双环传动
SHUANGHUAN COMPANY

Stock Code:002472

2024

Sustainability Report

ZHEJIANG SHUANGHUAN DRIVELINE CO., LTD.



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About this Report

Welcome to the third sustainability report released by Zhejiang Shuanghuan Driveline Co., Ltd. (Stock Code: 002472).

Reporting Scope

Unless otherwise stated, the reporting scope is consistent with that of *2024 Shuanghuan Driveline Annual Report*, covering Zhejiang Shuanghuan Driveline Co., Ltd. and its subsidiaries. For details on the entities referred to, please see the "Reference" section.

Reference

For clarity and readability, the following abbreviations are used:

Company/ Site	Reference
Zhejiang Shuanghuan Driveline Co., Ltd.	"Shuanghuan Driveline", "Shuanghuan", "the company", "we"
Zhejiang Shuanghuan Driveline Co., Ltd – Yuhuan Base.	"Zhejiang Shuanghuan"
Jiangsu Shuanghuan Gear Co.,Ltd.	"Jiangsu Shuanghuan"
Shuanghuan Gear (Jiaxing) Precision Manufacturing Co., Ltd.	"Jiaxing Shuanghuan"
Shuanghuan Driveline (Chongqing) Precision Technology Co., Ltd.	"Chongqing Shuanghuan"
Zhejiang Shuanghuan Supply Chain Co., Ltd.	"Shuanghuan Supply Chain"
Zhejiang Huanyi Technology Co.Ltd.	"Huanyi Technology"
Zhejiang Fine Intelligent Technology Co., Ltd.	"Fine Intelligent Technology"
Zhejiang Fine Motion Robot Joint Technology Co., Ltd.	"Fine Motion Technology"
Zhejiang Fundrive Technology Co., Ltd.	"Fun Drive Technology"
Jiangsu Huanou Intelligent Transmission Equipment Co., Ltd.	"Jiangsu Huanou"
Huanyan DriveTech (Jiaxing) Research Institute Co, Ltd.	"Shuanghuan Research", "Huanyan Driveline"
Dalian Huanchuang Precision Manufacturing Co., Ltd.	"Dalian Huanchuang"
Evoring Precision Manufacturing Kft.	"Evoring"

Reporting Period

This report covers information from January 1, 2024, to December 31, 2024. To ensure the completeness of the information presented, certain data may extend beyond this timeframe, in which case specific explanations are provided.

Basis for preparation

This report has been prepared in accordance with the *Shenzhen Stock Exchange Guideline No. 17 on Self-Regulation of Listed Companies - Sustainability Report*(referred to as the "Guideline"),*Enterprise Sustainable Disclosure Standards - Basic Standards (Trial)* issued by the Ministry of Finance and nine other departments and with reference to the United Nations Sustainable Development Goals (UN SDGs),the *GRI Standards* issued by the Global Sustainability Standards Board (GSSB).

Confirmation and Approval

This report was confirmed by the management and approved by the Board of Directors on [2025-4-23].

Access to the report

The report is available in both Chinese and English, in printed and online versions. The online version can be accessed and downloaded at: https://www.cninfo.com.cn/.
In the event of any discrepancies between the Chinese and English versions, the Chinese version shall prevail.

Assurance

In response to stakeholder expectations regarding the company's sustainability performance and information disclosure, this report has undergone independent third-party assurance by SGS. For details, please refer to [Assurance Statement].

[1] https://www.cninfo.com.cn/new/disclosure/stock?orgId=9900014368&stockCode=002472#companyProfile
[2] https://www.gearsnet.com/index.html

Message from the Chairman



2024 marks the 45th anniversary of Shuanghuan Driveline. As we look back on our journey, we have come to deeply understand that the gears of manufacturing not only drive industrial growth—they also carry the warmth of sustainable progress. Over the past 45 years, Shuanghuan has advanced hand in hand with China's reform and opening-up, upholding the mission of "Changing the self-sufficiency pattern of the gear industry, becoming a global leader in precision transmission," and staying true to our core value: "Better every time, always." From the beginning, we have remained committed to improving product quality, protecting the environment, safeguarding employee health and safety, and upholding integrity. These principles have continued to shape and expand our sustainability strategy.

From making to smart shaping, from growth to shared thriving

In 2024, sustainability at Shuanghuan encompasses climate action, circular economy, smart manufacturing, and supply chain resilience—woven into every aspect of our operations.

We remain committed to green, low-carbon, and circular development. Aligned with China's "3060" carbon peaking and carbon neutrality goals, we issued the *Shuanghuan Carbon Neutrality Action Plan*, addressing emissions across operations, our value chain, and product life-cycle. Across our facilities, we have advanced "zero-waste factory" programs, refined hazardous waste tracking through digital entry-exit systems, and upgraded our proprietary D-MOM digital manufacturing platform to include real-time energy monitoring and carbon accounting modules. In our pursuit of energy transition, we actively deployed clean energy initiatives such as photovoltaic projects. Our approach to circularity continues to evolve, with efforts to optimize life-cycle design and increase resource efficiency and regeneration.

We continue to drive industry progress through innovation. With Fine Intelligent Technology as our digital innovation arm, we are spearheading the transformation of smart factories across our operations. In Zhejiang Shuanghuan, we have pioneered the use of laser-engraved "gear footprints" and AI-based recognition to give each gear a unique digital identity—building trust and transparency into the global supply chain. Our precision in EV gears continues to lead the field, and our advances in reducer systems have successfully broken foreign technology monopolies.

We are building a stronger, more caring workforce. Employee well-being is a top priority. Our occupational health and safety systems ensure a safe working environment, while mentor-ship programs and leadership training offer clear career development pathways. Embracing our "Family" culture, we expanded the "Huanhuan Class", a summer care program to ease parenting challenges and strengthened support for vulnerable groups, ensuring everyone can find belonging and opportunity at Shuanghuan. Notably, in 2024 another group of employees were honored with the "30-Year Gold Service Award."

We are committed to building an inclusive and prosperous ecosystem. Our mission goes beyond value creation—it is about value sharing. Through scholarship funds, we help underprivileged students pursue their dreams. Through long-term elderly care, we bring warmth to those in need. Through our "Common Prosperity Farm" initiative, we support rural revitalization. We also empower dozens of small and medium-sized suppliers through capability-building programs, amplifying the ripple effects of responsible growth.

We are ensuring the gears of governance never rust. Integrity is the foundation of trust. We have established a dedicated Compliance & Ethics Committee, which I chair, to lead our Group-wide efforts in promoting ethical conduct. All suppliers are required to sign our *Supplier Integrity Commitment*, and internally, our "integrity point" reward system and 100% employee compliance training coverage ensure that a culture of ethics and accountability is embedded throughout the organization.

Looking ahead,we will embrace the global sustainability agenda with even greater openness. We will develop more sustainable solutions such as net-zero factories, digital transformation, circular economy, and rural revitalization.

We strive to collaborates with global partners to drive technological innovation and shape a more greener and sustainable future.

Zhejiang Shuanghuan Driveline Co., Ltd.
Chairman Mr. wu ChangHong

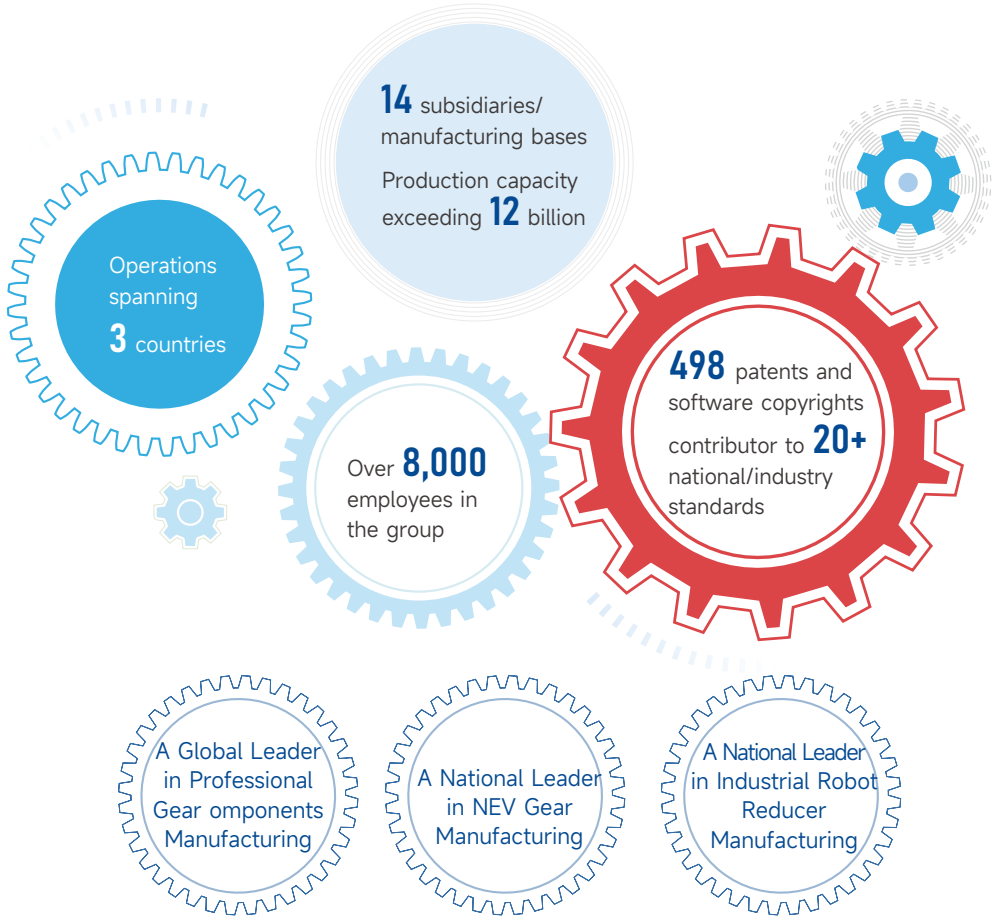
About Shuanghuan

Company Profile

Zhejiang Shuanghuan Driveline Co., Ltd. (Stock Code: 002472) is a leading global manufacturer of gear components, dedicated to "Drive the transition in the gear industry to be the global leader in precision drivelines " and providing high-speed, low-noise, safe, and sustainable products for global mechanical transmission systems.

Shuanghuan Driveline was founded in 1980 and publicly listed on the Shenzhen Stock Exchange in September 2010. For more than 40 years, the company has been focusing on the R&D, manufacturing, and sales of gears and their components, which are the core components of mechanical transmission, a leading global manufacturer in the gear component industry.

Shuanghuan Driveline's management headquarters is in Hangzhou, Zhejiang Province. It has over a dozen subsidiaries in 3 countries and 11 cities, including Zhejiang Shuanghuan, Jiangsu Shuanghuan, Jiaxing Shuanghuan, Chongqing Shuanghuan, Huanyi Technology, Fine Intelligent Technology, Fine Motion Technology, Fun Drive Technology, Jiangsu Huanou, Shuanghuan Research, Dalian Huanchuang, and Evoring. Shuanghuan's products include gears for new energy and fuel vehicles, commercial vehicles, rail transit, off-road machinery, industrial robot reducers, wind turbines, and gears and components for the livelihood sector, covering various fields such as clothing, food, housing, transportation, labor, energy, and smart living. Shuanghuan has become a supplier for renowned enterprises in various industries including Toyota, Volkswagen, ZF, Caterpillar, BYD, BorgWarner, GAC, NIO and more. Sales to Fortune Global 500customers account for over 50% of total revenue.



History

1980
The predecessor of Shuanghuan Driveline, Qingma Township Light Chemical and Electromechanical Plant was founded—marking the beginning of a dream where small gears drive a big world.

1999
The company underwent collective restructuring and was renamed Zhejiang Shuanghuan Gear Co., Ltd.

2005
Jiangsu Shuanghuan was established.

2006
The company completed its shareholding reform and officially became Zhejiang Shuanghuan Driveline Co., Ltd.

2010
Shuanghuan Driveline was successfully listed on the Shenzhen Stock Exchange, becoming the first gear manufacturer to go public on the A-share market.

2012
The Hangzhou management headquarters was established to enhance strategic planning and attract talent.

2013
Subsidiary Shuanghuan Supply Chain was founded.

2015
Subsidiary Jiaxing Shuanghuan was established, opening a new chapter in intelligent manufacturing.

2017
Shuanghuan acquired Chongqing Shuanghuan (The original name was Chongqing Shenjian), which opened a new chapter of southwest strategy.

2018
Dalian Shuanghuan was established to create localized supply base for Customers.

2020
The subsidiary Fine Motion Technology was established, which represented that Shuanghuan developed in-depth in research and manufacture of industrial robot reducers and contributed to the localization of industrial robot reducers.

2021
Shuanghuan Research was established to explore cutting-edge gear technology and offer optimal solutions. In the same year, Fine Intelligent Technology was founded to facilitate digital transformation across the company and its industry chain.

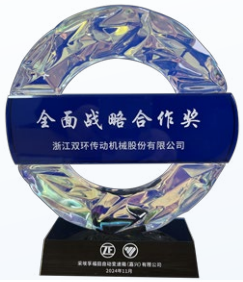
2022
Subsidiary Fun Drive Technology was established, and 100% equity of SAN-TOHNO Intelligent Transmission was acquired, marking the company's entry into the livelihood gear sector. In the same year, Jiangsu Huanou was founded, advancing R&D and manufacturing of industrial reducers.

2023
Acquired 100% equity of SAN-TOHNO (HAI PHONG) Transmission Technology Science Company Limited in Vietnam, expanding overseas business in livelihood gears. Hungarian subsidiary Evoring was founded to reach the European market. In the same year, Huanyi Technology was established.

2024
The Shuanghuan Research building was completed and put into operation. The factory of Hungarian subsidiary EVORING successfully topped out.

Awards and Certificates

Customer Recognition Awards



ZF Foton 2024 Comprehensive Strategic Cooperation Award



Toyota Original Cost Excellence Award



Inovance Technology 20-Year Partnership Award



BYD 2024 Outstanding Supplier



Foton Cummins Best Quality Award



BorgWarner Best Partner Award



NIO 2024 Quality Excellence Partner



ZF System (Beijing) Co., Ltd. 2024 High-Speed Rail Project Contribution Award



Eaton Cummins 2024 Quality Excellence Award at Chinese Supplier Conference

System Certifications



IATF 16949 Quality Management System Certification



ISO 9001 Quality Management System Certification



ISO 14001 Environmental Management System Certification



ISO 45001 Occupational Health and Safety Management System Certification



ISO 22163 Railway Industry Quality Management System Certification



ISO 50001 Energy Management System Certification



AAA-Level Certification for Integration of Informatization and Industrialization Management System



ISO 10012 Measurement Management System AAA-Level Certification



Intellectual Property Compliance Management System Certification



AAAAA-Level Certificate for Standardized Good Conduct



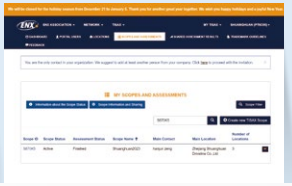
Level 3 Certification for Information System Security Classified Protection



High and New Technology Enterprise Certificate



Level 3 Certificate in Data Management Capability Maturity (Robust Level)



ISO 27001 Information Security Management System / TISAX Level 3 Certification

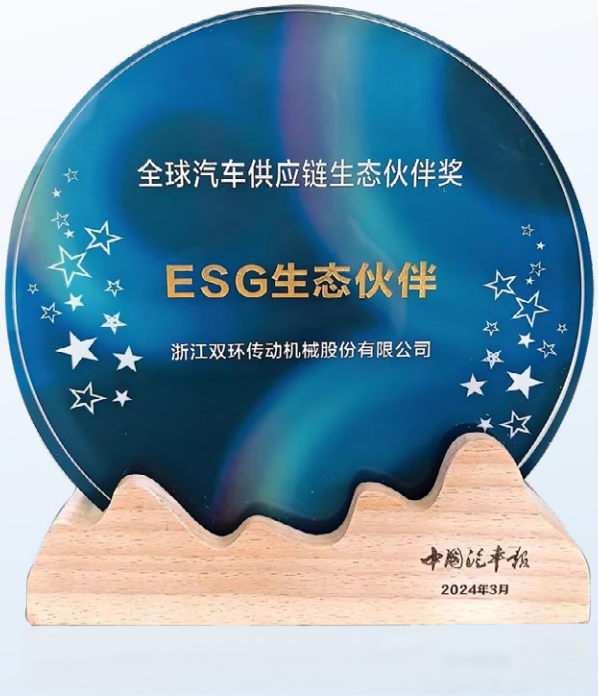


Advanced Certified Enterprise by Customs



CNAS Accredited Laboratory Certificate

Other Awards and Recognitions



- Green Supply Chain Management Enterprise – Ministry of Industry and Information Technology (MIIT)
- 2024 Top 100 Enterprises in China's Automotive Supply Chain
- National-Level Green Factory
- Manufacturing Single Champion Enterprise
- Ranked among the Top 500 High-Tech Enterprises in Zhejiang Province for Innovation Capability (2024)
- ESG Eco-Partner – Global Automotive Supply Chain
- Model Collective of Zhejiang Province
- Pilot Enterprise for Integration of Advanced Manufacturing and Modern Services in Zhejiang Province
- First Batch of Provincial Demonstration Units for Enhancing Employee Quality of Life – Zhejiang Province
- Outstanding Contributor to Zhejiang-Style Craftsmanship Cultivation in the New Era
- 2024 Benchmark Enterprise for "Robotics+" Application in Zhejiang Province
- Provincial Industrial Internet Platform
- 2024 5G Factory – Ministry of Industry and Information Technology (MIIT)
- Standards-Based Innovative Enterprise
- The First Prize of the "Zhejiang Provincial Science and Technology Progress Award" (2023)in 2024
- 2024 Leading Enterprise in Headquarters of Zhejiang's Private Economy

2024 Highlights

GHG emissions (Scope 1+2): **263,841.62** tons CO_2e

A decrease of **10.7%** compared to the previous period

0 major environmental compliance violations

All the officially operational production bases of the company will have passed the ISO14001 environmental management system certification

11,009 person-times of training participation in 2024

Customer satisfaction exceeded **92%**

Installation pass rate exceeded **98%**

Total R&D investment reached RMB **45,604.29** millions

Over **10** key quality improvement projects initiated

Digital inspection pass rate of finished products exceeded **98%**

Optimized transport routes, saving **152,900** kilometers in mileage annually

100% signing rate of the *Supplier Integrity Initiative Letter*

100% signing rate of the *Supplier Code of Conduct*

49 suppliers evaluated, with a **100%** corrective action completion rate for identified high-risk suppliers

Material Topic Analysis

Stakeholders Engagement

Shuanghuan Driveline has established a multi-level and transparent communication mechanism with its stakeholders to ensure that their concerns and needs are fully understood and addressed. The company regularly engages in dialogue with stakeholders including government/regulatory bodies, shareholders/investors, customers/consumers, employees, suppliers/distributors, communities, partners, and the media. Through various channels such as general meetings of shareholders, investor engagement sessions, customer satisfaction surveys, supplier conferences, and social responsibility initiatives, Shuanghuan collects feedback to continuously refine its business operations and sustainability strategy.

Stakeholders	Government and Regulatory Agencies	Shareholders and Investors	Customers	Employees	Suppliers and Partners	Partners	Public Media	Community and Public	Industry Associations
Topics Concerned	• Product safety and quality • Occupational health and safety • Climate change response • Circular economy • Digital transformation Rural revitalization	• Risk management • Business ethics • Intellectual property management • Product safety and quality • Anti-corruption, anti-bribery, and fair competition • Smart manufacturing and innovation • Sustainability disclosures	• Product safety and quality • Customer communication and privacy protection • Sustainability disclosures	• Occupational health and safety • Product safety and quality • Employee rights	• Customer communication and privacy protection • Sustainable supply chain • Equal treatment of SMEs • Sustainability disclosures • Anti-corruption and anti-bribery	• Intellectual property management	• Product safety and quality • Employee rights • Environmental performance	• Climate change response Technological innovation • Smart manufacturing • Energy conservation and emission reduction	• Product safety and quality • Environmental performance • Data and information security • Sustainability disclosures
Communication Channel	• Forums • Policy consultations • On-site inspections • Incident reportingRural revitalization	• General meetings • Investor conferences • Earnings briefings • Site visits • Emails • Online communication	• Social media • Trade shows • Client visits • Customer conferences • Customer satisfaction surveys • Phone communication	• Training and performance reviews • Phone/email/internal communication tools • Suggestion boxes • Employee activities • Engagement surveys • Collective bargaining meetings	• Supplier conferences • Audit communications • Routine visits • Technical discussions • Phone/email communication	• Specialized meetings • Phone/email icationDigital transformation Rural revitalization	• Social media • Press conferences and briefings • Interviews • Site visits	• Regular visits • Public welfare activitiesRural revitalization	• Industry seminars • Industry exhibitions • Collaborative researchRural revitalization
2024 Progress	• Organize multiple special topic symposiums; • Conduct policy consultations and on-site investigations on multiple occasions; • Cooperate with the Taizhou • Meteorological • Bureau to improve the emergency response mechanism for extreme weather.	• Improve investor communication mechanisms continuously; • Hold three shareholder meetings, four online investor exchange events, and one earnings call during the entire year; • Utilize various communication channels to maintain close interaction with investors.	• Push company information in official account regularly; • Participate in 10 domestic and international exhibitions throughout the year and organize over a hundred special customer visits; • Conduct a customer satisfaction survey; • Establish an efficient response mechanism and handle over a thousand customer inquiries annually.	• Continuously deepen the employee communication mechanism, carry out more than 10,000 employee exchanges cumulatively, collected 5,655 employee satisfaction surveys; • Hold the staff congress successfully.	• Hold a supplier conference; • Conduct regular special review and communication, organize over a hundred daily mutual visits, hold more than ten technical symposiums; • Maintain over a thousand regular phone and email communications.	• Hold multiple special working meetings, handle over a thousand phone and email exchanges, ensure timely and accurate information transmission, and effectively promote the implementation of all tasks.	• Strengthen external communication through diversified channels, post over a hundred updates on social media; • Hold multiple press conferences and industry exchange meetings; • Accept interviews from authoritative media, organize dozens of media interviews.	• Cumulatively provide employment support to over 60 people with disabilities and more than 200 people in difficulty in collaboration with government agencies; • Hold the public welfare run event successfully and raise 51,000 yuan in donations.	• Sponsor the 9th "Good Design" • National Innovation Awards Ceremony; • Co-organize the 2024 China Gear Industry • Conference to promote technological exchanges in the industry.

Materiality Assessment

Shuanghuan Driveline employs a four-step process—issue identification, stakeholder engagement, evaluation, and final confirmation—to assess the financial and overall materiality of various sustainability topics. This ensures the comprehensive identification and prioritization of key topics relevant to the company's operations and business activities.

01 Identification of Material Topics

The company begins by analyzing its own operations, external environment, and the needs and expectations of its key affected stakeholders. Based on the *Guideline* issued by the Shenzhen Stock Exchange, 21 material topics were identified from the guideline's 21 baseline topics. Each topic was assessed in terms of its potential impacts, risks, and opportunities, resulting in a comprehensive list of material topics for the company.

02 Stakeholder Research on Material Topics

Stakeholder input was gathered through structured questionnaires, where both internal and external stakeholders were invited to rate the importance of the identified topics. After quality screening, a total of 350 valid responses were collected. Respondents included 11 stakeholder categories such as shareholders, executives, employees, suppliers, customers, government representatives, and media.

03 Selection and Evaluation

The survey and interview data were statistically analyzed to assess the dual dimensions of each issue:

Impact Materiality Evaluation

Stakeholders rated the impact of each topic on a scale of 1–10. Expert input was also considered, and their respective weightings were applied to calculate the final impact materiality.

Financial Materiality Evaluation

Financial relevance was assessed by first defining the value thresholds for material financial impact. Topics were then evaluated based on the likelihood of occurrence and potential financial magnitude, allowing for the classification of financial materiality into different levels.

04 Review and Confirmation

A final ranking of the topics was determined based on their assessed impact and financial materiality. The prioritized list of material topics was submitted to the ESG Committee for formal confirmation and selection as the company's key sustainability topics.

