehicles", etc.



Concrete mixer truck



Liquid Tank Trailer



Dry bulk tank trailer

Covering logistics and transportation, construction machinery, urban distribution and cold chain logistics, which covers over low, middle and high-end brands



North American business
"Vanguard" "CIE"

European business
"SDC" "LAG"



④ Van semi-trailer



⑤ Refrigerated semi-trailer



⑥ Tank semi-trailer



⑦ Other special types of trailers

TB Business Group
-Dump truck business

TB Business Group-Van truck bodies
for urban distribution business
Taizijie (TB)



Urban dump truck



Dry van truck bodies



Refrigerated van truck bodies



Promote new energy products

Product Innovation

New energy lightweight urban dump truck

New energy lightweight urban dump truck which applies ultra-high strength wear-resistant steel and is equipped with new energy chassis. With leading advantages in light weight, durability, corrosion resistance and loading capacity.



Urban distribution vehicle and refrigerated van truck

Urban distribution vehicles and refrigerated vans: We jointly developed new energy refrigerated vehicles with automotive manufacturers and reduced over 1,000KG in the weight of the van body chassis.



Concrete mixer truck

Concrete mixer: We developed a variety of new energy pure electric concrete mixer trucks including charging and battery swapping types. We used small-capacity batteries to provide the rotating power of the mixing tank, thus saving energy, reducing emissions, and cutting costs.



We created lightweight and long-life semi-trailer solutions

We focused on the development of new energy heavy trucks, regional autonomous driving, and special-line fleets driving

Business model innovation

Expanding innovative business models in new energy and autonomous driving scenarios

we explored innovations integrating technology, business, and investment



Our Third Venture

A journey since 2002

CIMC Vehicles Group entered the industry in 2002, initiating a 20-year history of struggle

Enter a new stage of development

- ❖ 2023 is the first year of Chinese path to modernization, and China's economy has entered a new stage from high-speed growth to high-quality development
- ❖ CIMC Vehicles sounded the clarion call for their third venture, maintained strategic focus, seized the development opportunity of the unified national market, nurtured opportunities in the crisis and opened a new chapter in the changing situation

Adopt new development concepts

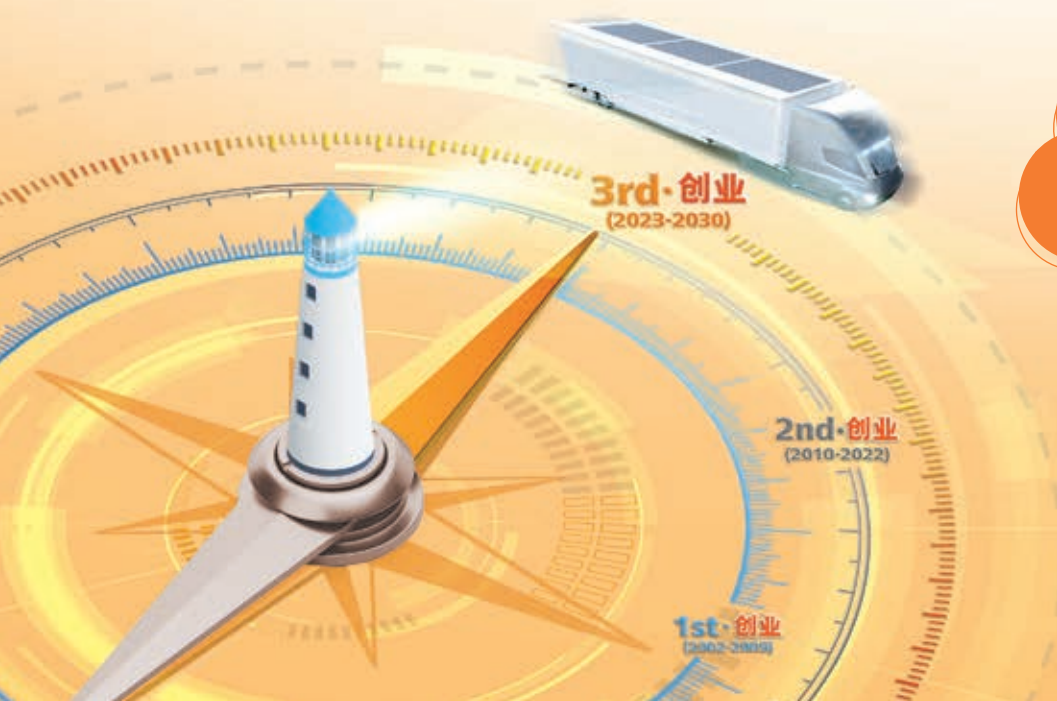
- ❖ Follow the new development concept of "innovation, coordination, green, openness, and sharing"
- ❖ CIMC Vehicles' "high-end manufacturing system" and "new management infrastructure" have achieved initial results, and the construction of "Light Tower manufacturing network" will be taken to the next level
- ❖ Relying on innovation to drive connotative growth, achieving short-term sales breakthroughs and long-term sustainable growth for six major businesses or groups

Build a new development pattern

- ❖ Establish a "dual circulation" development pattern in which domestic economic cycle plays a leading role while international economic cycle remains its extension and supplement
- ❖ CIMC Vehicles will build a new development pattern with outstanding global operational capabilities and strong executive power
- ❖ Focus on new opportunities in the global semi-trailer business, North American business, European business, TB Business Group, etc.

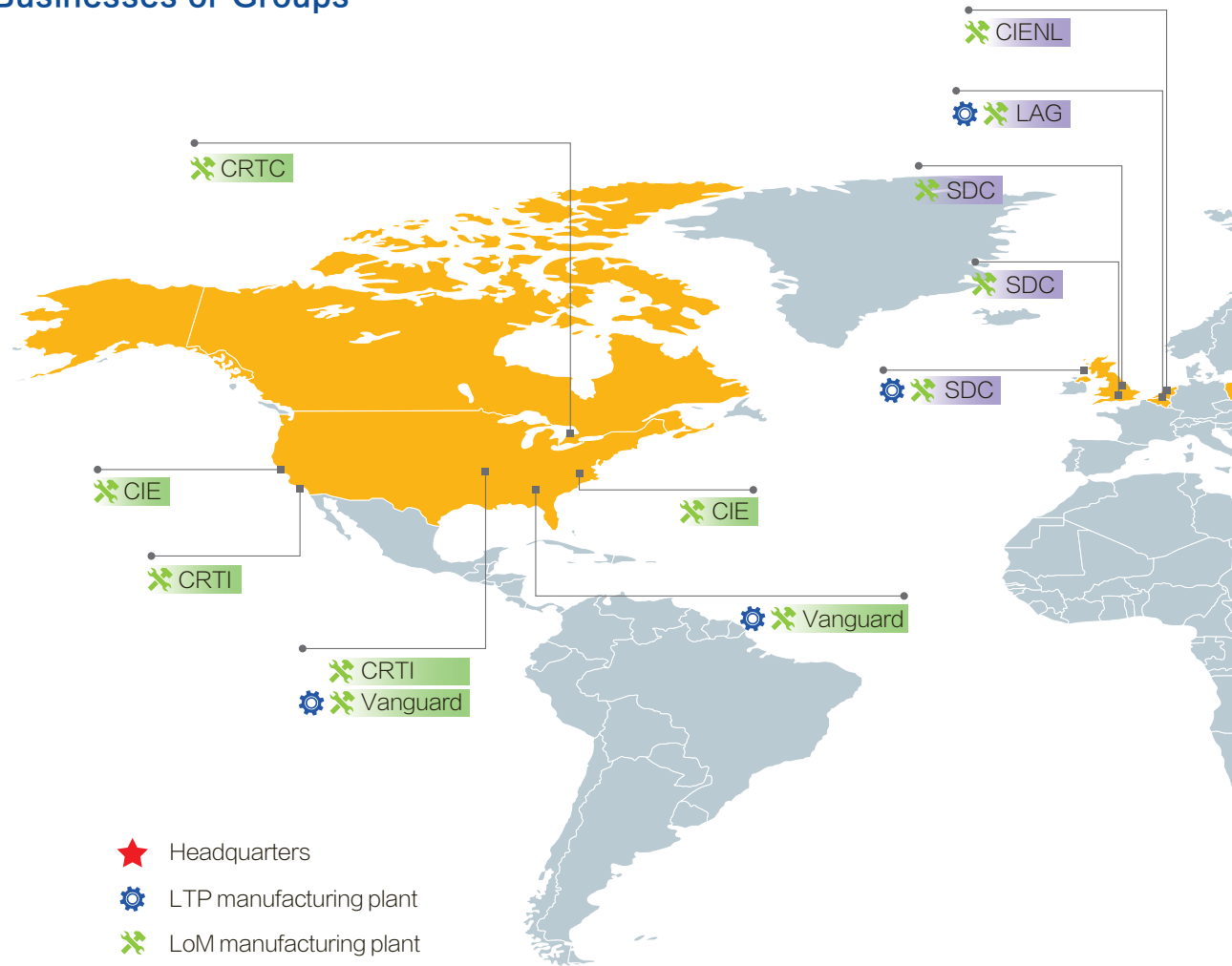
Achieve high quality development

- ❖ High quality development is the theme of China's economic and social development during the "14th Five Year Plan" or even longer period
- ❖ We will promote supply side reform and break supply constraints to achieve high-quality development



Taking Action with the Trend of Development, the Company Launched its Third Venture

Our Six Businesses or Groups



Light Tower Pioneer Business

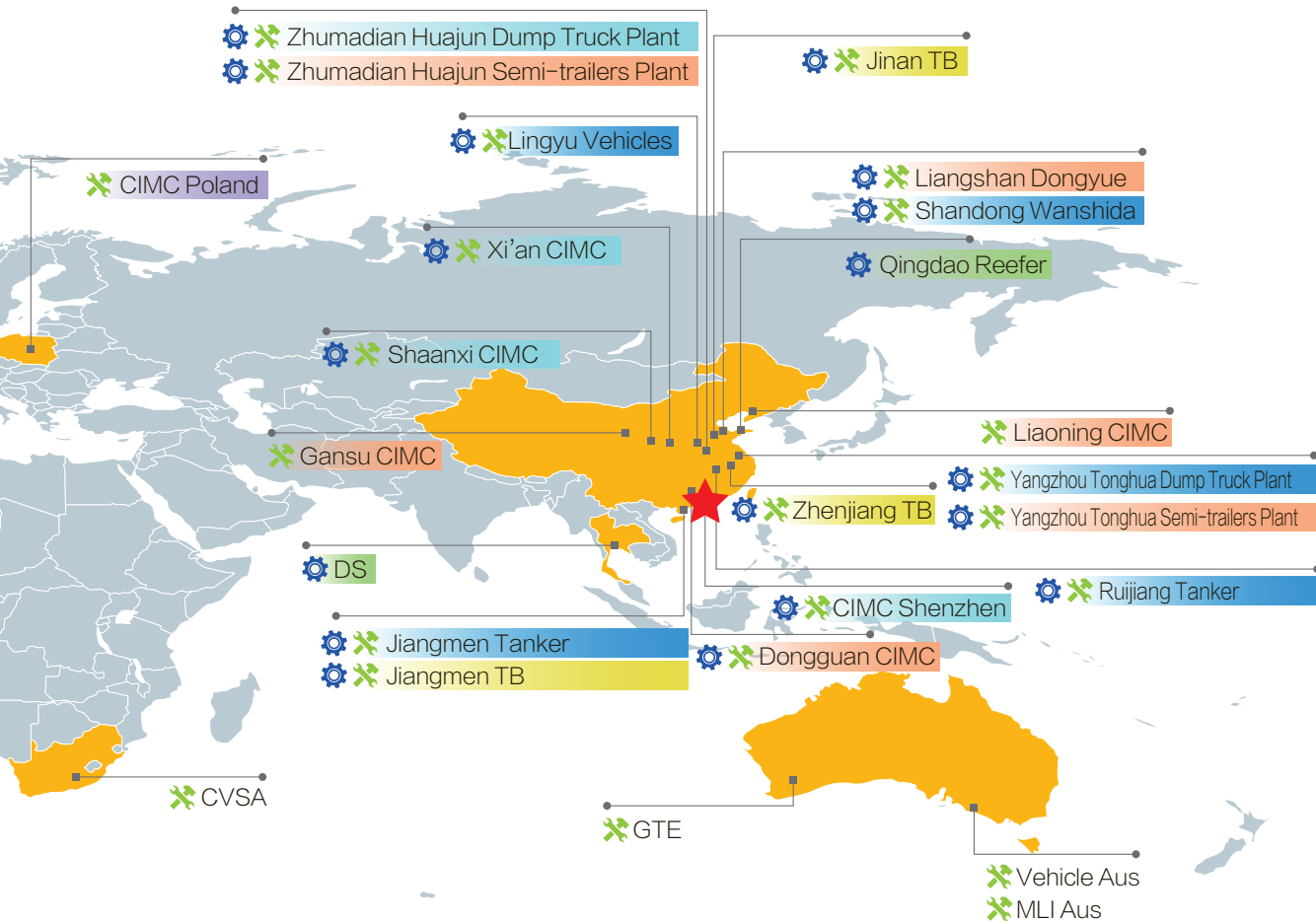
- Reintegrate the semi-trailer business so as to develop joint driving force to build a "LTP + LoM" Light Tower Manufacturing Network.
- Focus on seven series of semi-trailer products.

North American Business

- Establish four LTP manufacturing centers and seven LoM manufacturing plants to achieve cost optimization, accelerate the release of production capacity, and exert the scale effect.
- The refrigerated semi-trailer in North America has surpassed the expectation with improved product design and further exploration in new energy. The profit has set a new record.

European Business

- Complete the construction of LoM manufacturing plants located in Southampton and Mansfield in UK, and Pijnacker in Netherlands, fully releasing production capacity.
- Guided by the intercontinental operation strategy, the Company leveraged the advantage in intercontinental competition and completed the layout of the "Light Tower Manufacturing Network" of European business, consolidating its market share at the same time.



Champion Tanker Business Group

- Create leading lightweight green products in the industry, reduce the dead weight of concrete mixer trucks to lead the market trend of concrete mixer trucks. We explore new energy products and have launched more than 10 types of charging and battery swapping concrete mixer trucks.
- Launched innovative products such as “the alloy steel liquid tank trailer” and “the alloy steel gyroscope power tank trailer” which is multifunctional and capable of transporting several types of cargos by connecting trailers, expanded channels and customers and launched a new online marketing platform called “Home of Champion Tank”, forming a leading edge in tank trailer products

TB Business Group – Dump Truck Business

- As the country accelerates the construction of a “nationwide unified market”, the Company constructs the TB Business Group – dump truck business, further improving the efficiency of resource allocation and exerting the industrial agglomeration effect
- Organize marketing reform, enhance the cooperation with automobile makers, vigorously develop new energy products, expand the wide body mining vehicle market and explore overseas business. Relying on product R&D innovation and “Light Tower manufacturing network”, occupying a leading position in the dump truck modification industry

TB Business Group – Van Truck Bodies for Urban Distribution Business

- TB Business Group - van truck bodies for urban distribution Jiangmen LTP manufacturing center has been put into operation. In the face of market downturn, it has actively adjusted its target market and product structure, seized incremental opportunities for new energy products, reached strategic cooperation with several well-known and leading new energy vehicle manufacturers and established multiple front-end LoM manufacturing plants
- TB Business Group - van truck bodies for urban distribution accelerates the cultivation and expansion of overseas businesses, achieve order delivery in Africa, Southeast Asia, the Middle East and other regions, actively map out assembly sites and continuously improve overseas market sale and product launch capabilities

Awards and Honors



Most Valuable Brand of the Year
IFENG.COM



Best IR
Sina Finance

单领域冠军产品（第四批）

序号	单领域冠军产品名称	生产企业名称
2	智能罐车及半挂车	中集车辆（美国）股份有限公司

Single Champion Products of Manufacturing Industry
Ministry of Industry and Information Technology, PRC



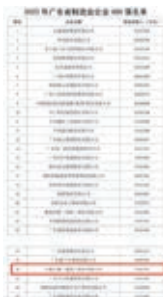
“Pioneering Environment-friendly Enterprise”
Callianpress.com



“Most Valuable Industrial Manufacturing Company”
Zhitong Finance



“Best ESG”
RoadShowChina



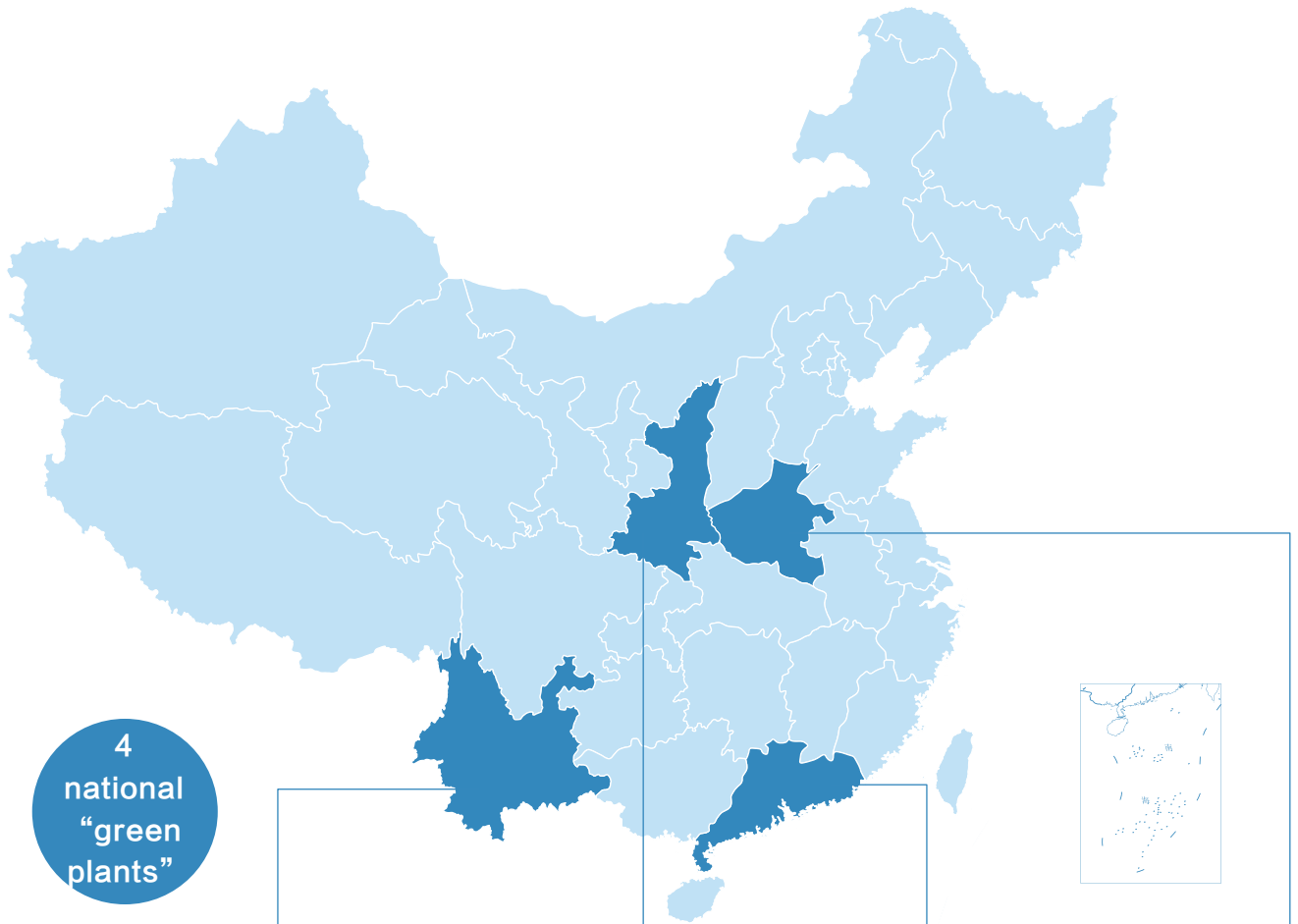
2022 Honor List of Top 500 Manufacturing Enterprises in Guangdong Province
Jointly organized by Institute of Industrial Economics, Jinan University, Guangdong Manufacturers Association and Guangdong Provincial Development and Reform Commission.



Listed Company with the Greatest Growth Potential in the Sophisticated Manufacturing Industry
National Business Daily



“Jinlan Cup” ESG Best Practice Cases
The Xinhua News Agency



4 national "green plants"



Ruijiang Tanker



Dongguan CIMC



Xi'an CIMC



Zhumadian Huajun Vehicles

Three national small technology giants that “apply special, sophisticated techniques to produce unique and novel products”



Truck bodies for semi-trailers and specialty vehicles, main product of Jiangmen Tanker



Semi-trailer product of Gansu CIMC, which adaptable to transportation environments of China’s western provinces



Commercial vehicle wheel hub, main product of Zhumadian Huajun Casting

Ruijiang Tanker, a subsidiary of CIMC Vehicles, won the “Quality Award of The People's Government of Anhui Province”



Two provincial green plants
Yangzhou Tonghua, Gansu CIMC

Two national green supply chain management enterprises
Ruijiang Tanker, Zhumadian Huajun Vehicles

One provincial small technology giants that “apply special, sophisticated techniques to produce unique and novel products”
Shandong CIMC



Awards and honors of the Group and subsidiaries are listed separately:

Winner	Honor	Awarding organization
CIMC Vehicles	"Most Valuable Brand of the Year"	IFENG.COM
CIMC Vehicles	Best IR	Sina Finance
CIMC Vehicles	Single Champion Products of Manufacturing Industry	Ministry of Industry and Information Technology, PRC
CIMC Vehicles	"Pioneering Environmental-friendly Enterprise"	Caillianpress.com
CIMC Vehicles	"Most Valuable Industrial Manufacturing Company"	Zhitong Finance
CIMC Vehicles	"Best ESG"	RoadShowChina
CIMC Vehicles	2022 Honor List of Top 500 Manufacturing Enterprises in Guangdong Province	Jointly organized by Institute of Industrial Economics, Jinan University, Guangdong Manufacturers Association and Guangdong Provincial Development and Reform Commission.
CIMC Vehicles	Listed Company with the Greatest Growth Potential in the Sophisticated Manufacturing Industry	National Business Daily
Ruijiang Tanker	The 6th Quality Award of The People's Government of Anhui Province	The People's Government of Anhui Province
Ruijiang Tanker	Top 100 Industrial Enterprises of Wuhu City	Enterprises Federation of Wuhu City
Ruijiang Tanker	2021 Anhui Youth Production Safety Demonstration Entity	Anhui Provincial Committee of the Communist Youth League, Anhui Provincial Department of Emergency Management
Ruijiang Tanker	2022 Water-saving Enterprise	Wuhu City Tax Bureau, Wuhu City Economic and Information Bureau, Wuhu City Water Conservation Leading Group Office
Ruijiang Tanker	"2021 Advanced Unit of Science and Technology Innovation"	CIMC Vehicles Group
Ruijiang Tanker	CNAS Laboratory Certification for Wuhu CIMC Ruijiang Automobile Co., Ltd.	China National Accreditation Service for Conformity Assessment
Ruijiang Tanker	The 6th Quality Award of The People's Government of Anhui Province	The People's Government of Anhui Province
Ruijiang Tanker	Wuhu City Labour Protection and Integrity Demonstration Unit	Wuhu City Human Resources and Social and Security Bureau
Yangzhou Tonghua	Science and Technology Award	China Federation of Logistics & Purchasing
Yangzhou Tonghua	Jiangsu Industrial Internet Demonstration Project	Department of Industry and Information Technology of Jiangsu Province
Yangzhou Tonghua	Advanced Unit of Charity Donation of Yangzhou Development Zone	Charity Association of Yangzhou Economic and Technological Development Zone
Yangzhou Tonghua	Yangzhou Industrial Design Centre	The People's Government of Yangzhou City
Yangzhou Tonghua	Certificate of Assessment for Integration of Informatization and Industrialization Management System, AAA	Ministry of Industry and Information Technology of the People's Republic of China - CICS-TECH
Yangzhou Tonghua	Outstanding Contribution Enterprise in High-quality Development of Economic Development Zone	The Management Committee and Working Committee of the SIP Party of Yangzhou Economic and Technological Development Zone
Lingyu Vehicles	"National Worker Pioneer"	All-China Federation of Trade Unions
Lingyu Vehicles	Demonstration Site for Standardised Construction of Grassroots Labour Union in Henan Province	Henan Province Federation of Trade Unions

Winner	Honor	Awarding organization
Lingyu Vehicles	Henan Province Branch of 54 Red Flag Youth Corps Committee	Henan Communist Youth League
Lingyu Vehicles	Advanced Unit of Economic and Technical Work of National Trade Union of Metallurgical Building Materials Industry	China Metallurgical Construction Material Workers Technology Association
Lingyu Vehicles	Star Product of Construction Machinery New Energy Equipment of PRC	cm.hc360.com/
Lingyu Vehicles	National Intelligent Manufacturing Excellent Scenarios	Jointly issued by the Ministry of Industry and Information Technology/ National Development and Reform Commission/Ministry of Finance/State Administration for Market Regulation
Lingyu Vehicles	Henan Intelligent Plant	The People's Government of Henan Province
Lingyu Vehicles	Top 100 Private Enterprises of Henan in 2022	Henan Province Federation of Industry and Commerce
Lingyu Vehicles	Leading Quality Brand in the National Special Vehicle Industry	China Association for Quality Inspection
Shandong CIMC	CIMC Taizijie KG KG Hydrogen Energy Refrigerated Vehicle Won the prize of "2022 First Hydrogen Energy Refrigerated Vehicle"	www.cworld.cn
Shandong CIMC	High and New Tech Enterprise	The Department of Science & Technology, Finance Bureau, Tax Bureau of Shandong Province
Shandong CIMC	Enterprise of Shandong Province that apply special, sophisticated techniques to produce unique and novel products	Department of Industry and Information Technology of Shandong Province
Shandong CIMC	Shandong High-end Brand Cultivation Enterprise	Shandong Market Supervision Bureau
Shandong CIMC	Shandong Small Technology Giant Enterprise	The Department of Science & Technology of Shandong Province
Shandong CIMC	Enterprise of Qinan City that apply special, sophisticated techniques to produce unique and novel products	Jinan Industry and Information Technology Bureau
Shandong CIMC	Single Champion Enterprise of Jinan City	Jinan Industry and Information Technology Bureau
Shandong CIMC	Shandong Famous Brand (Refrigerated Vehicles)	Shandong Brand Construction Promotion Association
Shandong CIMC	Shandong Outstanding Brand (Communication Vehicles, Power Vehicles)	Shandong Quality Assessment Association
Zhenjiang TB	Science and Technology Progress Award of the Group	CIMC Group
Xi'an CIMC	Xi'an Worker Pioneer	Xi'an City Federation of Trade Unions
Xi'an CIMC	"Chinese Dream, Beauty of Labor - Celebration for the 20th CPC National Congress to establish new era" "Excellent Work Award" 2022 Xi'an workers' Uniform Display and Workshop Exercise Competition	Xi'an City Federation of Trade Unions
Xi'an CIMC	"The Most Beautiful Staff Book House" in Xi'an Economic Development Zone in 2022	"The Party Working Committee of Xi'an Economic and Technological Development Zone The Management Committee of Xi'an Economic and Technological Development Zone"
Gansu CIMC	Worker Pioneer	Baiyin City Federation of Trade Unions

Winner	Honor	Awarding organization
Gansu CIMC	2021 Excellent Organizational Unit of Vocational Skill Quality Improvement Activities for Workers in Baiyin City	Organization Department of Baiyin Municipal Party Committee, Baiyin Bureau of Industry and Information Technology, Baiyin Federation of Trade Unions, Baiyin Bureau of Science and Technology, Baiyin Bureau of Human Resources and Social Security, and State-owned Assets Supervision and Administration Commission of People's Government of Baiyin
Gansu CIMC	"Yan Chaoyuan" was named excellent private entrepreneur for his care for employees in the "Dual Love & Dual Appraisal" Campaign	Baiyin Federation of Trade Unions, and Baiyin Federation of Industry and Commerce
Gansu CIMC	Business Environment Monitoring Point of China Council for the Promotion of International Trade Gansu Sub-council	Baiyin City Bureau of Commerce
Dongguan CIMC	2022 SRDI Small and Medium-sized Enterprise	Department of Industry and Information Technology of Guangdong Province
Dongguan CIMC	Enterprise with Outstanding Contribution at the 40th Anniversary of CIMC	CIMC
Dongguan CIMC	Group Star Product Award	CIMC
Dongguan CIMC	2021 Express Supplier Award	China Post Express Newspaper Office
Dongguan CIMC	Executive Member of the Council	China Association of Warehousing and Distribution Parts Logistics Branch
Dongguan CIMC	Vice President Unit	Guangdong Intercity Transportation Service Association
Dongguan CIMC	Vice President Unit	Guangdong Logistics Industry Association
Liangshan Dongyue	Member of "Science and Technology Association"	China Association for Science and Technology
Liangshan Dongyue	"Meritorious Enterprise" of Jining	Jining Government of Shandong Province
Liangshan Dongyue	CIMC Model Worker	CIMC Headquarters
Zhumadian Huajun Vehicle	"Henan Province Quality Benchmark"	Department of Industry and Information Technology of Henan Province
Zhumadian Huajun Vehicle	"Five-star Enterprise in Zhumadian"	People's Government of Zhumadian
Zhumadian Huajun Vehicle	Green Supply Chain Management Enterprise	Department of Industry and Information Technology of Henan Province
Zhumadian Huajun Vehicle	2021 China Industrial Digital Transformation Leader	e-works
Jiangmen CIMC Vehicle	Vice President Unit	China Federation of Logistics & Purchasing Hazardous Chemicals Logistics Branch
Qingdao Reefer	Top 10 Manufacturing Companies in SCO New Area for 2022	Jiaozhou Committee of the Communist Party of China
Zhumadian Huajun Casting	Zhumadian Mayor Quality Award	People's Government of Zhumadian
Zhumadian Huajun Casting	Four-star Enterprise in Zhumadian	People's Government of Zhumadian
Zhumadian Huajun Casting	Leader in Specialized Casting	Casting and Forging Industry Association of Henan Province
Zhumadian Huajun Casting	Green Technology Innovation Demonstration Enterprise	Zhumadian Bureau of Industry and Information Technology
Zhumadian Huajun Casting	5G+Smart Factory	Department of Industry and Information Technology of Henan Province



01

Responsibility Management and Honest Business

The Group is committed to fulfilling its corporate social responsibility, sharing the development results with stakeholders and promoting the industrial economy, while sparing no effort to bring sound, sustainable and stable development to the environment and society.



Corporate Governance

We have established a governance structure designed for global operations. The investments of our substantial shareholders and our business relationships with all parties also demonstrate the confidence of the community in our governance structure, which will continue to serve as a solid foundation for our sustainable growth.

The Board of the Group comprises 9 directors, including 1 executive director, 5 non-executive directors, and 3 independent non-executive directors. All directors offer their extensive business experience, deep knowledge and professional management for the efficient operation of the Board. Meanwhile, four special committees are established under the Board, namely the Audit Committee, the Remuneration Committee, the Nomination Committee and the Strategy and Investment Committee, all of which actively perform their duties to safeguard the interests of the Group and medium and small shareholders. From January 1, 2022 to December 31, 2022, the Board held 12 meetings, the Audit Committee held 10 meetings, the Remuneration Committee held 6 meetings, the Nomination Committee held 6 meetings and the Strategy and Investment Committee held 3 meetings.

Information Disclosure

144 announcements on
A Shares disclosed

158 announcements on
H Shares disclosed

A total of **302** announcements
disclosed during the year

* In 2022



Investor Relations

Participated in more than **160**
roadshows by the team

* In 2022



In 2022, the Company's investor relations team communicated with institutional investors to publicize the Company's value. The Company completed more than 160 roadshows and received more than 300 institutional investors throughout 2022.

Meanwhile, the Company attaches importance to individual investors and small and medium-sized investors relationship maintenance. During the year, the Company answered 71 questions in total from investors on Hudongyi (互动易) in a timely and accurate manner, with a response rate of 100%; and received nearly 400 emails and calls from investors, and had an unblocked mail communication channel for investor relations.

Honesty and Integrity in Operations

Internal Control

The Group has continuously regulated the corporate governance structure and the supervision of decision making and management in accordance with the Basic Standard for Internal Control of Enterprises and the supporting guidelines and other relevant provisions jointly issued by five authorities and commissions, including the Ministry of Finance of the People's Republic of China and China Securities Regulatory Commission. In addition, the Group enhanced its organisational structure, specified the responsibilities and authorities of the Board, the Supervisory Committee, and the management and improved the internal control and risk management system framework. The Group ensures legal compliance of our operations, and the realization of the strategic objectives and business goals by continuously improving and optimising in five areas, namely internal environment, risk assessment, control activities, information and communication, and internal control and thereby adapting to the ever-changing external environment and internal management needs.

During the year, the Audit Committee held 10 meetings, of which 3 were to listen to the report of the internal audit compliance department on the internal audit work and review the effectiveness of the internal control system and the Company's internal audit function.

During the year, we provided risk control courses (such as contract management and outsourcing business risk control courses) and held corresponding examinations for employees in key positions of the Group, with a total of 588 participants and a passing rate of 98.64%.

Internal Audit

During the Year, we completed ten audit projects, including nine core cadre audits and one sale business audit; A total of 16 enterprises and 12 core cadres were involved.

Based on the needs of promoting organizational development and assisting in the "new management infrastructure", we have formulated the Detailed Rules for Audit Work and the Audit Work Manual to rationalize the audit process and standardize the audit work model.

Complete **10** internal
audit projects

Conduct internal audits for
16 enterprises

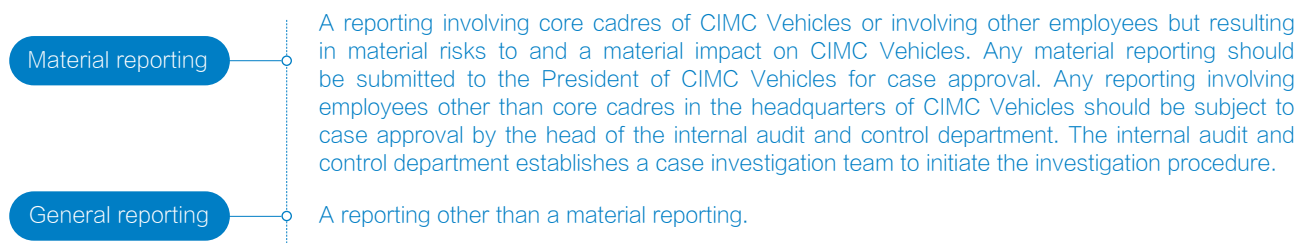


Supervision

The Group has always adhered to the business philosophy of law-based governance & good faith. We strongly oppose commercial bribery and are committed to a level playing field. In 2022, we strictly complied with legal and regulatory requirements related to anti-bribery, extortion, fraud and money laundering and there were no significant legal cases of corruption. We will continue to carry out management and supervision work in order to fight commercial bribery through strengthening our corporate and bringing society together.

The Group strictly complied with the requirements in the Criminal Law of the People's Republic of China, the Company Law of the People's Republic of China, the Anti-Unfair Competition Law of the People's Republic of China, the Anti-Money Laundering Law of the People's Republic of China, the Interim Provisions on Banning Commercial Bribery, other laws and regulations. We continuously enhance integrity in administration based on the publicly released regulations, including the Administrative Measures of Commission for Discipline Inspection on Acceptance of Gifts and Payments by Party Members and Cadres and Employees in Business (Official) Activities and the Regulations on Supervision Work - Management Standards for Supervision Matters Assigned by External Regulatory Authorities. Pursuant to the Whistleblowing Tip-off Handling Procedures formulated by the commission for discipline inspection of CIMC, the legal internal audit department of the Company accepts real name and anonymous reports through regular monitoring and reporting channels, including the WeChat official account, mailbox, landline telephone, letter and interview, among others. In 2022, in order to strengthen the Group's governance and internal control, prevent fraud, reduce operational risks, and maintain high standards of integrity and ethical business conduct, the Group formulated and issued the Anti-Corruption and Reporting Management System of CIMC Vehicles (Group) Co., Ltd., and added channels for receiving complaints and reporting, including phone call complaints and reporting. The Group carefully investigates complaints about violations received to determine the existence of the violations, holds delinquent employees liable, and maintains a "zero-tolerance" attitude towards fraud.

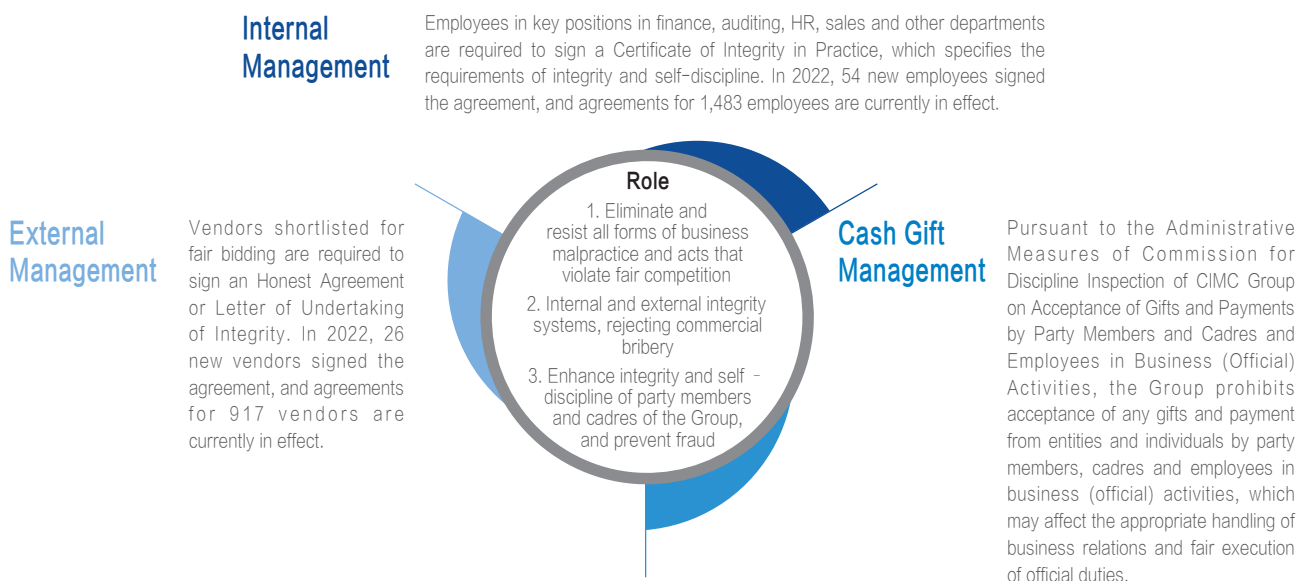
The Company classifies the reporting into material reporting and general reporting based on their nature and impact:



In treating a reporting, the internal control organization of the Group keeps confidential the name of whistleblower, the concerns and other matters required by the whistleblower. Relevant personnel with knowledge of the reporting shall assume management or legal liabilities for their violation of the provision, depending on the seriousness of the case. The letter of reporting, evidence, records of the report and other important documents should not be directly delivered to suspected departments or relevant persons, so as to prevent the leakage and retaliation against the whistleblower. Persons who retaliate against the whistleblower will be held administratively, economically and legally liable.

In 2022, 110 employees of the Group received anti-corruption trainings in 2022, and the anti-corruption coverage rate of the directors and supervisors achieved 100%.

By practising the concepts through the following measures, we continuously strengthen the integrity management of enterprises and jointly build a clean environment against corruption and bribery.



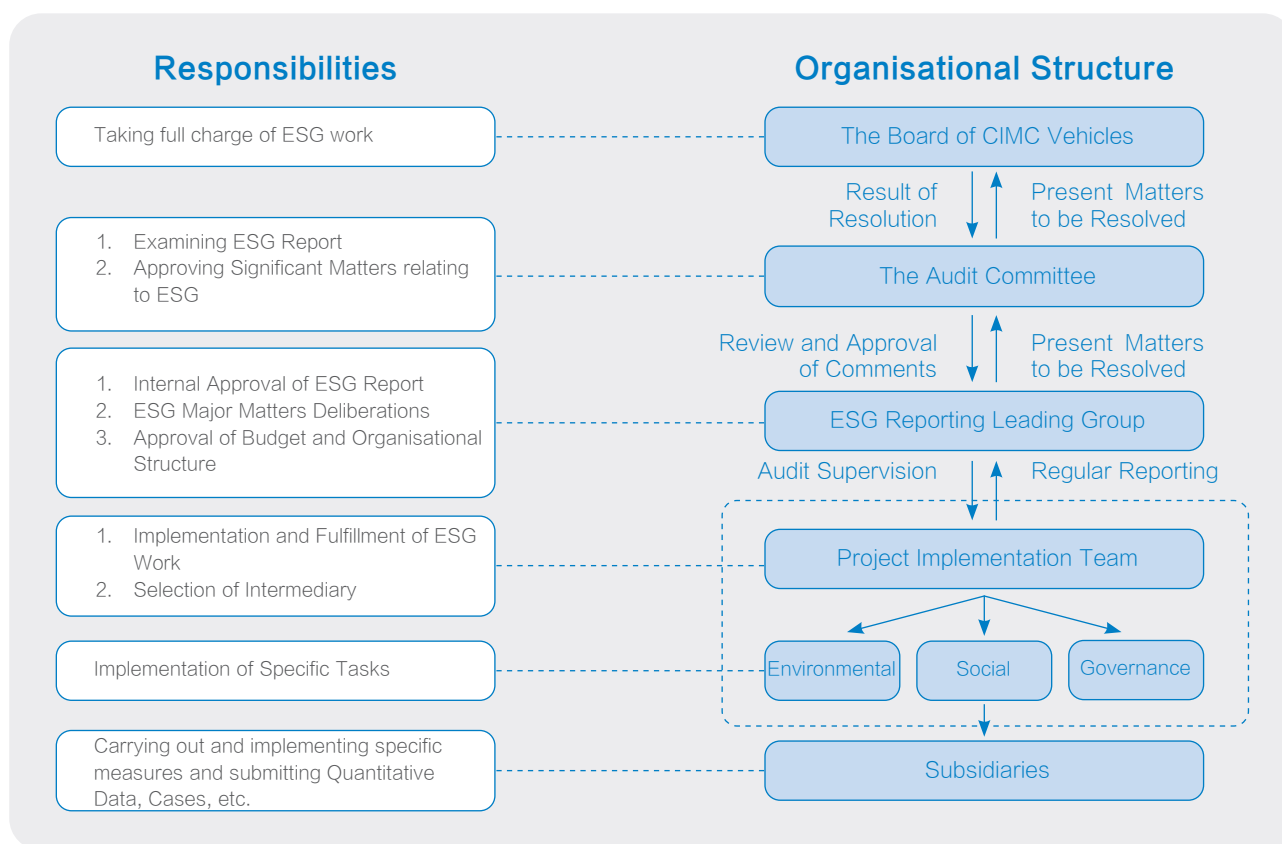
Certain integrity supervision and reporting channels

WeChat official account	E-mail	Landline/mobile tel
“CIMC Supervision”	5198@cimc.com/ audit_vehicle@cimc.com	86-0755-26802869 86-13530941839

During the Reporting Period, the Group did not experience any litigation cases related to corruption brought against the Company or its employees.

Corporate Social Responsibility Management

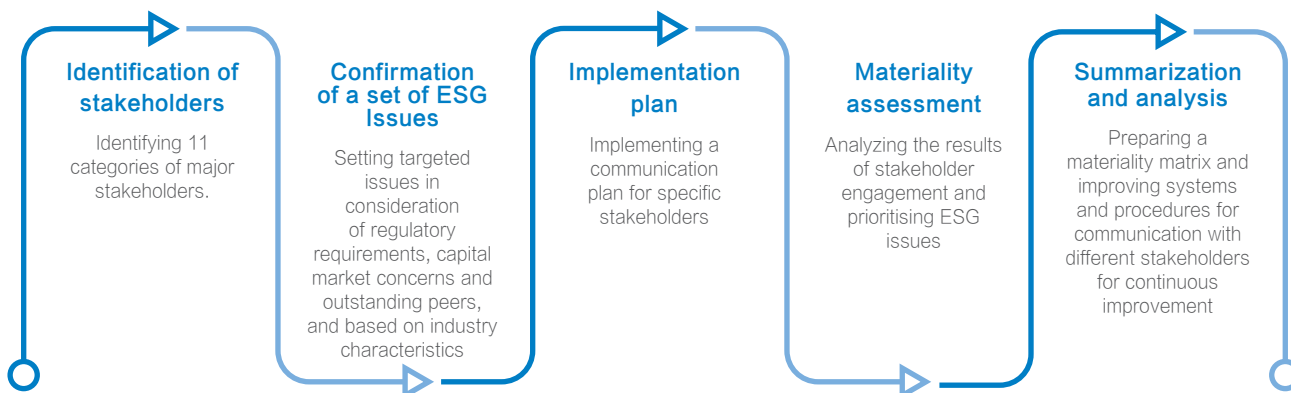
The Group has been committed to continuously expanding its business in the global market under the business philosophy of “Intercontinental Operation, Local Manufacturing”, creating sustainable synergies in design, supply chain, manufacturing and sales among the global subsidiaries of CIMC Vehicles. In the course of our business development and operation, we are committed to putting sustainable development at the forefront and actively contributing to society and environmental protection. The Group has established an ESG Organisational Structure in which the Board leads the Audit Committee, the ESG Reporting Leading Group and the Project Implementation Team to formulate the Group-wide ESG strategy and oversee the implementation of ESG initiatives by each subsidiary in accordance with the strategic direction set by the Board. Each group within the ESG Organisational Structure meets regularly to report on the progress of ESG work and review the effectiveness of the said system. The ESG governance structure of the Group is set forth in the chart below.