Materiality Matrix



1 Climate Change Response
2 Pollutant Emissions
3 Waste Management
4 Ecosystem and Biodiversity Conservation
5 Environmental Compliance Management
6 Energy Use
7 Water Resource Utilization
8 Circular Economy
9 Rural Revitalization
10 Social Contributions
11 Technological Innovation
12 Digital Transformation
13 Supply Chain Security and Sustainability
14 Equal Treatment of SMEs
15 Product and Service Safety & Quality
16 Data Security and Customer Privacy Protection
17 Employee Rights and Development
18 Occupational Health and Workplace Safety
19 Anti-Bribery and Anti-Corruption
20 Due Diligence and Risk Management
21 Unfair Competition Prevention

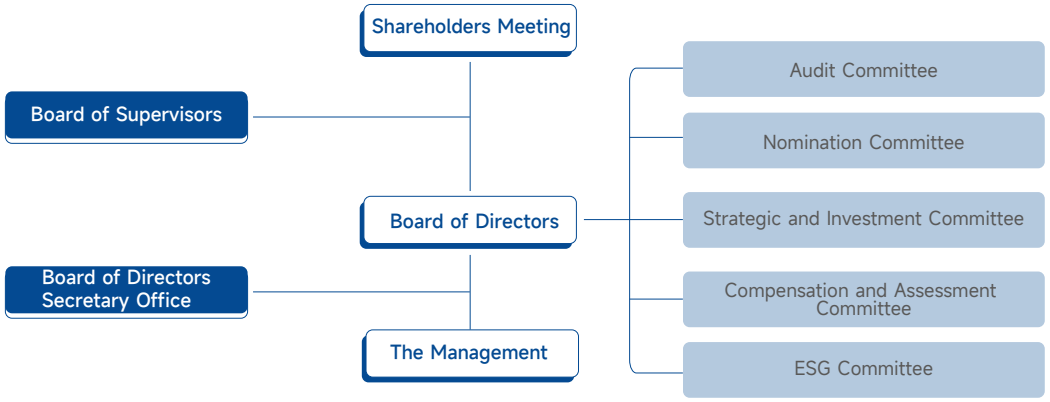
Analysis of the Impact, Risks and Opportunities of Financial Materiality Topics

Material Topics	Impact Type	Impact Description	Scope of Influence	Types of Risks and Opportunities	Description of Risks and Opportunities	The Impact Cycle of Risks and/or Opportunities
Waste treatment	Actual positive impact (+) Potential negative impact (-)	Improper waste disposal may lead to pollution of soil, water sources and air. Waste contains recyclable resources. Through effective treatment, the reuse of resources can be achieved, reducing resource waste.	Upstream of the value chain Enterprise operation Downstream of the value chain	Risk + Opportunity	Non-compliant handling may lead to penalties or negative public opinion, affecting the corporate image. Recycling metal waste can reduce the cost of raw material rocurement, and the regeneration and utilization of waste oil can generate ddtional income.	Short-Term Mid-term Long-term
Energy utilization	Actual positive impact (+) Potential negative impact (-)	The utilization of traditional energy sources such as coal and oil can lead to air pollution, water pollution and greenhouse gas emissions, which in turn cause global warming and ecological damage. With the increasing global demand for clean energy, related industries (such as electric vehicles and green buildings) will experience rapid development.	Upstream of the value chain Enterprise operation Downstream of the value chain Downstream of the value chain	Risk + Opportunity	If energy prices fluctuate (such as rising electricity prices) or carbon tax policies are introduced, traditional high-energy-consuming models will increase financial pressure. Installing photovoltaic power generation or purchasing green electricity can reduce carbon emissions and may also enjoy government subsidies.	Short-Term Mid-term Long-term
Circular economy	Actual positive impact (+)	The circular economy can effectively reduce the demand for raw materials and lower the costs of resource extraction and processing. By reducing waste and pollution, the circular economy helps protect the ecological environment and mitigate climate change.	Upstream of the value chain Enterprise operation Downstream of the value chain	Opportunity	Build a closed-loop supply chain with downstream enterprises (such as recycling old gears for reprocessing) to enhance customer stickiness Consider the circular economy from the entire stage of the product life cycle to achieve lightweight and reduced design.	Mid-term Long-term
Technological innovation	Actual positive impact (+)	Technological innovation has driven the transformation and upgrading of the company's production methods. The application of digital and intelligent technologies has significantly enhanced production efficiency and product quality, while reducing energy consumption and environmental impact.	Upstream of the value chain Enterprise operation Downstream of the value chain	Opportunity	The cooperation among industry, academia and research institutions helps to integrate innovative resources, develop independent core technologies, and transform the company from a traditional manufacturer to a provider of technology solutions The improvement of scientific and technological innovation capabilities will enhance Shuanghuan's say in the industrial chain, explore emerging markets such as robots and high-end equipment, and create new growth points.emerging markets such as robots and high-end equipment, and create new growth points.	Short-Term Mid-term Long-term
Digital transformation	Actual positive impact (+)	The digital energy management system can monitor the energy consumption of equipment in real time, optimize production scheduling and reduce carbon emissions.	Enterprise operation Downstream of the value chain	Opportunity	Intelligent manufacturing (such as automated production lines and AI quality inspection) can reduce human errors, increase the yield of qualified products, and lower energy consumption and material waste.	Short-Term Mid-term Long-term
Occupational health and safe production	Actual positive impact (+) Potential negative impact (-)	Occupational hazards such as noise, dust and mechanical injuries may lead to work-related accidents or occupational diseases. Safety accidents can lead to work stoppage investigations and compensation for losses, affecting the production progress.	Upstream of the value chain Enterprise operation	Opportunity	An unstable working environment will lead to the loss of skilled workers and increase recruitment and training costs. Mechanical injury accidents may cause direct losses (medical reatment, compensation) and indirect losses (production suspension, order delay).	Long-term
Supply chain security and sustainability	Actual positive impact (+) Potential negative impact (-)	Disruptions in raw material supply (such as shortages of special steel) may lead to production halts and affect order delivery. Environmental issues in the supply chain (such as high-carbon-emission suppliers) and labor problems (such as wage arrears) may lead to joint liability and damage the brand reputation	Upstream of the value chain Enterprise operation Downstream of the value chain	Risk + Opportunity	Policies such as the EU Carbon Border Tax (CBAM) may increase the costs of high-carbon supply chains. Developing local or nearshore suppliers can reduce reliance on a single source. Cooperate with suppliers to carry out energy-saving renovations and share the benefits of carbon reduction.	Mid-term Long-term
Product safety and quality	Actual positive impact (+) Potential negative impact (-)	Gear failure may lead to mechanical equipment malfunction and cause safety accidents. Quality problems can trigger a crisis of customer trust and affect market share.	Upstream of the value chain Enterprise operation Downstream of the value chain	Risk + Opportunity	The company continuously promotes the gear quality improvement project, maintaining an outstanding quality level among its peers' products, which brings about word-of-mouth effects and business expansion. If a product quality accident occurs, it may lead to product recall and customer loss.	Short-Term Mid-term Long-term
Employee rights and development	Actual positive impact (+)	Outstanding talents and a stable team of employees bring stable development potential for product quality and business expansion	Upstream of the value chain Enterprise operation	Opportunity	The company continuously attracts high-level talents and expands its talent team by virtue of its good employee rights and development.	Long-term
Anti-commercial bribery and anti-corruption	Actual positive impact (+) Potential negative impact (-)	Corruption can erode corporate profits, undermine internal fairness and affect employee morale. Corruption scandals can damage a company's image and lose the trust of customers and investors.	Upstream of the value chain Enterprise operation Downstream of the value chain chain	Opportunity	If company personnel accept kickbacks from suppliers, it will lead to a decline in the quality of raw materials or inflated costs The sales team obtaining orders through improper means may lead to legal disputes.	Long-term

Sustainable Development Governance

Corporate Governance Structure

We have established a comprehensive corporate governance structure to ensure that decision-making processes are scientific, transparent, and compliant. Our governance framework comprises the General Meeting of Shareholders, the Board of Directors, and the Supervisory Committee, clearly delineating roles and responsibilities. Specifically, the Supervisory Committee oversees corporate operations to guarantee management transparency and compliance. Under the Board of Directors are specialized committees—including the Strategy and Investment Committee, Nomination Committee, Compensation and Assessment Committee, Audit Committee, and ESG Committee—each complementing one another to effectively support the board's decision-making processes.



Shareholders Meeting

As the company's highest decision-making body, Shareholders Meeting determines corporate policies and investment plans in compliance with relevant laws. It reviews and approves major matters such as board reports, annual financial budgets, and final accounting plans.

Board of Directors

Responsible for convening the General Meeting of Shareholders and executing its resolutions.

Board of Supervisors

Composed of shareholder and employee representatives, the committee oversees financial and operational activities and strictly manages risks throughout all phases—before, during, and after operations.



In 2024, Shuanghuan held **3** General Meetings of Shareholders and **10** Board Meetings, with **1** ESG-related topic approved at a **100%** pass rate. Additionally, we hosted **5** investor engagement sessions, reaching an audience of over **1,000** participants.

Board Diversity and Independence

We fully recognize the positive impact of board diversity on corporate governance and sustainable development capabilities. When selecting board members, we emphasize a diverse composition in terms of professional background, industry experience, gender balance, and global perspective, ensuring comprehensive and inclusive decision-making. Currently, our board comprises experts from critical fields including strategic analysis, corporate management, marketing, financial management, risk control, technological innovation, and sustainability.

Shuanghuan Driveline's board currently has nine directors, among whom three are independent directors, accounting for one-third of the board. These independent directors provide objective, impartial, and professional insights to support robust decision-making. Additionally, we actively promote gender equality, with one female director presently serving on the board.

Through continuous optimization of board structure, the Group enhances transparency in governance, strengthens risk management capabilities, and deepens our commitment to social responsibility. Currently, the board members include experts in multiple key fields, such as strategic analysis, management, marketing, financial management, risk management, technology development, and sustainable development.

Sustainability Governance Framework

Shuanghuan Driveline has established a robust sustainable development (Environmental, Social, and Governance) framework, ensuring that sustainable development strategies are implemented at every level—from decision-making to execution—so that sustainability principles are deeply embedded in the company's operations.



The Board of Directors serves as the highest decision-making body for the company's sustainability strategy. A dedicated ESG Committee has been established at the board level to formulate sustainability strategies, oversee the implementation of ESG goals, and ensure that ESG policies align with both international and domestic standards, as well as industry best practices. The Board regularly reviews ESG performance, evaluates the execution of the ESG strategy, and integrates ESG factors into its decision-making processes.

Senior executives and functional department heads are responsible for driving ESG policies forward. They assess and manage material topics and regularly report progress to the Board. To enhance ESG awareness and promote cross-departmental collaboration, the company conducts regular ESG training and internal communication programs for management personnel.

The Chairman's office has established an ESG working group, which is responsible for organizing and promoting specific work related to sustainable development and implementing the company's various ESG standards. It ensures that business units, factories, and frontline employees operate in accordance with ESG standards in areas such as green manufacturing, energy conservation and emission reduction, workplace safety, circular economy practices, and social responsibility initiatives. The company also conducts regular ESG data monitoring and compliance audits, leveraging the oWorks digital platform (see [Digital Transformation]) to enhance ESG execution efficiency.

01
Flowing with Green Circularity

This chapter responds to the following SDGs:



Climate Change Response

GHG Emissions(Scope 1+2)

263,841.62 tons CO_2e

GHG Emission Intensity (Scope 1 + 2)

0.74 tons CO_2e per 10,000 RMB of Industrial Value Added

Energy Use

Total Energy Consumption

61,096.14 tce (equivalent value)

155,889.63 tce (calorific value equivalent)

Energy Intensity

0.17 tce (equivalent value) / RMB 10,000 of Industrial Value Added

0.44 tce (calorific value equivalent) / RMB 10,000 of Industrial Value Added

Water Resource Use

Total Water Consumption

987,881 tons

Water Intensity

2.78 tons per RMB 10,000 of Industrial Value Added

Climate Change Response

Corporate Governance

Strengthening the Governance Structure

In response to China's national "3060" goals (carbon peak by 2030 and carbon neutrality by 2060), Shuanghuan Driveline established a Carbon Neutrality and Dual Energy Control Task Force in September 2021, along with a Carbon Emissions Office, to comprehensively advance its low carbon agenda.The Board of Directors and the ESG Committee bear clear supervisory responsibilities and jointly oversee all climate-related efforts. They provide strategic guidance for managing climate-related risks and formulate climate goals and targets.The Carbon Neutrality and Dual Energy Control Task Force identifies and assesses climate-related risks and opportunities, promoting carbon neutrality initiatives to achieve the climate strategy set by the board and ESG committee. The Carbon Emissions Office, in coordination with relevant functional departments, ensures that climate risk management measures are effectively implemented on the ground.

ESG Committee

To study and make recommendations on the company's long-term development strategy and major investment decisions, as well as the establishment and improvement of a comprehensive risk management system. Assist the Board in evaluating the company's ESG performance and the risks and opportunities it faces, formulate ESG-related policies, strategies, and targets, and organize the coordination, supervision, and review of ESG policy implementation and progress toward targets.

Group Carbon Emissions Office

Responsible for overseeing the Group's carbon management in line with internal and external policy developments, and for formulating medium- and long-term carbon neutrality plans as well as annual implementation strategies.

Carbon Neutrality and Dual Energy Control Task Force

Each subsidiary has established a Carbon Neutrality and Dual Energy Control Task Force, responsible for organizing, coordinating, and directing efforts related to carbon neutrality and energy consumption control.

Departments Responsible for Carbon Management

In accordance with the annual carbon neutrality work plan, relevant functional departments are clearly designated. Department heads collaborate and coordinate efforts to jointly advance the implementation of carbon neutrality initiatives.

Responsibilities of the Carbon Neutrality and Dual Energy Control Task Force

Enhancing Organizational Management Capacity

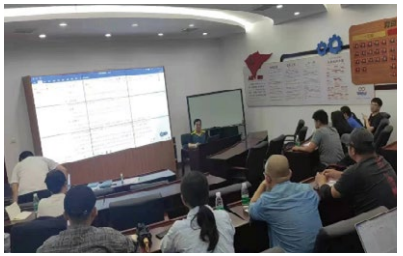
To effectively carry out group-wide carbon management initiatives, Shuanghuan Driveline established a Carbon Emissions Office, tasked with overseeing the company's greenhouse gas (GHG) management. To strengthen the office's capabilities, the company has appointed dedicated professionals to lead its low carbon agenda and actively fosters talent development in this area.

Composition and Responsibilities of Carbon Leadership Task Force and Carbon Emissions Office

Division	Personnel & Position		Main Responsibilities
Task Force	Leader	General Manager	Provides organizational leadership for carbon emission work, promotes the company's green and low-carbon strategy, approves action plans, and makes key decisions on major issues related to carbon management.
	Deputy Leader	VP of Operations	
	Members	Subsidiary GMs	
Office	Director	Head of Chairman's Office	Receives directives from the task force, leads the development and coordination of company-wide carbon action plans, and delegates specific tasks.
	Team Members	Carbon Specialists from Subsidiaries	Handle daily coordination, progress tracking, communication, and implementation of tasks assigned by the task force.

Shuanghuan Driveline places strong emphasis on talent development for its low-carbon strategy, actively building a robust pipeline of professionals to support the company's low-carbon transition.





Carbon Emissions Training Program

Reporting and Monitoring Mechanism

Shuanghuan Driveline applies the D-MOM digital manufacturing operation management platform to obtain relevant data such as energy utilization and carbon emissions regularly. Each subsidiary company reports the progress of its "low carbon" work to the Carbon Emissions Studio on a quarterly basis, including the performance of the targets and the progress of key emission reduction projects. The Carbon Emissions Office conducts a comprehensive assessment of the carbon reduction work of each subsidiary company in combination with the climate goals set by the group and specific data indicators (KPIs), such as carbon emission intensity and energy use efficiency, including the actual reduction situation and the effect of energy-saving project promotion.

In addition, Shuanghuan Driveline actively collaborates with external partners to mitigate risks associated with extreme weather events, enhancing its climate resilience.

CASE Typhoon Risk Response Measures

Zhejiang Shuanghuan has actively partnered with the Taizhou Meteorological Bureau to develop a targeted response plan based on the city's official typhoon warning levels. The company identified areas most susceptible to typhoon impact and compiled a detailed risk zone list. The Environmental Health and Safety (EHS) Department conducted on-site assessments of these areas, formulated tailored precautionary measures, and established corresponding emergency response levels. A tiered control strategy was then implemented to ensure effective risk mitigation and operational safety during typhoon events.



Climate Change Strategy

Shuanghuan Driveline integrates climate considerations into its existing enterprise risk management framework to remain proactive and resilient. Informed by its own operations and industry trend, the company conducts scenario analyses using physical and transition pathways developed by authoritative global organizations such as the Intergovernmental Panel on Climate Change (IPCC) and the International Energy Agency (IEA) to identify potential risks and opportunities.

Physical Scenarios

The company adopts two Representative Concentration Pathways (RCPs) from the IPCC to evaluate physical climate risks:
For physical risks, the company adopts two Representative Concentration Pathways (RCPs) from the IPCC to evaluate physical climate risks for the two scenarios respectively. Shuanghuan Driveline focuses on the impact of acute and chronic risks in high-emission scenarios.

Scenario	Description
Low-emission scenario	Representative Concentration Path (RCP) 2.6 is used as a temperature control scenario of 2°C or below
High-emission scenario	Representative Concentration Path (RCP) 8.5 is used as a temperature control scenario of 2°C or above

Transition Scenarios

For transition risk analysis, Shuanghuan uses NZE (Net Zero Emissions by 2050): From the IEA's *World Energy Outlook*, representing a scenario that aligns with keeping global warming within 2°C. STEPS (Stated Policies Scenario): Reflecting a trajectory based on currently announced and implemented policies, which corresponds to a temperature rise exceeding 2°C. In assessing transition risks, the company focuses on how changes in external policies, market dynamics, and technological developments may affect its operations, investment decisions, and long-term strategy.

Scenario Analysis Models

Physical Scenarios (IPCC-Based)		
Scenario	RCP2.6（IPCC）	RCP8.5（IPCC）
Description	A scenario with very low greenhouse gas concentrations, requiring CO_2 emissions to decline from 2020 and reach net negative before 2100.	A scenario without government intervention, in which greenhouse gas emissions continue rising throughout the 21st century.
Estimated Temperature Rise by 2100	1.8°C	4.4°C
Transition Scenarios (IEA-Based)		
Scenario	NZE（IEA）	STEPS（IEA）
Description	A pathway for the global energy industry to achieve net zero emissions by 2050, limiting global warming to below 1.5°C.	A scenario where countries maintain current and announced policies without significant change.
Estimated Temperature Rise by 2100	1.4°C (50% probability)	2.4°C (50% probability)

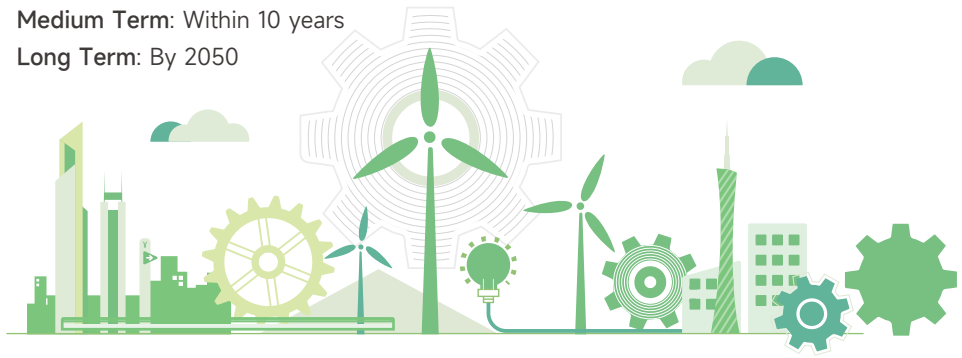
Shuanghuan Driveline evaluates climate-related risks and opportunities based on a two-dimensional matrix that considers both likelihood of occurrence and financial impact. The final impact level is classified into five categories: Very Low, Low, Medium, High, Very High.

Impact Assessment of Risks/Opportunities

Likelihood of Occurrence (Based on Historical Frequency)	Degree of impact (Financial impact)				
	1 – Negligible (≤ RMB 100,000)	2 – Minor (>RMB100,000 to ≤ 500,000)	3 – Moderate (>RMB500,000 to ≤ 1M)	4 – Major (> RMB 1M to ≤ 5M)	5 – Severe (> RMB 5M)
5 – Frequent (Occurred every year in past 5 years)	Very Low5	Low 10	Medium 15	High 20	Very High 25
4 – Very Likely (Occurred 2–3 times in past 5 years)	Very Low4	Low 8	Medium 12	High 16	High 20
3 – Likely	Very Low3	Low 6	Low 9	Medium 12	Medium 15
2 – Occasionally	Very Low2	Very Low4	Low 6	Low 8	Low 10
1 – Rare or Unlikely	Very Low1	Very Low2	Very Low3	Very Low4	Very Low 5

Time Horizons for Climate Risk and Opportunity Analysis

- **Short Term**: Within 1–3 years
- **Medium Term**: Within 10 years
- **Long Term**: By 2050





Climate Change Risk and Opportunity Response

Risk Type		Risk	Value Chain Stage	Potential Impact	Financial Impact		Scenario Analysis			
					Financial Category	Impact Description	Climate Scenario	Degree of Impact		
								Short-term	Mid-term	Long-term
Physical Risk	Acute	Typhoon	Supplier, Logistic, Direct Operations	1.The typhoon destroyed the production facilities of the base, such as factories and warehouses, or the rooftop photovoltaic facilities. 2.Construction workers or other employees were injured and unable to travel or go to and from work, causing some production machinery to come to a standstill. 3.The disruption of raw material/product transportation routes has led to the failure of upstream and downstream products to be delivered on time.	Asset(-) Income(-)	Facility damage and production stagnation leads to increased operating costs and decreased income	RCP2.6	Low	Low	Low
							RCP8.5	Low	Low	Medium
		Heat Wave	Supplier, Logistic, Direct Operation	1.Employees are prone to heatstroke or other health problems in high-temperature environments, and the production efficiency of enterprises decreases. 2.The increase in cooling demands for employees' work and equipment operation has led to higher operating costs.	Outcome(+)	The increase in energy consumption leads to increased operating costs	RCP2.6	Low	Low	Low
							RCP8.5	Low	Low	Medium
		Flood	Supplier, Logistic, Direct Operation	1.The flood inundated the production facilities, causing direct property losses. 2.The disruption of raw material or product transportation routes has led to the failure of upstream and downstream products to be delivered on time. 3.The government departments suspended the production and operation of enterprises, resulting in a decrease in their operating income.	Income(-) Asset(-)	Production stagnation leads to decreased in income	RCP2.6	Extremely Low	Extremely Low	Extremely Low
							RCP8.5	Extremely Low	Low	Low
		Heavy Rain	Supplier, Logistic, Direct Operation	1.Continuous heavy rain may cause water to enter the production plant, damaging production equipment, raw materials and finished products. 2.Construction workers or other employees were injured and unable to travel or go to and from work, causing some production machinery to come to a standstill. 3.The disruption of raw material or product transportation routes has led to the failure of upstream and downstream products to be delivered on time.	Asset(-) Income(-)	Facility damage and production stagnation leads to increased operating costs and decreased income	RCP2.6	Extremely Low	Extremely Low	Extremely Low
							RCP8.5	Extremely Low	Low	Low
	Chronic	Drought	Supplier, Direct Operation	1.The reduction of available water and the rise in water prices have led to an increase in operating costs.	Outcome(+)	The increase in water charges leads to increased operating costs	RCP2.6	Low	Low	Low
							RCP8.5	Low	Medium	Medium
		Rising Temperature	Direct Operation	1.The increased cooling demands for employees' work and equipment operation have led to higher operating costs. 2.The working costs of employees and the expenses for equipment insurance and maintenance have increased.	Outcome(+) Cash flow(-)	The increase in energy consumption costs and employee costs leads to increased operating costs	RCP2.6	Extremely Low	Low	Low
							RCP8.5	Extremely Low	Low	Medium
		Rising Sea Level	Supplier, Direct Operation	1.Some bases are located in the southeast coastal area with a relatively low terrain. The rise in sea level may force the production bases to relocate.	Outcome(+) Asset(-)	Facility damage leads to increased operating costs	RCP2.6	Extremely Low	Extremely Low	Low
							RCP8.5	Extremely Low	Low	Medium
Transition Risk	Policy and Legal Risk		Supplier, Direct Operation	1.The cost of greenhouse gas emissions has increased, and related investments have also risen, such as the costs of projects like carbon verification and carbon footprint. 2.The trend of carbon tax on international trade imports and exports is obvious, which may lead to an increase in international trade expenditure and greater difficulty in trade.	Outcome(+)	More judicial supervision leads to increased operating costs	NZE	Extremely Low	Low	Medium
							STEPS	Low	Low	Low
	Technical Risk		Direct Operation	1.The expenditure of enterprises on the research and development of low-carbon technologies has increased, and the difficulty of technological breakthroughs is unknown. In the short term, there is still a risk of excessively high investment costs. 2.Enterprises have increased their investment in high efficiency and energy conservation, clean energy use and circular economy, such as reducing the lifespan of high-energy-consuming equipment.	Outcome(+) Asset(-)	The demand for low-carbon technologies has led to increased investment in research and development and higher operating costs	NZE	Medium	Medium	Low
							STEPS	Low	Low	Medium
	Market Risk		Direct Operation, Marketing and Sales	1.Customers tend to purchase more low-carbon products in the market. If customer expectations cannot be met, it will lead to a decline in operating income.	Income(-)	Failure to meet customer expectations may lead to decreased income	NZE	Low	Medium	Medium
							STEPS	Extremely Low	Low	Medium
	Reputation Risk		Marketing and Sales	1.The failure to meet the expectations of stakeholders for the sustainable development of the enterprise or the lack of obvious competitive advantages compared with peer enterprises will lead to a decline in the stock price and a reduction in the corporate brand image.	Income(-)	A decline in reputation may lead to decreased income	NZE	Low	Medium	Medium
							STEPS	Extremely Low	Low	Medium

Climate Change Risk and Opportunity Response

	Opportunity	Value Chain Stage	Potential Impact	Financial Impact		Scenario Analysis			
				Financial Category	Impact Description	Climate Scenario	Degree of Impact		
							Short-term	Mid-term	Long-term
Opportunity	Resource Efficiency	Direct Operation	1.Improving the efficiency of resource utilization and process efficiency brings new positive opportunities to enterprises. 2.Strengthen the recycling of materials such as steel, recycle packaging materials, and enhance the efficiency of resource utilization.	Outcome(-)	Reduce operating costs by improving the efficiency of resource utilization	NZE	Medium	High	High
						STEPS	Medium	Medium	Medium
	Energy Supply	Direct Operation	1.Increasing the proportion of clean and renewable energy in the energy structure can, on the one hand, reduce carbon emissions and, on the other hand, lower energy costs.	Outcome(-)	Reduce operating costs by using more renewable energy	NZE	Medium	High	High
						STEPS	Medium	Medium	Medium
	Innovative Product	Direct Operation	1.Developing more innovative and low-carbon products, such as taking ESG factors into account during the design stage, can help attract more environmentally friendly customers and capture a larger market share.	Income(+)	Developing innovative products helps increase revenue	NZE	Medium	High	High
						STEPS	Medium	Medium	Medium
	Market	Direct Operation, Marketing and Sales	1.Explore more low-carbon and innovative solutions in the market, conduct low-carbon research together with enterprises in the upstream and downstream of the value chain, and develop new market opportunities	Income(+)	Exploring new markets is conducive to increasing revenue	NZE	Medium	High	High
						STEPS	Medium	Medium	Medium
	Reputation	Marketing and Sales	1.By enhancing the ESG performance of enterprises and strengthening the disclosure of ESG-related information, it is helpful to establish a deeper green brand image and improve the competitiveness of products.	Income(+)	Establishing a green brand image helps increase revenue	NZE	Medium	High	High
						STEPS	Medium	Medium	Medium

Climate-Related Risk and Opportunity Management

Risk and Opportunity Management

Shuanghuan Driveline manages climate change risks in strict accordance with its comprehensive risk management system, which defines clear responsibilities, methods, and processes.