ESG Organizational Structure

Stakeholder Engagement

The Group attaches great importance to the valuable opinions of its stakeholders, and actively engages in two-way interaction through various communication channels and platforms to understand their expectations of the Group, which provides a strong basis for formulating and adjusting our sustainable development strategies and objectives. In addition to regular communications, the Group also conducts stakeholder engagement research projects in the preparation of the Report. We engage third-party professional agencies to communicate with internal and external stakeholders to understand their assessments and opinions of the Group’s sustainability performance and their expectations for the Group’s future work. Their feedbacks help us to assess the importance of different sustainability issues to our stakeholders so that we can make more relevant disclosures in the Report.



Identification of Stakeholders

We have identified 9 categories of major stakeholders of the Group, namely employees, government and regulatory agencies, investment organizations/shareholders/analysts, suppliers/contractors/service contractors, customers, academic/research institutions, industry associations/professional organizations, media and local communities. We set targeted ESG issues, based on the actual situation of the Group and the characteristics of the industry, in consideration of regulatory requirements, capital market concerns and outstanding peers.

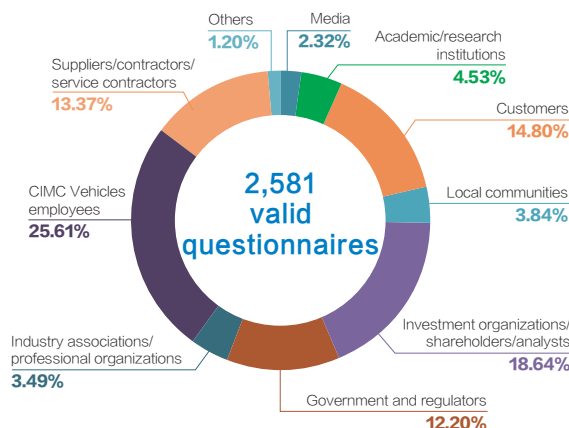
Confirmation of a Set of ESG Issues

In the process, we analyzed and determined the communication topics targeted at specific stakeholders, finally identified four major categories of topics, namely market, environment, society and corporate governance. Through summarization and refinement, the Group changed the 35 major ESG issues in 2021 to 34 issues by moderately adding new issues and combined original issues, namely adding four new issues of “green product service”, “clean energy opportunity”, “resource recycling” and “promoting industry development”, thus forming a set of issues for the year.

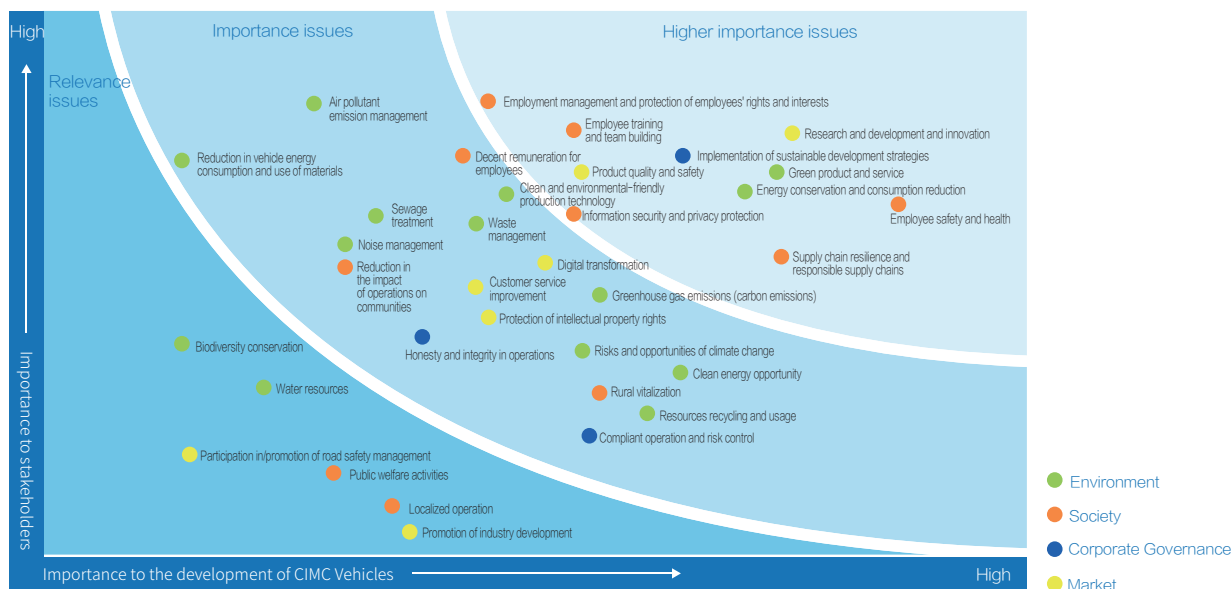
In prioritising topics, we invited internal stakeholders to consider the impact of topics on business success, and external stakeholders to consider the extent to which topics are important for sustainable development. We used a uniform questionnaire to ensure systematic and consistent assessment of key topics. In addition to this, we engaged third-party professional agencies to conduct one-on-one interviews and panel discussions with key stakeholders so that they can effectively voice their opinions in the process.

Materiality Assessment and Matrix

With reference to ISO26000 “Guidance on Social Responsibility”, GRI Standards and ESG Guide, the Group conducted a comprehensive assessment of the importance of the identified ESG topics through stakeholder survey, analysis and prioritisation of topics in two dimensions, namely “importance to CIMC Vehicles development” and “importance to stakeholders”. In addition, we categorised the topics into three levels, namely higher importance, medium importance and relevance to identify the materiality of each ESG topics. During the Reporting Period, the Group received a total of 2,581 valid questionnaires, including a total of 9 categories of internal and external stakeholder groups and other related persons. Based on the findings of the survey and a comprehensive consideration of the situation of peer companies, this year’s materiality matrix of ESG issues was formed, which serves as the basis for the disclosure of the contents of the Report and the guiding direction for the future development of sustainable development management.



Materiality Matrix of ESG Issues of CIMC Vehicles for 2022



Scope	Issue	Ranking of Issues in 2022	Degree of Materiality	Change in Ranking	Ranking in 2021
Society	Employee safety and health	1	Higher Important	↑ 1	2
Market	Research and development and innovation	2	Higher Important	↑ 26	27
Environment	Green product and service	3	Higher Important	New issue	/
Environment	Energy Conservation and consumption reduction	4	Higher Important	↑ 6	10
Governance	Implementation of sustainable development strategies	5	Higher Important	↓ 4	1
Market	Product quality and safety	6	Higher Important	↓ 3	3
Society	Supply chain resilience and responsible supply chains	7	Higher Important	Combined issue	28,29
Society	Information security and privacy protection	8	Higher Important	↑ 25	33
Society	Employee training and team building	9	Higher Important	↑ 8	17
Society	Employment management and protection of employees' rights and interests	10	Higher Important	Combined issue	7,10,34
Environment	Air pollutant emission management	11	Higher Important	↓ 2	9
Environment	Clean and environmental-friendly production technology	12	Important	↑ 7	19
Society	Decent remuneration for employees	13	Important	↑ 1	14
Market	Digital transformation	14	Important	↓ 3	11
Environment	Clean energy opportunity	15	Important	New issue	/
Environment	Waste management	16	Important	↑ 15	31
Environment	Greenhouse gas emissions (carbon emissions)	17	Important	↓ 1	16

Scope	Issue	Ranking of Issues in 2022	Degree of Materiality	Change in Ranking	Ranking in 2021
Environment	Sewage treatment	18	Important	↓ 6	12
Market	Customer service improvement	19	Important	↑ 2	21
Environment	Resources recycling and usage	20	Important	New issue	/
Environment	Risks and opportunities of climate change	21	Important	↓ 6	15
Environment	Noise management	22	Important	↓ 4	18
Society	Mitigating impact of operations on communities	23	Important	↓ 10	13
Market	Protection of intellectual property rights	24	Important	↑ 6	30
Society	Rural vitalization	25	Important	↑ 1	26
Environment	Reduction in vehicle energy consumption and use of materials	26	Important	↓ 18	8
Governance	Honesty and integrity in operations	27	Important	↓ 21	6
Governance	Compliant operation and risk control	28	Important	↓ 24	4
Environment	Biodiversity conservation	29	Relevance	↓ 5	24
Environment	Water resources consumption	30	Relevance	↓ 10	20
Market	Promotion of industry development	31	Relevance	New issue	/
Society	Localized operation	32	Relevance	↓ 7	25
Society	Public welfare activities	33	Relevance	↑ 2	35
Market	Participation in/promotion of road safety management	34	Relevance	↓ 12	22

After the management of the Group reviewed the assessment results, it was found that during the year, there was a certain improvement in the rankings of certain issues, including research and development, information security and privacy protection, waste management, employee training and team building, clean production technology and energy Conservation and consumption. Among the nine key issues of most concern to stakeholders during the year, distribution of issues in environment, society, governance and market and society were distributed relatively more, indicating that stakeholders' concern on the ESG issues of the Group is gradually shifted from a relatively balanced aspect in 2021 to society area, thus showing the gradual society expansion of their concern on the Group's ESG issues.



02

Environmental Protection and Green Manufacturing

Performance Data

The Group has always been committed to creating source-saving and environmental-friendly enterprise. We pay attention to green management in the production of vehicles.



Number of national green plants: **4**

Number of provincial green plants: **2**

Number of national green supply chain management enterprises: **2**

Number of enterprises passing ISO14001 environmental management system certification: **16**

Number of enterprises passing ISO50001 energy management system certification: **3**

Number of enterprises passing clean production audit: **6**

Investment of **RMB26.983** million in environmental protection in 2022

Responsible Manufacturing and Environment Protection First

Environmental Management System

CIMC Vehicles always practices the green philosophy. With the aim of joint development of economic and environmental benefits, while developing its business, CIMC Vehicles thoroughly implements the relevant environmental protection laws and regulations such as the Environmental Protection Law of the People's Republic of China, Solid Waste Pollution Prevention and Control Law of the People's Republic of China, the Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution, Water Pollution Prevention and Control Law of the People's Republic of China, Regulation on the Administration of Permitting of Pollutant Discharges, and the Guidelines for Investigation of Soil Pollution Hidden Dangers in Key Regulatory Units (Trial) as well as environmental protection philosophy such as energy conservation and emission reduction. By formulation of environmental policies, implementation of the environmental risk assessment, establishment of environmental objectives and plans, environmental performance assessment, continuous improvement, and full participation, CIMC Vehicles establish a complete environmental management system to ensure that the business activities of each enterprise will not exert negative effect on the environment.

In implementing new, alteration and addition projects, the Group strictly follows the “three simultaneous” efforts of environmental protection to ensure that the pollution prevention and control facilities of construction projects are designed, constructed and put into operation simultaneously with the main projects. The Group establishes a solid waste management system covering the whole process of generation, collection, storage and disposal; regularly maintains the pollution control equipment to ensure that pollutants are discharged in compliance; formulates self-monitoring scheme in accordance with the requirements of environmental impact assessment and pollutant discharge permit; regularly hires a qualified third-party testing organization to monitor wastewater, waste gas and noise, and reviews the environmental management level based on the monitoring results; and the Group continuously invests in upgrading of equipment and facilities or technical transformation of production processes to improve the environmental management performance of enterprises. In 2022, the Group invested RMB26.983 million in environmental protection.

Green Manufacturing

The goal of green manufacturing is to achieve sustainable economic, social, and environmental development. In green manufacturing, the Group takes environmental protection and sustainable development as one of its strategic objectives and adopts energy conservation, emission reduction, resource recycling, and other technical means to minimize the impact on the environment. Meanwhile, the Group actively promotes green supply chain management by requiring suppliers to meet environmental, social, and ethical standards and encouraging them to adopt green and sustainable practices. In addition, the Group encourages its employees to innovate in green manufacturing and develop green products and technologies to meet consumers' needs for environmental-friendly products and services while contributing to sustainable development.

As an important means for the Group to practice social responsibility and promote sustainable development, green manufacturing not only reduces the impact of various manufacturers on the environment, but also enhances the brand image and market competitiveness of enterprises, laying a solid foundation for future sustainable development.

Green Manufacturing—“Light Tower” Manufacturing Network

“Light Tower” Plants

“Light Tower” Plants is one of the five cornerstones for the Group to establish the sophisticated semi-trailers manufacturing system. “Light Tower” Plants is committed to green manufacturing, actively adopts energy-saving and environmental-friendly manufacturing approaches and is dedicated to reducing negative impacts on the environment. Its main green manufacturing measures include:

Green energy

renewable energy such as solar energy is used to meet the energy demand of the plant, so as to reduce the dependence on traditional fossil fuels.



Energy-saving technologies

a series of energy-saving technologies are implemented, including establishing energy-saving, intelligent lighting, efficient energy-saving equipment and systems, thus reducing energy consumption.



Water-saving measures

water-saving equipment and systems are adopted to make efficient use of water resources and reduce water consumption and waste.



Waste recycling

the waste recycling policy is implemented to classify and recycle the waste in the manufacturing process of the plant, thus reducing the environmental pollution.



Since the completion of Dongguan CIMC, the Group’s first “Light Tower” plant, the Group has established 25 domestic and overseas “Light Tower” plants of the Group.

The Group actively encourages enterprises to apply for the certification of green factories and green supply chains. As of the release of the report, the Group’s subsidiaries have owned two national green supply chain management enterprises, and two provincial green plants. In 2022, Zhumadian CIMC Huajun Vehicle Co., Ltd., a subsidiary of the Group, obtained the national green supply certification manufacturing system.

National Green Supply Chain—Zhumadian CIMC Huajun Vehicle Co., Ltd.

Zhumadian CIMC Huajun Vehicle Co., Ltd. actively promotes the construction of green supply chain. In the procurement process, the Group gives priority to environmental-friendly materials and products to reduce the impact of the supply chain on the environment. In addition, the Group actively encourages its partners to adopt energy-saving and environmental-friendly production approaches, which reduces the consumption of energy and resources, reduces the emission of wastes, and improves the production efficiency. The Group contributes to sustainable development while improving its sense of social responsibility and market competitiveness.

National Green Manufacturing Plant	Xi’an CIMC Dongguan CIMC	Ruijiang Tanker	Zhumadian Huajun Vehicle
Provincial Green Manufacturing Plant	CIMC Yangzhou	CIMC Gansu	
National Green Supply Chain Demonstration Enterprise	Ruijiang Tanker	Zhumadian Huajun Vehicle	



Setting Clear Goals and Defining a Direction

Based on the Group's business characteristics and the results of materiality assessment, we focus on the management of saving of truck body materials and air pollutant emissions in production. The Group strictly complies with the national environmental protection policies and pays close attention to the national environmental protection trend. In consideration of its focus on technological innovation and application, and saving of consumables in vehicle production, the Group has successively launched a series of lightweight products, which significantly supports the stable development of the Group and the consolidation of its industry position. Therefore, the Group also attaches great importance to the continuous development of light-weight products and continuous technological innovation in the future. The Group will continue to vigorously promote the design, research and development, production and promotion of lightweight products in order to promote the more sustainable development of the industry. The main air pollutant emissions of the Group are volatile organic compounds mainly from the coating process of vehicle production. Subject to strict compliance with national regulations on air pollutant emission management and ensuring the sustainable production of products, the Group maintains and ensures the stable operation of air pollutant treatment equipment. The Group also continuously monitors market dynamics to ensure the update of air pollutant treatment equipment and technology and the continuous improvement of the treatment level. The Group continuously implements the philosophy of energy conservation, consumption reduction and environmental protection, and reduces emissions at source. We will always take the promotion of emission reduction and environmental protection as our long-term goal, and ultimately achieve the circular economy philosophy and stick to the road of sustainable development.

Climate Mandate and Low-carbon Development

Climate change is an important issue facing the modern society and a significant part of global sustainable development. Climate change and carbon emissions are one of the most concerning environmental issues in the world. Low-carbon development is a sustainable development model that aims to achieve a balance between economic growth and environmental protection by reducing greenhouse gas emissions and resource consumption. The goal of this development model is to meet human needs without undue damage to the natural environment, thus ensuring the sustainable development of future generations.

As an upstream specialty vehicle manufacturer, the Group takes measures from various aspects including changing the energy structure, improving energy efficiency, promoting renewable energy, improving waste recycling rate based on greenhouse gas and other air pollutants from fossil energy consumption by specialty vehicles during road driving. The Group is committed to reducing carbon emissions and resource consumption to achieve the climate mission and the goals of low-carbon development.

Greenhouse Gas Emissions and Management

Greenhouse gases discharged in the production and operation activities of the Group are mainly derived from direct greenhouse gas emissions caused by the combustion of natural gas, gasoline and diesel oil, and indirect greenhouse gas emissions arising out of purchased electricity. In 2022, the total greenhouse gas emission of the Group was 158,126.99 tCO₂e, with the emission intensity being 669.46 tons/RMB100 million of revenue.

Clean energy is energy that is vigorously promoted at home and abroad to replace coal power. Ruijiang Tanker, Qingdao Reefer, Dongguan CIMC, Yangzhou Tonghua Tank Trailer and other subsidiaries of the Group utilized the roofs in the project to lay photovoltaic panels. In 2022, the total photovoltaic power generation of the Group was 10.5117 million kWh, representing an increase of 251,700 kWh as compared with those of 2021, and the carbon emissions reduced by a total of approximately 6,903.89 tons.

In order to actively respond to the national call for photovoltaic power generation and accelerate the construction of distributed photovoltaic projects, Yangzhou Tonghua Tank Trailer Plant to develop a photovoltaic power generation project. It was officially connected to the grid on September 28, 2022, with an estimated annual power generation of about 5.78 million kWh, reducing the carbon emissions by a total of approximately 4,066 tons.



Photovoltaic power generation

Subsidiary	Installed Capacity (MW)	Photovoltaic Power Generation ('0,000 kWh)	Carbon Emission Reduction (tons)
Ruijiang Tanker	3.60	339.00	2,384.87
Qingdao Reefer	1.66	138.76	1,227.05
Dongguan CIMC	2.99	281.00	1,481.15
Jiangmen Tanker	1.60	139.62	735.94
Jiangsu Baojing	0.90	90.00	633.15
Yangzhou Tonghua Tanker	5.89	62.79	441.73

Green Office and Environmental Protection Publicity

The Group vigorously promotes the philosophy of "green office and low-carbon lifestyle". In order to further enhance the employees' awareness of energy conservation and environmental protection and create a good corporate atmosphere, the Group realizes the conservation and recycling of energy and resources and reduces the impact on the environment by changing the routine operation and usage habits of the office. For example, green office can be realized by using energy-saving appliances, reducing the use of paper, promoting digital office, and strengthening waste sorting and recycling.

The Group advocates environmental awareness and knowledge to its employees through various channels, so that more employees can understand the importance of environmental problems, thus stimulating the environmental awareness and actions of practice of employees, such as putting up energy-saving slogans, daily environmental protection training, bulletin board exhibitions, media publicity, etc. Meanwhile, the Group also organizes corresponding theme activities for environmental protection and resource conservation on the World Environment Day (June 5) each year.

Huajun Casting, CIMC Xi'an and other companies responded to World Environment Day

 Case



Enterprises of CIMC actively responded to the theme activities for World Environment Day 2022. For example, Huajun Casting and CIMC Xi'an carried out a series of publicity activities around the theme of "Building a Clean and Beautiful World Together", vigorously promoted a simple, moderate, green and low-carbon lifestyle, and contributed to the construction of a homeland where man and nature can live in harmony.

Emissions and Pollution Reduction

Exhaust Emission and Management

The Group attaches great importance to the emission management of environmental pollutants, always takes the implementation of national laws and regulations as the basis and the fulfillment of responsibility system as the core, continuously explores innovative management approaches, and improves green manufacturing capacity to minimize the impact of production and operation on the environment.

In terms of exhaust emission management, during the operation of the Group, pollutants such as volatile organic compounds, welding/cutting smoke and dust are generated from painting, welding, cutting, heating, and drying in the plants. With regard to air pollutants, we have strictly complied with the national and local laws and regulations such as the Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution, and the Regulations of Henan Province on the Prevention and Control of Atmospheric Pollution, resolutely implemented regulatory requirements such as the Opinions on Further Winning the Battle of Preventing and Controlling Environmental Pollution, and fully implemented emission standards such as the Integrated Emission Standard of Air Pollutants and the Emission Control Standard of Volatile Organic Compounds. While ensuring the effective operation of the exhaust collection and disposal system and the up-to-standard exhaust emission, we actively adopted efficient disposal technology to reduce the impact of exhaust emission on the environment. In addition, we entrusted qualified third-party agency to carry out environmental monitoring regularly to check the exhaust management effect of the enterprise, and continuously reduced the emission of pollutants on the basis of ensuring that the emission standards were met.

In the year, the Group's VOCs emissions were 31.13 tons with an emission intensity of 0.13 tons/RMB100 million of revenue, representing a decrease of 56% as compared with the previous year. The Group and its subsidiaries continue to invest heavily in the upgrading of the painting line to reduce VOCs emissions from the root cause. In the future, we will continue to control exhaust gas from coating and constantly promote the upgrading of our production lines to reduce coating gas emissions at source.



VOCs emissions in 2022

31.13 tons



Emission intensity

0.13 tons/RMB100 million

Upgrading of the Painting Line of Zhumadian Huajun Vehicle

Case

Zhumadian Huajun Vehicle upgraded the painting production line in 2022, gradually transferring the semi-trailer production capacity from the manual painting line to the automatic powder spraying line. Volatile organic compounds, paint mist washing wastewater, paint slag and other wastes were therefore reduced at source. The company also adopted more efficient volatile organic compounds and smoke and dust disposal facilities, effectively reducing the emission of air pollutants.



Upgrading of the Coating Line of Ruijiang Tanker



Ruijiang Tanker has stepped up the construction of intelligent plants, upgraded and transformed the coating production line by learning from international advanced technologies and independent R&D reform, and transformed the original manual coating process of oil paint into the electrostatic automatic coating process of powder spraying. The coating raw materials were replaced, the oily paint was replaced with the powder spraying, which improved the utilization rate of spraying raw materials and the adhesion rate of the workpiece surface. The utilization rate of original coating materials was increased from 40% to 99%, the powder spraying materials could be recycled, and the packaging materials could be recycled, which was an environmental-friendly spraying material that was harmless to the environment. The generation of hazardous wastes such as paint slag was reduced at source.



Waste Management

The Group strictly complies with the laws, regulations and standards, including the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes, the National List of Hazardous Waste, and the Standard for Pollution Control on Hazardous Waste Storage, as well as the relevant laws and regulations in overseas areas of operation of the Group, such as the Pollution Prevention Act (PPA) of the United States and the ENVIRONMENTAL PROTECTION ACT of the UK to standardize the management of solid waste and ensure compliant disposal. We always adhere to the principles of "reduction", "recycling" and "harmlessness", continuously upgrade and improve the manufacturing process, strive to reduce the generation of wastes, actively explore the recycling methods of wastes, dedicated to the recycling of solid wastes, and eventually collect and store hazardous wastes based on their characteristics, and regularly hand them over to qualified units for harmless disposal.

The Group generates non-hazardous wastes such as paper shells, plastics, wooden pallets, steel slag, iron filings, leftovers, etc., as well as the hazardous wastes like paint buckets, paint slag, contaminants, waste mineral oil, phosphate residues, etc. in the production process. For these wastes, each manufacturer shall, in combination with its own production characteristics, implement waste management and control means suitable for actual production needs, and implement waste reduction and recycling from waste generation, material use, systematic material recycling and other links, so as to reduce the pressure of waste disposal and improve the efficiency of resource utilization.

In terms of hazardous waste, the subsidiaries manufacturers of the Group set up specialized warehouses to store hazardous wastes, which were stored in strict accordance with the Standard for Pollution Control on Hazardous Waste Storage and passed the environmental assessment and acceptance before putting into operation. The storage facilities meet the anti-spreading, anti-loss and anti-leakage requirements. In addition, the hazardous waste storage warehouses are managed by specific personnel to truthfully record the ledger, and finally hand over to a third party with relevant qualifications for disposal, so as to ensure that the entire disposal process of hazardous waste is legal and compliant and prevent illegal loss.

For general wastes, the Group has entered into waste disposal contracts with sanitation companies which regularly remove domestic waste and collect recyclable solid wastes like waste paper, scrap metal and waste wood for reuse.



Total amount of nonhazardous waste generated was **45,457.78** tons



Emission intensity was **192.45** tons/RMB100 million of revenue



total amount of hazardous waste generated was **1,775.69** tons



Emission intensity was **7.52** tons/RMB100 million of revenue

Wastewater Management

The Group strictly abide by the environmental laws, regulations, and standards, such as the Law of the PRC on Prevention and Control of Water Pollution and the Comprehensive Wastewater Discharge Standards, as well as the relevant laws and regulations in overseas areas of operation of the Group, such as the Clean Water Act (CWA) of the United States and the WATER RESOURCES ACT of the UK.

Based on the categories and concentrations of wastewater pollutants generated from each manufacturing area, the Group adopts targeted wastewater treatment processes to ensure that the wastewater discharged in the plant area meets the requirements of the discharge standards of the operation location such as the Comprehensive Wastewater Discharge Standards and the Pollutant Discharge Standards for Urban Wastewater Treatment Plants. Meanwhile, we have taken a number of wastewater treatment measures, such as "anaerobic + aerobic + sedimentation + adsorption filtration" process, to ensure that the concentration and total amount of wastewater meet the discharge standards required by the environmental protection department. In the year, the Group's total wastewater discharge amounted to 559,430 m³.

In 2022, the Group continued to optimize the existing wastewater treatment process, actively introduced new wastewater treatment equipment, and strived to realize the wastewater reuse to further reduce wastewater discharge and water consumption.

Reconstruction of Sewage Treatment Station of Ruijiang Tanker



Ruijiang Tanker implemented rainwater and sewage diversion. The wastewater from acid washing and the wastewater from treatment before powder spraying would enter the wastewater treatment station of the plant after pretreatment. The process of "anaerobic + aerobic + sedimentation + adsorption filtration" was adopted together with domestic wastewater after the reconstruction. Ruijiang Tanker realized 100% recycling.



In 2022, **6,006 tons** of water was saved.

Recycling of Waste Liquid from Cleaning Process During Casting Machining of CIMC Huajun



In order to reduce the Group's cost and wastewater discharge, CIMC Huajun Casting Co., Ltd. launched the recycling project of waste liquid arising from cleaning process during the machining in 2022. Through solid-liquid separation, off-line separation, aqueous solution performance test and other experiments, CIMC Huajun Casting has successfully verified that the filtered solution has antirust ability and meets the requirements of re-cleaning the machine tool and can be recycled and placed in the machine tool sink for recycling. It can reduce the generation of waste liquid by 48 tons each year and reduce the cost by about RMB210,000.



1

Waste liquid after cleaning



2

Validate the solution + Polyaluminum Chloride (PAC) solution + paint mist coagulant, the impurities in the waste liquid can be coagulated and collected



3

Add 600g of Polyaluminum Chloride (PAC) solution and 400 ml of paint mist flocculant to 50kg of waste liquid in accordance with the test standard, and separate the solid and liquid through a press plate



4

The separated water is also clear, with a PH value close to 10.



Conclusion

It has been verified that solid-liquid separation is possible, but the PH value is unstable after treatment by water-based paint system

Noise Management

The Group strictly complies with the relevant domestic regulations and standards for noise pollution control, such as the Law of the PRC on the Prevention and Control of Ambient Noise Pollution and the Emission Standard for Industrial Enterprises Noise at Boundary, as well as the relevant laws and regulations in overseas areas of operation of the Group, such as the Noise Control Act of the United States and the Environmental Act of the UK. Firstly, we assessed our own noise pollution, analyzed information such as noise sources, transmission routes and impact scope, and disclosed the assessment results to the public; secondly, we continued to optimize the design, such as giving priority to low-noise equipment and process, and focusing on arranging high-noise equipment. We have installed sound insulation and silencer materials and devices, replaced old equipment and actively carried out noise control effort to continuously reduce the impact of noise on the surrounding environment; in addition, the enterprise strictly implemented the relevant regulations and standards of noise management, strengthened the education and training of employees and suppliers, improved the awareness and ability of noise management, carried out publicity and education activities of noise management, publicized the importance of noise management to employees, and enhanced the participation and supervision of employees; and finally, we monitored and evaluated the effectiveness of noise management, entrusted qualified third-party institutions with carrying out noise evaluation regularly so as to ensure that the environmental noise in their plants comply with the requirements of the Environmental Noise Emission Standards for the Plants of Industrial Enterprises regardless of day or night, and provided feedback to the public with relevant information, and took the initiative to accept public supervision and evaluation to continuously improve noise management.

In the future, the Group will continue to speed up the upgrading of our production lines and further reduce noise and ensure the sustainable development of public health and the environment by improving the automation and intelligence of material transportation and mechanical processing, as well as increasing the number of new energy powered facilities such as the forklifts.

Noise Improvement Project for Door Panel Front Wall Workstation of Qingdao CIMC Reefer Trailer



In July 2022, in order to reduce the workshop noise and release sources, technical and process improvements were made in the door panel front wall workstation. The original method of using solid rivet pneumatic rivet gun to hit and form was improved to use the special aluminum HUCK rivet, and the original method of using rivet gun to hit was changed to use the rivet of rivet gun. The noise peak is reduced by 39.2db from the source to reduce noise and protect the hearing health of employees.

Improvement for occupational health

The noise reduction is 39.2db



113.1db of noise released in case of pneumatic tool with aluminum solid rivet, with a peak of 125db



Riveting by the riveting tool using blind rivets, with a peak of 85.8db

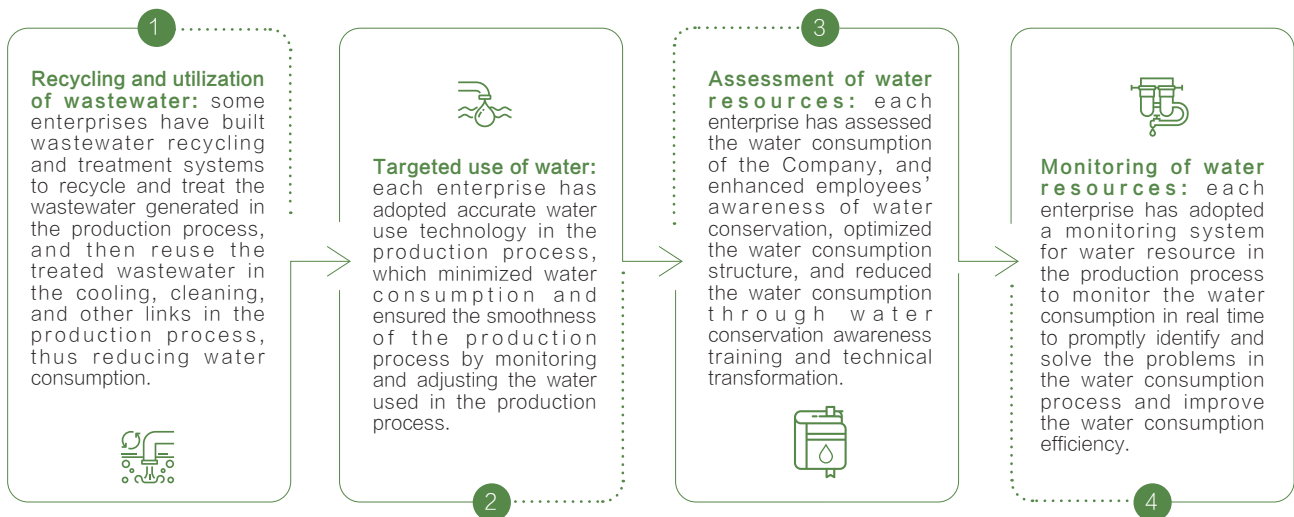


Conserving Resources and Increasing Energy Efficiency

Water Resources Management

The Group is in strict compliance with the Water Law of the People’s Republic of China, the Implementing Measures for Water-taking Licensing System, the Water Pollution Prevention and Control Law of the People’s Republic of China, the Action Plan for Prevention and Control of Water Pollution, and the relevant laws and regulations in overseas areas of operation of the Group, including the Clean Water Act (CWA) of the United States and the WATER RESOURCES ACT of the UK, in terms of wastewater discharge and management. The Group’s water consumption mainly includes water pressure test, washing, and greening. During the year, the total water consumption of the Group was 988.94 thousand m³, and the consumption intensity was 4.19 thousand m³/RMB100 million of revenue. The water resources used by the Group and its subsidiaries come from the municipal pipeline network, and no issues have occurred in obtaining suitable water sources.

The Group has continuously improved its resource management, promoted clean production, adopted advanced technologies, and strictly controlled the consumption of water resources. We actively promote water conservation technology, apply water conservation facilities, strengthen the maintenance of equipment and facilities, and strive to improve problems such as leakage. The main measures include the following aspects:



Energy Conservation and Consumption Reduction

The Group strictly complies with the Energy Law of the People’s Republic of China, the Energy Conservation Law of the People’s Republic of China, the Energy Policy Act and the Energy Protection Law, and the relevant laws and regulations in overseas areas of operation of the Group, including the Energy Policy Act of the United States. Under the guidance of Energy Management Systems - Requirements with Guidance for Use and Energy Management Systems, we have established and operated an energy management system that conforms to the characteristics of the Group.

The energy required for the operation of the Group mainly includes electric power for daily operation, natural gas for heating the drying room, and diesel for forklift driving. During the year, the Group’s total energy consumption amounted to 38,681.79 tons of standard coal, with a comprehensive energy consumption intensity of 163.77 tons of standard coal/RMB100 million of revenue.



The Group’s total energy consumption amounted to **38,681.79** tons of standard coal

Comprehensive energy consumption intensity of **163.77** tons of standard coal/RMB100 million of revenue

By establishing an energy management system, the Group has realized the monitoring and management of energy use, including energy use evaluation, energy measurement and analysis, energy consumption analysis and control, energy conservation technology application, and energy performance indicator monitoring, etc. In addition, by optimizing the equipment structure, the equipment is optimized in the production process, and high-efficiency and energy conservation equipment and new technologies are adopted, such as replacing traditional fluorescent lamps with LED lamps, and replacing them with high-efficiency and energy conservation variable speed air conditioners and air compressors; in addition, we also carry out energy conservation technology innovation, and continuously innovate energy conservation technology in the production process, such as adopting automation control technology to realize the intelligence and automation of the production process; we adopt green manufacturing technology to reduce waste generation and environmental pollution; finally, we also pay attention to the cultivation of employees' awareness of energy conservation, and enhance employees' awareness and skills of energy conservation through various forms of training activities, including lectures, training courses, and cultural activities, etc.

Phosphating Switching Silane Project of Zhumadian Huajun Vehicle



In 2022, Zhumadian Huajun Vehicle changed the phosphating tank to silane tank by improving the process. By lifting the surface conditioning process, replacing the surface conditioning tank with a pure water tank, and replacing the phosphating circulating pump motor (37KW) with a frequency converter post-circulation silane pump (20KW), the Company could save 157,200 kWh of electricity throughout the year.





03

Innovation Driving and Smart Products

The Company conforms to the trend of electrification and intelligence in the automobile industry, actively promotes the development and innovation of new energy and intelligent products and pushes forward the transformation of high-quality development of the road transportation equipment industry to low emission.

The Company actively develops and promotes lightweight, new energy, digital and intelligent innovative products, continuously optimizes the product structure, promotes quality reform and efficiency transformation, and practices high-quality development.

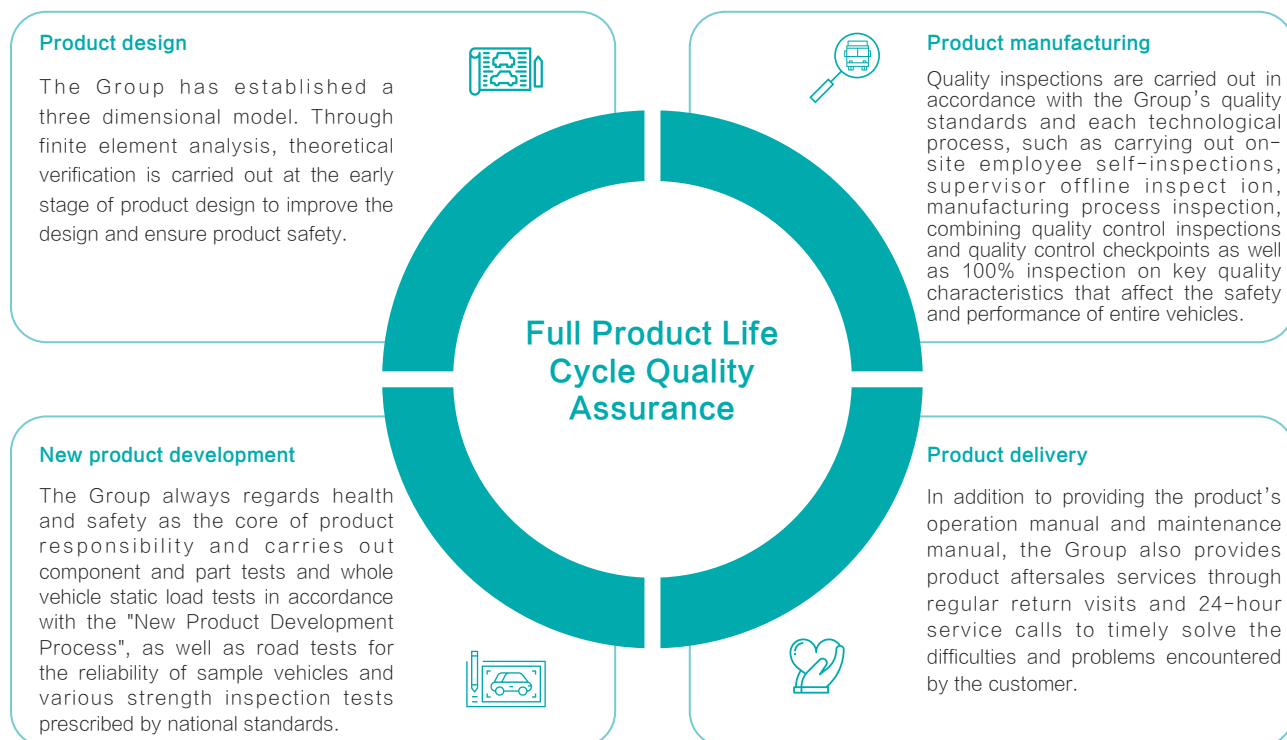


In terms of new energy specialty vehicles, the Company follows the trend of electrification and intelligence, explores the way of innovation, produces and sells innovative products such as new energy lightweight urban dump trucks, pure electric mining trucks, charging and battery swapping concrete mixer trucks, and new energy refrigerated van trucks, and develops innovative business models in new energy and autonomous driving scenarios, occupying the development opportunity in the new energy specialty vehicle market.



Quality Commitment and Comprehensive Assurance

With the establishment of the sophisticated manufacturing system as the focus, the Group has integrated product lifecycle management (PLM) and customer relationship management (CRM) and other information management systems, and established the linkage between smart manufacturing and the information platform, covering all processes from product development that caters to market needs to design, logistics procurement, manufacturing, customer management, and product sales, which guarantees the correct input of market information for product development and design of the Group, the standardization of manufacturing quality after product development, the streamlining of procurement of raw materials and parts, the intelligentization of production and manufacturing management, as well as the informationization and intelligentization of cost accounting, quotation, customer management, and sales management. During the year, the number of products recalled for safety and health reasons as a percentage of the total number of products sold or shipped by the Group and the product recall rate both were 0%.



Driving the Industrial Upgrading with Technological Innovation

“Unlimited Innovation” is one of the core values of the Group, and it is also the way for the Group to survive and develop. Since its founding, the Group has been continuously improving and optimizing the innovation mechanism and building an innovation culture. Upholding the “technology-driven” development idea, the Group has further promoted the research and development of new products, new technologies, new processes and new equipment, with a view to driving the technological progress and value enhancement of the entire industry, promoting the sustainable development of the Company. Especially in recent years, along with accelerated internationalization of the specialty vehicle industry, the Group has increased its R&D investment in advanced technologies globally, as well as the introduction and incubation of advanced R&D methods and manufacturing technologies to continuously improve the Company’s independent innovation capabilities and core competitiveness. Meanwhile, the Group is constantly improving the development, incentive and promotion mechanism for innovative achievements, and accelerating the transformation of scientific and technological achievements, building core competitiveness.

We have formulated the Measures for Management of Product Development and the Project Management Measures. Theoretical analysis, experimental verification and road testing of vehicles are carried out for the development of new products in strict accordance with the product development process, so as to ensure the integrity, preciseness and compliance of development processes of new products, and the reliability and safety of the products. Major product retrofitting also complies with the new product development process and qualification test procedures, and is subject to certification by relevant national testing institutes and announcements by the Ministry of Industry and Information Technology.

In terms of innovation incentive mechanism: Taking the CIMC Technology Innovation Incentive Measures as the main body, the Group has constructed a multi-level technological innovation incentive management system of CIMC - the vehicle industry - all member companies, to encourage engineering and technical personnel to continue to innovate from multiple angles and levels. While continuously improving the mechanism for technological innovation, achievement incentives and promotion, the Group has also enhanced the transformation efficiency of scientific and technological achievements, continuously improved its independent innovation capabilities and core competitiveness, to promote technological development.

In terms of construction of research and development systems: According to the needs of technological upgrading and industrial arrangements of the Group, the headquarters of the Group has established a technology research and development system comprising “one office (CTO office)”, “four centers (research and development center, validation center, digital center, and training center)”, the DE department and the ME department. The CTO is responsible for leading and coordinating new product development, manufacturing technology upgrading, and digitalization of manufacturing and product technologies. Currently, 13 member companies under the Group have been awarded as High and New Technology Enterprises. In addition, the Group has set up technical centres or studios in overseas branches in the United States, Germany, Belgium, the United Kingdom, Poland, Australia and Thailand. Relying on strong R&D strength, we transform leading technologies into our strong product competitive advantages.

S/N	Project Name	Type
1	Alloy steel acid and alkali tank trailer development - Champion Tanker	Product technology innovation
2	Gyro tank trailer development - Champion Tanker	
3	New gooseneck-type refrigerated semi-trailer - Qingdao Reefer	
4	Green dump truck for energy conservation and emissions reduction - Luoyang	
5	Lightweight, maintenance-free traveling mechanism product - Benjiu Tengyue	
6	Hot billet insulation transport vehicle -Huajun	
7	Ultra-lightweight powder and particle material semi-trailer - "5th generation small white tank trailer" - Luoyang	
8	New energy mixer truck - Luoyang	
9	Bulk feed transport vehicle - Luoyang	
10	South African refrigerated semi-trailer technology research and development	
11	Core module upgrading for the new energy mixer truck body	
12	K2 building block (two-year iteration) project	
13	Project of modular upgrading of the new generation of lightweight K2 refrigerated truck body	

S/N	Project Name	Type
14	X-ray real-time imaging detection method (DR detection) – Champion Tanker	Innovation of manufacturing technology
15	Research and development based on 16.5m domestic first open foaming press machine	
16	Refrigerated truck beam-sticking technology research and development	
17	Shaanxi CIMC coating line upgrade (under construction)	
18	European refrigerated semi-trailer ME_V&V development project	
19	K2 new environmental-friendly foaming technology	Basic technology research and development
20	Lightweight polyurethane foam research and development	

Table of Innovative Research and Development Achievements of the Group in 2022

Main achievements of the Group in research and development in 2022 are as follows:

Lightweight Category

Alloy steel acid and alkali tank trailer

At present, concentrated sulfuric acid and liquid alkali are generally stored and transported with tanks made of ordinary carbon steel, which have poor corrosion resistance and very large wall thickness, leading to large dead weight of the vehicle. Such tanks can store and transport only a few types of media, with very low transport efficiency. Tanks used by some customers are made of stainless steel to reduce the dead weight, but the cost of the whole vehicle is too high. In the acid and alkali industry, customers generally demand a low-cost and lightweight tank trailer to maximize vehicle operation efficiency.