A structured process has been established for identifying and assessing climate-related risks. Leveraging national policies, regulations, and stock exchange listing requirements, the company organizes its headquarters and subsidiaries to evaluate risks based on their specific operational contexts. The company conducts annual risk identification and assessment across all areas. In addition, the company also carries out specialized climate risk assessments for specific projects as needed.

A qualitative assessment approach is used to evaluate both the likelihood and impact of potential risks. Identified risks are prioritized according to their significance, and a detailed risk and opportunity inventory is compiled. Based on this list, tailored mitigation and response measures are developed to address each identified issue.

List of Climate Risks and Opportunities

Risk	Response
Typhoon	☑ Pay close attention to meteorological warnings. Once extreme weather is detected, issue alerts promptly; ☑ Purchase typhoon emergency supplies, such as sandbags, flashlights, etc.; Formulate emergency evacuation plans and emergency measures; ☑ Formulate a diversified supplier plan.
Flood	☑ Purchase flood control materials and formulate emergency plans for the base; ☑ Formulate a diversified supplier plan; ☑ Purchase the corresponding extreme weather insurance.
Drought	☑ Formulate diversified water source plans; Search for alternative water sources and emergency water sources; ☑ Enhance employees' awareness of water conservation, add facilities for recycling water use, and reduce water consumption; ☑ Regularly assess the water risks of the base.
Rising Sea Level	☑ Pay attention to climate change and gradually carry out strategic actions to address climate change.

Risk	Response
Heat Wave	☑ 1.Enhance employees' awareness of safety precautions, provide heat-relieving supplies during hot weather, and pay attention to their working conditions; ☑ Purchase necessary refrigeration facilities and buy temporary refrigeration supplies such as ice cubes at critical moments; ☑ Arrange the working hours of employees flexibly; ☑ Backup power (peak electricity consumption).
Heavy Rain	☑ Establish and maintain infrastructure to deal with continuous rainfall, and regularly inspect the operation status of drainage measures at the base; ☑ Formulate a diversified supplier plan.
Rising Temperature	☑ Enhance employees' awareness of safety precautions, provide heat-relieving supplies during hot weather, and pay attention to their working conditions.; ☑ Purchase necessary refrigeration supplies and buy ice cubes and other supplies at critical moments. ☑ Arrange the working hours of employees flexibly.
Policy and Legal Risk	☑ Pay close attention to international and domestic carbon policies and related regulations; ☑ Formulate carbon reduction plans and energy conservation plans and implement them in each base; ☑ Regularly assess the impact of new policies on the company's operations and supply chain.

Risk	Response
Technical Risk	☑ Consider ESG factors throughout the entire product lifecycle to achieve reduction and lightweighting, and incorporate recyclable raw material factors into the design considerations.
Market Risk	☑ Establish long-term communication channels with key clients to understand their environmental expectations for the enterprise; ☑ Improve the environmental performance of the product.
Reputation Risk	☑ Strengthen the communication frequency with key stakeholders, establish a good feedback mechanism, and obtain stakeholders' expectations for the enterprise's ESG performance in a timely manner; ☑ Increase the transparency of enterprises' ESG performance and proactively disclose ESG policies and performance to the outside world.

Opportunity	Response
Resource Efficiency	☑ Strengthen lean manufacturing of products, improve process efficiency and production design capabilities; ☑ Increase the proportion of recyclable materials used and enhance the capacity for resource recycling and utilization.
Energy Supply	☑ Install rooftop photovoltaic systems, actively adjust the energy structure, and increase the proportion of more sustainable energy usage.
Innovative Product	☑ Carry out product carbon footprint accounting, identify high-emission stages, and reduce carbon emissions throughout the product's life cycle; ☑ During the design stage, ESG factors of the product are considered, and more circular and economical materials and design schemes are used. ☑ Actively explore new technologies, new processes, new equipment and new materials, and promote innovative research and development.
Market	☑ Expand the scope of cooperation in low-carbon and innovative solutions and jointly develop new markets.
Reputation	☑ Actively expand the scope of cooperation, participate in international ESG conferences, and disclose the ESG performance of enterprises to a greater extent. ☑ Actively expand the scope of cooperation, participate in international ESG conferences, and disclose the ESG performance of enterprises to a greater extent.

Carbon Emissions Reduction Management

Shuanghuan Driveline places great importance on supporting China's national "low carbon" goals and has developed the *Shuanghuan Driveline Carbon Neutrality Action Plan*. In alignment with the requirements of high-quality development in the new era, the company actively integrates sustainability into its operations by considering its specific carbon emission profile and analyzing both internal and external factors.

These factors include projected business growth, internal energy-saving initiatives, emission data from the upstream steel industry, and national energy transition policies. By embedding the low carbon strategy into the Group's overall development plan, Shuanghuan has set clear phased targets for 2030, 2040, and 2050, as well as long-term goals.

This structured approach ensures that carbon reduction measures are carried out in an orderly manner and lays a solid foundation for achieving the company's long-term goal of net-zero emissions.



Product Carbon Footprint Certification



The carbon neutrality roadmap of Shuanghuan Driveline

Carbon Reduction Strategy Area 1 – Operational Emissions Reduction

- **Monitoring and Optimization Management**
  Shuanghuan Driveline is committed to building a systematic, data-driven energy management system that comprehensively covers all aspects of energy consumption and carbon emissions. By implementing refined monitoring and management mechanisms, the company aims to significantly enhance energy efficiency across its operations.
- **Energy Transition**
  The company actively promotes photovoltaic power and purchases green electricity and other measures to continuously increase the proportion of renewable energy in the company.

Carbon Reduction Strategy Area 2 – Value Chain Emissions Reduction

- **Supply Chain Optimization and Collaboration**
  Shuanghuan Driveline works closely with its supply chain partners to optimize supply chain management and drive the achievement of shared carbon neutrality targets through collaborative efforts.
- **Transport Decarbonization**
  The company reduces carbon emissions in transportation by optimizing logistics networks, promoting the use of clean energy vehicles, and improving overall transport efficiency.
- **Circular Economy**
  By enhancing resource recovery, reuse, and efficiency, Shuanghuan actively promotes the development of a circular economy, reducing environmental impact across the product lifecycle.

Carbon Reduction Strategy Area 3 – Product Emissions Reduction

- **Full Lifecycle Product Management**
  By calculating the carbon footprint of the product and quantifying the carbon emissions of the product throughout its entire life cycle, it lays the foundation for reducing the carbon footprint of the product in the future.
- **Low-Carbon R&D and Manufacturing**
  Focus on the carbon emissions of raw materials and the R&D and production stages, and thereby start to gradually reduce the carbon footprint of the products.
- **Product Labeling and Certification**
  Through obtaining eco-friendly certifications, Shuanghuan is committed to transparently showcasing its green products. These efforts support the company's long-term goal of achieving net-zero emissions across the entire value chain by 2050.

Metrics and Targets

Target Setting

Shuanghuan Driveline has established an overarching climate goal of reaching peak carbon emissions by 2030 and achieving carbon neutrality by 2050. Based on this roadmap, the company has set near-term, mid-term, and long-term reduction targets using 2023 as the baseline year:

Annual targets: Reduce energy intensity by 5% each year.Reduce carbon emission intensity by 8.5% each year. Near-term: Achieve a 46% reduction in carbon emission intensity by 2030. Mid-term: Achieve a 30% reduction in absolute operational emissions by 2040. Long-term: Achieve net-zero emissions in company operations by 2050.

Greenhouse Gas Emissions Reduction Initiatives

Shuanghuan Driveline actively promotes GHG reduction through a series of energy-saving and emissions-reduction projects, driving the implementation of its dual-carbon strategy with practical, measurable actions.

2024 Key Carbon Emission Reduction Projects

Number	Project Category	Project Name	Project Content	Input (10,000 RMB)	2024 Revenue (10,000 RMB)	Investment Return Cycle (Year)	2024 Emission eduction Volume (tCO_2e)
1	Energy-saving Technology	Recovery of waste heat from gas	The waste heat from the combustion in the heat treatment workshop is utilized. By installing pipeline heat exchangers, the waste heat is recovered for use in the cleaning machine	10	25.2	0.39	17.94
2	Energy-saving Technology	Recovery of waste heat from air compressors	By utilizing the waste heat from the air compressor and installing a waste heat recovery machine, the waste heat can be recovered for use in the cleaning machine	15	18.9	0.79	2693.76
3	Management Measure	When people leave, the machine stops	The equipment stops when people leave	/	/	/	4277.81
4	Management Measure	Control the power off of the lighting	During the lunch break, install a time control switch to cut off the power of the lighting for one hour to save electricity	0.2	3.72	0.05	29.09
5	Energy-saving Technology	Newly build distributed photovoltaic systems	A new distributed photovoltaic system was built on the roof with an installed capacity of 6.348MWp	/	62.89	/	2506.84
6	Energy-saving Technology	Purchase Green Energy Certificate	Promote the use of Green Energy Certificate	11.9	/	/	2097
7	Equipment Renovation	Structural modification of the chip conveyor	The structure of the chip conveyor has been changed, effectively separating the grinding wheel dust from water, reducing the waste of grinding fluid and lowering the workload of employees	5	/	/	/
8	Equipment Renovation	Renovation of the hydraulic system of the gear hobbing machine	Chongqing Shuanghuan achieved energy-saving effects by transforming the hydraulic system of the gear hobbing machine	/	/	/	121.60
9	Energy-saving Technology	Recycling and utilization of waste oil	Grinding sludge, treated as hazardous waste, is compressed into briquettes to extract waste oil, which is then recycled—effectively reducing oil consumption costs	0	50	0	214.63

Metrics Management

Shuanghuan Driveline continuously tracks its own carbon reduction performance, we calculate greenhouse gas emissions in accordance with the ISO14064-1:2018 standard.

Greenhouse Gas Emissions

Metrics	2023	2024
Total GHG Emissions (Scope 1 + 2) (tons CO_2e)	295,460.24	263,841.62
Scope 1 – Direct GHG Emissions (tons CO_2e)	20,864.45	15,834.85
Scope 2 – Indirect GHG Emissions (tons CO_2e)	274,595.79	248,006.76
Carbon Emission Intensity (tons CO_2e / RMB 10,000 industrial output)	0.39	0.29
Carbon Emission Intensity (tons CO_2e / RMB 10,000 industrial value added)	1.01	0.74

Notes: 1. The greenhouse gases included in the calculation are: CO_2 (carbon dioxide), CH_4 (methane), N_2O (nitrous oxide), HFCs (hydrofluorocarbons), PFCs (perfluorocarbons), SF_6 (sulfur hexafluoride), and NF_3 (nitrogen trifluoride).

2. The scope of GHG emissions covers nine facilities: Zhejiang Shuanghuan, Fine Motion Technology, Hangzhou HQ, Dalian Huanchuang, Fun Drive Technology, Jiaxing Shuanghuan, Jiangsu Huanou, Jiangsu Shuanghuan, and Chongqing Shuanghuan.

3. The electricity emission factor for 2023 is based on the *2012 China Regional Power Grid Average CO_2 Emission Factor* for the East China region: 0.7035 kgCO_2/kWh.

For 2024, the factor is based on the *2022 National Power CO_2 Emission Factor*: 0.5366 kgCO_2/kWh.

4. The consolidation method used for GHG accounting is the operational control approach.

Pollutant Management

Governance and Strategy

Shuanghuan Driveline strictly complies with relevant environmental laws and standards.Emissions generated during operations mainly include dust and particulates from metal surface treatment, as well as exhaust gases from heat treatment. Wastewater is primarily composed of industrial wastewater, domestic wastewater, and canteen wastewater. Shuanghuan centrally collects all exhaust gas and wastewater generated during operations and is equipped with dedicated treatment facilities to ensure emissions meet required standards. Air emissions comply with the Level II standards for new pollution sources under the *Integrated Emission Standard of Air Pollutants* (GB 16297-1996), while heat treatment emissions meet the Level II standards for metal heat treatment furnaces under the *Emission Standard of Air Pollutants for Industrial Kilns and Furnaces* (GB 9078-1996). Wastewater discharge concentrations meet Level III standards of the *Integrated Wastewater Discharge Standard* (GB 8978-1996), and total discharge volumes comply with the requirements set in the company's pollutant discharge permit. To ensure effective operation of its treatment systems, Shuanghuan has established an EHS inspection regime. Safety personnel carry out regular inspections of exhaust gas and wastewater treatment equipment, supplemented by unscheduled spot checks to ensure everything functions properly.

Total Control

- Shuanghuan Driveline strictly controls both emission concentrations and total discharge volumes in accordance with the limits defined in its pollutant discharge permit, and fully complies with legal obligations for environmental information disclosure.

Process Control

- **Equipment Maintenance and Servicing:**Regular maintenance of exhaust gas and wastewater treatment equipment is enforced to prevent the discharge of untreated heat-treatment exhaust and oily wastewater.
- **Canteen Wastewater Management:**Separate drainage pipelines are installed in dishwashing areas to prevent wastewater from entering rainwater systems. Canteen wastewater passes through a grease trap and septic tank, with food scraps and waste oil regularly cleaned out.
- **Laboratory Wastewater Management:**Acidic and alkaline wastewater/solutions from laboratories must be neutralized (pH adjusted to 6–9) before discharge. Toxic waste liquids from chemical analysis must not be discharged into water bodies and are to be collected for centralized treatment.
- **Installation of High-Efficiency Treatment Equipment:**New facilities are equipped with more energy-efficient and eco-friendly exhaust gas treatment systems.
- **Regular Monitoring:**Environmental monitoring is conducted periodically by qualified third-party agencies, in accordance with regulatory requirements, to ensure the validity and accuracy of all inspection certifications.

Impact, Risk, and Opportunity Management

Shuanghuan has developed and continually improves its *Emergency Response Plan for Environmental Incidents,* which is filed with the local ecological and environmental authorities. The company also conducts regular emergency drills to maintain preparedness. During special periods—such as major events or episodes of heavy pollution—Shuanghuan formulates targeted environmental emergency management plans, detailing emission reduction and production response measures for various emergency levels.

List of Shuanghuan Driveline Pollutant Collection and Treatment Facilities

Category	Pollutant	Collection Measure
Waste gas	Waste gas from heat treatment	The waste gas from heat treatment is discharged at a height of 15 meters after being burned by a small torch
	Quenching oil mist	The quenching oil mist is sprayed in the chimney and then ischarged at a height of 15 meters after the oil fume is purified
	Shot blasting dust	The shot blasting dust is discharged at a height of 15 meters after being dusted by the Venturi spray device
	Cleaning exhaust gas	The cleaning exhaust gas is discharged at a height of 15 meters after electrostatic degreasing
	Cooking fumes and exhaust gas from the cafeteria	The cooking fumes and exhaust gas from the cafeteria are ischarged at a high altitude on the roof after electrostatic oil removal
	Welding fume	Strengthen ventilation in the workshop and adopt roof exhaust and ventilation methods as much as possible
Waste water	Production wastewater	The production wastewater is treated by sewage treatment facilities to meet the sewage treatment plant's pipe connection standards and then connected to the pipe. Eventually, it is uniformly treated by the sewage treatment plant to meet the standards before being discharged into the sea
	Oily wastewater from the cafeteria	The oily wastewater from the cafeteria is treated by an oil separator or oil separation equipment and then discharged into domestic sewage
	Domestic sewage	Domestic sewage is pre-treated in septic tanks and then connected to the sewage treatment plant's pipe standards. Eventually, it is uniformly treated by the sewage treatment plant to meet the standards before being discharged into the sea

Shuanghuan Driveline Pollutant monitoring work

Main Detection Metrics	Monitoring Frequency	Sampling	Monitoring and Analysis Method
VOCs、NO_x、PM	At least once a year	On-site sampling	*Determination of Particulate Matter in Exhaust Gas from Stationary Sources and Sampling Methods for Gaseous Pollutants* (GB/T 16157-1996), etc
COD、NH_3-N	At least once a year	On-site sampling	*Integrated Wastewater Discharge Standard* (GB8978-1996), etc

Metrics and Targets

As of the end of the reporting period, Shuanghuan Driveline's air pollutant metrics and targets are shown in the table below.

Pollutant Metrics and Targets

Metrics	Unit	Emissions in 2024	Total approved emissions for 2024	2025 Target
VOCs	tons	20.54	35.09	Decrease by 3% year-on-year
NO_x	tons	2.97	6.92	Decrease by 3% year-on-year
PM	tons	3.42	22.86	Decrease by 3% year-on-year
COD	tons	6.20	11.30	Decrease by 3% year-on-year
NH_3-N	tons	0.84	2.36	Decrease by 3% year-on-year



Waste Management

Governance and Strategy

Shuanghuan Driveline strictly adheres to laws and regulations such as the *Law of the People's Republic of China on the Prevention, Administrative Measures for the Transfer of Hazardous Wastes and Control of Environmental Pollution by Solid Waste, the Pollution Control Standard for Storage and Disposal of General Industrial Solid Waste*, and the *Pollution Control Standard for Storage of Hazardous Waste*. The company has established a dedicated *Waste Pollution Control Management Procedure* to guide compliance and operations. Regular reviews are conducted to identify and register all hazardous chemicals, with full compliance ensured through careful inspection, documentation, and reporting. As part of the company's 14th Five-Year Plan, Shuanghuan has set clear targets for reducing hazardous waste generation, with a focus on technological upgrades to minimize hazardous waste. The company actively implements its primary responsibility for waste management, adheres to the basic principles of "reduction, resource utilization and harmlessness", strives to minimize the generation of its own waste, and strictly controls the environmental risks that waste may cause.

Zhejiang Shuanghuan was awarded the title of "Waste-free Factory" in Zhejiang Province in 2021, and Shuanghuan has been continuously promoting the active construction of "Waste-free Factories" in all its base factories.

Impact, Risk, and Opportunity Management

With the goal of becoming a "Zero-Waste Factory," Shuanghuan Driveline has developed a comprehensive waste management strategy focused on three major principles: source reduction, resource utilization, and safe disposal of general and hazardous waste. This includes actions across policy education, system capacity building, R&D exploration, implementation of key projects, information system construction, and targeted supervision and inspections.

The company conducts internal audits for general waste management and on-site inspections of hazardous waste disposal vendors to ensure full compliance. At the same time, Shuanghuan actively optimizes its waste management model, enhancing both environmental performance and operational efficiency.

Source Reduction

- Use of low-toxicity, low-hazard raw materials to minimize environmental impact.
- Process and equipment optimization through technological innovation to reduce waste generation during production.

Resource Utilization of General Solid Waste

- Collaborate with supply chain partners to promote waste recycling and the use of recycled steel, establishing a closed-loop model of production–recovery–reproduction.
- Implement paperless office practices, reduce single-use paper cup consumption, recycle discarded packaging through manufacturers, and entrust damaged items to external units for reuse.

Compliant Disposal of Hazardous Waste

- **Accurate source classification:** Identify all hazardous waste generation points, label hazardous waste clearly, and establish a comprehensive tracking list and ledger.
- **Strict storage controls:** Build and operate temporary hazardous waste storage facilities in compliance with laws and regulations; ensure proper categorization and zoning; strictly prohibit open-air storage.
- **Enhanced utilization and disposal management:** Some hazardous wastes can be recycled—for example, waste oil recovered from compressed grinding machine dust. Non-recyclable hazardous waste is entrusted to licensed professionals for safe transfer and disposal.

CASE On-Site Inspection of Hazardous Waste Disposal Vendors

Zhejiang Shuanghuan develops an annual evaluation plan and on-site assessment checklist for hazardous waste disposal vendors and completes the full coverage of hazardous waste testing for suppliers during the reporting period. Vendors are assessed and scored based on three key criteria: qualifications, waste treatment practices. The hazardous waste assessment of 100% of suppliers was completed during the reporting period.





CASE Hazardous Waste Inventory Data Management

Shuanghuan Driveline currently manages 11 types of hazardous waste, each tracked through a dedicated paper-based ledger. A designated staff member is responsible for daily recording of inbound and outbound inventory. Before hazardous waste enters storage, it is weighed using the “Zhegu Code Weighing System”, which also prints a corresponding waste label. The inbound data is then automatically uploaded to the Zhejiang Provincial Solid Waste Information System, ensuring real-time synchronization with the electronic waste ledger.For outbound waste, the disposal transfer volume is calculated based on the vehicle's weight recorded at the facility gate, which is cross-checked with the waste transfer manifest to ensure accuracy and consistency.





Metrics and Targets

As of the end of the reporting period, the waste treatment metrics of Shuanghuan Driveline are shown in the following table.

Shuanghuan Driveline Waste Treatment Metrics

Metrics	Unit	2024 Progress	2025 Target
Total amount of hazardous waste	tons	3,470.81	/
Density of hazardous waste	tons/Output value of 10,000 RMB	0.0039	/
Density of hazardous waste	tons/10,000 RMB of industrial added value	0.0098	Decrease by 3% year-on-year
Total amount of general waste	tons	24,393.67	/
Density of general waste	tons/Output value of 10,000 RMB	0.0271	/
Density of general waste	tons/10,000 RMB of industrial added value	0.0687	Decrease by 3% year-on-year

Ecosystem and Biodiversity Protection

Biodiversity is the foundation of ecological balance and a vital pillar for human survival and development. Shuanghuan Driveline takes a comprehensive and proactive approach to biodiversity protection, implementing multiple measures to help preserve ecological integrity, stability, and balance.

The company strictly complies with the *Environmental Impact Assessment Law of the People's Republic of China* and other relevant environmental regulations. For all new projects across its locations, biodiversity protection and land use assessments are conducted throughout the entire lifecycle—from construction to operation—in accordance with legal requirements. Ensure that the locations for project development and operation are far away from ecological conservation red lines and areas of high biodiversity vulnerability. The company attaches great importance to minimizing the impact on the ecological environment during its production and operation. It strictly monitors the discharge of pollutants such as waste gas and waste water from each production base to avoid negative impacts on the natural ecological environment.

Shuanghuan Driveline avoids disturbing the habitats of wild animals, preventing soil erosion and deforestation. Actively participate in the work of protecting biodiversity. In the future, Shuanghuan is committed to actively participating in and collaborating with local environmental protection departments to carry out various ecological and environmental protection projects.



Environmental Compliance Management

Shuanghuan Driveline places great emphasis on environmental compliance, strictly adhering to relevant laws, regulations, and planning guidelines, including the Air Pollution Prevention and Control Law, *the Negative List Guidelines for the Development of the Yangtze River Economic Belt, the Zhejiang Province 14th Five-Year Plan for Ecological and Environmental Protection*, and *the Law on the Promotion of Cleaner Production of the People's Republic of China.*

Based on external regulatory requirements, internal compliance systems, and actual operational needs, Shuanghuan Driveline has built a sound environmental management system to effectively manage its environmental responsibilities, monitor risks, and fulfill its obligations. The company has also established internal management documents, such as the *Environmental Protection Management System*, to clearly define its environmental management policies and responsibilities. By the end of the reporting period, all the production bases that have been officially put into operation had achieved full certification under the ISO 14001:2015 Environmental Management System.

To avoid legal risks and compliance with other requirements, while ensuring the compliance of the company's environmental management system, occupational health and safety, and energy management system operations. According to the above requirements, Shuanghuan Driveline began to promote the compliance evaluation work from Zhejiang Shuanghuan, Jiangsu Shuanghuan and Jiaxing Shuanghuan. In accordance with relevant standards and company documentation, it compiles a compliance evaluation report to summarize areas needing improvement and ensure system operation remains fully aligned with legal and regulatory requirements, thereby minimizing legal risks.

Zhejiang Shuanghuan had received multiple honors, including National Green Factory, Provincial-Level Green Enterprise, Water-Saving Enterprise, and Zero-Waste Factory and added National Green Supply Chain Enterprise in 2024. Chongqing Shuanghuan was certified as a National Green Factory; Jiangsu Shuanghuan was recognized as a Municipal-Level Green Benchmark Enterprise, an Advanced Unit in Water Conservation, and an Annual Water-Saving Enterprise; and Jiaxing Shuanghuan was designated a Provincial-Level Green Factory.



ISO 14001 Environmental Management System Certification

Shuanghuan also actively conducts training in environmental compliance. During the reporting period, the company organized **11** training sessions, totaling **1,157** hours, with **591** participants in total.

CASE Environmental compliance training for Shuanghuan Driveline






A total of two enterprises, namely Shuanghuan Driveline and its major subsidiaries, have been included in the list of enterprises that disclose environmental information in accordance with the law. For details, please refer to the table below.