Given the above-mentioned situation, Champion Tanker has developed an alloy steel fluid tank semi-trailer, which is a disruptive product in the industry and quite favored by the market.



Alloy steel acid and alkali tank trailer has the following characteristics:

- Corrosion-resistant tank: Champion Tanker has cooperated with domestic well-known steel mills to develop customized high-strength and corrosion-resistant alloy steel plates, which have excellent corrosion resistance to acid and alkali.
- Dead weight advantage: By replacing the tank material, the vehicle gains an obvious lightweight advantage by reducing its dead weight by more than 1,000 kg compared with competing ordinary carbon steel products.
- Full load-bearing structure: As shown by CAE comparison and analysis of key parts, the saddle-type full load-bearing structure eliminates local stress concentration of the tank caused by the conventional longitudinal beam structure, significantly improving the structural safety factor.
- Safety upgrading: The high-strength rear protection structure with a safety buffer distance of more than 500mm can minimize the risk of tank damage caused by rear-end collision.

Gyro tank trailer

With the social and economic development and stricter national requirements for environmental protection, tank storage of special materials will become a future development trend, and more vertical tanks will be demanded. The European-style structure of existing vertical tanks makes fitting up and moulding difficult, causing low efficiency and high production costs. Meanwhile, general horizontal dry bulk tanks have the problems of fierce competition, severe homogenization and vicious competition, displaying a deep red ocean market. Horizontal dry bulk tank trailers can only transport a small range of materials, including cement and fly ash, and cannot solve the problems of transport of mixed materials and return of goods. A new disruptive vehicle style is required to replace the existing horizontal tanks to improve market competitiveness and create new market opportunities.

Given the above-mentioned situation, the Company has developed a new type of dry bulk tank trailer to realize multi-media transport of cement and fly ash, as well as subdivided media such as river sand, machine-made sand and calcium carbonate. This vehicle can replace horizontal tanks and traditional European-style vertical tanks. At the same time, the tank body is standardized and modularized, with production guaranteed by tooling equipment, which can improve production efficiency and reduce production costs, thereby improving market competitiveness.



• The gyro tank trailer has the following characteristics:

- Multi-media transport: The trailer expands the range of customers' transport media, increases customers' business volume, and creates value for customers.
- Dead weight advantage: By removing the interlayer, the tank becomes lightweight and the cost of raw materials is reduced.
- Reduced transport losses: The tank adopts a 45-degree cone angle and a bottom discharge structure to effectively achieve multi-media transport and make zero residue possible.

Powder and particle material semi-trailer

On the basis of the original lightweight technology and taking into account the use of the product on transport roads in different regions, the main parts have been separately analyzed and the product structure has been continuously optimized, so that the powder and particle material semi-trailer (5th generation small white tank trailer) can meet the national requirements for use in non-special road conditions. The vehicle has become more lightweight and durable, with dead weight reduced by 100 kg to 200 kg compared with the previous generation of the product with the same configuration.



• The powder and particle material semi-trailer has the following characteristics:

- Streamline design: A new tank design is adopted. The middle section is changed from the balloon style to the "pear" style, and the arc radius of the whole tank roof is nearly the same. The middle sunken part of the tank is eliminated, making the whole tank roof smoother and more beautiful.
- Dead weight advantage: A lightweight design is adopted for the whole vehicle body, reducing the dead weight of the whole vehicle by 100 kg.
- Reduced transport losses: The radius of the lower part of the middle tank section is reduced, and the fluidization angle at the tank bottom is increased. Design blind spots are eliminated to reduce the residual rate.
- Energy consumption and carbon emissions: For every 100 kg of vehicle weight loss, fuel consumption per 100 km can be reduced by 0.4 L, and carbon dioxide emissions can be reduced by 0.29 kg (calculation based on 0.717kg of carbon emissions from 1L diesel combustion). Based on a life cycle of 700,000 km, carbon emissions can be reduced by 2,007 kg.

New Energy Vehicles

New energy mixer truck

According to the national planning for the "Dual Carbon" goal and related industry development trends, Lingyu Vehicles strengthened research and development of new energy mixer trucks, and made substantial breakthroughs in product development and application. It has successively developed pure electric (battery swapping and battery charging), fuel cell and other green energy mixer trucks, with chassis from Faw Jiefang, Shaanxi Heavy Duty Automobile, Jinan Heavy Duty Automobile and other mainstream brands in the market.

Jiefang Truck has remained prestigious in the industry as a heavy duty truck enterprise with a long history. In terms of new energy product layout, Jiefang and Lingyu Vehicles has formed a strong alliance to launch multiple products adopting the battery charging mode, the battery swapping mode, etc. The whole vehicles have outstanding performance in safety, reliability, cost efficiency, comfort, controllability, etc. After being launched in the market, the products have been unanimously praised by users for their excellent performance. The popularity and brand influence of new energy mixer trucks keep increasing.



• The new energy mixer truck has the following characteristics:

- Fast charging: Using high-power drive motors and high energy density batteries. Gear ratios are more reasonable than ever before. Dual DC charging significantly reduces charging time.
- Intelligent electronic control system: the truck body control adopts an electronic control system, and the rear large screen display (integrated control function with buttons) has three control modes: manual control, touch screen control and remote control. The cooling system adopts a temperature sensing automatic mode for intelligent heat dissipation, which saves power and is safer than ever before.
- Energy consumption and carbon emissions: Electric mixer trucks achieve zero emissions during transportation. Fuel mixer trucks consume approximately 40 L of diesel fuel per 100 km, and carbon emissions can be reduced by 28 kg per 100 km (calculation based on 0.717kg of carbon emissions from 1L diesel combustion). Calculated based on a life cycle of 700,000 km, carbon emissions can be reduced by about 200,000 kg per life cycle.

Electric intelligent dump truck

Due to the increasingly prominent domestic environmental protection pressure and the continued deepening of the national "Dual Carbon" strategy, new energy dump trucks have become the main carbon reduction force in the field of commercial vehicles.

CIMC Vehicles comprehensively and efficiently cooperates with relevant chassis manufacturers to implement integrated product R&D and joint promotion and service in the full life cycle, seizing opportunities in the new energy blue ocean market. In the past year, the Company developed different models of pure electric intelligent dump trucks in cooperation with new energy chassis manufacturers, including the representative pure electric standard-weight dump truck launched together with Yutong and Shaanxi Heavy Duty Automobile. Based on coordination and cooperation with new energy main machine manufacturers, the Company has accumulated rich experience in integrated research and development, and has become a new force in the new energy vehicle modification industry.



- The electric intelligent dump truck has the following characteristics:
- Environmental friendly top cover: Special design ensures synchronous action. Better sealing ensures no dripping and leakage. The cover is durable.
- Unloading advantages: U-shaped box structure, easy unloading, and it is not easy to accumulate mud and dust on the surface of the box.
- Energy consumption and carbon emissions: Electric waste dump trucks achieve zero emissions during transportation. Fuel powered waste dump trucks consume about 35 L of diesel fuel per 100 km, and carbon emissions can be reduced by 25 kg per 100 km (calculation based on 0.717kg of carbon emissions from 1L diesel combustion). Calculated based on a life cycle of 700,000 km, carbon emissions can be reduced by approximately 170,000 kg during the lifetime.

Truck body of the hydrogen energy refrigerated trailer

Under the guidance of the “Dual Carbon” goal, the Company is committed to creating green and intelligent transport solutions. By implanting the core competitiveness of “digital technology + intelligent operation”, and empowering all fields and links of cold chain logistics through big data and the Internet of Things, the Company accelerates the digital transformation and intelligent upgrading of facilities and equipment. The new generation of hydrogen energy refrigerated trailer developed by CIMC Vehicles and iBlue is equipped with the advanced technology of CIMC national highway refrigerated trailer, offering high-strength and high-performance refrigeration effect for its refrigerated van. Meanwhile, the trailer also has super strong temperature adaptability and ultra-high thermal efficiency. With the domestic first hydrogen energy system layout that does not occupy the volume of the cargo compartment, the largest hydrogen cylinder set of lightweight trailer in the industry, the hydrogen energy refrigerated trailer perfectly integrates hydrogen fuel cells and large power demand of refrigeration to achieve ultra-long battery life. The product won the “2022 No. 1 Hydrogen Energy Refrigerated Trailer” award at the 2022 (7th) “Who is No.1” Annual Commercial Vehicle Selection Finals and Award Ceremony.



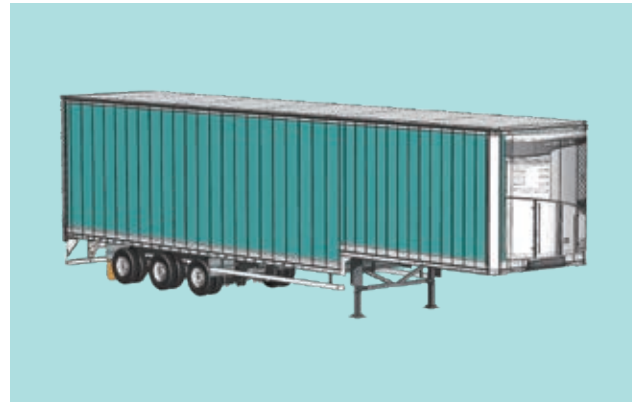
- The truck body of the hydrogen energy refrigerated trailer has the following characteristics:
- Distributed energy system: A hydrogen system layout that does not occupy the cargo volume. The largest hydrogen cylinder group in the light truck industry, perfectly combining hydrogen fuel cells with the demand for refrigeration and high power.
- Energy storage efficiency: Hydrogen charging time is less than five minutes.
- Energy consumption and carbon emissions: Hydrogen energy refrigerated trailer achieve zero emissions during transportation. Fuel powered refrigerated vehicle consume about 15 L of gasoline per 100 km, and carbon emissions can be reduced by 10 kg per 100 km (calculation based on 0.717kg of carbon emissions from 1L diesel combustion). Calculated based on a life cycle of 500,000 km, carbon emissions can be reduced by approximately 50,000 kg during the lifetime.

Emissions Reduction and Low Energy Consumption Vehicles

New gooseneck-type refrigerated semi-trailer

At present, there are diversified types of refrigerated trailers, and few meet national standards. Some non-specialized refrigerated trailers are applied in the refrigerated transport business. At this stage, refrigerated trailers can be classified into trailer with aluminum container, steel container, or glass container. The wall panels of refrigerated trailers are usually made of whole glass reinforced plastic (FRP), while a small number of refrigerated trailers with high requirements for strength (such as military refrigerated trailers) are made of metal plates (such as aluminum plates and stainless steel plates). For the purpose of meeting the current national 3C standards, the existing technology leads to a small capacity. Moreover, there are too many thermal bridges, and cold air mostly deposits at the bottom of the front part after being blown out of the refrigerator, resulting in poor thermal insulation performance. The material selected also leads to heavy dead weight.

Based on the above-mentioned situation, the Company has developed a new gooseneck-type refrigerated trailer to solve the problems of excessive dead weight, poor thermal insulation performance and excessively small capacity.



• The new gooseneck-type refrigerated semi-trailer has the following characteristics:

- Dead weight advantage: The vehicle adopts dense beam arrangement to reduce the floor weight, which can reduce the overall energy consumption during vehicle operation and thus achieve energy conservation and emissions reduction.
- Increased volume: The vehicle enlarges the volume by sinking the rear floor.
- Reduced temperature dissipation in the truck body: Through the clever use of the gooseneck structure, the vehicle realizes the circulation of cold air to achieve constant low temperature and reduce temperature dissipation inside the trailer body.

Truck body with new environmental-friendly foaming material

The Company actively follows the national development trend of low carbon and environmental protection to contribute to the “Dual Carbon” planning. The research and development team of the Company has independently developed a complete set of production equipment and full-process process solutions to improve production efficiency by 40% and thermal insulation performance by 15%.

• The truck body with new environmental-friendly foaming material has the following characteristics:

- Environmental advantages: Halogen-free. Short life in the atmosphere. Easy to decompose safely. It does not damage the ozone layer.
- Reducing temperature dissipation in the box: Constant temperature in the box, excellent thermal insulation performance.



In-depth university-enterprise cooperation carried out by Champion Tanker Business Group



In 2022, Yangzhou CIMC Tong Hua Special Vehicles Co., Ltd. worked with Yangzhou University and The Hong Kong University of Science and Technology to carry out cooperative research and development of key technologies for improving the safety performance of new intelligent tankers, and established a project of Jiangsu Provincial Science and Technology Plan (Science and Technology Cooperation with Hong Kong, Macao and Taiwan) with the Jiangsu Provincial Department of Science and Technology.

Through the project cooperation, the cooperative organizations will achieve the goal of cooperative research and development of the highly intelligent integrated system of dry bulk tank trailers. The organizations are expected to achieve breakthrough research results in the establishment of a bulk and solid coupling model for dry bulk tank trailers, the automatic and intelligent integrated development of unloading devices, the integrated control system for pneumatic switch manhole covers, the design of integrated optimization control algorithm, the rapid realization and application of control technology, etc., as well as to form a series of core technologies with independent intellectual property rights, so as to reverse the current unfavorable situation of long-term imported product monopoly in the domestic market, break through the key theoretical and technical bottlenecks of improving the performance of domestic dry bulk tank trailers made of aluminum alloy, and promote the upgrading of the dry bulk tank trailer industry in Jiangsu and even China.

Cooperative Organization	Content of Cooperation	Remarks
Yangzhou University	Cooperative research and development of the highly intelligent integrated system of dry bulk tank trailers	
The Hong Kong University of Science and Technology	Research and development of key technologies for improving the safety performance of new intelligent tank trailers	

Intellectual Property Rights and Patent Maintenance

Safeguarding Intellectual Property Rights and Interests

The Group upholds the philosophy of “building a high-quality patent portfolio and giving full play to the value of intellectual property rights”, and safeguards trade secrets, patents, and intellectual property rights in our products, technologies, designs and know-hows. We have formulated Patent Management Measures of the CIMC Vehicles Group in strict compliance with relevant laws, rules and regulations, such as the Patent Law of the People’s Republic of China, the Rules for Implementation of the Patent Law of the People’s Republic of China. From the development of new products to the research and development of technologies and the introduction of foreign technologies, we protect our own interests according to law and respect the legitimate rights and interests of others and organisations. In 2022, the Group revised the Patent Management Measures of the CIMC Vehicles Group, including adding patent proposal method and document requirements, modifying ownership principles for patent applicant and patent application fee, modifying workflow of patent transfer and patent licensing, adding assessment principle of patent maintenance and other amendments.

The Group attaches great importance to the management and protection of intellectual property rights and has established a set of management systems. For example, before the development of new products, global patent searches and novelty searches are required to prevent infringements; all new products and technologies developed independently will be protected in time by filing domestic and foreign patent applications. Meanwhile, when introducing and adopting foreign patented technology, the Group will respect the legitimate rights and interests of the intellectual property rights of other individuals and organisations, and will not participate in infringement activities.

List of New Licensed Patents of the Group in 2022

S/N	Name of Enterprise	Utility Model Patent	Invention Patent	Design Patent	Total
1	Luoyang CIMC Lingyu Automobile Co., Ltd.	23	0	2	25
2	Dongguan CIMC Special Vehicle Co., Ltd.	16	0	0	16
3	Wuhu CIMC Ruijiang Automobile Co., Ltd.	43	7	7	57
4	Qingdao CIMC Special Vehicle Co., Ltd.	6	0	0	6
5	Yangzhou CIMC Tong Hua Special Vehicles Co., Ltd.	27	1	1	29
6	Zhumadian CIMC Huajun Casting Co., Ltd.	5	0	0	5
7	CIMC Vehicle (Jiangmen) Co., Ltd.	4	0	1	5
8	CIMC Taizijie Vehicle Body Manufacturing (Jiangmen) Co., Ltd.	1	0	0	1
9	Shandong Wanshida Special Automotive Manufacturing Co., Ltd.	13	4	5	22
10	Zhumadian CIMC Huajun Vehicle Co., Ltd.	50	1	0	51
11	CIMC Vehicles (Group) Co., Ltd.	0	2	0	2
12	CIMC-SHAC (Xi'an) Special Vehicles Co., Ltd.	2	0	0	2
13	Shenzhen CIMC Vehicle Co., Ltd.	5	0	0	5
14	CIMC Taizijie Vehicle Body Manufacturing (Zhenjiang) Co., Ltd.	2	0	0	2
15	CIMC Vehicles (Shandong) Co., Ltd.	14	0	1	15
16	Qingdao CIMC Reefer Trailer Co., Ltd.	1	1	0	2
17	Gansu CIMC Vehicles Co., Ltd.	4	0	1	5
18	CIMC Vehicles (Liaoning) Co., Ltd.	0	0	0	0
19	Liangshan CIMC Dongyue Vehicle Co., Ltd.	0	0	0	0
	Total	216	16	18	250

* In this table, if CIMC Vehicles and its subsidiaries are listed as patentee, the patent belongs to the top subordinate enterprises; and if CIMC Vehicles and its deregistered subordinate enterprises are listed as patentee, the patent belongs to the CIMC Vehicles.

In 2022, the Group invested a total of approximately RMB300 million in research and development, which created favorable conditions for the development of new products and the upgrading and transformation of production technologies. As of December 31, 2022, majority-owned subsidiaries of the Group in China had 250 new patents in 2022, including 216 utility model patents, 16 invention patents and 18 design patents.



New patents

250

An Automatic Assembly and Welding Method for Trailers (CN201711467834.3)



Case

As the world's leader in sophisticated manufacturing of semi-trailers and specialty vehicles, the Group not only focuses on building a sophisticated manufacturing system represented by the "Light Tower" plant, but also continuously practices the automatic assembly and welding method in the context of safety production.



The automatic assembly and welding technology for trailer is a technology that uses visual identification technology to identify and locate the parts to be machined, utilizes intelligent processing equipment to handle and assemble the parts to be machined, and uses automatic welding equipment to weld the parts to be machined.

At present, this technology is mainly used in the production process of assembling and welding trailer traction modules in the Group. Using this technology to replace the previous manual assembly welding for eliminating the possibility of parts falling and hitting workers. It not only improves the processing accuracy and production efficiency, but also greatly reduces the production risk to employees.



Supporting Industry Development

The Group is committed to maintaining the sound development of the industry. In recent years, the Group has actively participated in the formulation and revision of national standards and industry standards in the vehicle industry, invested manpower and material resources in the technical verification and product verification of the standards, to promote the healthy development of the vehicle industry. The formulation and amendment of relevant national and industry standards in which the Group has participated in recent years are listed below:

S/N	Name of Standard	Category of Standard
1	GB 1589-2016 Limits of Dimensions, Axle Load and Masses for Motor Vehicles, Trailers and Combination Vehicles	National standard
2	GB 6420-2017 Freight Trailer Series Pedigree	National standard
3	No.1 Amendment to GB 7258-2017 Safety Specifications for Motor Vehicles Operating on Roads	National standard
4	GB 12676-2014 Road Vehicle - Braking Systems - Structure, Performance and Test Methods	National standard
5	GB 28373-2012 Tank Vehicles of Categories N and O with Regard to Rollover Stability	National standard
6	GB 15089-2016 Classification of Motor Vehicles and Trailers	National standard
7	JT/T 1100-2016 Trailer Converter Dolly	Industry standard
8	GB 29753-2013 Safety Requirements and Test Methods for Refrigerated Truck for Road Transportation of Perishable Foods and Biological Products	National standard
9	GB/T29912-2013 Technical Requirements for Type Selection of Urban Logistics Distribution Vehicles	National standard
10	GB/T 35782-2017 Specification for Drop and Pull Transport Vehicles	National standard
11	GB/T 3730.1 Motor Vehicles, Trailers and Combination Vehicles -Terms and Definitions Part 1	National standard
12	JT/T 1195-2018 Swap Body Markings for Multimodal Transport	Industry standard
13	JT/T 1178.2-2019 Safety Specification for Commercial Trucks	Industry standard
14	QC/T 23-2014 Milk Tankers	Industry standard
15	QC/T 980-2014 Coal Transport Vehicles	Industry standard
16	JT/T 389-2022 Specification for Van Trailers	Industry standard
17	JT/T 12772-2019 Technical Requirements and Test Methods for Swap Bodies for Multimodal Transport	Industry standard
18	WB/T 1046-2012 Requirements for Refrigerated Transport of Perishable Foods by Motor Vehicles	Industry standard
19	GB/T 37245-2018 General Technical Requirements for Centre-axle Trailers	National standard
20	GB/T 17275-2019 General Technical Requirements for Freight Draw-Bar Trailers	National standard
21	GB 18564.1-2019 Tank Trucks for Road Transportation of Liquid Dangerous Goods Part 1: Technical Requirements for Metal Atmospheric Tanks	National standard
22	T/CAAMTB XXXX - XXXX Technical Specification for Urban Logistics Vehicles	Group standard
23	T/CAAMTB 109-2022 Specification and test methods for curtainside vehicles	Group standard
24	GB/T26778-2011 Combination of vehicle performance requirements and test method	National standard

CIMC Vehicles led the revision of the industry standard Technical Specifications for Van Trailers



In 2022, CIMC Vehicles led the revision of the industry standard JT/T 389-2022 Technical Specifications for Van Trailers, and the revision of the previous version of JT/T 389-2010 was also led by CIMC. The biggest change in the revision 2022 is that the test load of the side wall airbag of the van trailer is revised according to the vehicle type, and the van trailer is divided into road transport carriage and intermodal carriage, and then the test load is defined based on the L and XL models in the European Standard EN 12642. Another major change is to add the strength and test requirements of the van trailer floor, absorb the strength and test requirements of the U.S. TTMA Standard for wood trailer flooring, and the strength requirements of the European Standard EN 283 for wood van flooring, thus proposing the strength and test requirements of the wood flooring that adapt to China's vehicle regulations and road conditions.