Information on Shuanghuan Driveline Key Environmental Control Units

No.	Enterprise Name	Category of Key Units	Query Index
1	Zhejiang Shuanghuan Driveline Co., Ltd – Yuhuan Base.	Key water environment polluters, key air environment polluters, and environmental risk control units in Taizhou City	Publicly available web sites
2	Shuanghuan Gear (Jiaxing) Precision Manufacturing Co., Ltd.	Environmental Risk Control and Management in Jiaxing	Publicly available web sites

In 2024, Shuanghuan Driveline issued its *Emergency Response Plan for Environmental Incidents*, which was officially filed with the Taizhou Municipal Bureau of Ecology and Environment. The company's Environmental Health and Safety (EHS) Department also developed the *Environmental Incident Emergency Drill Plan* and carried out corresponding emergency response drills.

During the reporting period, no major environmental incidents occurred, and no significant administrative penalties were imposed on the company.

CASE Hazardous Chemical Spill Drill

June 2024, Zhejiang Shuanghuan conducted an emergency response drill simulating a hazardous chemical spill. The scenario involved the leakage of a chemical drum, with warehouse staff, administrative personnel, the emergency response team, and the spill containment team each performing their roles according to predefined responsibilities.

The drill provided employees with hands-on experience in correctly handling hazardous chemical spills across different work processes, significantly enhancing awareness of safety and environmental protection in the use of hazardous substances.




Energy Use

Governance and Strategy

Shuanghuan Driveline regards energy management as one of the key drivers for achieving low-carbon, green manufacturing. The company promotes efficient and sustainable operations by enhancing management systems, driving lean improvements, boosting energy efficiency, and adopting renewable energy sources.

In alignment with standards such as ISO 50001, the company has developed the *Energy Management Manual of Zhejiang Shuanghuan Driveline Co., Ltd.* and established a comprehensive energy management system. This system supports the certification efforts of both the Zhejiang Shuanghuan and other production sites. By the end of the reporting period, three facilities—Zhejiang Shuanghuan, Jiaxing Shuanghuan, and Jiangsu Shuanghuan—had successfully obtained third-party energy management system certifications.



Energy Management System Certificates

Impact, Risk, and Opportunity Management

Shuanghuan Driveline constantly optimizes its own energy management and promotes technological innovation. The company's energy use strategy focuses on three aspects: monitoring and management optimization, promoting energy transformation, and implementing energy-saving projects.



Monitoring and Management Optimization

To achieve independent control over digital manufacturing technologies and data analytics capabilities, Shuanghuan Driveline independently developed the D-MOM Digital Manufacturing Operations Management Platform. In alignment with its low carbon goals, the company integrated dedicated energy consumption and carbon neutrality management modules into the platform.

CASE D-MOM - Energy Consumption and Carbon Management Module

- **Real-Time Data Collection**
  Smart meters and other measurement devices are deployed at energy-using units to enable real-time data collection. Information is uploaded via intelligent gateways, enabling paperless, visualized, and standardized operations. Data can be quickly queried and provides an intuitive overview of energy usage.
- **Energy Monitoring**
  The platform includes modular monitoring functions such as a basic energy management module, energy consumption and cost analysis, electricity analysis, energy station monitoring, and a carbon neutrality module. It captures peak and off-peak usage patterns, enhances energy monitoring quality, detects line losses in real time, flags abnormalities for immediate response, and ensures energy usage safety.
- **Intelligent Energy Consumption Analysis**
  The system tracks trends in power quality, issues energy station exception reports, delivers precise carbon emission statistics, and provides comprehensive analysis of energy and production costs. With smart trend graphs and data interconnectivity, the platform supports science-based decision-making, enabling high-efficiency optimization of energy management measures and equipment operations, and significantly improving energy use efficiency.



Advancing the Energy Transition

- **Industrial Electrification**
  Shuanghuan Driveline is promoting energy transition by upgrading to electric-powered production equipment, adopting electric transportation within factory premises, and improving process electrification—thereby reducing dependence on fossil fuels.
- **Photovoltaic Solar Power & Energy Storage**
  The company is expanding its use of solar energy by increasing photovoltaic power generation across the Group, building distributed energy systems, and integrating energy storage solutions to enhance solar utilization.
- **Green Power Procurement**
  By purchasing clean electricity from external sources, the company reduces reliance on fossil fuel-based power and lowers carbon emissions. It is actively increasing the share of power sourced from renewable energy and has developed corresponding procurement strategies and targets.
- **Other Renewable Energy Sources**
  Shuanghuan is also exploring alternative clean energy technologies such as wind, hydro, and nuclear power. Future adoption of these energy sources will be based on the company's evolving energy structure and the selection of solutions best aligned with its development strategy.

CASE Distributed Photovoltaic System

Shuanghuan Driveline has implemented distributed rooftop photovoltaic (PV) power generation projects across multiple facilities. Looking ahead, the company plans to prioritize PV infrastructure in the design of new plants and sites, ensuring conditions are in place to support solar installation. By giving preference to renewable energy for internal electricity consumption, Shuanghuan actively drives its energy transition strategy.

During the reporting period, a new distributed rooftop PV system was installed at the Jiaxing facility, with a total installed capacity of 6.348 MWp.



Implement energy-saving projects

Shuanghuan Driveline actively implemented energy-saving initiatives such as waste heat recovery and distributed photovoltaic (solar) projects, to increase energy use efficiency.

CASE Waste Heat Recovery Project

• Gas Waste Heat Recovery

At the heat treatment workshop of the Sixth Branch of Zhejiang Shuanghuan, a pipe-type heat exchanger was installed to recover waste heat from multi-purpose furnace combustion. The recovered heat is used to supply energy to the heat treatment cleaning machine, thereby reducing electricity consumption.
The project involved an investment of RMB 100,000 and is estimated to save approximately 30,000 kWh of electricity per month, translating to a monthly cost saving of over RMB 20,000.




• Air Compressor Waste Heat Recovery

At the screw air compressor workshop of the Second Branch of Zhejiang Shuanghuan, a waste heat recovery unit was installed to capture and reuse heat generated by the compressors. This recovered heat is then used to power the heat treatment cleaning machine, effectively reducing electricity consumption.
The project required an investment of RMB 150,000 and is estimated to save over 20,000 kWh of electricity per month.





Metrics and Targets

Energy use situation

Shuanghuan Driveline's energy structure is relatively simple, with electricity and natural gas being the primary sources of energy. The company is gradually working to reduce the intensity of fossil fuel usage, increase the share of renewable energy in its operations, and optimize the energy production layout across its facilities.

Energy Use Metrics

Metrics	Unit	2022	2023	2024
Comprehensive energy consumption (equivalent value)	tce	/	52,431.90	61,096.14
Comprehensive energy consumption (equal value)	tce	109,755.74	126,867.00	155,889.63
Natural gas	10,000Nm^3	218.81	297.91	334.57
Gasoline	tons	/	62.21	36.96
Diesel	tons	/	114.77	121.40
State Grid Electric Power	MWh	375,046.17	395,068.54	462,181.82
Photovoltaic Electric Power	MWh	/	9,589.47	6,649.81
Comprehensive energy consumption intensity (equivalent value)	tce/output value of 10,000 RMB		0.07	0.07
	tce/output value of industrial added value	/	0.18	0.17
Comprehensive energy consumption intensity (equal value)	tce/10,000 RMB of industrial added value		0.17	0.17
	tce/10,000 RMB of industrial added value	0.43	0.43	0.44

Energy-saving Targets

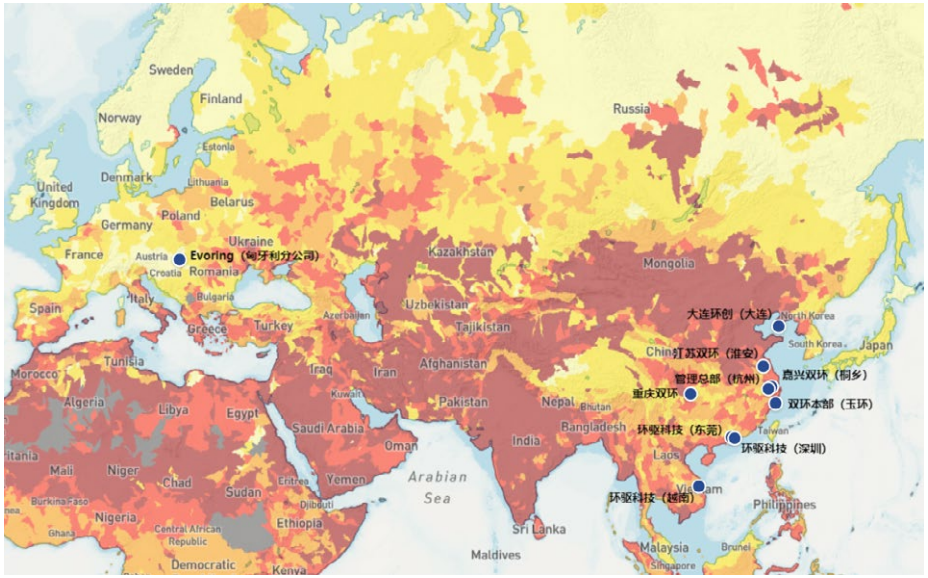
Metrics	2023 base year	2024 Progress	2025 Target
Comprehensive energy consumption intensity tce/10,000 RMB of industrial added value)	0.43	0.44	0.42

Water Resource Utilization

Water Resource Risk

Global water resources are unevenly distributed, and regions across the world are experiencing varying degrees of water stress. To minimize the environmental impact of its operations on water resources, Shuanghuan Driveline strictly complies with all applicable national and local water-related laws and regulations.

The company utilizes the Aqueduct Water Risk Atlas, developed by the World Resources Institute (WRI), to conduct a quantitative assessment of water-related risks—including water scarcity—at the watershed level for each of its operational locations. Based on these assessments, all of Shuanghuan's facilities have undergone water risk classification, using a 5-level scale, achieving 100% coverage of operational sites.



Water Resources Risk map



According to the latest risk assessment and monitoring results, the areas with the highest levels of water risk include Dalian, followed by Yuhuan, Hangzhou, Huai'an, Dongguan, and Vietnam.

Based on the identified water risk map, Shuanghuan Driveline has developed water-saving plans for sites exposed to water stress. These plans include implementing water conservation projects and adopting water-efficient technologies and equipment. Measures such as wastewater reuse, rainwater harvesting, and recycled water treatment are being adopted to improve water efficiency, enhance the company's ability to respond to water risks, and strengthen resilience in water resource management.

Governance and Strategy

In response to the national call for water conservation, Shuanghuan Driveline places high importance on water resource protection and strictly abides by laws and regulations such as the *Water Law of the People's Republic of China* and the *Regulations on Groundwater Administration*. The company has established a dedicated *Water Conservation Management System* and actively works to improve water use efficiency across management, production, and office operations.

As of the end of the reporting period, both Zhejiang Shuanghuan and Jiangsu Shuanghuan have been recognized as municipal-level water-saving enterprises.

Water Resource Conservation Measures

Water Conservation on the Management Side	• Water conservation on the management side refers to systematic water conservation management carried out from the management level, such as using tools like smart water conservation systems to analyze water resource usage and identify potential water conservation opportunities. • Zhejiang Shuanghuan and Jiangsu Shuanghuan conduct water balance tests once every three years to assess the water usage in the factory area and reduce water waste.
Water Conservation on the Production Side	• Water conservation on the production side refers to the implementation of water-saving measures at the production end, such as water-saving process renovations in daily life and water resource reuse within the factory area. • Zhejiang Shuanghuan has explored the potential for water conservation and launched a project to reuse the condensate water from the air conditioners in the workshops. • Jiangsu Shuanghuan has launched a water-saving project to convert open cooling towers into closed ones.
Water Conservation on the Office Operation Side	• Water conservation on the office operation side refers to the adoption of water-saving measures at the operational end of an enterprise, such as conserving water resources in the office and employee accommodation and living areas. • Zhejiang Shuanghuan and Jiangsu Shuanghuan actively carry out water conservation publicity. Through activities such as large-screen publicity and "water conservation knowledge competitions", they call on employees to save water in office and dormitory areas.

Shuanghuan has been widely promoting the concept of water conservation within the factory area, organizing activities such as "Water Conservation Knowledge Competition" and "Rationalization Proposals for Water Conservation", and advocating that employees reduce the waste of water resources in their daily work and life. Furthermore, each production base has fully recognized its own water-saving potential:

The successful experiences of Zhejiang Shuanghuan and Jiangsu Shuanghuan will be gradually extended to other production bases, promoting the work of creating "water-saving" enterprises in each base of Shuanghuan.

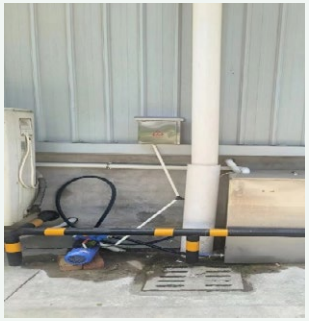
Metrics and Targets

As of the end of the reporting period, Shuanghuan Driveline's water resource use metrics and water-saving targets are shown in the table below.

Water Resource Use Metrics and Water-saving Targets

Metrics	Unit	2024 Progress	2025 Target
Total water intake	m^3	987,881	/
Total water consumption	m^3	987,881	/
Total drainage volume	m^3	496,069	/
Total water consumption intensity	tons/Output value of 10,000R/B	1.10	Decrease by 10% year-on-year
Total water consumption intensity	tons/10,000R/B of industrial added value	2.78	/

CASE Zhejiang Shuanghuan-Condensate Water Reuse Project



The Equipment department observed the situation of the air conditioning condensate water being discharged in the second workshop and launched a condensate water reuse project. At Zhejiang Shuanghuan' Second Branch, the volume of condensate discharged from air conditioning systems is relatively high—for example, Workshop No. 2 discharges approximately 1.25 tons of condensate per hour, representing significant reuse potential.

The project was implemented at the Second Branch by installing condensate collection tanks. Condensate is gathered through pipelines into the tank and then pumped for reuse in auxiliary workshop processes or for evaporator condensate systems, creating a closed-loop water cycle.

During the summer, the workshop is expected to reuse an average of 6.47 tons of condensate per day, resulting in an estimated annual water cost saving of RMB 115,000.

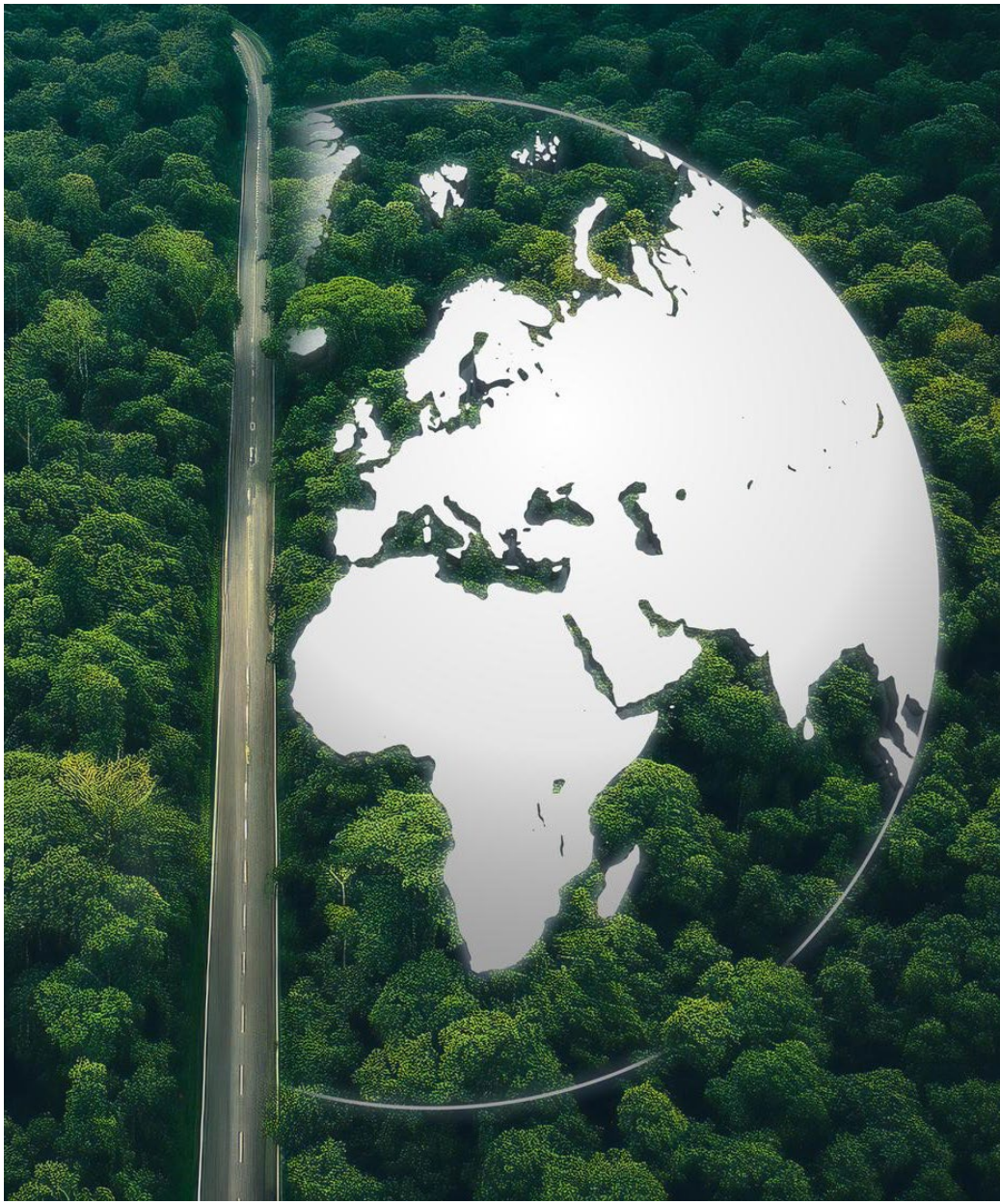
CASE Jiangsu Shuanghuan- Conversion of Open Cooling Towers to Closed Systems

To enhance water resource efficiency, Jiangsu Shuanghuan launched a project to convert open cooling towers to closed-loop systems. Closed cooling towers operate using soft water in a sealed circulation loop, which not only reduces water evaporation but also minimizes problems such as scaling and corrosion, thereby supporting long-term, stable equipment operation. The closed-loop design significantly conserves water, particularly in dry or high-temperature environments.

The project began in 2023 and is being implemented in three phases. In 2023, 11 units were retrofitted; in 2024, another 5 units were converted; and in 2025, 8 additional units are planned for upgrade. Each unit retrofit costs approximately RMB 70,000. As of now, the total investment has reached RMB 1.12 million, with a projected total investment of RMB 1.7 million by project completion.







Circular Economy

Corporate Governance

Shuanghuan Driveline is committed to advancing circular economy practices. Guided by the 3R principles—Reduce, Reuse, and Recycle—the company focuses on resource recovery, reuse, and efficiency improvement to promote circular economic development. These efforts help reduce resource waste during production.

Shuanghuan will continue to promote the circular economy as one of its decarbonization strategies, aiming to maximize resource utilization efficiency, reduce waste generation, and thereby lower overall carbon emissions. With ongoing advancements in technology and management, along with collaborative efforts of the upstream and downstream of the supply chain, the circular economy is regarded as one of the core pillars to promote its own manufacturing and green transformation, contributing to the ultimate goal of carbon neutrality.

Circular Economy Strategy

Taking into account its production and supply chain realities, Shuanghuan Driveline has formulated a three-part circular economy strategy: transforming and optimizing the use of consumables, improving the recovery and reuse rate of materials and waste, and establishing circular economy partnerships throughout the supply chain.

Transformation and optimization of consumables utilization

By leveraging technological innovation and optimizing production processes, we strive to minimize resource consumption and maximize the lifespan of our products.

Improve the recycling and utilization rate of materials, waste, and other resources

Build a closed-loop material recycling system to maximize the recovery and reuse rate of materials and waste, and reduce the demand for raw materials.

Establish supply chain circular economy cooperation

By establishing circular economy cooperation with upstream and downstream enterprises, we can achieve resource recycling and reduce the demand for primary mineral resources.

Impact, Risk, and Opportunity Management

Shuanghuan Driveline is committed to enhancing the use of recyclable packaging materials and the recycling and utilization of resources and products, striving to minimize the consumption of natural resources. To seize the opportunities of the circular economy, relevant measures have been actively taken from five aspects: process optimization, optimizing the ecological design of products, enhancing green procurement, recycling packaging materials, and product recycling and treatment.

Metrics and Targets

As of the end of the reporting period, Shuanghuan Driveline's circular economy metrics and targets are as follows.

Shuanghuan Driveline Circular Economy Metrics and Targets

Metrics	Unit	2024 Progress	2025 Target
The amount of waste recycled and reused	tons	26,327.40	Increase by 3% year-on-year
Consumption of recyclable resources (Steel)	tons	280,461.78	/
Consumption of recyclable resources (Floating oil)	tons	2,798.56	/
Consumption of recyclable resources (Plastic)	tons	840.70	/
Consumption of recyclable resources (Packaging materials)	tons	2,229.57	/
Consumption of recyclable resources (Turnover box)	tons	1,219.38	/
Consumption of recyclable resources (Cutting tool)	tons	93.61	/

CASE Reuse–Waste Oil Recovery

To manage grinding sludge containing harmful substances such as metal particles, metal dust, abrasive residues, oil, and lubricants, Shuanghuan Driveline has invested in grinding sludge briquetting equipment. This allows the sludge to be compressed into briquettes for more efficient collection, separation, and recovery. Currently, the company processes 4–5 tons of grinding sludge per day, recovering approximately 0.8 tons of oil daily. This initiative is expected to reduce hazardous waste by around 300 tons annually, while recovering approximately 200 tons of oil. From a cost perspective, this project saves about RMB 66,200 per month, amounting to an estimated RMB 790,000 per year.



Before



After

CASE Recycling – Packaging Material Improvement and Reuse

Shuanghuan Driveline has promoted the replacement of wooden pallets and wooden boxes in its workshops with reusable plastic pallets. This shift supports a more circular approach to packaging and significantly reduces packaging material costs through repeated use and extended lifespan.



Before



After

CASE Reduction – Precision Forging

By optimizing the production process through technical R&D, Shuanghuan Driveline achieved an approximate 8% increase in material yield for disc- and shaft-type precision-forged gear blanks. This improvement results in a material saving of 0.71 kg per unit, translating to a cost reduction of RMB 4.49 per piece.







CASE Reduction – Process Improvement

Shuanghuan Driveline implemented technical measures such as optimizing forging blank allowances and switching from die forging to ring rolling processes. These improvements significantly reduced material usage in critical components, resulting in annual material savings of over 8,000 tons across the entire production process.

CASE Reduction – Material Composition Optimization

By applying advanced materials science methods, Shuanghuan Driveline optimized the composition ratio of materials and conducted topology optimization of the differential using finite element analysis (FEA). This approach achieved a 5% reduction in total product weight while maintaining structural strength and manufacturing reliability. As a result, the company effectively reduced raw material procurement costs and lowered carbon emissions during transportation.

02
Unified in Perfect Harmony



This chapter responds to the following SDGs:

Employee Recruitment and Development

Total number of employees	Male employees	Female employees	Person-times of training participation
8,333	6,344	1,989	11,009

Occupational Health and Safety

In 2024, the company has fully established an occupational health and safety management system, among which 7 production bases have passed the **ISO 45001:2018** Occupational Health and Safety Management System certification.

Employee Rights Protection

Governance and Strategy

Shuanghuan Driveline places great importance on the protection of employee rights and strictly adheres to relevant labor laws and regulations, such as the *Labor Law of the People's Republic of China*, the *Labor Contract Law of the People's Republic of China,* the *Protection of Minors Law of the People's Republic of China*, the *Protection of the Rights and Interests of Women Law of the People's Republic of China*, and the *Trade Union Law of the People's Republic of China*. To support this commitment, Shuanghuan has established a set of internal compliance policies, including the *Social Responsibility Manual, Labor and Human Rights Protection Management Measures, Employee Handbook*, and *Recruitment Management Policy.*

Impact, Risk, and Opportunity Management

Workplace Protection

In 2024, Shuanghuan Driveline updated its *Social Responsibility Management Manual*, further strengthening its framework for protecting employee rights in the workplace. Key enhancements included the optimization of procedures such as the *Child Labor Prevention and Juvenile Worker Protection Program*, the *Prohibition of Forced Labor Management Procedure*, and the *Anti-Discrimination Policy*. These updates reinforce the company's commitment to maintaining a fair, safe, and respectful work environment for all employees.



Employee Communication

Shuanghuan Driveline respects employees' rights to freedom of association and collective bargaining. To foster an open and efficient internal communication environment, the company has developed a *Workforce Communication Channel Development Plan*, establishing a variety of communication platforms to ensure that employees' voices are heard promptly and accurately. In addition, Shuanghuan has formulated and implemented a comprehensive *Employee Suggestion Management Policy,* which standardizes and manages the rationalization suggestions put forward by employees from several major aspects including the scope of suggestions, feedback channels, processing procedures, reward mechanisms, and implementation tracking to stimulate the enthusiasm of employees to participate in the operation of the enterprise.

Suggestion Mailboxes

Installed in accessible public areas such as cafeterias, dormitories, and high-traffic locations, allowing employees to submit written suggestions anonymously.

Email

A dedicated suggestion inbox has been created within the company's internal email system, offering employees a convenient and documented way to share ideas.

Regular and Ad Hoc Meetings

Departments hold scheduled meetings, as well as special sessions organized as needed to facilitate timely discussion.

Roundtable Discussions

Events such as employee forums, executive face-to-face sessions, and HRD open discussions encourage deeper conversations and mutual understanding.

Skip-Level Interviews

These mainly involve in-depth communication with cross-level management regarding specific work situations and business goals.

Annual Employee Representative Conference

Organized annually by the labor union, this event offers employees a platform to participate in corporate decision-making and ensures their legal rights are protected.

Employee Satisfaction Survey

Shuanghuan Driveline has developed and implemented the *Employee Satisfaction Survey Management Policy*, under which regular surveys are conducted covering more than 50% of the workforce across the entire group. These surveys comprehensively collect employee opinions and suggestions regarding various aspects of company operations.

A score of 80 or above is considered satisfactory. Based on survey findings, the company dynamically adjusts its management strategies and operational practices to continuously improve employee satisfaction, thereby strengthening overall cohesion and competitiveness.

In 2024, to fully understand the satisfaction level of all employees in the group, the group conducted a comprehensive survey through Wenjuanxing from seven dimensions: "Company Culture and Values", "Work Environment and Facilities", "Compensation, Benefits and career Development", "Team assistance and communication", "Management decision-making and Leadership", and "Training and promotion opportunities". The survey results were satisfactory. For the issues reflected in the survey, we collected information through the Questionnaire Star survey, conducted systematic analysis and measurement through the Micro Word Cloud, and summarized them into the *Summary of Employee Satisfaction Problem Points in 2024*. On this basis, the *2024 Employee Satisfaction Rectification Project List* was formulated and implemented as planned.



Employee Recruitment and Development

Shuanghuan Driveline firmly upholds the belief that "talent is the most valuable asset of an enterprise," viewing employees as the driving force behind continuous innovation and sustainable growth. The company actively explores diverse talent acquisition channels and is committed to building a strong, future-ready workforce.

In terms of development, Shuanghuan has established clear career advancement pathways, offering employees ample opportunities for promotion. A comprehensive training system is in place, with personalized learning programs tailored to employees' specific career stages, ensuring ongoing enhancement of knowledge and skills.

The company also places great emphasis on holistic employee care—providing competitive compensation packages and a wide range of benefits and health initiatives designed to support both the physical and mental well-being of its workforce.

Employee Number Metrics

Category	Unit	2022	2023	2024
Total number of employees	persons	7,037	7,263	8,333
Among them: Male	persons	5,099	5,448	6,344
Female	persons	1,938	1,815	1,989
Under 30 years old	persons	2,593	3,017	3,608
31-40years old	persons	1,971	2,416	2,722
41-50years old	persons	1,085	1,281	1,392
Over 50 years old	persons	456	549	611

Governance

Shuanghuan Driveline has established a comprehensive system to support talent management, encompassing frameworks such as the job classification system, professional title system, qualification standards, leadership appointment standards, talent evaluation system, and talent development system. These frameworks provide strong institutional support for structured and effective human resource management.

For example, the company has introduced and implemented a series of evaluation and grading policies, including the *Equipment Maintenance Engineer Grading Management Policy*, *Quality Engineer Grading Management Policy, Technical Engineer Grading Management Policy, Supply Chain Engineer Grading Management Policy*, and *Production Technology Staff Grading Management Policy*, along with corresponding compensation systems for each talent track.

These initiatives together form a structured talent cultivation and evaluation framework across four major technical talent tracks, ensuring consistent, fair, and strategic development of professional capabilities within the organization.

Strategy

Shuanghuan Driveline is guided by the corporate spirit of "a group of people, one mission, a lifetime of dedication," the company adheres to the talent philosophy of "integrity and ability, with integrity first; recognizing and empowering the right people to bring out their full potential."

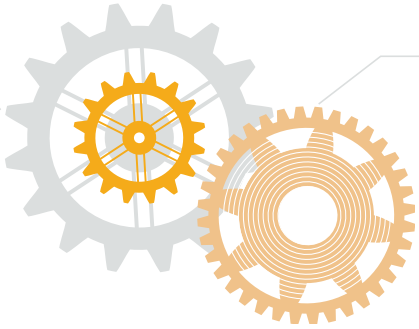
Shuanghuan is committed to building a comprehensive talent development and succession system. Through talent reviews and assessments, the company identifies high-potential individuals, creates employee profiles, and implements structured programs such as new employee orientation and executive leadership training to foster growth.

In addition, Shuanghuan provides employees with clearly defined Individual Development Plans (IDPs), encouraging them to progress through a step-by-step advancement path, continuously enhancing both personal and professional capabilities.

Two Key Approaches

Talent Review

Shuanghuan Driveline regularly conducts talent reviews to comprehensively assess employees' capabilities, potential, and performance. These reviews provide vital data to support succession planning and strategic decision-making, ensuring that talent deployment aligns with the company's evolving development needs.



IDP (Individual Development Plan)

Personalized development plans are created for employees, clearly outlining career goals and growth pathways. This ensures that individual development is closely aligned with the company's strategic direction, fostering mutual growth and long-term success for both the employee and the organization.

Talent Lifecycle Management

Shuanghuan Driveline implements a structured talent lifecycle management system to ensure that employees receive tailored support and development opportunities at every stage of their career journey:

Onboarding Phase (First 180 Days)

Through a rigorous selection process, the company ensures that new hires align closely with its core values and culture. This enables rapid integration into the team and brings fresh energy to the organization.

Growth Phase

Supported by a robust talent development system, employees are provided with abundant learning resources and development opportunities to enhance their professional skills and overall competencies, facilitating rapid personal and career growth.

Development and Retention Phase

For core and high-performing employees, the company offers competitive retention mechanisms, including career development platforms and long-term incentive programs, fostering mutual growth and sustained engagement with the organization.

Impact, Risk, and Opportunity Management

Enterprise-Wide Mentorship and Knowledge Transfer Culture

Since 2012, Shuanghuan Driveline has steadily built a team of internal instructors composed of mid-to-senior managers, technical experts, key business personnel, and skilled craftsmen. In 2020, the company launched the "Lighthouse Talent Training Camp", establishing a structured internal trainer certification and talent development system. To date, nearly 100 certified trainers have been developed and over 300 internal training courses created. Supporting this initiative, the company has issued policies such as the *Internal Trainer Management Policy* and the *Mentorship Management Policy*, fostering a strong culture of mentorship and knowledge transfer. This system enhances both talent retention and innovation capability across the organization.

Leadership Development

Recognizing the critical role of talent pipelines in long-term success, Shuanghuan has developed a tiered leadership training framework, nurturing managers from early-stage talent to senior leadership. This structured path includes the Chick-Eagle, Soaring Eagle, Sharp Eagle, Mighty Eagle, and Elite Eagle programs, corresponding to various levels of management responsibility. Guided by leadership competency standards and supported by a robust succession planning system, this framework lays a solid foundation for the company's sustained performance and organizational excellence.

Cadre Echelon Training Program

No.	Training Program	Target Object	Project Introduction
1	Young Eagle Training Camp	Recent undergraduate and postgraduate students	Through centralized training and job rotation, fresh graduates can make the transition from campus students to professionals
2	Flying Eagle Training Camp	Reserve team leaders	Carry out team leader training camps, strengthen team building, enhance the overall on-site management capabilities of the enterprise, and build a platform for team growth
3	Sharp Eagle Training Camp	Reserve grassroots managers	Carry out the successor project for key positions, combine training with practice, and cultivate grassroots managers of the company
4	Mightly Eagle Training Camp	Reserve middle-level managers	Reserve middle-level management cadres for the company and cultivate the backbone of the company
5	Elite Eagle Training Camp	Reserve senior managers	Cultivate reserve high-level cadres with a global perspective and strategic capabilities

The company also offers a diverse range of on-the-job training programs, including new employee orientation, job transfer training, and professional technical talent development, ensuring that employees at all levels have continuous opportunities for growth and advancement throughout their careers.

CASE Mid-Level Leadership Development Program

Shuanghuan Driveline's mid-level leadership training program is designed to enhance the comprehensive capabilities of its managers and cultivate leaders with strategic vision and holistic thinking. The program integrates theoretical learning, benchmarking, and practical application to systematically improve participants' management and business skills.

Theoretical learning is delivered through a combination of offline intensive sessions and online courses, covering topics such as *"A+ Manager: Growth Accelerator," "Lateral Leadership,"* and *"Financial Management for Non-Financial Managers."* Supplementary activities such as themed reading groups focus on management cognition, team collaboration, and business thinking.

Benchmarking is achieved through visits to exemplary enterprises—such as Toyota for lean production and Inovance for digital transformation—as well as through internal executive sharing sessions on topics like organizational communication, behavioral science, and marketing strategy. These experiences broaden the perspectives of participating managers.

The program also emphasizes practical application through action learning and business simulation exercises, enabling participants to translate theory into real-world solutions for business challenges. This well-rounded and structured training program not only enhances the leadership capabilities of Shuanghuan's mid-level managers but also builds a strong talent foundation to support the company's long-term development.



Metrics and Targets

Employee Training Metrics and Targets

Metrics	Unit	2024 Progress	2025 Targets
Person-times of training participation	person-times	11,009	Increase by 5% year-on-year
Expenditure on employee training	10,000 RMB	239.41	Increase by 5% year-on-year
Employee training coverage rate	%	82.7	/

Employee Well-being and Care

Welfare System

Shuanghuan Driveline remains committed to a people-centered approach, aiming to build a welfare system that is warm, supportive, and motivating. The company provides comprehensive support for both work and life, enhancing employees' sense of belonging and happiness, constantly optimizing the level of welfare and security and effectively safeguarding the legitimate rights and interests of employees.

Compliance Assurance

Shuanghuan strictly complies with relevant laws and regulations across all operational regions and industries. The company ensures lawful contributions to social insurance and housing funds, and provides various labor protection subsidies.

In addition, Shuanghuan offers comprehensive paid leave, including statutory holidays and various leave types such as annual leave, marriage leave, bereavement leave, maternity check-up leave, maternity leave, paternity leave, breastfeeding leave, and sick leave—fully ensuring the rights and interests of employees.

Employee Assistance

Shuanghuan Driveline has established Labor Union at each base to assess and assist employees in financial difficulty. For employees suffering from serious illness, the "Loving Heart Fund" provides additional aid, offering timely help and demonstrating genuine care.



Health Protection

Shuanghuan has introduced supplementary medical insurance, such as Taizhou's "Limin Bao," to strengthen employees' healthcare coverage. Facilities such as gyms are available in office areas to support physical and mental well-being. Nursing homes are provided for female employees. Additionally, the company has equipped workshops with blood pressure monitors and AED defibrillators to safeguard employee health and safety. We also pay attention to the mental health of our employees. The administrative department has established long-term contact with psychologists to provide professional advice and assistance to employees with mental health problems in a timely manner.



Gym

Service Awards

Shuanghuan Driveline fully respects and honors the contributions of its long-serving employees by implementing the *Employee Service Award Management Policy*, which provides formal recognition based on length of service. In addition, the company holds convalescent and recreational activities for retired employees every two years to express gratitude for their long-term contributions.

Childcare Support

To help employees manage their children's care during school holidays, Zhejiang Shuanghuan and Jiaxing Shuanghuan launched the "Huanhuan Class" Care Program, a compassionate initiative providing summer break childcare. Staff take turns supervising the children, guiding them in completing homework, playing games, reading books, and watching movies.



CASE Shuanghuan Driveline Employee Service Award



Awards are given at key milestones and include:

- 5 years – Bronze Award (Silver Medal)
- 10 years – Silver Award (Silver Medal)
- 15 years – Gold Award (Silver Medal)
- 20 years – Platinum Award (Gold Medal)
- 25 years – Diamond Award (Gold Medal)
- 30 years – Shuanghuan Award (Gold Medal)

In 2024, the company invested over 1.3 million yuan to customize exclusive medal engraved with employees' names and present the medal during the 2024 annual meeting.

Employee Care

Shuanghuan Driveline embraces a strong "family culture", striving to create a warm and supportive work environment that enhances employees' sense of belonging and well-being. This approach not only improves employee satisfaction but also reduces turnover and strengthens team cohesion.

Housing Support

The company provides comprehensive accommodation solutions. For dual-income couples, Shuanghuan offers suite-style or loft apartments, ensuring a comfortable and home-like living environment. This thoughtful arrangement allows employees to feel truly cared for, both at work and in their personal lives.



Team-Building Benefits

Shuanghuan Driveline places strong emphasis on team building and the cultivation of a positive corporate culture. In addition, regular trips for advanced employees, departmental team activities and team-building dinners are also organized.



Care for Employees with Disabilities

Shuanghuan Driveline firmly upholds the values of equality and inclusiveness, placing great importance on the protection of rights and social integration for employees with disabilities and fulfilling social responsibilities.

CASE "Home for People with Disabilities"

Shuanghuan Driveline, in collaboration with Zijin Subdistrict of Liandu District in Lishui City, jointly established a "Home for People with Disabilities", creating a supportive platform for employment and social integration. Through this initiative, local individuals with disabilities are provided with meaningful job opportunities, primarily through handicraft production, which helps boost their confidence and sense of social inclusion.

Shuanghuan bears the social security expenses for the disabled and pays their working wages to ensure their basic living security and purchases the handicrafts made by these individuals—such as sachets for the Dragon Boat Festival—and distributes them as festive gifts to employees. This not only recognizes and supports the work of people with disabilities but also conveys the company's warmth and care.



Occupational Health and Workplace Safety

Shuanghuan attaches great importance to safety production, actively carries out safety standardization activities, and is committed to creating a favorable working environment for the company's production and operation activities. Leaders at all levels and all employees of the company have earnestly studied a series of national laws and regulations concerning work safety, and firmly established the idea of "safety first, prevention foremost, and comprehensive governance". All employees must strictly abide by and implement the company's safety management and production systems, job safety discipline, and process discipline, etc., to ensure the standardization and normalization of safety production work, eliminate violations, and do their best to eliminate potential accident hazards.

Governance and Strategy

Shuanghuan Driveline strictly implements a comprehensive governance framework for occupational health and safety, fully aligning with national and regional laws and regulations such as GBT 33000-2016 *Basic Specifications for Enterprise Work Safety Standardization*, the *Production Safety Law of the People's Republic of China*, the *Prevention and Control of Occupational Diseases Law of the People's Republic of China*, the Zhejiang Province Work Safety Regulations, and the Fire Protection Law of the People's Republic of China. These laws serve as the foundation for protecting both personnel and property throughout the production process.

In line with actual production needs, each production base has formulated its own *Work Safety Standardization Management Manual* to better support its internal safety management activities. To ensure effective implementation, Shuanghuan has established a Safety Production Management Committee and a dedicated Safety Office to lead all aspects of workplace safety.

Upholding the principle of “safety first, prevention-oriented, and comprehensive management,” the company has set ambitious annual safety targets of “zero safety incidents, zero environmental pollution, and zero employee injuries.” These goals demonstrate Shuanghuan’s firm commitment to building a secure, healthy, and sustainable working environment across all its operations.



Impact, Risk, and Opportunity Management

Shuanghuan Driveline always places the occupational health and workplace safety of its employees as a top priority. Through systematic management measures, professional external support, and ongoing improvement initiatives, the company ensures a safe working environment and strong health protection for its workforce.

Hazard Identification and Risk Assessment

Shuanghuan Driveline employs a systematic hazard identification and risk control process to ensure production safety and regulatory compliance. In accordance with national standards GB 6441 and GB/T 13861, the company has identified 14 categories of potential accident types, including mechanical injuries, electric shocks, and fires, as well as four main sources of hazards: human factors, material factors, environmental factors, and management deficiencies. Additionally, based on the *Classification Catalogue of Occupational Hazards*, six types of occupational health risk factors have been clearly defined, such as dust, chemical agents, and physical hazards. The risk control process is led by the EHS (Environment, Health and Safety) department, in collaboration with cross-functional teams. Using the LEC method, Shuanghuan assesses the inherent risk levels of identified hazards and classifies them into four color-coded levels—red, orange, yellow, and blue. The outcome includes a *Safety Risk Identification and Evaluation Table*, graded control reports, risk archives, color-coded risk maps, and job-specific risk notification cards. Furthermore, the company ensures a closed-loop risk management system through comprehensive measures such as operational unit segmentation, targeted safety training, emergency response planning, and real-time risk communication tools. This holistic approach effectively safeguards employee health and ensures full production compliance.

Occupational Health Protection

Shuanghuan Driveline continuously monitors employees' well-being. The company has established a robust system to safeguard employee health, including pre-employment and on-the-job medical examinations, and the creation of comprehensive occupational health records.

In response to common industry-related occupational diseases—such as hearing loss, tinnitus, chemical exposure poisoning, burns, and scalds—the company provides labor insurance coverage for all employees. For those identified with occupational health restrictions, Shuanghuan arranges appropriate job reassignments to ensure their safety and health are fully protected throughout their employment.

Production Environment Optimization

In this manufacturing environment, each production base has established comprehensive protective measures, including ventilation and dust control facilities, to effectively reduce occupational health risks. The company conducts annual occupational health inspections, covering key indicators such as noise levels, NOx emissions, lab hydrochloric acid, and nitric acid, ensuring that environmental standards are met. Additionally, a monthly inspection system is implemented, encompassing safety, environmental protection, and fire safety aspects, all of which are cross-checked by a third-party consulting teacher to promptly identify and address any issues.

CASE Safety consulting Project

The company has commissioned a safety consultant expert to implement a safety hazard investigation and supervision system for 2024, with a total duration of 24 days, averaging 2 days per month at the site for training guidance and hazard inspection, and issuing a monthly safety hazard investigation report.

The key contents of the safety consultant and training include:

- Establishment of responsibility lists for the regional manager, on-site managers, and safety supervisors.
- Establishment of responsibility lists for the regional manager, the central safety department, site safety managers, workshop leaders, and team leaders.
- Development of safety training materials and evaluation standards.
- Implementation of safety hazard investigation and supervision.

Zhejiang Shuanghuan also entrusted a third party to assist in carrying out the occupational health entrustment service for 2024 and improve the corresponding health ledgers. At the same time, conduct occupational health examinations in the workshop once a month and urge the rectification of potential safety hazards.



ISO 45001 Occupational Health and Safety Management System Certification

Metrics and Targets

Occupational Health and Safety Production Metrics

Metrics	Unit	2024 Progress
Employee work-related injury insurance liability insurance	10,000RMB	569.40
The investment amount of employee safety production liability insurance	10,000RMB	54.80
Employee work-related injury insurance coverage rate	%	100
Coverage rate of employee safety production liability insurance	%	100

Rural Revitalization

Rural revitalization is a key step toward achieving sustainable development with Chinese characteristics, playing a vital role in poverty alleviation. Shuanghuan Driveline actively supports this mission through a dual focus on industrial revitalization and educational empowerment, injecting strong momentum into the development of rural communities.

Industrial Revitalization

Shuanghuan Driveline actively responds to China's rural revitalization strategy by supporting rural economic development and promoting common prosperity through industrial assistance and resource integration.

Educational Revitalization

Shuanghuan Driveline regards educational revitalization as a key pillar of rural development. Through measures such as providing financial support and carrying out educational public welfare projects, the company is committed to advancing rural education and providing quality educational resources and growth opportunities for underprivileged students and employees' children.

Shuanghuan actively supports the education sector in Shamen Town, donating RMB 200,000 annually to an education fund for five consecutive years. This funding is dedicated to improving local educational infrastructure and enhancing teaching quality, creating better learning conditions for rural students.

Metrics and Targets

Rural Revitalization Metrics and Targets

Metrics	Unit	2024 Progress	2025 Targets
Investment amount for rural revitalization	10,000 RMB	98	Increase by 3% year-on-year

CASE Runfu Farm

Shuanghuan carries out targeted assistance in Zhuwo Village, Luhuo County, Sichuan Province, implementing a comprehensive revitalization plan. In terms of industry, the company helps clarify development direction, plan specialty projects, and expand e-commerce sales channels. In employment, it establishes labor supply-demand matching mechanisms. In skills development, it provides training in production techniques and management knowledge to improve villagers' sustainable employment capabilities. These integrated efforts work together to drive high-quality rural revitalization in both regions.



Welfare

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Providing Employment for the Poor Population

The company actively responds to the national poverty alleviation policy, providing job opportunities for over 200 people who have been lifted out of poverty, and promoting equal employment by formulating labor documents.



Support for Local Public Welfare

Shuanghuan Driveline provides long-term support to public welfare-oriented nursing homes. Through regular donations and festive visits during holidays such as the Spring Festival and Mid-Autumn Festival, the company delivers essential goods including rice, flour, and cooking oil, helping to improve the residents' living conditions and bringing them warmth and care.

CASE The Shuanghuan Love Foundation Visited the Enhui Nursing Home

In February 2024, Wei Fengzhong, the chairperson of the Shuanghuan Labor Union, and Gong Jianbin, the vice-chairperson, along with a delegation, visited the Enhui Elderly Care Home and brought the elderly consolation money as well as daily necessities such as rice and oil. In September of the same year, on the eve of the Mid-Autumn Festival, Wei Fengzhong and others came to the nursing home again, bringing mooncakes and festival greetings to the elderly. The director of the nursing home expressed his gratitude to the Shuanghuan Trade Union for its long-term donation, believing that this care has given them more confidence to persist in public welfare.





Diverse Welfare Activities

Shuanghuan Driveline actively carries out various public welfare activities, including public run, sea picking, Eye Care Day, greenway garbage picking, etc., and actively calls on all employees to participate together with all sectors of society. The company has connected with the Shamen Social Work Station and plans to organize more meaningful public welfare activities in the future. They are also discussing the mutual recognition of public welfare duration certification between the two sides, hoping to encourage more people to participate in public welfare undertakings.

CASE Charity Fun Run

The Human Resources and Culture Department of the Group planned and organized a public welfare run event for the entire group, calling on employees of all subsidiaries and branches to actively participate in micro-public welfare undertakings and spread love and positive energy. Through various launch ceremonies, each subsidiary company encourages its employees to uphold the core values of "a little better, much better", and to draw the trajectory of love with their steps, demonstrating the support and love of Shuanghuan people for public welfare. Since the launch of the campaign in May 2024, it has received an enthusiastic response from 11 subsidiaries and over 300 employees. The cumulative running mileage was 10,199.45 kilometers, and 51,000 yuan was raised in donations, all of which were used to support the charity work of the Shuanghuan Love Foundation.





Love Fund Program

Shuanghuan Driveline has been continuously fulfilling its social responsibilities through the “Loving Heart Fund” and is committed to helping those in need and supporting education. Since its establishment in 2015, Shuanghuan Driveline’s “Loving Heart Fund” has raised a total of RMB 1.22 million and disbursed RMB 900,000 to support disadvantaged employees and underprivileged students in areas where the company operates, including Yuhuan and Jiangsu.

CASE "Love Fund" Charity Education Activity

In September 2024, on the eve of the school's opening, the "Love Fund" of Shuanghuan launched its eighth charity education assistance activity, providing targeted support to 10 impoverished students in Haishan Township and Jishan Township of Yuhuan City, with a total of 37,000 yuan in donations. The 5 students from Jishan Township who received financial aid this time all come from families on minimum living allowances or in financial difficulties. With their indomitable spirit, they were admitted to prestigious universities such as Ningbo University and Wenzhou Medical University.





Metrics and Targets

Welfare Metrics and Targets

Metrics	Unit	2024 Progress	2025 Targets
The amount of charitable donation funds	10,000RMB	13.7	Increase by 3% year-on-year

03

Powered by Infinite Innovation

This chapter responds to the following SDGs:



Product Safety and Quality

Customer satisfaction rate exceeded **92%**

Assembly pass rate surpassed **98%**

Over **10** new key quality improvement projects were launched

Intelligent Manufacturing

68% of forklifts at Zhejiang Shuanghuan converted to electric

152,900 kilometers of transportation mileage saved annually through route optimization

Gear grinding and heat treatment OEE improved to **87%**, with production line availability reaching **80%**

Digital Transformation

Digital inspection pass rate of end products reached over **98%**

Technological Innovation

Total R&D investment in 2024 reached RMB **435.39** million

Product Safety and Quality

Governance

Shuanghuan Driveline fully recognizes that product quality is the cornerstone of both business survival and sustainable growth, as well as a core concern for its customers. Shuanghuan is committed to becoming a company that is both forward-looking and firmly grounded—earning customer trust through exceptional product quality. The company's *Corporate Standards Manual* clearly outlines the synergy between Customer-Oriented Processes (COP), Support Processes (SP), and Management Processes (MP), forming an integrated quality governance framework driven by customer needs.

At the Group level, Shuanghuan has established a dedicated Quality Management Center, responsible for the execution of over 70 quality management documents, including advanced product quality planning procedures. To ensure consistent excellence in both products and services, the company has successfully implemented internationally recognized management systems such as ISO 9001 (Quality Management System), IATF 16949 (Automotive Quality Management System), and ISO/IEC 17025 (*General Requirements for the Competence of Testing and Calibration Laboratories*).



ISO 9001 Quality Management System Certification



IATF 16949 Automotive Quality Management System Certification



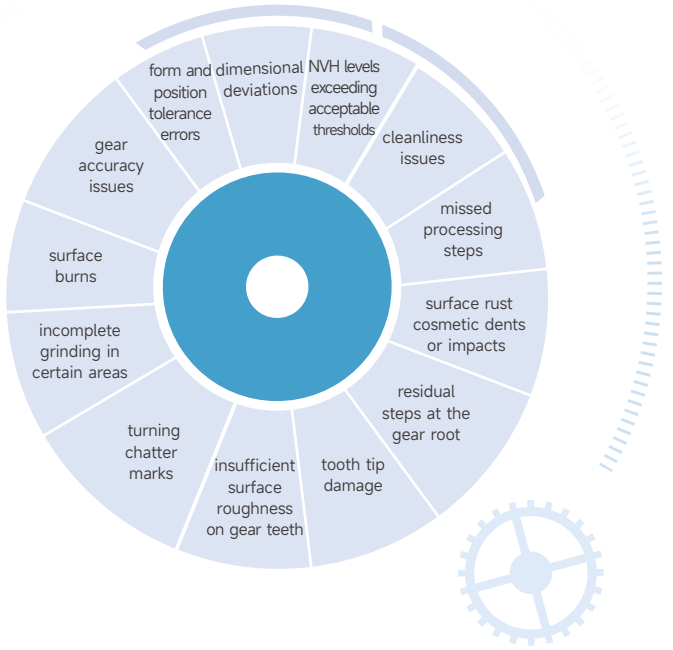
CNAS Certification Certification

Strategy

Shuanghuan Driveline consistently upholds its quality management mission, which emphasizes enhancing customer satisfaction, recognizing quality as the lifeline of the enterprise, reducing quality-related costs, driving innovation in quality management, and shaping a distinctive Shuanghuan quality culture.