The revised industry standard JT/T 389-2022 Technical Specifications for Van Trailers is more suitable for pallet shipping of modern transportation equipment in China, as well as the need for van trailers to participate in road-rail intermodal transport of the multimodal transport. Meanwhile, the development of van trailers is in line with the standard requirements of European and American countries, and the international exposure of standards and products is further enhanced.

CIMC Vehicles led the preparation of the group standard for side curtain trailers



CIMC Vehicles led the preparation of T/CAAMTB 109-2022 Technical Specifications and Test Methods for Side Curtain Trailers, which has been officially released and implemented. The drafting of this standard fully draws on the regulations and standards of European side curtain trailers and the development experience of European side curtain semi-trailer products accumulated by CIMC Vehicles over the years, which is the first domestic standard for side curtain trailer products. This standard comprehensively standardizes the technical requirements for structural design and parts and components of side curtain trailers, as well as the air bag test requirements and floor strength requirements for side walls, front and rear end walls. Meanwhile, the design and strength test of roof structure, side curtain structure, side protective structure and pull ring are put forward. The establishment of the group standard for side curtain trailers is of great significance to the promotion of side curtain semi-trailers and specialty vehicles in China, opening a new chapter of a brand-new and efficient means of transportation.



Dedicated Service and Customer Satisfaction

The Group has always focused on “Producing Products Trusted by Customers” as the core of its operations. We have established a complete customer service support system and information feedback system through our direct sales and dealer networks, and formulated a “Customer Satisfaction Control Program” to provide customers with warm customer service throughout the life span.



Improving Cost-performance Ratio of Products

While providing customers with high-quality products, the Group pays more attention to the cost-performance ratio of products produced in the entire industry. Therefore, the Group has established the basic models of mainstream products by sorting out and analyzing the market conditions that it focuses on and integrated the high-quality product resources of the “Light Tower” plants, and tailored solutions to suit to individualized demands, to sell representative products while increasing the added value of the products. The Group provides customers with high cost-performance ratio products based on the advantage of lower costs benefiting from centralized procurement.



Rapid Response Mechanism for Customer Complaints

The Group has formulated customer complaint response plans, specified the time limit for problem resolution and responsible contacts, and cooperates with overseas sales points (distributors and overseas subsidiaries) and domestic manufacturers to formulate emergency plans for major quality issues to ensure a rapid response mechanism of feeding back on the issues within 24 hours. Meanwhile, the Group has customized the corresponding standing list of wearing parts according to the sales of mainstream products in different overseas markets, established overseas spare parts warehouses and authorized repair points through negotiation with overseas sales points and major customers, and provided professional training for its maintenance personnel, and advocates the early detection, early consultation, and early resolution of product quality issues, to enhance customer satisfaction with timely and effective after-sales service. With comprehensively promoting the construction of “Informatization”, the Group launched an online business platform “CIMC RJST” APP, to provide users with comprehensive service experience such as car selection, car purchase, car use, and one-click repair.

The number of customer complaints received by the Group in respect of products and services for the year was 0, with customer satisfaction of 94.4%.



Daily Management and Communication Mechanism

Based on the customer management system, the Group systematically manages customer information and existing historical sales data in a digital, family-mapped, scientific way, so that customer information is completed and can be updated frequently, forming a richer and smarter customer information database. The Group actively pays return visits to customers, takes the initiative to listen to customer needs through field visits, widely solicits customer opinions, and constantly optimizes the Group's product sales and services with practical actions. The Group strives to meet the customer's requirements before, during and after sales.

Rush repair in the night with continuous service



The regional service of Champion Tanker Tank Truck in Central China is based on the principle of taking the customer as the center, and it is dedicated to providing the most convenient, thoughtful and timely and friendly service for the customer with a focus on “fulfilling customers’ needs and requirement”.

On one night in August 2022, due to improper use by Sanmenxia Shunding Transportation Co., Ltd., the unloading valve of the stainless steel liquid tank for transporting sulfuric acid could not be opened, as a consequence of which materials could not be unloaded. Qiang Guan Tank Truck in Central China provided services with a focus on “fulfilling customers’ needs and requirement”, in line with the customer-centric service concept. Relevant maintenance personnel of Qiang Guan Tank Truck in Central China were mobilized from other places for emergency rescue at night, and the problem of valve jamming was solved quickly. With the assistance of Qiang Guan Tank Truck in Central China, Sanmenxia Shunding Transportation Co., Ltd. finished unloading smoothly and returned safely at 3am. Afterwards, the professionals of Champion Tanker Tank Truck in Central China visited Sanmenxia Shunding Transportation Co., LTD., patiently explaining and emphasizing the precautions for stainless steel liquid tank in transporting sulfuric acid medium to avoid the same problem, which was highly praised by customers.



The “Sanhao Development Center” was released



On December 15, 2022, Shaanxi Automobile and CIMC Vehicles Group jointly established the “Sanhao Development Center”, aiming at exporting to the market CIMC Shaanxi Automobile’s “excellent in three areas” commercial vehicle products including “excellent horse with excellent saddles” (trump truck and truck), “excellent tractors with excellent trailers” (semi-trailers), “excellent trucks with excellent tanks” (tank trailer), providing customers with more professional, higher quality and more diversified integrated solutions and services for the host-mounted vehicle, so that customers can choose and use the vehicle without worry and get the value experience beyond the expectation.



Improve service quality by return visit to customers



In May 2022, a customer revisit team composed of core members from the Service Department, Technology Department and Marketing Department of Ruijiang Tanker went to Yunnan, Guizhou and other places for follow-up visits. Through field visits, the team actively listened to customers' needs, extensively solicited customers' opinions, and constantly optimized the Group's product sales and services with practical actions, striving to meet the customer's needs before, during and after sales.



Information Security and Privacy Protection

Customer information is closely related to the vital interests of customers. Protecting customer information and privacy is the foundation for maintaining long-term sustainable cooperation. The Group attaches great importance to the protection of customer privacy and strictly abides by the laws and regulations on privacy protection in countries and regions where it operates, such as the Administrative Measures for Protection of the Security of International Internetworking of Computer Information Networks, and ensures that customer information is protected through the establishment of rules and regulations, equipment and file encryption management, and the enhancement of employees' awareness of confidentiality and other measures. The main measures taken by the Group include:

Signature of agreements on key information

A confidentiality agreement must be signed if key information involved to ensure the safety of customer information;

Access to Information

The inquiry and use of customer information are operated through the customer management system and we set role-based access control for employees of different levels and different business scopes, and revoke the authority immediately after the employee leaves;

Special person responsibility system

The business manager is responsible for the customer privacy protection, and information is limited to flows between superiors and subordinates, to effectively avoid circulation between business units (mutual transmission requires the approval of the superiors of both units). Meanwhile, special business personnel are subject to confidentiality requirements.

Cloud reinforcing security

The cloud system deployed host security, data security audit, bastion machine, data security governance center, cloud fire wall, vulnerability scanning and intrusion detection products to ensure network access security. For customer-related systems, SSL encryption certificate was added, and information data security was guaranteed in combination with the security certification of application system.

Reinforcement of network layer

The Company conducted the security policy configuration of the web firewall at the network layer, and deployed the cloud host security, security monitoring and Ddos high-level defense in 2022. Through the cooperation of these products, the security guarantee network with close impermeability was formed, and the network security of customer information was guaranteed at all times.

Reinforcement of underlying data security

In 2022, The Group added data security audit, sensitive data protection, bastion machine and data security governance to strengthen the underlying data security. High-availability servers which can be seamlessly switched were deployed to ensure the reliability of system applications and the consistency of customer data.

In 2022, the Group did not experience information security or privacy leakage incidents.

Global Supply Chain Management

The Group firmly believes that the success of global operations is attributable to the cross-border design, cross-border manufacturing, and global supply chain capabilities. With the rapid expansion of business of the Group worldwide, component suppliers from the United States, China and other countries keep up with the development of the Group and gradually improve their international supply capacity, thus forming a mature global supply chain system for semi-trailer components.

In accordance with the Bidding and Tendering Law of the People's Republic of China and the Regulations on Implementation of the Bidding and Tendering Law of the People's Republic of China, the Group has formulated the Rules of the CIMC Vehicles Group on Management of Suppliers for Centralized Purchase of Materials, the Supplier Questionnaire and the Quarterly Supplier Evaluation Form, to ensure the level of suppliers. Our suppliers mainly include steel, aluminum companies, manufacturers of automobile and trailer parts (such as paint, main engine, wheel system, running gear, hydraulic system, electrical system, brake system and reflective products) and logistics transporters. We have established long-term cooperative relations with many well-known automobile and trailer parts manufacturers and steel suppliers around the world to ensure that our products are of high quality. In order to ensure the safety of the supply chain system and standardize fair cooperation with suppliers, we formulated the Regulations of CIMC Vehicles Group for the Management of Suppliers for the Centralised Procurement Materials. Starting with the daily benchmarking management of suppliers' qualifications, capabilities, equipment, operations, quality systems, personnel structure, etc., we advocate the survival of the fittest, fair competition, and strengthens management of centralized procurement supplier access, thus promoting and ensuring the sustainable and healthy development of the supply chain.

EPS Digital Supply Chain

Sophisticated manufacturing system of the Group is requiring digital transformation and upgrading of the supply chain. To this end, the Group is launching EPS platform, a digital procurement platform developed by the Group for CIMC Vehicles, in its headquarters and member enterprises, in order to build a transparent and efficient omni-channel procurement supply chain between the headquarters and member enterprises, and from member enterprises to member enterprises, and bring the headquarters and member enterprises under the same supply chain platform to convey the headquarters' value proposition for compliance, efficiency and standard processes. EPS enables the headquarters to digitally manage all of suppliers under its management based on the platform, including basic supplier information management, supply qualification management, bidding/tendering management and contract management. As of the end of 2022, 1,101 domestic and overseas suppliers registered on the EPS platform, allowing headquarters and enterprises of the Group to share the supplier information with each other. The Group also explores business model of LTS and LTP through the platform-based process, efficiently empowering the "Light Tower Manufacturing Network". Although price of raw materials remained rising in the first half of 2022, the Company solicited bids for OEM parts through the EPS platform, enabling the Group to purchase the OEM parts at prices much lower than the price in the mainstream markets.

The EPS platform plays a crucial role in the Group's efforts in business model. CIMC Vehicles is actively building the "Light Tower Manufacturing Network" in such way that the EPS platform serves as a process hub connecting with each segment of the sophisticated manufacturing system to maximize the "delivery of orders". In the future, the Group will actively push forward the "Selection and Development of OE Components Based on Product Application Scenarios", and will establish a professional technical supply chain team to create a single working platform for supply chains of our subsidiaries. Those will facilitate sharing of professional knowledge about product modules, "Light Tower" plant improvement and development of new retail, thus materializing the Group's value proposition in core parts and components.

Further, EPS platform can also improve working efficiency. One of our online invitations for bids is an example in this regard. The invitation process was transparent and in compliance with regulations, during which experts who were located in different cities evaluated bids online, and commercial terms were automatically compared and displayed. The duration of the online bidding process is 12 days shorter than the offline bidding process, greatly reducing the costs and time of all parties to the bidding.

In recognition of the Group's EPS platform as our digital transformation project, the EPS project was awarded the "Annual Procurement Transformation Model" under the "Dingge Award" Digital Transformation Pioneer List for 2022. (At present, digitalization has penetrated into the business development of enterprises in various industries, and the "Dingge Award" has been recognized as a highly credible award for digital transformation of enterprises. "Dingge Award" Digital Transformation Pioneer List is a corporate digital transformation award jointly sponsored by the Harvard Business Review China and SAP, and receiving academic support from the Industry for Global Institute of Tsinghua University, aiming to explore excellent cases of digital transformation and light up the innovative path of Chinese enterprises towards digital transformation.

In order to promote legal and honest operation and create a fair, impartial, standardized and transparent business environment with suppliers, the Group has entered into the Integrity Agreement with all suppliers. According to the relevant regulations governing business bribery, the agreement sets out clear binding terms on the business conduct of the Company, suppliers and relevant practitioners, so as to prevent operational risks and protect the interests of both the Company and suppliers, thus establishing a safe, sound and long-term stable partnership.

Admission of Suppliers

In the supplier admission process, we adopted relevant inspection measures and requirements for environmental and social risk management of our suppliers during the year. For example, in the supplier access process, Shandong CIMC requires suppliers to obtain certification for Environmental Management System and Occupational Health and Safety Management System, and the effectiveness of the system operation is reviewed and inspected on-site; CIMC Liaoning and Yangzhou Tonghua required that suppliers of hazardous chemicals should have a hazardous chemicals business license and pass the quality management system certification, occupational health and safety management system certification and environmental management system certification; Lingyu Vehicles required that suppliers should clearly described whether environmental

impact assessment was carried out for their production sites and should provide relevant proof, and that some chemical suppliers should provide certification for the environmental system audit; in the first cooperation with new suppliers, Xi'an CIMC first reviewed their environmental protection and safety, including on-site inspection, information review, special inspection of environmental protection equipment and the implementation of environmental protection processes, lack of environmental impact assessment approvals, penalties as to environmental protection and other indicators, all of which were taken into consideration in important project implementation and evaluation for new suppliers.

Supplier Review

CIMC Vehicles organizes companies to conduct performance reviews on the four aspects of quality, cost, delivery, and service for the centralized procurement material suppliers. The companies provide a quarterly list of performance issues, and CIMC Vehicles scores the suppliers based on the list. According to the results of supplier performance evaluation, for suppliers scored below 70, or lower-ranking suppliers, relevant improvement reports are required to be submitted on a semi-annual basis, and when necessary, the global supply chain management department will organize a counselling team to conduct counselling in forms of meetings, on-site audits, etc., and track the supplier's implementation performance. CIMC Vehicle Headquarters conducted quarterly performance review on 68 suppliers in the list of qualified suppliers for centralized purchasing materials, and the average score of the review was 95.2.

Supplier review includes qualification review and on-site review. Qualification review mainly refers to review of the supplier's qualifications and basic conditions. On-site review includes review of the company's organizational structure, personnel training, design and development and document management, procurement and control of incoming materials, and process implementation and monitoring, nonconforming product control and continuous improvement, inspection tool verification and equipment maintenance, final inspection and packaging and delivery.

In supply chain management, we continuously enhance our focus on suppliers in terms of HSE. For example, the inspection and scoring of Environmental Management System Certification, supplier safety accidents, use of environmental-friendly materials and processes and other matters are added in the supplier assessment and irregular two-party audit sampling inspection by CIMC Xi'an, and the cooperation will be terminated for unqualified suppliers. In the admission of suppliers and cooperation with them, Lingyu Vehicles strengthened the inspection of HSE compliance; in tendering for purchase of chemical materials, Shandong CIMC added the scoring item of whether the product packaging materials are environment-friendly and recyclable, and the scoring item of whether oddments are recycled; Yangzhou Tonghua urged suppliers with long-term cooperation to pass the environmental management system certification, and required that the treatment of hazardous wastes of suppliers should comply with national and local laws and regulations.

During the year, CIMC Vehicles had a total of 1,926 suppliers*, including 1,904 domestic suppliers, accounting for 98.9%, and 22 foreign suppliers, accounting for 1.1%. The distribution of suppliers by region is as follows:

Region	Number (Supplier)	Percentage (%)
North China	140	7.27%
Northeast China	75	3.89%
Northwest China	50	2.60%
East China	1171	60.80%
Central China	228	11.84%
South China	225	11.68%
Southwest China	14	0.73%
Hong Kong, Macau and Taiwan	1	0.05%
Foreign countries	22	1.14%
Total	1,926	100%

* The scope of the Group's supplier data includes not only the productive capacity of the Group's manufacturing enterprises in China, but also the first time to include suppliers of non-productive materials, making supplier management more detailed and complete than ever before.

Number and Proportion of Suppliers Passing Relevant System Certification or Evaluation

	Passing Quality Management System Certification	Passing Occupational Health and Safety Management System Certification	Passing Environmental Management System Certification	Signing Honest Agreement (or Letter of Undertaking)	Signing HSE Undertaking
Number of Suppliers	1,337	901	935	917	491
As a Percentage of the Total Number of Suppliers	69.40%	46.80%	48.50%	47.60%	25.50%

Looking forward to the future, the Group will continuously strengthen the prevention and management of environmental and social risks of suppliers.





04

Agglomerating Efforts and People First

The Group has always upheld the core human resource philosophy of “Putting People First, Common Cause”, and is committed to providing employees with a global career platform, so that all employees have the opportunity to promote, develop and achieve their careers. While providing the career platform and career development opportunities, the Group also hope that all employees, like the Group, will be committed to contributing to the world, the country, and the communities in which they live, and pay back to the society.



Equal Employment and Rights Guarantee

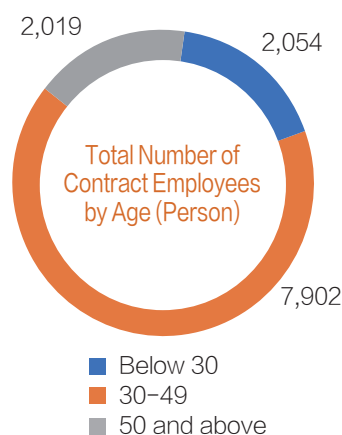
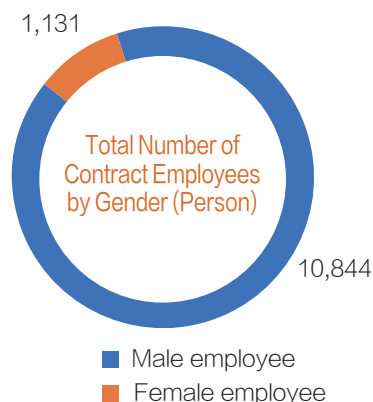
The Group also strictly complies with the relevant domestic and foreign laws and regulations, such as the Labour Law of the PRC, the Labour Contract Law of the PRC, the Law on the Protection of Minors of the PRC, the Provisions on the Prohibition of Using of Child Labour, the U.S. Labour Law and the UK Labour Law. During the year, the Group did not commit any major violations related to employee employment, remuneration package, working hours, equal opportunities, anti-discrimination and employment of any child labour and forced labour.

Equal Employment and Diversity Policy

The Group believes that employees are a key factor for business success. Therefore, we are committed to providing a harmonious, inclusive, equal employment opportunity and non-discriminatory working environment for all employees to unleash the maximum potential. The Group strictly complies with the Recruitment Management Regulations of CIMC Vehicles to carry out recruitment work, and timely recruits outstanding talents through internal and external selection according to the needs of the Group's business development and under the principle of "open recruitment, comprehensive investigation, and merit-based employment".

During the recruitment screening process, the Human Resources Department will strictly review the qualifications and actual ages of candidates to prevent the employment of child labour. During the selection and appraisal process, the Group adheres to the principles of "open recruitment, comprehensive investigation, and merit-based employment", considers the applicants' educational background, work experience, training experience, and skills, etc., and undertakes that all enjoy equal job opportunities irrespective of their gender, age, nationality and race.

While continuously deepening the business philosophy of "Intercontinental Operation, Local Manufacturing", we take "local wisdom" as a key management tool to promote the long-term development of local organizations and businesses, and effectively grasp local market opportunities. We make full use of the knowledge and experience of localised management teams to gain a deeper understanding of local regulatory requirements and market demands, which in turn allows us to effectively overcome the challenges brought by cultural and geographic differences. As of December 31, 2022, the total number of contract employees of the Group around the world was **11,975**, with the breakdown of contract employees by gender, age group and region shown in the figure on the right. Although the inherent characteristics of the industry limited the proportion of female employees, the Group has fully achieved employment equality and gradually improved the current situation of the industry, and we keep on improving the fairness of female employment. In order to better implement the equal employment and diversity policies, we have taken the following management measures: 1) to break down traditional social beliefs and create a frank, open, caring and understanding work environment; 2) Provide equal access to resources and opportunities for training and learning; and 3) jointly celebrate International Women's Day and promote women's power.



local management team is to conduct daily operations



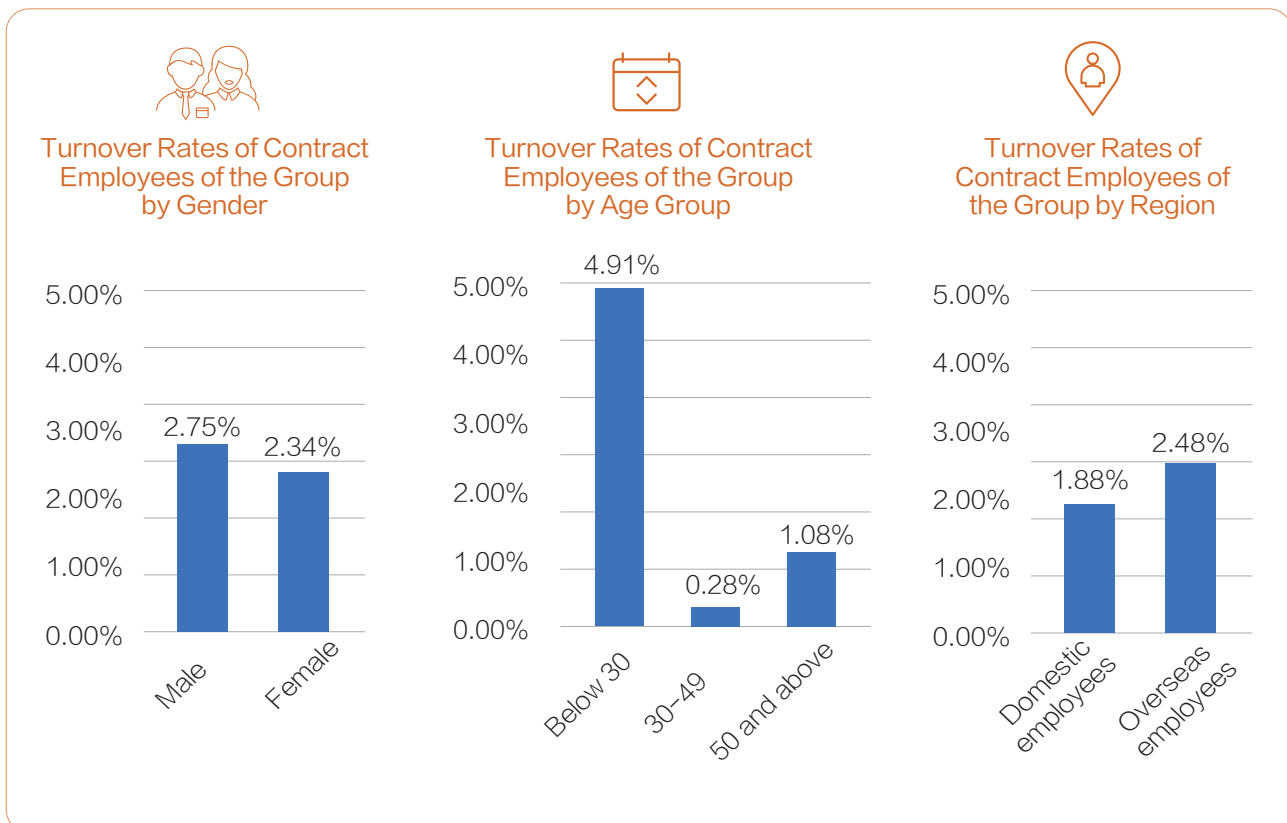
Adopt a profit sharing incentive scheme



Establish effective corporate governance

	The number of people	Proportion in the total work force of this level
Management	458	
Including: Male managers	408	89.08%
Female managers	50	10.92%
Including: Ordinary male employees	11,517	
Ordinary: Female employees	10,436	90.61%
Ordinary female employees	1,081	9.39%
Total number of employees	11,975	
Including: Male employees	10,844	90.56%
Female employees	1,131	9.44%

In terms of employee resignation, the Group has established a strict management process. After the employee submits a resignation application, we will first initiate the internal communication process and communicate with the employee who intends to resign through his/her direct superior and Human Resource Department to understand the reason for leaving office. If the employee wishes to resign due to company reasons, we will optimise and adjust the influencing factors so far as possible to retain the talents for the Company. If the employee decides to resign, after completing the resignation approval procedures, the Human Resources Department will handle the resignation matters for the employee and issue relevant certificates to clarify the further responsibilities and obligations of both parties. The turnover rates of contract employees of the Group by gender, age group and region are shown in the following chart.