Identification of Quality Risk Types

The main risks we've identified related to product safety and quality include:



Shuanghuan's Key Areas of Quality Focus Include:



Product Safety and Quality Management

In managing product safety and quality, the company places a strong emphasis on quality improvement initiatives and error-proofing project summaries. These efforts serve as key implementation drivers, laying a solid foundation for systematically enhancing the level of quality management and ensuring excellence in both products and services.

Quality Improvement Projects

- In line with the ISO 22163 rail transit quality management system, Shuanghuan established a dedicated rail industry audit mechanism and evaluation standards. Special audits are conducted monthly in the high-speed rail workshops, with corrective actions issued based on audit findings.
- Each production site actively promotes Total Quality Management (TQM) based on internal implementation guidelines. In 2024, efforts focused on advancing production lines to "Iron and Copper Award" levels (evaluated using multidimensional, multi-level criteria), maintaining qualifying line pass rates, and developing TQM star-rated model workshops.
- The VDA 6.3 Group Promotion Team (based on the German automotive industry quality standard) supported quality improvements across model lines at various sites through coaching, audits, and evaluations. After a full year of PDCA self-assessment cycles and group-level guidance, the quality management levels at each site improved significantly—meeting customer expectations more comprehensively.



ISO 22163 Railway Industry Quality Management System Certification



ISO 10012 Measurement Management System AAA-Level Certification



Advanced Certified Enterprise by Customs



AAAAA-Level Certificate for Standardized Good Conduct



Standards-Based Innovative Enterprise

Error-Proofing Project Summary

The company has systematically compiled over 400 error-proofing measures across 14 key processes and several additional procedures into a dedicated *Error-Proofing Manual*. This manual has been widely promoted internally with the goal of standardizing and formalizing preventive measures to effectively reduce and prevent quality issues during production.



Error-Proofing Manual



Metrics and Targets

Metrics and Targets of Product Safety and Quality

Metrics	Unit	2024 Progress	2025 Target
Amount involved in major liability incidents related to product and service safety and quality during the reporting period	10,000 RMB	0	0

Intelligent Manufacturing

Intelligent Logistics

As part of its commitment to advancing intelligent manufacturing, Shuanghuan Driveline places strong emphasis on optimizing logistics and transportation processes. Through a series of green logistics initiatives, the company significantly enhances logistics efficiency.

Green Logistics



Reusable Logistics Tools

Shuanghuan has replaced traditional wooden materials with reusable plastic pallets and recyclable packaging boxes, each with an average lifespan of over three years.

Electric Forklifts

The company is gradually phasing out diesel forklifts in favor of electric ones for internal transportation. In Zhejiang Shuanghuan, electric forklifts now account for 68% of total forklift usage.

Standardized Cleaning Process

Since September 2022, all circulation tools have been cleaned using environmentally friendly detergents. Wastewater is processed through the company's treatment system to ensure compliant discharge, supporting clean production practices.

Optimized Transportation Routes

By redesigning internal transport routes, Shuanghuan has reduced overall transport distances, saving more than 152,900 kilometers of travel annually.

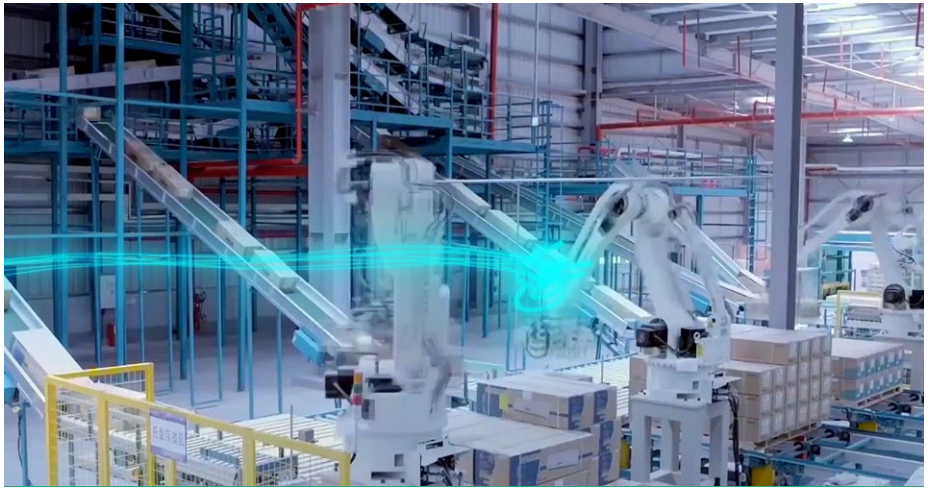
Intelligent Warehousing

Automated High-Bay Warehousing

Shuanghuan utilizes intelligent high-bay storage systems to enable fully automated loading and unloading, significantly reducing manual intervention.

AGV (Automated Guided Vehicles)

Widely adopted for internal transport, AGVs bring high efficiency and smart mobility, resulting in a substantial boost in overall logistics performance.



Production Optimization

Refined process management and continuous process optimization are key to reducing operational costs and enhancing financial performance. Through proactive planning, dynamic control, and post-process innovation, Shuanghuan Driveline applies scientific management practices to continuously improve production performance and drive ongoing innovation in manufacturing processes.

Production Planning and Dynamic Control

Each production site conducts daily reviews of production plans, with real-time dashboards displaying metrics such as production fulfillment rates to ensure balanced capacity utilization. In response to bottlenecks, the company develops targeted solutions by analyzing personnel, equipment, and tooling needs, further optimizing resource allocation. For unsent excess inventory, regular monthly analyses are conducted to verify customer demand and formulate handling procedures. Unused raw materials are also tracked and sold monthly.

Process Innovation and Technological Breakthroughs

Shuanghuan continuously advances its process innovation to ensure both high product quality and technical performance, while also adopting low-carbon, environmentally friendly techniques. Key innovations include:

- **Dry Cutting Processes:** To reduce oil consumption, 90% of hobbing and 90% of turning processes now use dry cutting. Traditional oil-based grinding is retained for modules larger than 5 to meet precision requirements.
- **Mirror Grinding:** Improves transmission efficiency and reduces energy consumption.
- **Welding Replaces Bolting:** Lowers product weight and enables structural simplification for lightweight designs.
- **Heat Treatment and Surface Hardening:** Increases product strength by 10% to 15%.
- **Process and Sensor Optimization:** Enhances accuracy of data collection and identifies inefficient steps in the production process.
- **Coolant and Cleaning Agent Optimization:** Reduces the variety of cleaning agents used and standardizes brand and model selection. Optimal concentrations are determined through testing, which in turn reduces the load on the wastewater treatment system.



Lean Management

To continuously enhance production efficiency across its manufacturing bases and ensure smooth project execution with consistent product quality, Shuanghuan Driveline introduced a lean production system in 2005, anchored by three core pillars: TPM (Total Productive Maintenance), TPS (Toyota Production System), and TQM (Total Quality Management). Guided by the philosophy of "meticulousness and pursuit of excellence," the company has steadily advanced lean practices to achieve the goals of cost reduction, energy savings, and labor efficiency—the "two reductions and one saving" strategy.

Shuanghuan conducts regular analyses of equipment downtime and integrates improvement measures into a standardized operations manual, driving steady gains in production efficiency. By 2024, the Overall Equipment Effectiveness (OEE) for gear grinding and heat treatment processes had increased to 87%, and line availability reached 80%, significantly boosting production stability. In addition, the company has implemented QR code tagging on products, enabling automated data capture and traceability throughout the entire production process—from raw materials to finished goods—thereby enhancing quality control.

To ensure the successful implementation of lean manufacturing, Shuanghuan has established a dedicated Lean Production Promotion Team, composed of a management coordination unit and an execution task force. The company continuously drives breakthroughs in seven key areas:



AAA-Level Certification for Integration of Informatization and Industrialization Management System



High-Tech Enterprise – Zhejiang Province

Seven Key Areas

- Modular process reengineering
- Enhancement of visual management
- Consolidation of standardization systems
- Optimization of continuous improvement mechanisms
- Strengthening of talent development systems
- Deepening TPM and TQM practices
- Empowering frontline teams with autonomous operations and management

Digital Transformation

Shuanghuan Driveline firmly upholds the core philosophy of "Lean-Driven, Digitally Empowered", striving to lead the transformation and upgrading of the manufacturing sector toward "Digital Lean Manufacturing."

Governance

In its digital transformation journey, Shuanghuan Driveline has built a structured, multi-tiered digital architecture encompassing four key levels—enterprise, management, operations, and control. This framework ensures efficient alignment and synergy between data flow, information flow, and business operations.

Enterprise Level >>>
Anchored by ERP (Enterprise Resource Planning) and PLM (Product Lifecycle Management) systems, this layer enables efficient resource allocation and end-to-end digital management of product lifecycles.

Management Level >>>
Powered by MES (Manufacturing Execution System) and factory configuration systems, it supports integrated management of design and production, covering digital management of materials, BOMs (Bills of Materials), and processes, ensuring transparency and control over production operations.

Operations Level >>>
Utilizes DCS (Distributed Control Systems) and SCADA (Supervisory Control and Data Acquisition) to monitor equipment status in real time, ensuring stability and efficiency in operating procedures.

Control Level >>>
Based on PLC (Programmable Logic Controllers) and HMI (Human-Machine Interfaces), this layer provides precise control of production equipment and intuitive operator interaction.

Strategy

In 2021, Shuanghuan Driveline established its digital innovation subsidiary Fine Intelligent Technology to drive the group's transformation toward smart manufacturing. Focusing on the automotive parts and precision machining sectors, Huanzhi Yunchuang is dedicated to delivering high-quality digital and intelligent transformation services to manufacturing enterprises, while also sharing Shuanghuan's advanced manufacturing management expertise. With the goal of fully integrating digital workflows across all stages of production, the subsidiary developed the oWorks Platform—a comprehensive solution that consolidates key elements of smart transformation for industrial enterprises. This platform has been rolled out across the entire group, accelerating Shuanghuan's progress in digital transformation and reinforcing its leadership in intelligent manufacturing.



Impact, Risk, and Opportunity Management

Integrated Smart Factory Solutions

Shuanghuan Driveline's smart factory model aims to continuously plan and implement lean, automated, and digital transformation projects, leveraging Value Stream Mapping (VSM) along with a suite of lean tools and methodologies. By integrating innovation-driven initiatives, the company cultivates in-house talent specialized in autonomous lean management and continuous improvement.

Production Automation

Shuanghuan Driveline has implemented a comprehensive suite of intelligent solutions across its production processes, aimed at enhancing efficiency, precision, and safety.

Logistics Control

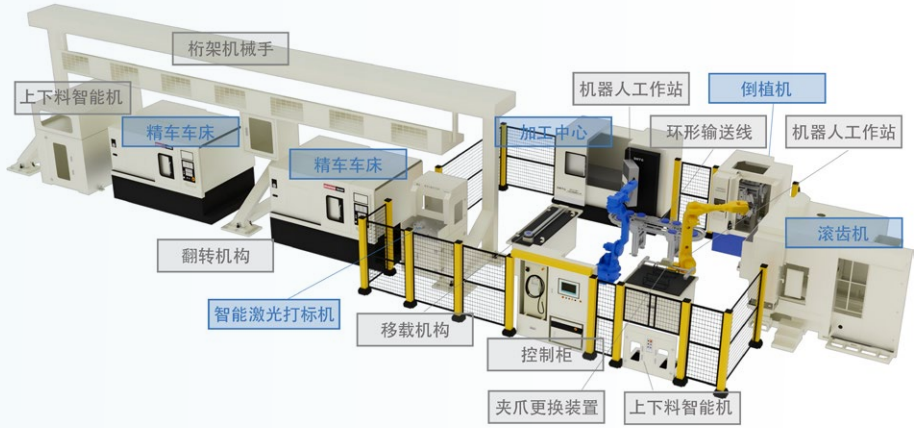
A self-developed system links order and material data at the front end to improve planning accuracy. The company has introduced a range of advanced automation technologies, such as intelligent loading/unloading machines and robotic arms for automated material handling. An internally developed intelligent high-bay warehouse enables fully automated loading and unloading operations.

Production

Precision lathes are equipped with intelligent control systems to ensure high-accuracy machining, while smart laser marking machines enable precise positioning and labeling, increasing process accuracy.

Inspection

A smart product inspection system identifies and retains defective items, maintaining a final product pass rate above 98%.



Production Automation Solutions

Production Digitalization

The company has independently developed a digital platform that integrates with its Industrial Internet of Things (IIoT) system to enhance the quality of data collection. This robust infrastructure empowers the transformation of raw data into valuable insights, effectively driving value creation through data.

D-MOM Digital Operations Management Platform

Developed in-house, the D-MOM platform gives the company full control over its manufacturing digital technologies and data analytics. With parameter-level MES, it enables full lifecycle management of key automotive components. The platform integrates over a dozen subsystems—including production, processes, quality, energy, equipment, warehousing, performance, and tooling—achieving standardized operations, seamless workflow coordination, real-time visibility, and full-process traceability.

IOT&ICP Industrial IoT and Intelligent Computing Platform

Built on Industrial IoT and TPM (Total Productive Maintenance), the IOT&ICP platform boosts equipment efficiency. It supports multi-channel data access, enforces data collection and application standards, and delivers high-quality data services—helping realize transparent production data and intelligent operational management.

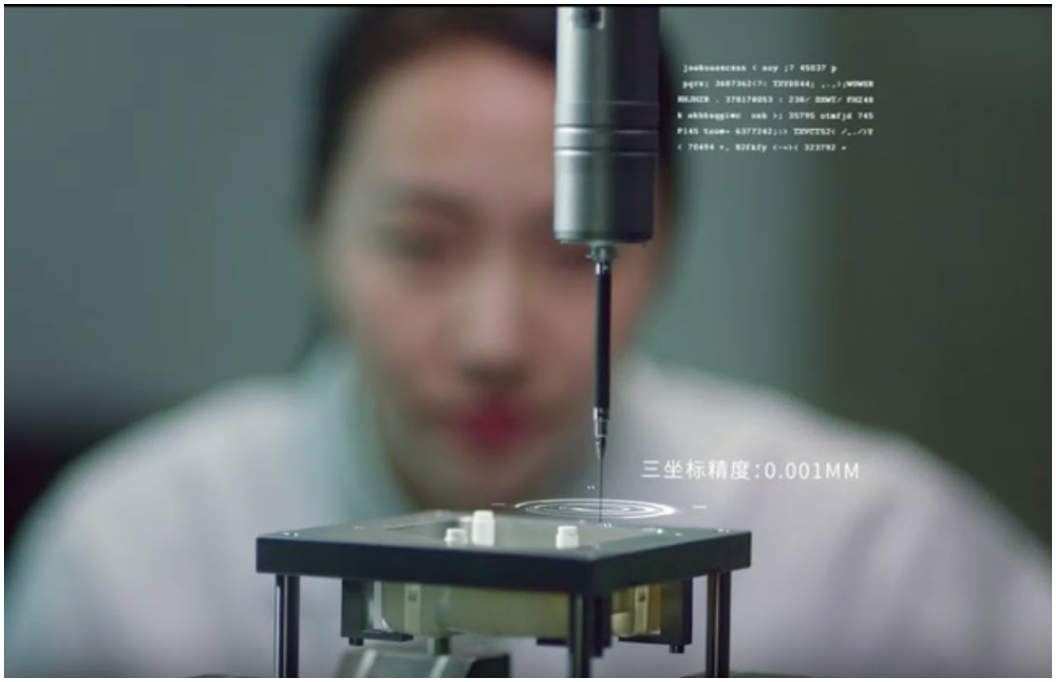
SmartOP Intelligent Enterprise Operations Platform

SmartOP divides enterprise intelligence into four key phases: descriptive analysis, diagnostic analysis, predictive analysis, and prescriptive analysis. These layers work together to enhance sales insights, strengthen procurement control, optimize processes, and improve product quality, while bridging communication gaps between sales and process departments.



Technological Innovation

In Shuanghuan Driveline's long-term strategic roadmap, technological innovation and product R&D are top priorities. While continuing to deepen its expertise in the core technologies of precision transmission, the company is also expanding its product portfolio, building on its foundation of high-precision offerings. Through continuous iteration and innovation, Shuanghuan aims to precisely meet the evolving and diverse needs of the market.



Governance and Strategy

At the heart of its innovation strategy, Shuanghuan Driveline has established a dedicated Research Institute, working in close collaboration with its four major production bases to build an integrated innovation and R&D platform. Its goal is to continuously push the boundaries of precision transmission technologies while expanding their applications across a broader range of future markets.

Technical Support and Product Development

- Provide ongoing technical support for current mass production projects to ensure product quality and stability.
- Develop new product lines targeted for market launch within 1–3 years to meet short-term demand.
- Invest in R&D of emerging technologies expected to expand market opportunities over the next 3–5 years, laying a foundation for medium- and long-term growth.

Market Expansion

Adopt a customer-centric approach by deeply exploring key application areas and target customer groups, steadily advancing into the global high-end market.

Enhance global brand recognition and influence through outstanding product quality and service excellence.

Actively build strategic alliances, collaborate with top domestic and international research institutions, and participate in industry standard-setting to help shape the future of the sector.

High-End Talent Development

- Foster a robust talent ecosystem to attract and nurture top technical experts, ensuring strong human capital support for innovation breakthroughs.
- Leverage the successful experience of the Hungary facility to advance the company's international footprint and build a global industrial service network.

In 2024, the number of R&D personnel reached **1,262**, accounting for over **15**% of the company's total workforce.

The company holds **498** active patents, all of which are applied to its core business operations. In 2024 alone, **33** new invention patents were filed, and **84** patents were granted.

Impact, Risk, and Opportunity Management

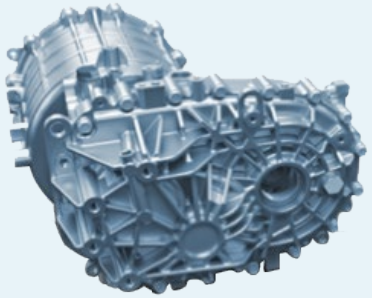
Innovative Product Development

The R&D process for new technologies related to gears and similar products generally includes the following stages:

Stages	
Needs Analysis and Planning	Gain a deep understanding of market demands and clearly define the application scenarios and performance requirements of the product. For example, in the new energy vehicle sector, products must meet requirements such as high torque, high rotational speed, and low noise. In the industrial robotics field, there are extremely high demands for precision and reliability. The team conducts thorough industry research and competitive analysis to identify the strengths and weaknesses of existing technologies, pinpoint customer pain points, and set clear R&D priorities—ensuring competitive positioning for the development of innovative new products.
Theoretical Research and Design	Undertake fundamental theoretical studies—such as gear meshing principles, material mechanics, and dynamics—to provide a solid technical foundation. Based on this, perform innovative design work, including gear profile design, transmission structure design, and more.
Modeling and Simulation Analysis	Use CAD (Computer-Aided Design) software to build 3D models of gears and gearboxes, accurately representing their geometry and structure. Then run simulations such as Finite Element Analysis (FEA) and Multi-body Dynamic Analysis to evaluate performance under various conditions, assessing key indicators like strength, stiffness, fatigue life, and vibration noise, identifying potential issues early for optimization.
Experimental Verification and Refinement	Produce physical prototypes and conduct both bench testing and real-world scenario tests. Gather experimental data—such as meshing accuracy, transmission efficiency, noise levels, and temperature variations—to validate the design and simulation outcomes. Based on the results, continue refining the product through adjustments to design parameters and manufacturing processes until the performance targets are fully met.
Industrialization and Market Deployment	Establish robust production processes and quality control systems to ensure product consistency and reliability, facilitating the transition from laboratory innovation to mass production. Launch targeted marketing strategies, run product promotion and demo applications, and gather customer feedback to further optimize performance and functionality—enhancing market share and user satisfaction.

CASE Noise Reduction Design for New Energy Vehicle Gear Reducers

Shuanghuan's Research Institute leveraged multi-body dynamics analysis and finite element simulation to address the varying torque performance demands of new energy vehicle (NEV) gear reducers. By applying an integrated tooth profile and lead modification strategy, the team optimized tooth contact patterns, avoided impact between the tooth tip and root, and prevented localized overload on the tooth surface. This significantly improved transmission accuracy and vibration and noise performance. Testing showed that the modified gear reducer reduced noise by up to 8 decibels at the same rotational speed compared to unmodified designs.

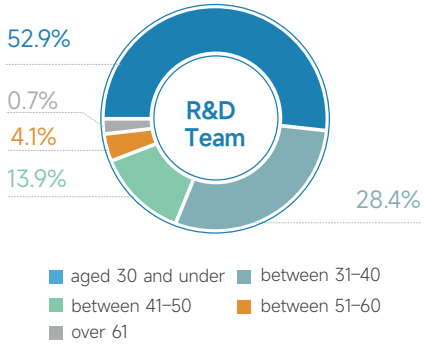


R&D Ecosystem Development

Shuanghuan Driveline regards the construction of an innovative R&D ecosystem as the cornerstone of its innovation-driven growth. The company is committed to building an open, collaborative, and efficient research environment that fosters synergy across internal teams, external partners, and industry networks.

▶ Building a Diverse, High-Caliber R&D Team

Shuanghuan Driveline's R&D team is primarily composed of young professionals, forming a well-balanced talent pipeline.





R&D Incentive Mechanisms

Chairman's Special Contribution Award	Recognizes teams and individuals who make outstanding contributions in market development, operations, technological advancement, and management innovation.
General Manager's Project Achievement Award	Based on departmental self-nomination and evaluated by annual performance completion rates, with rewards issued by the GM for meeting strategic targets.
Innovation Incentive Fund	Rewards teams and individuals with exceptional outcomes in R&D innovation, sparking a strong spirit of creativity.
Promotion Opportunities for Innovators	Outstanding performers in innovation initiatives are offered advancement opportunities.



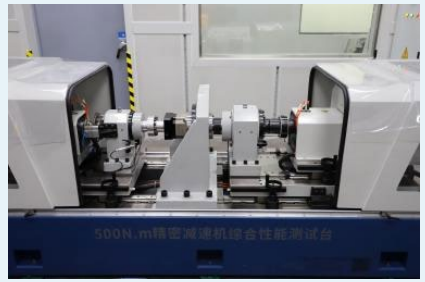
R&D Investment

As a national-level high-tech enterprise and home to a national-level enterprise R&D center, Shuanghuan Driveline allocated RMB 456.04 million to R&D in 2024. The company also continuously upgrades its R&D infrastructure and testing equipment to ensure its researchers have strong hardware support.

CASE R&D Equipment and Testing Instruments



Vibration and Noise Test Bench



Differential Test Bench



Intelligent Transmission System Comprehensive Test Platform

Collaborative Innovation

Shuanghuan Driveline actively promotes industry–academia–research collaboration, partnering with leading universities and research institutions both in China and abroad to jointly conduct technological and industrial research. The company also actively participates in industry research initiatives, playing a key role in driving technological innovation and the advancement of industry standards.

CASE 2024 National Good Design Awards Ceremony

In November 2024, the 9th 2024 National Good Design Awards Ceremony was held in grand fashion in Tongxiang, Zhejiang, under the theme “Innovation Design Empowering New Productive Forces.” The event was graced by the participation of numerous academicians from China’s top science and engineering institutions. A congratulatory letter from Academician Lu Yongxiang was read during the event, which brought together over 300 experts, scholars, and industry representatives.

The ceremony announced winners across various industrial design categories, with Shuanghuan Driveline proudly sponsoring both the event and the prize money for the top three awards. Looking ahead, Shuanghuan has committed to sponsoring the Good Design Awards for the next ten consecutive years, underscoring its dedication to high-quality development and its ongoing contribution to driving innovation across the industry.



CASE China Gear Industry Conference – Shuanghuan Driveline Leads Innovation in Gear Sector

From November 13 to 15, 2024, the 2024 China Gear Industry Conference was successfully held in Cixi, Ningbo, Zhejiang. Organized under the theme “Strengthening the Foundation, Empowering Industrial Upgrading”, the event attracted over 300 industry experts and business representatives.

As the presiding unit of the Gear and E-Drive Branch of the China General Machinery Components Industry Association (CGMA), Shuanghuan Driveline played a key role in the conference. Chairman Wu Changhong, also the President of CGMA, delivered the opening speech and keynote address, offering deep insights into the current landscape and opportunities within the gear industry.



Full Life Cycle Design

In today's era of pursuing sustainability and peak efficiency, Shuanghuan Driveline fully embraces life cycle thinking in the development and design of its gear products. The company carefully considers every stage—from raw material sourcing and product design/manufacturing, all the way to end-of-life recycling—to create products that are greener and more carbon-efficient throughout their entire lifespan.

Raw Material Selection Stage

The R&D team prioritizes low-carbon and environmentally friendly materials, such as steel with a relatively small carbon footprint, to control emissions right from the source. For non-metal gears, the team comprehensively evaluates the material's environmental impact—including energy consumption during extraction, transportation costs, and pollutant emissions—and gradually adopts new materials that combine performance and eco-friendliness, such as self-lubricating polymer composites that require less energy to produce. These materials help reduce energy consumption and wear during gear operation and maintenance.