Remuneration Package

The Group adheres to the “external competition principle” and the “internal fairness principle” in its remuneration management rules, formulates the Remuneration Management Rules and the Remuneration Management Measures, and attracts and retains talents needed for the development of the Group through scientific and standardized remuneration management.

The remuneration structure of the Group’s employees is basic monthly salary plus quarterly or annual performance incentives. A reasonable remuneration system is adopted to motivate employees and encourage them to give full play to their personal initiative.

Welfare Benefits

The Group has strictly abided by the Social Insurance Law of the People’s Republic of China and the Regulations on the Management of Housing Provident Fund to provide pension insurance, work injury insurance, medical insurance, unemployment insurance, maternity insurance and housing provident fund for employees.

In addition to ensuring the annual leave and statutory holidays prescribed by the state, which are enjoyed by employees in accordance with the Labour Law of the PRC, the Group specially offers annual leave, incentive leave, special leave and other holidays of CIMC Vehicles. Meanwhile, the Group provides employees with additional welfare benefits including festival and holiday allowances, employee accident group insurance, annual travel benefits and hardship assistance funds.

Working Hours

In accordance with the Labour Law of the PRC, the Group specifies the working hours and leave arrangements of employees through the Regulations of CIMC Vehicles Group for Management of Attendance and Holiday of Employees and the Employee Handbook. Through a “working hours adjustment” and a “flexible working time” system, we respect employees and their actual work needs, and provide them with flexible adjustment arrangements.

In additions, considering that there were special circumstances in 2022, we optimized the flexible office plan for special periods, encouraging personnel who were at risk of contact with suspected cases to observe themselves at home in a timely manner and work from home, taking into account health prevention and control and daily work progress and ensuring the physical and mental health of employees.

Completion of Election of New Employee Representatives to Fully Guarantee the Democratic Participation Rights of Employees

 Case

In accordance with the Company Law and the Board governance structure requirements, CIMC Vehicles officially conducted re-election of employee representative supervisors in September 2022. In strict compliance with the principles of “secret ballot” and “one person, one vote”, 1 employee representative supervisor was democratically elected by members of departments at the headquarters of the CIMC Vehicles Group. The employee representative supervisor listened to opinions and suggestions of employees, exercised rights on behalf of employees, fully expressed their opinions, performed the duties of supervision and inspection, and safeguarded the democratic decision-making, management and supervision rights of the employees.



Talent Training, Promotion and Development

The Group is committed to providing a good career path for its employees and creating room for their growth. The Group persists in implementing the Training Management Procedure and the Training Management System, providing diversified training and development opportunities for its employees, including but not limited to training in digital skills and knowledge, lean management, quality control, professional knowledge and skills, laws and regulations.

The Group makes available various channel resources for internal and external training. The department taking charge of internal or external training should fill in the Training Record Form in a truthful and timely manner. After training, such department should keep relevant training records and materials or rating materials.

As the strategy of sophisticated manufacturing system is in the stage of implementation, CIMC vehicles continues to dedicated to the construction of professional personnel team to meet the needs of high quality and sustainable development of the organization. In 2022, the Group launched the special development plan for technical professionals and financial professionals. Through the unified talent standards and the training process of “selection, training, practice and evaluation”, and continuous optimization of the professional military management mode of “talent sharing and knowledge sharing”, the Group has built an inter-organizational joint training project platform and talent development platform, promoted the overall ability improvement of professionals, and provided the echelon with a sustainable and benign talent development cycle.

In addition, we have formulated the Performance Management System and the Rank and Grade Management System. Employees can get promotion through year-end assessment and daily work assessment. While encouraging learning, we promote employees who achieve work performance appraisal targets or annual performance appraisal targets in accordance with the Performance Management System and the Rank and Grade Management System.

Employee Training	Percentage of Employee Trained	Average Training Hours (Hours)
By Gender		
Male	94.36%	17.22
Female	92.37%	20.02
By Rank		
Senior management	98.04%	81.91
Middle management	93.08%	50.60

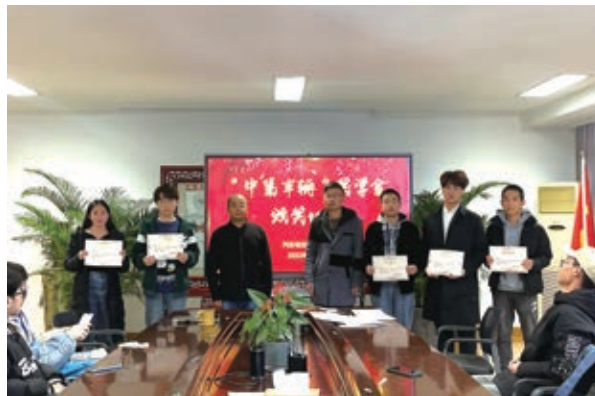
Launch of “Senior Leadership Training Program” for Promoting Continuous Development of Senior Leadership



The Group’s Senior Leadership Training Center will provide employees in leadership positions and core operating positions at headquarters and core enterprises, with opportunities for self-improvement, high-end manufacturing knowledge training and development of a comprehensive outlook. The Group has offered four courses in the senior leadership training program. Through the senior leadership training, the senior management can deeply understand the strategic plans of the Sophisticated Manufacturing System and the new management infrastructure, acquire the high-end leadership ability with the governance structure hierarchy, and thus become promoters of the Group’s Sophisticated Manufacturing System, core members of strategic development projects and even industry leaders. Many employees have graduated early from the senior leadership training program and become the core business executives of the Group.



Deepening the Cooperation with Universities and Continuously Providing “Scholarships and Grants of CIMC Vehicles”

 Case


We fully understand that “talent is the first resource”. CIMC Vehicles continuously introduces recent graduates every year and pays attention to the growth of students. Since 2018, it has cooperated with Jiangsu University in providing scholarships and grants to encourage students to make greater efforts and become innovative talents that are essential for the society. Meanwhile, it has communicated with scholarship applicants and winners of cooperative universities every year and paid attention to the talent training under the school-enterprise cooperation. In 2022, CIMC awarded 42 students from Jiangsu University the “Scholarships and Grants of CIMC Vehicles”, with a total amount of RMB200,000. The Company supports the development of higher education encourages outstanding students with actual resources and actions.

Continuously Promoting the Employer Brand and Deepening the Recent Graduate Training Program

 Case

The Company successively launched the “2025”, “Global Operations” and “MBA” talent training programs to recruit outstanding recent graduates to the Group. The Company provides “2025”, “Global Operations” and “MBA” trainees with comprehensive professional training courses and rich practice projects, to enhance their professional ability and personal leadership, regularly provides them with regular review reports and professional guidance and encourages them to actively participate in the projects of constructing the sophisticated manufacturing system. This helps continuously trains core technical backbones leading the development of Industry 4.0 and global operation strategy leaders for the Company and the society.



Opening Ceremony of the Special Training Camp and Science and Technology Festival of CIMC Vehicles for Sophisticated Manufacturing of Vehicle Model of the Year was Successfully Held

 Case

In order to implement the construction plan of the sophisticated manufacturing system of CIMC Vehicles, deepen and expand the sophisticated manufacturing system, CIMC Vehicles further upgraded the training module, combined the modular design of products with the new retail, and developed the business thinking of engineers. The trainees of the “2022 Special Training Camp for Sophisticated Manufacturing of Vehicle Model of the Year” completed their courses in 2022 successfully. During the period, the trainees were provided with various courses including methodology, business insight and professional skill improvement. Meanwhile, under the principle of “unity of knowledge and action”, the special training camp provided subject reports in consideration of the needs of enterprises, while carrying out the course training, and converted the product modularization philosophy into actual product achievements and promoted the production of products. In order to enhance the interaction and learning among the technical teams of CIMC Vehicles, the “CIMC Vehicles Science and Technology Festival” was successfully held in 2022.



Dongguan CIMC set up CIMC “Light Tower” high-end Manufacturing College

 Case



In 2022, Dongguan CIMC set up CIMC “Light Tower” high-end Manufacturing College. The courses of the high-end Manufacturing College provided seven courses, including management knowledge, reserve cadre construction, job skills and qualification certification, and a series of special training on Sophisticated Manufacturing System was set up to comprehensively cover the regular fields of enterprise training and learning to meet the cognitive needs of learners at different positions and levels, which truly helped to achieve full learning and create an excellent organizational learning ecosystem. After years of exploration and accumulation, a management mechanism based on the basic system of high-end manufacturing college, training points management system, internal lecturer management methods, training incentive system has been formed to help the college operate and manage reasonably and efficiently and cultivate high-level industry talents with excellent comprehensive quality, and further promote the common progress of employees, enterprises and the industry.

Zhumadian Huajun Vehicles continues to promote and organize new apprenticeship training



In order to improve the quality of employees, enrich the management knowledge and job skills, and enhance the work quality and performance, the Company has cooperated with Zhumadian Technician College and Henan Provincial Traffic Advanced Technical School for new apprenticeship training, adopting the training mode of “Integrated Enterprise and Education Training System”, to carry out the intermediate training of 320 people in four types of jobs: welder, electrician, forklift operator and assembler. In 2022, new apprenticeship training continues to be carried out, and the second batch of new apprenticeship (fitter) training was launched. At the same time, in 2022, we will focus on the construction of the “everyone holds a certificate, build a skill-based Henan” activity, and focus on the independent identification of the professional skills of front-line employees. We compiled the implementation plan for the independent identification of the professional skills level of Zhumadian CIMC Huajun, and submitted it to Zhumadian Human and Social Security Bureau and Yicheng Human and Social Security Bureau, and carried out offline training and online application according to the registered jobs type. We completed the task of “everyone holds a certificate, build a skill-based Henan”, with 984 employees holding a certificate.



Yangzhou CIMC Tonghua carries out “independent certification” to improve staff skills



In 2022, the Company was evaluated by experts organized by the Human Resources and Social Security Bureau of Yangzhou City, and obtained the independent certification of “stamping workers, lifting and loading machinery operator, fitters” by the municipal Human Resources and Social Security Bureau. The Company is the only unit in the Development Zone and the only unit in the City that can directly certify senior technicians. In order to organize the training work well, the Company invited teachers from East China Petroleum Technician College, the Company engineers and the backbone of production line to compile the training materials and question bank, and organized 5 batches of training and skill identification. Through obtaining the vocational skills self-recognition qualification of three job types (stamping workers, lifting and loading machinery operator, fitters), the Company has obtained 546 intermediate work certificates in total, including 92 stamping, 127 fitter, 327 driving, and 1638 person-time training. This help to build a better career development platform for the growth of technical talents and create career development channels for blue-collar talents.



Occupational Safety and Staff Health

Occupational Health and Safety

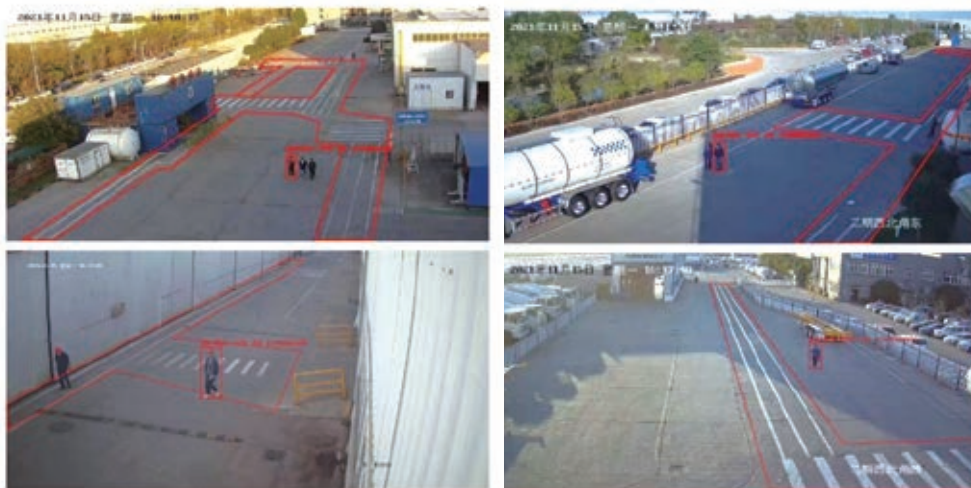
The Group has always adhered to the HSE philosophy of “compliance, safety, health, and green operation”, and strictly implemented the safety management policy of “safety and prevention first and comprehensive management”. The Group complies with the Work Safety Law of the People’s Republic of China, the Law of the People’s Republic of China on the Prevention and Treatment of Occupational Diseases, the Labor Law of the People’s Republic of China and the relevant laws and regulations in overseas areas of operation of the Group in relation to work safety. In accordance with the principles of “three managements and three musts” and “those who are in charge shall take responsibility”, based on the improvement of the work safety responsibility system and taking the work safety target management as the starting point, the Group further refines and implements the efforts of the main responsibility of work safety, conscientiously implements the main responsibility of enterprise work safety and the main responsibility of investment. Based on the working ideas of supervision, guidance, and service, the Group continues to promote investment enterprises to strictly implement the main responsibility of work safety and promote work safety management and business development of enterprises at the same time.

The Group strictly implements the “three simultaneities” management system for new construction, reconstruction, and expansion projects. The Group identifies, analyzes and controls occupational hazard factors that may occur or exist in the process of work, and gives priority to healthier and safer processes, equipment and materials to minimize the impact of hazard factors on employees; the Group entrusts occupational health technical service institutions with relevant qualifications to regularly carry out occupational hazard factor detection and publicize the results; meanwhile, the Group entrusts hospitals with relevant qualifications to continuously and comprehensively carry out the occupational health examination of employees, so as to strictly ensure their occupational health and safety. In addition, the Group actively carries out occupational health-related training, equips employees with appropriate labor protection supplies and first aid kits. The Group also sets up warning signs in places involving occupational hazard factors and strives to create a healthy and safe working environment to effectively protect the occupational health rights of employees.

During the year, the Group did not violate laws and regulations in respect of occupational health and safety. In 2020, the number of work-related fatalities was 1, with a ratio of 0.075%. In 2021 and 2022, the number of work-related fatalities was nil in the Group. In 2022, the number of the Group’s working days lost due to work-related injuries was 1,845.5 days.

Ruijiang Tanker informatization and automation help enterprises realize HSE management

 Case



Automatically Detect Employees in the Danger Zone and Alert Them to Return to the Safe

Ruijiang Tanker has improved the professional management ability of HSE through continuous improvement of the nature of safety hazards, hardware transformation, and information monitoring of safety, environmental protection, and violations in important areas. It has also established 17 types of common violation models and installed 47 monitoring cameras to automatically identify personnel violations. Meanwhile, information was used to report hidden dangers to all employees, achieving a decrease of 37% in the percentage certification rate and tackling key problems to reduce 34 hazard sources, providing a strong protection for the physical and mental health of employees.

Improvement of On-site Climbing Operation Environment of Yangzhou CIMC Tonghua Tank Trailer Plant

 Case

In 2022, Yangzhou CIMC Tonghua Tank Trailer Plant carried out the identification of high-altitude operation workplaces, rectified the hardware of non-conforming items, designated high-altitude operation personnel, conducted visual training of theoretical knowledge and operative skill, supplemented on-site warning signs and visual spot inspection, etc. A total of 79 high-altitude operation risks were improved, the danger of the operation post was reduced, the possibility of accidents was effectively reduced, and the physical and mental health of employees was guaranteed.

* The number of work-related fatalities disclosed, as of the date of publication of the Report, is subject to the government's determination of production safety liability accidents.

Employee Communication and Care

CIMC Vehicles Group attaches great importance to corporate cultural activities and spreads positive vibes to employees with positive and sound cultural contents. It creates a good communication atmosphere for employees through various employee activities and conveys the considerateness and care of the Company to employees. Through various employee activities, the CIMC Vehicles Group creates a good communication atmosphere for its employees and conveys the considerateness and care of the Group to employees.

CIMC Vehicle Group sends greetings and birthday gifts to its birthday employees in the month of their birth, surprising and showing its care for its employees; the Group holds monthly or quarterly birthday parties to gather together birthday employees, for celebration and thanking them for their contributions. Meanwhile, subject to ensuring the health and safety of employees, the Group persists in carrying out various sports and recreational activities and actively provides employees with opportunities for activities. In addition to the above regular birthday parties, we also carry out activities such as celebrating the Chinese New Year, Dapeng hiking, challenging Wutong Mountain/Tanglang Mountain, badminton matches, the free books from the president, all of which are recognized and praised by employees.

“Enjoying the Beauty of Books, Sharing the Pure Time”——Midsummer 2022 Book Sharing Birthday Party, Jiangmen Tanker Taizijie Employee Birthday Party

 Case

In 2022, the headquarters of the Company organized a midsummer reading birthday party, which was actively participated by its employees. The activity entertained and relaxed the employees, and further enhanced the communication between them. It fully demonstrated the positive and optimistic attitude of CIMC Vehicles' employees to life and work, inspired their enthusiasm for work, and made them devote themselves to the high-quality development of the Company in a more enthusiastic, aggressive, and pragmatic manner.



“Exploring the Future with High-quality Development by Enjoying the Beauty of Books”——New Year Book Giving by the President in 2022

 Case

In 2022, the book giving and reading sharing activity of the president gained traction with and was actively participated in by the employees of the Company. CIMC Vehicles is actively developing a learning organization and creating a strong atmosphere of “love reading, read good books and be good at reading”, so as to improve employees’ cultural literacy, and establish a capable team.



Employee Activity Exhibition of Some Enterprises of CIMC Vehicles Group

 Case



While attaching importance to the cultural activities of employees, the enterprises of CIMC Vehicles Group also actively carry out cultural activities for employees, so that they can always stay active, feel the joy of life and sports at work, and deepen their communication and friendship with colleagues.

Serving People and Giving Back to Society

The Group has always adhered to the spirit of responsibility, and actively contributed to the local economy, people's livelihood, and social harmony. The Group does not forget to give back to the society in its development. In 2022, the Group actively took part in social welfare activities, carried out various charitable donations and volunteer activities such as social assistance, environmental protection practice and the supporting medical care, and maintained good communication with the community. CIMC Vehicles and its enterprises held 20 social welfare activities; the total donations (including self-raised donations) amounted to RMB378,724; and the total duration of volunteer services was 1,513 hours with 124 participants.



Performance Indicators



Number of social welfare activities:

20



Amount of donations (RMB):

RMB 378,724



Number of participants in volunteer services:

124 attendances



Duration of volunteer services:

1,513 hours

Rural Revitalization

Case

In 2022, the Group contributed to rural revitalization from multiple dimensions. In addition to donations, it empowered rural fresh and cold-chain logistics with technology and provided efficient and convenient integrated transportation & loading and unloading solutions.



The activity of Zhumadian CIMC Huajun Casting 99 Social Welfare Day donated to Henan Good Samaritan Foundation and rural revitalization.



The Tiantou mobile cold storage built by CIMC Vehicles Terabyte Truck Body Manufacturing (Jiangmen) Co., Ltd. was successfully installed and delivered in Huaiji County, Zhaoqing. The Tiantou mobile cold storage with excellent thermal insulation performance and outstanding product appearance will serve the local farmers. It will also contribute value to the construction of refrigeration and preservation equipment and facilities in local source areas.



The grain transport vehicle developed by CIMC Light Tower provides efficient and convenient integrated transportation and loading & unloading solutions for grain transport subdivision scenarios, ensuring national grain transport security and helping rural revitalization and new rural construction.