Design and Manufacturing Stage

Advanced topology optimization techniques are used to refine internal structures based on actual gear stress distribution, eliminating unnecessary material and achieving lightweight designs that cut manufacturing costs and energy consumption. The optimized structure also enhances meshing performance, reduces vibration and noise, and extends service life. In manufacturing, smart technologies such as industrial robots and high-precision CNC machines ensure machining accuracy, reduce defect rates, and improve material utilization. Smart sensors monitor cutting fluid usage in real time, allowing precise dosing to avoid waste and pollution.

End-of-Life Recycling Stage

At the product's end-of-life, gears are designed for easy disassembly and recycling—for instance, using clip-on or threaded joints instead of traditional welding or riveting, allowing different materials to be quickly separated for individual recycling. Looking ahead, the company plans to collaborate with steel manufacturers to explore steel material recovery programs. By ensuring recycled materials meet quality standards for reuse, these efforts aim to create a closed-loop resource recycling system.

Metrics and Targets

Metrics and Targets of Technological Innovation

Metrics	Unit	2024 Progress
R&D investment amount	10,000 RMB	45,604.29
R&D investment as a percentage of main revenue	%	5.19
Percentage of R&D personnel	%	15.14
Number of R&D personnel	persons	1,262
Number of invention patents applied in core business	/	498
Number of invention patent applications during the reporting period	/	33
Number of invention patents granted during the reporting period	/	84
Total number of valid patents during the reporting period	/	498

04

Connected in Symbiotic Synergy

This chapter responds to the following SDGs:



Supply Chain Security and Sustainability

100% of suppliers signed the *Supplier Integrity Pledge*

100% of suppliers signed the *Supplier Code of Conduct*

49 suppliers were reviewed in total

100% rectification rate for identified high-risk

Supply Chain Security and Sustainability

To build a secure, transparent, and sustainable supply chain, Shuanghuan is committed to minimizing supply chain risks by enforcing strict supplier management systems. We ensure that all suppliers comply with relevant laws, regulations, and Shuanghuan's internal policies. In addition, we promote sustainable practices through supplier responsibility management and empower our suppliers with capability-building programs to continuously enhance their management level and sustainability performance.

Supply Chain Compliance Management

Business Ethics and Integrity Agreements

Shuanghuan integrates clear business ethics clauses into all commercial contracts, requiring all suppliers to sign integrity agreements such as the Sunshine Integrity Commitment. These agreements commit suppliers to strictly uphold ethical business practices throughout the cooperation process. In 2024, the signing rate of the *Supplier Integrity Initiative* and *Supplier Code of Conduct* reached 100%.

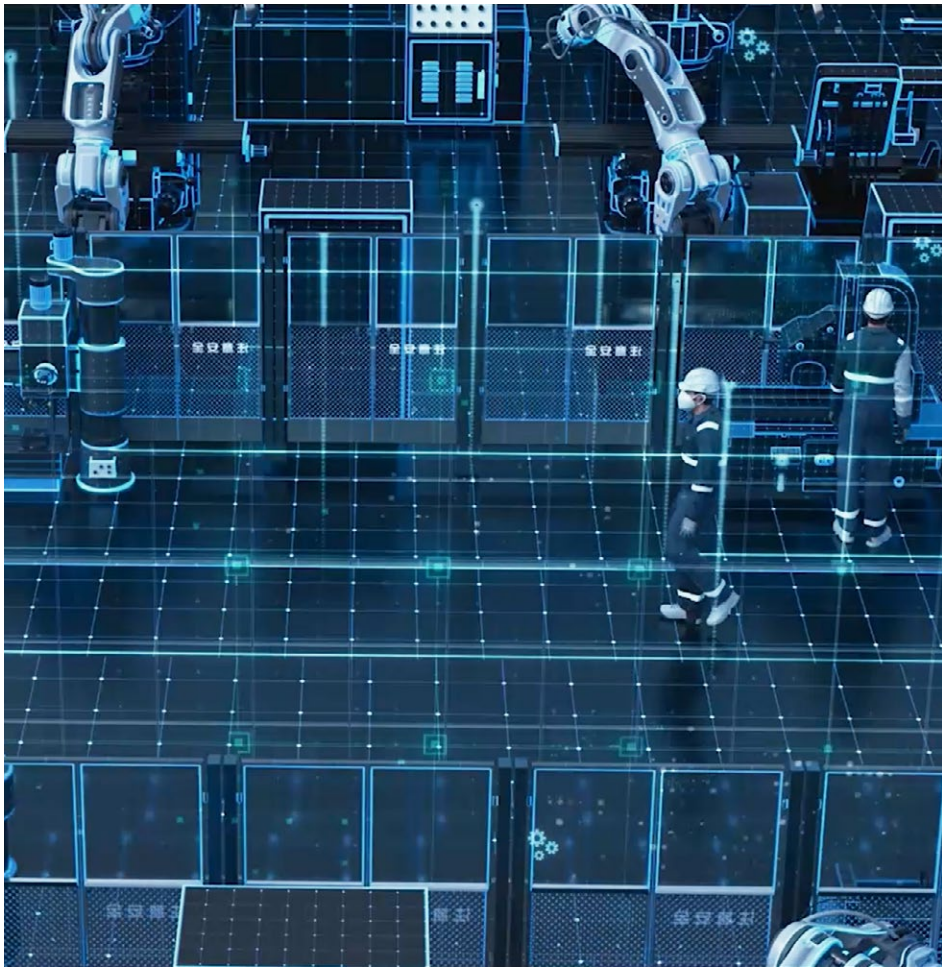
Institutionalized Management Documents

Shuanghuan has developed a comprehensive set of supply chain management policies, including procurement regulations and the *Supplier Management Manual*. These documents provide clear standards and operational guidance for compliance management across all stages—from supplier selection and procurement execution to contract fulfillment—ensuring that every step is well-documented and regulated.

Compliance in Steel Procurement

Steel, being the core raw material for gear products, is subject to a highly regulated procurement system at Shuanghuan. The company has implemented a traceable and controlled order management system for steel procurement, ensuring compliance and transparency from order placement to final delivery.

In this process, Shuanghuan signs a *Compliance Commitment Letter for Partners* with steel suppliers, explicitly outlining anti-corruption and ethical trading clauses. Suppliers are required to comply with all integrity standards and legal regulations, with zero tolerance for misconduct. Meanwhile, internal procurement staff must sign a *Code of Conduct Commitment*, pledging to uphold ethical practices and safeguard the company's interests throughout procurement activities.



Supplier Responsibility Management

Admission Phase

Shuanghuan has established a comprehensive onboarding process for suppliers, accompanied by clear standards to ensure supplier quality, compliance, and stability. The supplier development workflow is as follows:



When selecting new suppliers, the company evaluates key factors such as capability assessment, financial health, prior cooperation experience, quality systems, geographic location, and management level. Additionally, corporate social responsibility (CSR), environmental performance, and business ethics are also incorporated as selection criteria.

Performance Evaluation

The company implements a dynamic management mechanism for the *Approved Supplier List*, conducting annual performance evaluations. The assessment covers not only product quality and on-time delivery but also service quality and CSR performance. Evaluations are organized by the procurement department and cover three key areas:

- **Quality** › Assessed based on the ratio of defective items to total delivered items.
- **On-time Delivery** › Calculated based on the percentage of delayed deliveries relative to total deliveries.
- **Service Quality and Responsiveness** › Based on the supplier's responsiveness and ability to meet service expectations; suppliers with >95% timely responses receive full points.

Based on total scores, suppliers are rated as:
A-level: ⩾ 80 points – Preferred supplier, eligible for increased purchase share;
B-level: 60–79 points – Acceptable supplier, purchase volume maintained or slightly reduced;
C-level: 40–59 points – Under observation, purchase volume reduced, no new projects;
D-level: < 40 points – Disqualified, removed from procurement list, no further cooperation.
In 2024, Shuanghuan conducted evaluations for 49 suppliers. Of these, 15 were identified as having potential risks, and 100% of those suppliers submitted and implemented corrective action plans.

Elimination Mechanism

To maintain a sustainable and reliable supply chain, Shuanghuan enforces a supplier elimination mechanism based on performance ratings:

A-level

Continue procurement and increase order share;

B-level

Continue procurement with potential reduction in order volume;

C-level

Maintain supply only for essential deliveries, halt new project development;

D-level

Terminate cooperation and exclude from future project opportunities.

Supplier Empowerment

We place great importance on collaborative development with our suppliers and strive to enhance the overall capabilities of the supply chain through a variety of empowerment initiatives, fostering mutual benefit and shared success. The main approaches adopted by Shuanghuan to empower suppliers include:

Information Sharing and Strategic Alignment

Shuanghuan regularly organizes supplier engagement activities to promote transparent information exchange and strategic coordination.

CASE Steel Mill Partnership Conference

In August 2024, Shuanghuan successfully held its second partnership conference with six major domestic specialty steel manufacturers at Daming Mountain in Lin'an, Hangzhou. During the event, Shuanghuan presented a comprehensive analysis of key steel procurement performance indicators from the previous period and outlined future procurement policies, development directions, and strategic visions. This helped suppliers gain a clearer understanding of Shuanghuan's needs and strategic goals.



Supplier Conference and Strategic Alignment

Shuanghuan hosts a Supplier Conference every two years, offering suppliers a valuable platform to gain in-depth insights into the company's strategies and policies.

CASE 2024 Supplier Conference

The 2024 Supplier Conference, themed "Empowering Shuanghuan, Driving the Future," brought together over 500 participants from 238 companies. During the event, Shuanghuan's General Manager presented the company's achievements over the past year, future development plans, quality expectations for suppliers, and updated procurement policies—further clarifying the direction and goals of future collaboration.

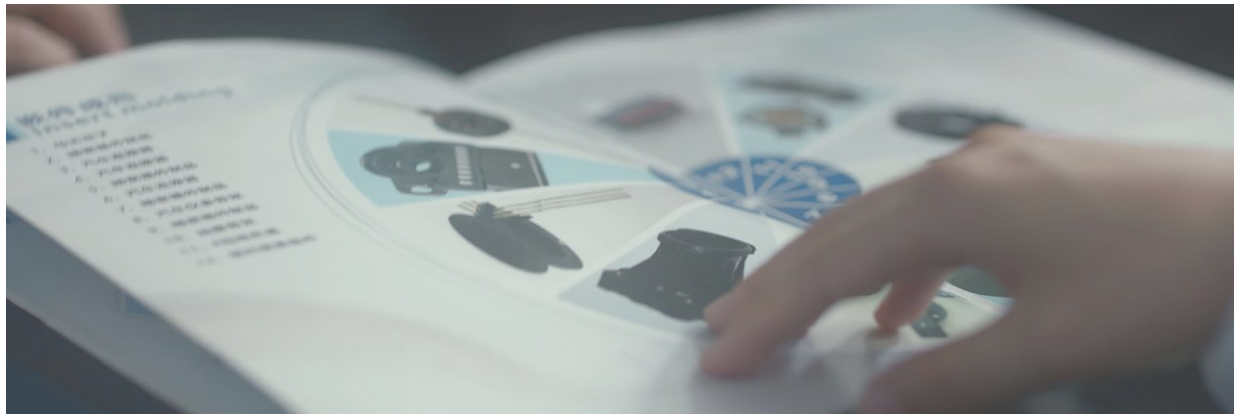


Technical Support and On-Site Assistance

Shuanghuan offers comprehensive technical support and on-site assistance to its suppliers, covering areas such as quality management, environmental optimization, and facility electrical layout design. Through hands-on guidance and training, the company helps suppliers enhance their technical capabilities and management standards, ensuring their products and services consistently meet Shuanghuan's high expectations.

Supplier Risk Management

To ensure a stable and sustainable supply chain, Shuanghuan has established a comprehensive supplier risk management system, implementing various proactive measures and response mechanisms:



Green Energy and Environmental Requirements

In response to downstream customer demands for environmental responsibility, Shuanghuan sets green energy usage requirements for specific steel suppliers. Suppliers are encouraged to use clean energy sources to reduce the environmental impact of their production processes.

Tiered Carbon Emissions Management

Shuanghuan adopts a tiered approach to managing supplier carbon emissions: steel suppliers are categorized as Tier 1, while all others fall into Tier 2. Beginning in 2025, the company plans to conduct comprehensive carbon emissions assessments across its supplier base. It is also developing an internal carbon emission factor database, collecting and verifying supplier emission data, and offering technical support in completing carbon disclosure forms required by OEM clients.

Hazardous Substance Control

Shuanghuan maintains strict controls on hazardous substances in raw materials, particularly steel. Suppliers subject to REACH, RoHS, and restricted substance regulations must submit MSDS documents, relevant certifications, and signed compliance statements. For suppliers with significant pollutant emissions, Shuanghuan urges the optimization of hazardous waste treatment processes to reduce environmental impact.

Raw Material Compliance Management

For steel procurement involving high-risk regions, suppliers must commit to avoiding conflict minerals. Subsidiary Huanqu Technology, which primarily procures plastic pellets, sources mainly from European suppliers with supplemental domestic sourcing. All suppliers must submit RoHS and MSDS reports to ensure compliance, and both domestic and international vendors have obtained GIS certification, reinforcing transparency and reliability of supply chain.

Climate Risk Response

Shuanghuan has formulated climate risk response plans based on the risk levels of each operational base's location. It also proactively notifies suppliers to maintain adequate inventory in anticipation of extreme weather events.

Equal Treatment of SMEs

Shuanghuan is committed to upholding fairness and equity in its partnerships with small and medium-sized enterprises (SMEs), striving to create a fair and transparent business environment. The company has taken the following actions:

Timely Payment of Invoices

Shuanghuan strictly adheres to contractual agreements to ensure timely payment to suppliers. In the first half of 2024, the company fully cleared all outstanding payments that had been overdue for six months to a year, effectively eliminating any delays in payments to SMEs. This reflects its strong respect and support for small and medium-sized partners.

End-to-End Bank-Enterprise Integration

By implementing a fully integrated bank-enterprise coordination mechanism, Shuanghuan has enhanced the operational efficiency of the company and streamlined SMEs operational processes.



Data and Information Security

Shuanghuan places great emphasis on data and information security. Through advanced technologies, stringent management protocols, and continuous optimization measures, the company ensures both robust data protection and full compliance with privacy regulations. Utilizing methods such as network segmentation and firewalls, Shuanghuan has built a secure network perimeter that effectively shields against external threats. Regular offensive-defense drills and penetration tests are conducted to refine security strategies, ensuring data integrity and system stability.

Information System Integration and Optimization

To maintain data consistency and quality, Shuanghuan has established a synergized digital environment integrating people, materials, and data. This integration supports efficient workflows across production, quality control, engineering, marketing, and other business operations. By connecting key platforms such as BI (Business Intelligence), OA (Office Automation), CRM (Customer Relationship Management), ERP (Enterprise Resource Planning), and D-MOM (Digital Manufacturing Operations Management), the company achieves end-to-end information system integration.

Hardware and Network Infrastructure

A fiber-optic backbone supports the company's LAN, with seamless data exchange between plants via the internet. In 2019, Shuanghuan established a T2-compliant data center in Hangzhou. Additionally, a remote backup center in Yuhuan ensures disaster recovery and enhances business continuity.

Accelerated Remote

To boost inter-regional data exchange, Shuanghuan has deployed Citrix SD-WAN systems in Hangzhou, Chongqing, and Huai'an, increasing network speed by 40% and significantly improving stability and data transfer efficiency.



Information Security Contingency Plans

The company has developed a comprehensive emergency response protocol for information security incidents, categorized into three types:

Attack-related incidents

Disruptions caused by malware, hacking, or other forms of cyber intrusion.

System failure incidents

Interruptions due to software/hardware malfunctions, environmental issues in data centers, or human error.

Disaster-related incidents

Events like explosions, fires, lightning, earthquakes, or typhoons that damage IT infrastructure and affect operations.

Shuanghuan has detailed contingency measures in place to ensure rapid and effective response, minimizing losses in the event of an incident.

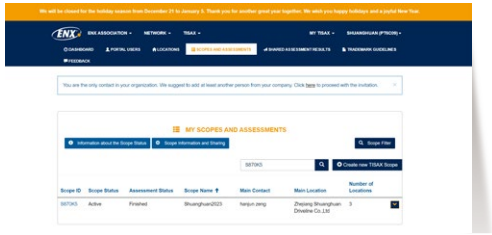
Shuanghuan has achieved Level 3 (Robust) certification under the Data Management Capability Maturity Model (DCMM), signifying a significant advancement in its enterprise-level data governance and management capabilities.



Level 3 Certificate in Data Management Capability Maturity (Robust Level)



Level 3 Certification for Information System Security Classified Protection



ISO 27001 Information Security Management System / TISAX Level 3 Certification

Metrics and Targets

Data and Information Security Metrics and Targets

Metrics	Unit	2024 Progress	2025 Target
Specific monetary loss from data security incidents	10,000 RMB	0	0

Customer Privacy Protection

Email Anti-Fraud Managed Service

The company has engaged a third-party provider to implement an email anti-fraud managed service, with regular reports issued. Through advanced technical measures, the service helps prevent phishing emails and online scams, safeguarding both customer and company sensitive information from potential breaches.

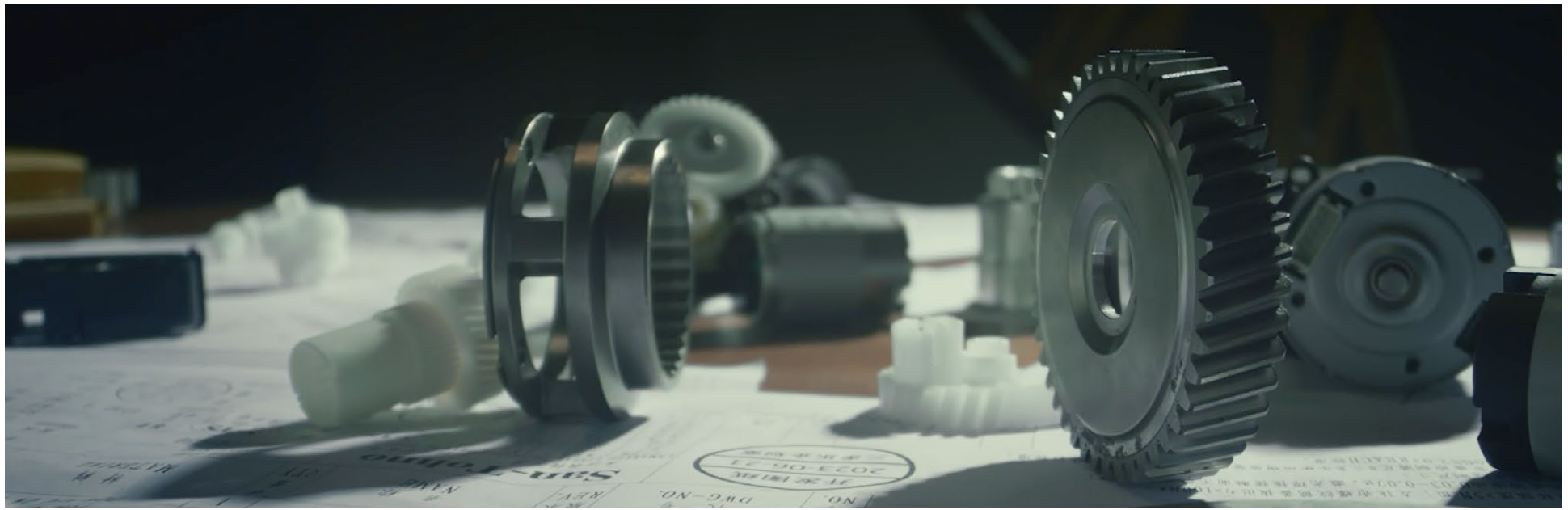
Third-Party Penetration Testing

The company regularly commissions third-party agencies to conduct penetration testing exercises. These simulated cyber-attack scenarios are designed to assess and enhance the security of the company's information systems, ensuring robust protection of customer data and privacy.

Metrics and Targets

Customer Privacy Protection Metrics and Targets

Metrics	Unit	2024 Progress	2025 Target
Specific amount involved in customer privacy breach incidents	10,000 RMB	0	0



05

Rooted in Steady Governance

This chapter responds to the following SDGs:



Anti-Bribery and Anti-Corruption

The Board of Directors received one anti-bribery and anti-corruption training session, achieving 100% participation among board embers.

All new employees underwent anti-bribery and anti-corruption training, with 100% employee coverage.

Unfair Competition Prevention

Zero legal cases or major administrative penalties incurred due to unfair competition practices.

Successfully obtained the Intellectual Property Compliance Management System Certification.

Due Diligence and Risk Management

Shuanghuan has established internal systems such as the *ESG Risk Management Procedure, Economic Responsibility Audit Measures*, and *Audit Clue Collection Guidelines*. These systems define the standards for assessing compliance and operational risks, enabling comprehensive identification of potential risks and issues throughout the company's operations. They also enhance control over high-risk areas and help formulate mitigation strategies.

For investments, acquisitions, and mergers, the company engages third-party agencies to conduct thorough due diligence. Similarly, due diligence is conducted during the onboarding process of new suppliers (see [Connected in Symbiotic Synergy-Supplier Responsibility Management] for details).



Risk Management Framework

The company has established a Supervisory Board responsible for overseeing both financial and operational activities. Comprising shareholder and employee representatives, the board manages risks across pre-, mid-, and post-operation phases, and plays a key role in improving the company's overall risk management system.

An Internal Audit and Legal Affairs Office has been set up to monitor and audit risk management performance during business operations, continuously enhancing the risk management and internal control systems.

Risk oversight is incorporated into the company's annual work plan. Each year, audit projects and internal control evaluations are conducted to assess the implementation and effectiveness of risk management measures. Any major deficiencies or significant risk issues identified during audits are promptly reported to the Audit Committee.

Risk Management Mechanism

Shuanghuan has established a comprehensive ESG risk management system based on the COSO Enterprise Risk Management Framework and ISO 31000 Risk Management Standards to ensure sustainable long-term development. By moving the identification of potential major ESG risks to an earlier stage, the company proactively detects all ESG risk points associated with its business operations. It has defined internal control measures and control procedures for each risk point, enhancing the effectiveness of risk prevention and control. This approach reinforces operational stability and demonstrates Shuanghuan's commitment to corporate social responsibility.



ESG Risk Management Mechanism

Risk Audit and Supervision

The company has established an *Internal Audit Policy* to independently evaluate and oversee the effectiveness of internal controls and risk management. This includes verifying the authenticity and completeness of financial information, ensuring the legality and compliance of operations, and assessing overall operational efficiency and effectiveness. The objective is to prevent and mitigate risks while safeguarding the company's operations.

The Audit Committee convenes regular meetings to review work plans and reports submitted by the Audit Department. Reports to the Board of Directors include, but are not limited to, audit progress, audit quality, and any significant findings.

In addition, the company conducts third-party audits upon client request. These audits cover areas such as labor practices, occupational health and safety, environmental protection, business ethics (including conflict minerals), and management systems.

Risk Management Culture

Shuanghuan places great emphasis on cultivating a strong risk management culture, striving to embed risk awareness deeply into the mindset of every employee. By establishing comprehensive internal policies, the company integrates risk management as a vital component of its overall development strategy and continuously enhances its capability for ongoing improvement in this area.

The Internal Audit and Legal Affairs Department regularly organizes internal training sessions, conducting at least one focused training on core risk management principles each year across the organization. These efforts aim to ensure regulatory compliance in operations and to mitigate risks to an acceptable level.



Anti-Bribery and Anti-Corruption

Shuanghuan upholds a culture of integrity, guided by the principle of "acting with integrity, living with transparency." The company recognizes the vital role that ethical conduct plays in enhancing its reputation, strengthening partnerships, and maintaining competitive advantage. It is committed to continuously improving its supervisory systems, establishing and refining whistleblower mechanisms, and reinforcing a culture of integrity at all levels.

Governance and Strategy

Shuanghuan strictly adheres to anti-bribery and anti-corruption laws and regulations, including the *Criminal Law of the People's Republic of China* and the *Anti-Unfair Competition Law*. The company maintains a zero-tolerance policy toward all forms of corruption.

To strengthen its anti-corruption governance framework, Shuanghuan has established and implemented a series of internal policy documents, including the *Integrity Management Measures,* the *Ethics Evaluation Implementation Guidelines*, and the *Reception Management Guidelines.* These policies are designed to continually enhance the company's anti-corruption systems and ensure compliance and ethical conduct across all operations.

Integrity Management Measures

Strengthening Whistleblower Mechanisms

Shuanghuan has established a robust integrity framework under its *Integrity Management Measures*. The company has formed an Integrity Management Committee led by the Chairman, with executive management and subsidiary general managers serving as committee members. A dedicated Integrity Office, housed within the Chairman's Office, is responsible for day-to-day oversight. Supporting roles are also designated within each subsidiary's general administration and HR departments to assist in implementing integrity initiatives.

The company offers multiple accessible whistleblowing channels—via phone, email, website, and official WeChat account—to ensure timely and compliant handling of complaints and reported issues. To increase visibility and encourage reporting, signage with whistleblowing information is displayed in high-traffic and high-risk areas across facilities. Regular checks are conducted to ensure the effectiveness of these channels at all subsidiary locations.

The Integrity Management Measures also include strict confidentiality protocols to protect whistleblowers. Before utilizing or referencing any lead that might expose a whistleblower's identity, the Integrity Office is required to implement technical safeguards. All related case files are sealed and may not be accessed without formal approval.

Whistleblowing Channels

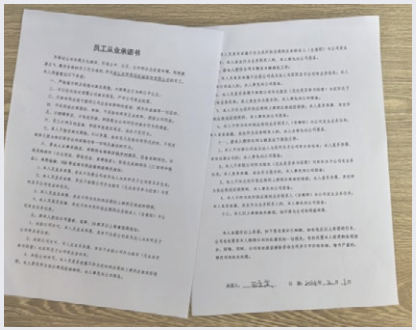
Phone: (0571) 81671020
Email: lianjie@gearsnet.com
Website: https://www.gearsnet.com/wx/feedback
WeChat Public Account: Follow the official "双环传动" (Shuanghuan) WeChat account, and tap on the "一辈子"("Whole Life)" menu at the bottom navigation bar, then select "我要举报" ("I Want to Report").

Strengthening Integrity Education

As one of the company's four core values, integrity is deeply embedded in Shuanghuan's culture. The company promotes integrity awareness through diverse and engaging formats, including the publication of the *Code of Business Conduct*, display of integrity slogans, themed Integrity Month campaigns, dedicated training sessions, a points-based integrity reward system, and employee commitment pledges. These initiatives cultivate a strong culture of ethical conduct across the organization.

CASE Employees Sign the *Employee Code of Conduct*





CASE "Integrity in Action, Subtle Influence" Integrity Points Redemption Program

To embed integrity awareness into daily work and life, Zhejiang Shuanghuan launched a "Integrity Points Redemption" initiative. Employees are encouraged to voluntarily hand over items related to potential integrity risks, which are then recorded by designated personnel and publicly acknowledged once a year. Participants are awarded integrity assessment points, which are directly linked to opportunities for promotion and recognition. These points can also be redeemed for material rewards, fostering a culture where ethical behavior is valued and tangibly encouraged.





Supplier Integrity Management

Shuanghuan not only emphasizes internal integrity but also actively promotes ethical awareness throughout its supply chain. The company requires all suppliers to sign a *Letter of Integrity Commitment*, which sets clear expectations for ethical conduct and helps regulate the behavior of personnel on both sides, fostering a culture of transparency and trust in business collaboration.



Shuanghuan Business Ethics and Compliance Training

Metrics and Targets

Shuanghuan regularly conducts anti-corruption and anti-bribery assessments. During the reporting period, the company recorded zero incidents related to commercial bribery or corruption.

- **100%** of employees received anti-corruption and anti-bribery training upon onboarding.
- The Board of Directors completed one round of anti-corruption and anti-bribery training, with **100%** participation from board members.



Unfair Competition Prevention

Shuanghuan places great importance on preventing unfair competition and is committed to practicing responsible marketing. Through a systematic approach to trademark protection and authorization management, the company ensures that its legal rights and interests are well protected in the competitive marketplace.

Responsible Marketing

Shuanghuan firmly upholds the principle of responsible marketing in all its commercial communications, ensuring that all promotional content is truthful, accurate, and compliant. Public materials strictly follow the requirements of the *Advertising Law of the People's Republic of China*, avoiding exaggerated or misleading language and always basing messaging on verified facts. To ensure compliance, the marketing team works closely with the legal team. Professionals handle promotional content to prevent overstatements and to ensure all communications are honest, objective, and responsible. In addition, the company places strong emphasis on compliance with overseas regulations, engaging a dedicated international legal team to provide specialized support.

Metrics and Targets

Metrics and Targets of Unfair Competition Prevention

Metrics	Unit	2024 Progress	2025 Target
Amount involved in lawsuits or major administrative penalties due to the company's unfair competition practices during the reporting period	10，000RMB	0	0

Intellectual Property Protection

Shuanghuan places great importance on intellectual property (IP) protection and has established a comprehensive *Intellectual Property Management Policy* to safeguard its technologies and innovations. Key measures include:

- Ongoing Trademark Registration: The company actively registers trademarks for new products to ensure brand rights are protected from infringement.
- Robust Patent Filing: Shuanghuan proactively applies for patents to secure proprietary technologies and innovations, reinforcing its leadership position in key technical areas.
- Confidentiality Controls: Internally, core employees are required to sign strict non-disclosure agreements that clearly outline confidentiality responsibilities and obligations to prevent leakage of trade secrets. Externally, the company includes explicit confidentiality clauses in contracts with partners, suppliers, and other stakeholders to ensure that all parties adhere to strict privacy requirements during collaboration.
- Authorization and Licensing Management: A rigorous system governs trademark use across subsidiaries. Written authorization is mandatory for all trademark usage, and all authorizations must be filed with the trademark bureau to ensure lawful and standardized trademark management and prevent infringement.



Intellectual Property Compliance Management System Certification

Key Sustainability Performance Table

Economic Performance

Metrics	Unit	2022	2023	2024
Total Revenue	10,000 RMB	683,794.63	807,419.15	878,139.81
Industrial Output Value	10,000 RMB	663,635.07	747,989.34	899,838.98
Industrial Added Value	10,000 RMB	234,395.18	291,774.24	354,949.37

Social Performance

Metrics	Unit	2022	2023	2024
R&D Investment	10,000 RMB	29,755.93	38,374.52	45,604.29
R&D Investment as % of Main Business Revenue	%	4.35	4.75	5.19
Number of R&D Personnel	persons	867	1,007	1,262
% of R&D Personnel	%	12.3	13.9	15.1
Invention Patents Applied to Core Business	items	509	509	498
Invention Patent Applications	items	71	45	33
Invention Patents Granted	items	62	82	84
Effective Patents	items	343	425	498
Total Rural Revitalization Investment	10,000 RMB	/	/	98
Major Incidents Related to Product & Service Safety	cases	0	0	0

Social Performance

Metrics	Unit	2022	2023	2024
Data Security Incidents During Reporting Period	cases	0	0	0
Privacy Breach Incidents During Reporting Period	cases	0	0	0
Work Injury Insurance Investment	10,000 RMB	348.08	393.65	569.40
Work Injury Insurance Coverage Rate	%	100	100	100
Safety Production Liability Insurance Investment	10,000 RMB	74.40	124.80	54.80
Safety Production Insurance Coverage Rate	%	100	100	100
Number of Safety Incidents	cases	0	0	0
Total Number of Employees	persons	7,037	7,263	8,333
— Male	persons	5,099	5,448	6,344
— Female	persons	1,938	1,815	1,989
— Age 30 and below	persons	2,593	3,017	3,608
— Age 31–40	persons	1,971	2,416	2,722
— Age 41–50	persons	1,085	1,281	1,392
— Age above 50	persons	456	549	611
Number of Training Sessions	sessions	4,245	6,098	11,009
Annual Training Expenditure	10,000 RMB	343.00	179.43	239.41
Training Coverage Rate	%	65.0%	68.5%	82.7%

Governance Performance

Metrics	Unit	2022	2023	2024
Number of Board Directors Trained in Anti-Corruption and Anti-Bribery	persons	9	9	9
Percentage of Directors Trained	%	100	100	100
Number of Management Personnel Trained	persons	680	686	706
Percentage of Management Personnel Trained	%	100	100	100
Number of Employees Trained	persons	7,037	7,263	8,333
Percentage of Employees Trained	%	100	100	100
Number of Business Ethics Violations	cases	0	0	0
Lawsuits or Major Administrative Penalties from Unfair Competition	cases	0	0	0
Number of Commercial Bribery or Corruption Cases	cases	0	0	0

Environmental Performance

Metrics	Unit	2022	2023	2024
Total VOC Emissions	tons	4.68	17.21	20.54
Total NOx Emissions	tons	0.68	1.29	2.97
Total PM Emissions	tons	/	/	3.42
Total COD Emissions	tons	6.91	4.58	6.20
Total NH_3 -N missions	tons	0.34	0.26	0.84
Total Hazardous Waste	tons	2,728.97	2,739.45	3,470.81
Hazardous Waste Intensity (per 10,000 CNY output)	tons/10,000 CNY output	/	/	0.0039
Hazardous Waste Intensity (per 10,000 CNY added value)	tons/10,000 CNY GVA	/	/	0.0098
Total General Waste	tons	10,286.22	25,102.15	24,393.67
General Waste Intensity (per 10,000 CNY output)	tons/10,000 CNY output	/	/	0.027
General Waste Intensity (per 10,000 CNY added value)	tons/10,000 CNY GVA	/	/	0.069
Total Recycled Waste	tons	/	/	26,327.4
Major Environmental Compliance Violations	cases	0	0	0
Total Water Consumption	tons	935,989	1,202,399	987,881
Total Wastewater Discharge	tons	/	/	496,069

Environmental Performance

Metrics	Unit	2022	2023	2024
Recycled Water Volume	tons	14,121.6	343,931	402,882
Water Intensity (per 10,000 CNY output)	tons/10,000 CNY output	/	1.59	1.10
Water Intensity (per 10,000 CNY added value)	tons/10,000 CNY GVA	/	4.12	2.78
Total Energy Consumption (Standard Coal Equivalent) - Quantity-Based	tce	/	52,431.90	61,096.14
Total Energy Consumption (Standard Coal Equivalent) - Value-Based	tce	109,755.74	126,867.00	155,889.63
Natural Gas sumption	10,000 Nm^3	218.81	297.91	334.57
Gasoline Consumption	tons	/	62.21	36.96
Diesel Consumption	tons	/	114.77	121.40
Grid Electricity Consumption	MWh	375,046.17	395,068.54	462,181.82
Photovoltaic lectricity Generation	MWh	/	9,589.47	6,649.81
Energy Intensity (Quantity-Based, per 10,000 CNY output)	tce/10,000 CNY output	/	0.07	0.07
Energy Intensity (Quantity-Based, per 10,000 CNY added value)	tce/10,000 CNY GVA	/	0.18	0.17
Energy Intensity (Value-Based, per 10,000 CNY output)	tce/10,000 CNY output	/	0.17	0.17
Energy Intensity (Value-Based, per 10,000 CNY added value)	tce/10,000 CNY GVA	0.43	0.43	0.44

Environmental Performance

Metrics	Unit	2022	2023	2024
WEEE Recycled as a Percentage of EEE Launched to Market	%	0	0	0
GHG Emissions (Scope 1 + 2)	tons CO_2e	230,700.00	295,460.24	263,841.62
Scope 1 GHG Emissions	tons CO_2e	/	20,864.45	15,834.85
Scope 2 GHG Emissions	tons CO_2e	/	274,595.79	248,006.76
GHG Emissions Intensity (per 10,000 CNY output)	tons CO_2e/10,000 CNY	/	0.39	0.29
GHG Emissions Intensity (per 10,000 CNY added value)	tons CO_2e/10,000 CNY GVA	0.9	1.01	0.74
Renewable Resource Consumption (Steel)	tons	/	/	280,461.78
Renewable Resource Consumption (Recovered Oil)	tons	/	/	2,798.56
Renewable Resource Consumption (Plastic)	tons	/	/	840.70
Renewable Resource Consumption (Packaging Materials)	tons	/	/	2,229.57
Renewable Resource Consumption (Returnable Boxes)	tons	/	/	1,219.38
Renewable Resource Consumption (Cutting Tools)	tons	/	/	93.61

GRI Content Index

No.	DISCLOSURE	LOCATION
2-1	Organizational Details	About Shuanghuan
2-2	Entities included in the organization's sustainability reporting	About this Report
2-3	Reporting period, frequency and contact point	About this Report
2-4	Restatements of information	/
2-5	External assurance	Assurance Statement
2-6	Activities, value chain and other business relationships	About Shuanghuan
2-7	Employees	Unified in Perfect Harmony
2-8	Workers who are not employees	/
2-9	Governance structure and composition	Anchored in Solid Operations
2-10	Nomination and selection of the highest governance body	Anchored in Solid Operations
2-11	Chair of the highest governance body	Anchored in Solid Operations
2-12	Role of the highest governance body in overseeing the management of impacts	Anchored in Solid Operations
2-13	Delegation of responsibility for managing impacts	Anchored in Solid Operations
2-14	Role of the highest governance body in sustainability reporting	Anchored in Solid Operations
2-15	Conflicts of interest	/

No.	DISCLOSURE	LOCATION
2-16	Communication of critical concerns	Material Topic Analysis
2-17	Collective knowledge of the highest governance body	Anchored in Solid Operations
2-18	Evaluation of the performance of the highest governance body	/
2-19	Remuneration policies	/
2-20	Process to determine remuneration	/
2-21	Annual total compensation ratio	/
2-22	Statement on sustainable development strategy	Anchored in Solid Operations
2-23	Policy commitments	Unified in Perfect Harmony
2-24	Embedding policy commitments	Rooted in Steady Governance
2-25	Processes to remediate negative impacts	Rooted in Steady Governance
2-26	Mechanisms for seeking advice and raising concerns	Rooted in Steady Governance
2-27	Compliance with laws and regulations	Rooted in Steady Governance
2-28	Membership associations	/
2-29	Approach to stakeholder engagement	Material Topic Analysis
2-30	Collective bargaining agreements	Unified in Perfect Harmony

No.	DISCLOSURE	LOCATION
GRI 201: Economic Performance 2016		
201-1	Direct economic value generated and distributed	About Shuanghuan
201-2	Financial implications and other risks and opportunities due to climate change	Flowed with Green Circularity
201-3	Defined benefit plan obligations and other retirement plans	Unified in Perfect Harmony
201-4	Financial assistance received from government	/
GRI 202: Market Presence 2016		
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	/
202-2	Proportion of senior management hired from the local community	/
GRI 203: Indirect Economic Impacts 2016		
203-1	Infrastructure investments and services supported	Unified in Perfect Harmony
203-2	Significant indirect economic impacts	Unified in Perfect Harmony
GRI 204: Procurement		
204-1	Proportion of spending on local suppliers	Key Sustainability Performance Table
GRI 205: Anti-corruption 2016		
205-1	Operations assessed for risks related to corruption	Rooted in Steady Governance
205-2	Communication and training about anti-corruption policies and procedures	Rooted in Steady Governance
205-3	Confirmed incidents of corruption and actions taken	Rooted in Steady Governance
GRI 206: Anti-competitive		
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Rooted in Steady Governance

No.	DISCLOSURE	LOCATION
GRI 207: Tax 2019		
207-1	Approach to tax	/
207-2	Tax governance, control, and risk management	/
207-3	Stakeholder engagement and management of	/
207-4	concerns related to tax	/
GGRI 301: Materials 2016		
301-1	Materials used by weight or volume	Flowed with Green Circularity
301-2	Recycled input materials used	Flowed with Green Circularity
301-3	Reclaimed products and their packaging materials	Flowed with Green Circularity
GRI 302: Energy 2016		
302-1	Energy consumption within the organization	Flowed with Green Circularity
302-2	Energy consumption outside of the organization	Flowed with Green Circularity
302-3	Energy intensity	Flowed with Green Circularity
302-4	Reduction of energy consumption	Flowed with Green Circularity
302-5	Reductions in energy requirements of products and services	Flowed with Green Circularity
GRI 303: Water and Effluents 2018		
303-1	Interactions with water as a shared resource	Flowed with Green Circularity
303-2	Management of water discharge-related impacts	Flowed with Green Circularity
303-3	Water withdrawal	Flowed with Green Circularity
303-4	Water discharge	Flowed with Green Circularity
303-5	Water consumption	Flowed with Green Circularity

No.	DISCLOSURE	LOCATION
GRI 304: Biodiversity 2016		
304-2	Significant impacts of activities, products and services on biodiversity	Flowed with Green Circularity
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	/
GRI 305: Emissions 2016		
305-2	Energy indirect (Scope 2) GHG emissions	Flowed with Green Circularity
305-4	GHG emissions intensity	Flowed with Green Circularity
305-6	Emissions of ozone-depleting substances (ODS)	/
GRI 306: Waste 2020		
306-2	Management of significant waste-related impacts	Flowed with Green Circularity
306-4	Waste diverted from disposal	Flowed with Green Circularity

No.	DISCLOSURE	LOCATION
GRI 308: Supplier Environmental Assessment 2016		
308-2	Negative environmental impacts in the supply chain and actions taken	Connected in Symbiotic Synergy
GRI 401: Employment 2016		
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Unified in Perfect Harmony
GRI 402: Labor/Management Relations 2016		
GRI 403: Occupational Health and Safety 2018		
403-2	Hazard identification, risk assessment, and incident investigation	Unified in Perfect Harmony
403-4	Worker participation, consultation, and communication on occupational health and safety	Unified in Perfect Harmony
403-6	Promotion of worker health	Unified in Perfect Harmony
403-8	Workers covered by an occupational health and safety management system	Unified in Perfect Harmony

No.	DISCLOSURE	LOCATION
403-10	Work-related ill health	Unified in Perfect Harmony
GRI 404: Training and Education 2016		
404-1	Average hours of training per year per employee	Unified in Perfect Harmony
404-2	Programs for upgrading employee skills and transition assistance programs	Unified in Perfect Harmony
404-3	Percentage of employees receiving regular performance and career development reviews	Unified in Perfect Harmony
GRI 405: Diversity and Equal Opportunity 2016		
405-1	Diversity of governance bodies and employees	Anchored in Solid Operations
405-2	Ratio of basic salary and remuneration of women to men	/
GRI 406: Non-discrimination 201		
406-1	Incidents of discrimination and corrective actions taken	Unified in Perfect Harmony
GRI 407: Freedom of Association and Collective Bargaining 2016		
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Unified in Perfect Harmony
GRI 408: Child Labor 2016		
408-1	Operations and suppliers at significant risk for incidents of child labor	Unified in Perfect Harmony
GRI 409: Forced or Compulsory Labor 2016		
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Unified in Perfect Harmony
GRI 410: Security Practices 2016		
410-1	Security personnel trained in human rights policies or procedures	/
GRI 411: Rights of Indigenous Peoples 2016		
411-1	Incidents of violations involving rights of indigenous peoples	/

No.	DISCLOSURE	LOCATION
GRI 413: Local Communities 2016		
413-1	Operations with local community engagement, impact assessments, and development programs	Unified in Perfect Harmony
413-2	Operations with significant actual and potential negative impacts on local communities	/
GRI 414: Supplier Social Assessment 2016		
414-1	New suppliers that were screened using social criteria	/
414-2	Negative social impacts in the supply chain and actions taken	Connected in Symbiotic Synergy
GRI 415: Public Policy 2016		
415-1	Political contributions	/
GRI 416: Customer Health and Safety 2016		
416-1	Assessment of the health and safety impacts of product and service categories	Powered by Infinite Innovation
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	/
GRI 417: Marketing and Labeling 2016		
417-1	Requirements for Product and Service Information and Labeling	Rooted in Steady Governance
417-2	Incidents of Non-compliance Concerning Product and Service Information and Labeling	Rooted in Steady Governance
417-3	Incidents of Non-compliance Concerning Marketing Communications	Rooted in Steady Governance
GRI 418: Customer Privacy 2016		
418-1	Substantiated Complaints Concerning Breaches of Customer Privacy and Losses of Customer Data	Connected in Symbiotic Synergy

Content Index for the *Shenzhen Stock Exchange Guideline No. 17 on Self-Regulation of Listed Companies - Sustainability Report*

Dimensions and Topics			No.	Location
Environmental Topic	Climate Change Response		21	Flowed with Green Circularity
			22	Flowed with Green Circularity
			23	Flowed with Green Circularity
			24	Flowed with Green Circularity
			25	Flowed with Green Circularity
			26	Flowed with Green Circularity
			27	Flowed with Green Circularity
			28	Flowed with Green Circularity
	Pollution Prevention and Ecosystem Protection	Pollutant Emissions	30	Flowed with Green Circularity
		Waste Management	31	Flowed with Green Circularity
		Ecosystem and Biodiversity Conservation	32	Flowed with Green Circularity
		Environmental Compliance Management	33	Flowed with Green Circularity
	Resource Utilization and Circular Economy	Energy Use	35	Flowed with Green Circularity
		Water Resource Utilization	36	Flowed with Green Circularity
		Circular Economy	37	Flowed with Green Circularity

Content Index for the *Shenzhen Stock Exchange Guideline No. 17 on Self-Regulation of Listed Companies - Sustainability Report*

Dimensions and Topics			No.	Location
Social Topic	Rural Revitalization and Social Contributions	Rural Revitalization	39	Unified in Perfect Harmony
		Social Contributions	40	Unified in Perfect Harmony
	Innovation-Driven Development and Tech Ethics	Innovation-Driven Strategy	42	Powered by Infinite Innovation
		Technology Ethics	43	/
	Suppliers and Customers	Supply Chain Security	45	Connected in Symbiotic Synergy
		Equal Treatment of SMEs	46	/
		Product and Service Safety & Quality	47	Powered by Infinite Innovation
		Data Security and Customer Privacy Protection	48	Connected in Symbiotic Synergy
	Employees	Employees	50	Unified in Perfect Harmony
Sustainable Development Governance Topics	Governance Mechanisms for Sustainable Development	Due Diligence	52	Rooted in Steady Governance
		Stakeholder Communication	53	Material Topic Analysis
	Business Conduct	Anti-Bribery and Anti-Corruption	55	Rooted in Steady Governance
		Unfair Competition Prevention	56	Rooted in Steady Governance

Assurance Statement

ASSURANCE STATEMENT
CN25/00002615

SGS-CSTC'S REPORT ON SUSTAINABILITY ACTIVITIES IN THE ZHEJIANG SHUANGHUAN DRIVELINE CO.,LTD.'S *SUSTAINABILITY REPORT FOR 2024*

NATURE OF THE ASSURANCE/VERIFICATION
SGS-CSTC STANDARDS TECHNICAL SERVICES CO., LTD. (hereinafter referred to as SGS) was commissioned by Zhejiang Shuanghuan Driveline Co., Ltd. (hereinafter referred to as SHUANGHUAN) to conduct an independent assurance of the Chinese version of SHUANGHUAN's *Sustainability Report for 2024* (hereinafter referred to as the Report).

INTENDED USERS OF THIS ASSURANCE STATEMENT
This Assurance Statement is provided with the intention of informing all SHUANGHUAN's stakeholders.

RESPONSIBILITIES
The information in the Report and its presentation are the responsibility of the management level of SHUANGHUAN. SGS has not been involved in the preparation of any of the material included in the Report.

Our responsibility is to express an opinion on the extent to which the Report conforms to the four principles of the AA1000 Assurance Standard within the scope of assurance with the intention to inform all SHUANGHUAN's stakeholders.

SGS hereby states that it shall not be held responsible or liable for any direct, indirect, incidental, or consequential damages or losses arising from or in connection with the use of information provided in this report.

ASSURANCE STANDARDS, TYPE AND LEVEL OF ASSURANCE
The assurance of this report has been conducted according to the AA1000 Assurance Standard (AA1000AS v3) , a standard used globally to provide assurance on sustainability-related information across organizations of all types, including the evaluation of the nature and extent to which an organization adheres to the AccountAbility Principles (AA1000AP, 2018).

Assurance Standard Options	Level of Assurance
AA1000AS v3 Type 1	Moderate

SCOPE OF ASSURANCE
The scope of the assurance was confined to assessing the extent to which the Report's content conforms to the four principles of the AA1000. It is important to note that this engagement did not encompass an assurance of the sustainability performance information included in the Report.

Reporting Criteria Options
AA1000 Accountability Principles (2018)

ASSURANCE METHODOLOGY
The assurance comprised a combination of pre-assurance research, interviews with relevant employees of SHUANGHUAN which is located at Hehe Building, Building 2, No. 658-1 Jingchang Road, Wuchang Street, Yuhang District, Hangzhou, Zhejiang Province, P.R. China, including documentation and record review and validation where relevant, and online review and confirmation of documents and records with relevant employees of its subsidiaries.

LIMITATIONS AND MITIGATION
This assurance engagement was restricted to the group level of SHUANGHUAN and did not include traceability of original data from all subordinate institutions.

This assurance engagement was limited to conducting interviews with departmental managers and selected employees of SHUANGHUAN, in addition to reviewing relevant documents and records. External stakeholders were not included in the interview process.

STATEMENT OF INDEPENDENCE AND COMPETENCE
The SGS Group of companies is the world leader in inspection, testing and certification, operating in multiple countries and providing services. SGS affirm our independence from SHUANGHUAN, being free from bias and conflicts of interest with the organisation, its subsidiaries and stakeholders.

The assurance team was assembled based on their knowledge, experience and qualifications for this assignment.

FINDINGS AND CONCLUSIONS

ASSURANCE/VERIFICATION OPINION
On the basis of the methodology described and the assurance engagement performed, the assurance team concludes that the Report conforms to the four principles of the AA1000 to the following extent:

INCLUSIVITY
SHUANGHUAN has identified the organization's stakeholders, established multiple channels for stakeholders communication and engagement, undertaken various forms of dialogue and interaction with them, and collected their expectations and concerns.

MATERIALITY
SHUANGHUAN has utilized methods such as stakeholder questionnaire surveys, expert evaluations, and scoring evaluations to conduct an analysis and evaluation of the importance of sustainability topics, and disclosed the importance of sustainability topics according to financial importance and impact importance.

RESPONSIVENESS
In the Report, SHUANGHUAN has disclosed the management practices and performance of topics that substantially impact stakeholders' evaluation and decision-making to an appropriate extent, and also demonstrated the communication and participation activities of key stakeholders.

IMPACT
In the Report, SHUANGHUAN has disclosed the important environmental and social impacts, target indicators, and monitoring methods of sustainability topics to a certain extent, based on the current management situation.

FINDINGS AND RECOMMENDATIONS
All observations pertaining to commendable practices, sustainable development activities, and managerial recommendations identified throughout the assurance process have been thoroughly documented in the *Internal Management Report on Sustainability Reporting Assurance*. This report has been officially presented to the relevant management divisions of SHUANGHUAN to serve as a reference for their ongoing efforts towards continuous improvement.

Signed:

For and on behalf of SGS-CSTC

David Xin
Sr. Director – Business Assurance
16/F Century Yuhui Mansion, No. 73, Fucheng Road, Beijing, P.R. China

Apr. 28th, 2025
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