Appendix I: Industry Association

No.	Name of Association	Member Company	Capacity
1	China Association of Automobile Manufacturers (中国汽车工业协会)	The Group	Vice Chairman
2	Special Purpose Vehicle Branch of the China Association of Automobile Manufacturers	The Group	Vice Chairman
3	National Technical Committee of Auto Standardization, Special Vehicle Sub-technical Committee (全国汽车标准化技术委员会专用车分技术委员会)	The Group	Deputy Secretary
4	National Technical Committee of Auto Standardization, Trailer Sub-technical Committee (全国汽车标准化技术委员会挂车分技术委员会)	The Group	Deputy Secretary
5	National Technical Committee of Auto Standardization	The Group	Member
6	Guangdong Logistics Profession Association	The Group	Vice Chairman
7	Shenzhen Fresh Food Cold Chain and Urban Logistics Association (深圳市生鲜冷链与城市物流协会)	The Group	Vice Chairman
8	Sub Committee for Freight Industry of CFLP	The Group	Vice Chairman
9	Society of Automotive Engineers of Jiangsu (江苏省汽车工程学会)	Yangzhou Tonghua	Managing Director
10	Hazardous Chemicals Logistics Branch of China Federation of Logistics & Purchasing (中国物流和采购联合会危化品物流分会)	Yangzhou Tonghua	Managing Director
11	LNG Tank Supply Chain Innovation Alliance (LNG 罐箱供应链创新联盟)	Yangzhou Tonghua	Director
12	Shanghai Transportation Trade Association	Yangzhou Tonghua	Director
13	Special Purpose Vehicle Branch of the China Association of Automobile Manufacturers	Yangzhou Tonghua	Vice Chairman
14	China Association of Automobile Manufacturers (中国汽车工业协会)	Yangzhou Tonghua	Director
15	China Society of Automotive Engineers	Yangzhou Tonghua	Director
16	China Society of Automotive Engineers, Specialty Vehicles Branch (中国汽车工程学会专用车分会)	Yangzhou Tonghua	Member
17	China Association for Standardization, Automobile Branch	Yangzhou Tonghua	Director
18	National Technical Committee of Auto Standardization, Trailer Sub-technical Committee	Yangzhou Tonghua	Member
19	National Technical Committee of Auto Standardization, Special Vehicle Sub-technical Committee	Yangzhou Tonghua	Member
20	Hazardous Chemicals Logistics Branch of China Federation of Logistics & Purchasing (中国物流和采购联合会危化品物流分会)	Jiangmen Tanker	Vice Chairman
21	Hazardous Chemicals Logistics Branch of China Federation of Logistics & Purchasing (中国物流和采购联合会危化品物流分会)	Ruijiang Tanker	Vice Chairman
22	Ready Mixed Concrete Branch, China Concrete & Cement-based Products Association (中国混凝土与水泥制品协会预拌混凝土分会)	Ruijiang Tanker	Vice Chairman
23	China Foundry Association (中国铸造协会)	Huajun Casting	Member
24	Henan Casting & Forging Industrial Association (河南省铸锻工业协会)	Huajun Casting	Vice Chairman
25	Henan Automobile Industry Association (河南省汽车行业协会)	CIMC Huajun	Vice Chairman

No.	Name of Association	Member Company	Capacity
26	Society of Automotive Engineers of Henan	CIMC Huajun	Managing Director
27	Henan Environment Federation (河南省环保联合会)	CIMC Huajun	Director
28	Henan Enterprise Confederation/Henan Entrepreneurs Association (河南省企业联合会 / 河南省企业家协会)	CIMC Huajun	Director
29	Henan Chief Information Officer Alliance (河南省首席信息官联盟)	CIMC Huajun	Director
30	Zhumadian Righteous Behavior Association (驻马店市见义勇为协会)	CIMC Huajun	Member
31	Zhumadian Enterprise Directors Association (驻马店市企业家协会)	CIMC Huajun	Honorary Chairman
32	Qingdao Industrial Design Association (青岛市工业设计协会)	Qingdao CIMC Special Vehicle	Member
33	Qingdao Automobile Industry Association (青岛市汽车行业协会)	Qingdao CIMC Special Vehicle	Member
34	Enterprises Federation of West Coast New Area (西海岸新区企业联合会)	Qingdao CIMC Special Vehicle	Director
35	China Petroleum and Chemical Industry Federation (中国石油和化学工业联合会)	Ruijiang Tanker	Member
36	Shandong Automobile Industry Association (山东省汽车行业协会)	Shandong CIMC	Member
37	Society of Automotive Engineers of Shaanxi (陕西省汽车工程学会)	Xi'an CIMC	Managing Director
38	Shaanxi Automotive Industry Association (陕西省汽车工业协会)	Xi'an CIMC	Managing Director
39	Hazardous Chemicals Logistics Branch of China Federation of Logistics & Purchasing (中国物流和采购联合会危化品物流分会)	Jiangmen Tanker	Vice Chairman
40	Hunan Federation of Logistics and Purchasing	Jiangmen Tanker	Director
41	Guangdong Enterprise Industry Association	Jiangmen Tanker	Member
42	Specialty vehicles Industry Association of Liangshan County	Shandong Wanshida	Member
43	China Association for Standardization, Automobile Branch	Liangshan CIMC Dongyue	Member
44	China Communications and Transportation Association, Professional Committee for Bulky Item Logistics	Liangshan CIMC Dongyue	Director
45	China Association for Science and Technology	Liangshan CIMC Dongyue	Member
46	Specialty vehicles Industry Association of Liangshan County	Liangshan CIMC Dongyue	Vice Chairman
47	China Construction Machinery Association, Concrete Machinery Branch	Lingyu Vehicles	Member
48	National Technical Committee for Standardization of Construction Machinery and Equipment, Concrete Machinery Sub-technical Committee (全国建筑施工机械与设备标准化技术委员会混凝土机械分技术委员会)	Lingyu Vehicles	Member
49	China Bulk-cement Association of Popularization & Development (中国散装水泥推广发展协会)	Lingyu Vehicles	Managing Director
50	China Automobile Standardization Association, Automobile Branch (中国汽车标准化协会汽车分会)	Lingyu Vehicles	Member
51	China Petroleum and Chemical Industry Federation (中国石油和化学工业联合会), National Collaboration Committee for Transportation and Logistics of Dangerous Chemicals (全国危险化学品运输和物流协作委员会)	Lingyu Vehicles	Director

Appendix II: HKEX ESG Guide Content Index

Content Index		Section	
Mandatory Disclosure Requirements			
Governance structure	A statement from the board containing the following elements: (i) a disclosure of the board's oversight of ESG issues; (ii) the board's ESG management approach and strategy, including the process used to evaluate, prioritise and manage material ESG-related issues (including risks to the issuer's businesses); and (iii) how the board reviews progress made against ESG-related goals and targets with an explanation of how they relate to the issuer's businesses.	Directors' Statement	
Reporting Principles	A description of, or an explanation on, the application of the following Reporting Principles in the preparation of the ESG report: Materiality: The ESG report should disclose: (i) the process to identify and the criteria for the selection of material ESG factors; (ii) if a stakeholder engagement is conducted, a description of significant stakeholders identified, and the process and results of the issuer's stakeholder engagement. Quantitative: Information on the standards, methodologies, assumptions and/or calculation tools used, and source of conversion factors used, for the reporting of emissions/energy consumption (where applicable) should be disclosed. Consistency: The issuer should disclose in the ESG report any changes to the methods or KPIs used, or any other relevant factors affecting a meaningful comparison.	About the Report	
Reporting Boundary	A narrative explaining the reporting boundaries of the ESG report and describing the process used to identify which entities or operations are included in the ESG report. If there is a change in the scope, the issuer should explain the difference and reason for the change.	About the Report	
A. Environment			
A1: Emissions	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.	Emissions and Pollution Reduction
	A1.1	The types of emissions and respective emissions data.	Appendix III: Environmental KPIs Table
	A1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions and intensity.	
	A1.3	Total hazardous waste produced and intensity.	
	A1.4	Total non-hazardous waste produced and intensity.	
	A1.5	Description of emissions target(s) set and steps taken to achieve them.	Emissions and Pollution Reduction
	A1.6	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.	Emissions and Pollution Reduction
A2: Use of Resources	General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials.	Resource Conservation and Greater Energy Efficiency
	A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total and intensity.	Appendix III: Environmental KPIs Table
	A2.2	Water consumption in total and intensity.	
	A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them.	Resource Conservation and Greater Energy Efficiency

Content Index			Section
	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.	Resource Conversation and Greater Energy Efficiency
	A2.5	Total packaging material used for finished products and with reference to per unit produced.	Resource Conversation and Greater Energy Efficiency
A3: The Environment and Natural Resources	General Disclosure	Policies on minimising the issuer's significant impacts on the environment and natural resources.	Environmental Protection and Green Manufacturing
	A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	Environmental Protection and Green Manufacturing
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.	Climate Mission and Low-Carbon Development
	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.	Climate Mission and Low-Carbon Development
B. Social			
B1: Employment	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.	Equal Employment and Rights Guarantee
	B1.1	Total workforce by gender, employment type (for example, full - or part-time), age group and geographical region.	Equal Employment and Rights Guarantee
	B1.2	Employee turnover rate by gender, age group and geographical region.	Equal Employment and Rights Guarantee
B2: Health and Safety	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.	Occupational Safety and Staff Health
	B2.1	Number and rate of work-related fatalities occurred in the past three years including the reporting year.	Occupational Safety and Staff Health
	B2.2	Lost days due to work injury.	Occupational Safety and Staff Health
	B2.3	Description of occupational health and safety measures adopted, and how they are implemented and monitored.	Occupational Safety and Staff Health
B3: Development and Training	General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	Talent Training, Promotion and Development
	B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	Talent Training, Promotion and Development
	B3.2	The average training hours completed per employee by gender and employee category.	Talent Training, Promotion and Development
B4: 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 labour.	Equal Employment and Rights Guarantee
	B4.1	Description of measures to review employment practices to avoid child and forced labour.	Equal Employment and Rights Guarantee
	B4.2	Description of steps taken to eliminate such practices when discovered.	Equal Employment and Rights Guarantee

Content Index			Section
B5: Supply Chain Management	General Disclosure	Policies on managing environmental and social risks of the supply chain.	Global Supply Chain Management
	B5.1	Number of suppliers by geographical region.	Global Supply Chain Management
	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.	Global Supply Chain Management
	B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	Global Supply Chain Management
	B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	Global Supply Chain Management
B6: Product Liability	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.	Innovation Driving and Smart Products
	B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	Quality Commitment and Comprehensive Assurance
	B6.2	Number of products and service related complaints received and how they are dealt with.	Dedicated Service and Customer Satisfaction
	B6.3	Description of practices relating to observing and protecting intellectual property rights.	Intellectual Property Rights and Patent Maintenance
	B6.4	Description of quality assurance process and recall procedures.	Quality Commitment and Comprehensive Assurance
	B6.5	Description of consumer data protection and privacy policies, and how they are implemented and monitored.	Information Security and Privacy Protection
B7: Anti-corruption	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.	Honesty and Integrity in Operations
	B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	Honesty and Integrity in Operations
	B7.2	Description of consumer data protection and privacy policies, and how they are implemented and monitored.	Honesty and Integrity in Operations
	B7.3	Description of anti-corruption training provided to directors and staff.	Honesty and Integrity in Operations
B8: Community Investment	General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	Serving People and Giving Back to Society
	B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	Serving People and Giving Back to Society
	B8.2	Resources contributed to the focus area.	Serving People and Giving Back to Society

Appendix III: Environmental KPIs Table

Indicator	Unit	Total for 2021	Total for 2022	Comparison of Totals for 2022/2021	Intensity (Per RMB100 million of revenue)
Total wastewater	Kiloton	646.27	549.00	-15.05%	2.32
Waste gas emissions:					
Volatile organic compounds (VOCs)	Ton	70.81	31.13	-56.04%	0.13
Total greenhouse gas emissions	tCO ₂ e	187,034.92	158,126.99	-15.46%	669.46
Direct greenhouse gas emissions	tCO ₂ e	36,482.33	27,903.14	-23.52%	118.13
Indirect greenhouse gas emissions	tCO ₂ e	150,552.59	130,205.18	-13.52%	551.25
Total amount of hazardous waste generated	Ton	2,775.73	1,775.69	-36.03%	7.52
Total amount of non-hazardous waste generated	Ton	74,571.97	45,457.78	-39.04%	192.45
Total energy consumption	tce	50,006.09	38,681.79	-22.65%	163.77
Electricity consumption	tce	31,200.76	24,578.95	-21.22%	104.06
Gas consumption	1,000 m ³	11,385.37	8,659.36	-23.94%	36.66
Oil consumption	1,000 L	3,059.00	2,342.94	-23.41%	9.92
Oil consumption - Gasoline	1,000 L	289.99	247.55	-14.63%	1.05
Oil consumption - Diesel	1,000 L	2,769.01	2,095.39	-24.33%	8.87
Total water consumption	1,000 m ³	1,343.72	988.94	-26.40%	4.19

Appendix IV: Definitions

Terms	Definitions
“Company” or “CIMC Vehicles”	CIMC Vehicles (Group) Co., Ltd.
“Group” or “We” or “us”	the Company and its subsidiaries
“The Report”	Social Responsibility and Environmental, Social and Governance Report of CIMC Vehicles 2022
“This Year” or “during the Reporting Period”	January 1, 2022 to December 31, 2022
“Hong Kong Stock Exchange”	The Stock Exchange of Hong Kong Limited
“ESG Guide”	Environmental, Social and Governance Reporting Guide
“Shandong CIMC”	CIMC Vehicles (Shandong) Co., Ltd. (中集车辆(山东)有限公司)
“Qingdao Reefer”	Qingdao CIMC Reefer Trailer Co., Ltd. (青岛中集冷藏运输设备有限公司)
“Ruijiang Tanker”	Wuhu CIMC Ruijiang Automobile Co., Ltd. (芜湖中集瑞江汽车有限公司)
“CIMC Shenzhen”	Shenzhen CIMC Vehicle Co., Ltd. (深圳中集专用车有限公司)
“CIMC Huajun”	Zhumadian CIMC Huajun Vehicle Co., Ltd. (驻马店中集华骏车辆有限公司)
“Qingdao CIMC Special Vehicle”	Qingdao CIMC Special Vehicle Co., Ltd. (青岛中集专用车有限公司)
“Dongguan CIMC”	Dongguan CIMC Special Vehicle Co., Ltd. (东莞中集专用车有限公司)
“Yangzhou Tonghua”	Yangzhou CIMC Tong Hua Special Vehicles Co., Ltd. 江苏挂车帮租赁有限公司
“Vanguard Trailer”	China Jiangsu Vanguard Trailer Rental Co., Ltd. (江苏挂车帮租赁有限公司)
“Lingyu Vehicles”	Luoyang CIMC Lingyu Automobile Co., Ltd. (洛阳中集凌宇汽车有限公司)
“Jiangmen Tanker”	CIMC Vehicle (Jiangmen) Co., Ltd. (中集车辆(江门市)有限公司)
“Huajun Casting”	Zhumadian CIMC Huajun Casting Co. Ltd. (驻马店中集华骏铸造有限公司)
“Liangshan CIMC Dongyue”	Liangshan CIMC Dongyue Vehicle Co., Ltd. (梁山中集东岳汽车有限公司)
“Xi’an CIMC”	CIMC-SHAC (Xi’an) Special Vehicles Co., Ltd. (中集陕汽重卡(西安)专用车有限公司)
“CIMC Liaoning”	CIMC Vehicles (Liaoning) Co., Ltd.
“Shaanxi CIMC”	CIMC Vehicles (Shaanxi) Automobile Co., Ltd. (中集车辆(陕西)汽车有限公司)
“Gansu Huajun Vehicle”	Gansu CIMC Huajun Vehicles Co., Ltd. (甘肃中集华骏车辆有限公司)
“Shandong Wanshida”	Shandong Wanshida Special Automotive Manufacturing Co., Ltd. (山东万事达专用汽车制造有限公司)
“Jiangsu Baojing”	Jiangsu Baojing Auto Parts Co., Ltd. (江苏宝京汽车部件有限公司)
“Zhenjiang TB”	CIMC Taizijie Vehicle Body Manufacturing (Zhenjiang) Co., Ltd. (中集车辆太字节汽车车厢科技(镇江)有限公司)
“Vanguard (莫嫩)”	Vanguard National Trailer Corporation
“Vanguard (特伦顿)”	Vanguard National Trailer Corporation
“SDC”	SDC Trailers Limited
“LAG”	LAG Trailers NV Bree
“CRTI”	CIMC REEFER TRAILER, INC.
“RMB”, “RMB100 million”	Renminbi, Renminbi100 million
“VOCs”	Volatile organic compounds
“Zhumadian CIMC Huajun Vehicle”	Zhumadian CIMC Huajun Vehicle Co., Ltd. (驻马店中集华骏车辆有限公司)

INDEPENDENT ASSURANCE AND STATEMENT OF OPINION

InFaith Group, as entrusted by CIMC Vehicles (Group) Co., Ltd. ("CIMC Vehicles"), has conducted independent limited assurance of the information and data related to corporate environmental, social and governance (ESG) responsibility disclosed in CIMC Vehicles 2022 Social Responsibility Report (the "Report"), and disclosed the assurance result and conclusion to readers and stakeholders of the Report in the form of independent assurance and statement of opinion.

Independence and Competence

1. All members of the assurance team of InFaith Group have no business relationship with CIMC Vehicles which would lead to conflict of interest. The assurance was independently performed by the team of InFaith Group;
2. The assurance team of InFaith Group consists of experienced ESG professionals in the industry. Relevant persons all have received professional trainings on the GRI Standards issued by the Global Reporting Initiative, AA1000AS v3, ISO 14001, ISO 26000, SA8000, EcoVadis global supply chain rating and other sustainability-related standards, and have adequate understanding and practical experience in relevant international principles, evaluation systems and assurance standards.

Statement of Assurance

1. The management of CIMC Vehicles is solely responsible for the preparation and content of the Report. The responsibility of InFaith Group is to conduct assurance based on the scope described herein and to provide professional assurance opinions for readers and stakeholders of the Report.
2. Based on matters subject to scope of assurance, InFaith Group conducted independent limited assurance of matters defined in the report and issue assurance conclusion in accordance with AA1000AS v3. In addition to providing independent assurance and making other statements of opinion on the facts of assurance under the conclusion, InFaith Group will not assume any legal or other liabilities for any inquiries for any other purposes, or for any other persons who read the Independent Assurance and Statement of Opinion.
3. Any queries regarding the content or related matters set out in the Independent Assurance and Statement of Opinion will be addressed by CIMC Vehicles.
4. In the event of any conflict or inconsistency between the Chinese version and the English version of the Independent Assurance and Statement of Opinion, the Chinese version shall prevail.

Assurance Standard

InFaith Group adopted Type 2 moderate assurance under AA1000 v3, including the assessment on CIMC Vehicles' compliance with and extent of such compliance of four AA1000 v3 assurance principles: inclusiveness, substantiality, responsiveness and impact.

Scope of Assurance

1. The scope of the assurance is limited to the information and data that are covered in the Report and related to CIMC Vehicles and its subsidiaries and does not include data or information related to CIMC Vehicles' suppliers, contractors, and other third parties;
2. Type 2 moderate assurance under AA1000 v3 was adopted to evaluate the nature and extent of CIMC Vehicles' adherence to the four principles set out in AA1000AS v3;

3. CIMC Vehicles and InFaith Group reached an agreement to select specified performance information in the Report as part of the assurance content. The selected specified performance indicators are as follows:

- Total number of employees
- Average employee training hours by gender
- Turnover rates of domestic contract employees
- Total number of suppliers
- Waste gas emissions:
- Electricity consumption

Assurance Process and Work

In order to collect evidence related to conclusion, we have performed the following work:

1. Having interviews with the senior management team and employees of CIMC Vehicles to understand the overall situation and relevant processes of the fulfillment of its environmental, social and governance responsibilities.
2. Verifying the implementation of key organizational developments and policies of the CIMC Vehicles, and reviewing the supporting evidence for claims made in the Report.
3. Through the interviews and the assurance of relevant documents, learning about CIMC Vehicles' main stakeholders and their expectations and demands, the specified communication channels between both parties, and how CIMC Vehicles responds to their expectations and demands.
4. Selecting certain ESG-related information in the Report, performing analytical assurance procedures on such information and overall performance, and evaluating and verifying the consistency with the Report or not.
5. Assessing the Company's reporting and management processes concerning this reporting against the principles of inclusivity, materiality and responsiveness as described in the AA1000 to identify the appropriateness of the Statement.
6. Conducting random sampling of supporting evidence pertaining to data reliability and quality for selected specified performance information.
7. Recalculating selected specified performance information.
8. Performing other procedures we deemed necessary.

Conclusions

1. Based on the information provided by CIMC Vehicles and the sampling test, the Report does not contain misrepresentations.
2. For the principles of inclusiveness, substantiality, responsiveness and impact contained in AA1000AS v3, the detailed assurance results are as follows:

Inclusivity	According to the Report, CIMC Vehicles has taken important measures including continuously seeking the participation of stakeholders in business operation, understanding their expectations and concerns, communicating about and confirming substantive issues in a timely manner, etc., to respond responsibly and strategically to stakeholders related to the ESG of the Company.
Materiality	CIMC Vehicles has announced major topics that will have substantial influence and impact on the evaluation, decision-making, actions and performance of the organization and its stakeholders, and judged and improved the management and performance of the issues.
Responsiveness	CIMC Vehicles has developed and implemented relevant policies, and is able to respond to issues that concern the stakeholders in a timely manner.
Impact	CIMC Vehicles has the adequate ability to identify substantive issues. It has implemented balanced and effective evaluation and disclosure methods, and has established a systematic process for monitoring, measurement, evaluation and management impact, so as to achieve more efficient management of decision-making and results within the organization, and demonstrate the impact of the substantive issues in an impartial and objective manner.

3. Based on the procedures InFaith Group has performed and the evidence obtained, nothing has come to our attention that causes us to suspect the reliability and quality of the disclosures of the selected specified performance information of the Report.

Limitations

The assurance was performed at aforementioned physical boundary;

The absence of a significant body of established practice on which to draw to evaluate and measure non-financial information allows for different, but acceptable, measures and measurement techniques and can affect comparability between entities.

If you have any advice for the Independent Assurance and Statement of Opinion, you may contact:



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 Shanghai

Tina Zhong

InFaith Group Zhong Wentang
 Managing Partner Managing Partner of the Sustainable Development Department of InFaith Group
 Shanghai, April 2023

Readers' Feedback

Dear Readers,

Thank you for reading the Report. In order to continuously enhance and improve the sustainable development management of the Group, we sincerely hope to hear opinions or suggestions from you on the Report. Please help to complete the following form and return to us by email or by post.

Email address: ir_vehicles@cimc.com

Post address: No. 2 Gangwan Avenue, Shekou Industrial Zone, Shenzhen, Guangdong, the PRC

1. What is your opinion of the Report:

Good Average Fair

2. Do you think the information and data disclosed in the Report are clear, accurate and complete?

Good Average Fair

3. Do you think the Report reflects the significant influence of the Group to the economy, society and environment?

Good Average Fair

4. How do you think of the Group's performance in safeguarding the interests of stakeholders?

Good Average Fair

5. Your opinions or suggestions on the sustainable development management of the Group:

Please leave your contact information if convenient:

Name:

Post Code:

Contact address:

Occupation:

E-mail:

Company:

Tel:

We will take thorough consideration of your opinions and suggestions and make sure your personal information is handled properly.

Report Preparation Organisation

Leading Group

CIMC Vehicles ESG Reporting Leading Group

Preparation Group

CIMC Vehicles ESG Reporting Project Implementation Group
ESG reporting representatives of subsidiaries

CIMC 中集车辆

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