

2022 ESG

Kaori Heat Treatment Co., Ltd.

Corporate Sustainability Report

Low Carbon and Emission ♦ People Values ♦ Sustainability ド高カ **KAORI - Go For Sustainable Future**

KAORI III 高力

創新、品質、責任、榮譽

Innovation · Quality · Responsibility · Honor

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About the Report

Basis of the Report

This report has been prepared in accordance with the 2021 GRI Standards published by Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB) standard for the Electrical & Electronic Equipment Industry, the framework of the Task Force on Climate-related Financial Disclosures (TCFD), and the requirements stipulated in the Taiwan Stock Exchange Corporation Rules "Governing the Preparation and Filing of Sustainability Reports by TWSE Listed Companies" and the "Sustainable Development Best Practice Principles for TWSE/TPEx-Listed Companies". The report is intended to explain the Company's sustainability practices and performance to stakeholders of Kaori Heat Treatment Co., Ltd.

The contents of this report were gathered and compiled by various task forces under Kaori's ESG Committee. The ESG Committee verified the Company's sustainability performance for the year and reviewed the completeness and correctness of the reported data, whereas the lead member of the ESG Committee gave the final approval for the report.

Scope and Boundary

This report discloses information relating to Kaori (excluding overseas subsidiaries) from January 1 to December 31, 2022. All financial data presented in the sustainability report has been prepared in accordance with the International Financial Reporting Standards (IFRS), and is denominated in TWD.

Publication Details

This is the 2022 Sustainability Report of Kaori Heat Treatment Co., Ltd. In support of Kaori's energy and carbon reduction, environmental care, and paperless initiatives, the Company has opted to disclose the report to all potential users in electronic form over Kaori's website.

- Reporting period: January 1 to December 31, 2022
- Reporting cycle: once a year
- Date of current publication: June 2023
- Date of next publication: June 2024 (scheduled)

Contact Information

Please do not hesitate to contact us if you have any suggestions regarding this report or Kaori's sustainability practices.

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Message from the Chairman

KAORI - Go For Sustainable Future

Supporting Global Green Transformation in Professionalism

The Company has been dedicated to the development of energy-related technologies since it was founded in 1970, using innovative energy technologies as a way to change the world. This mission is what has been driving our investments in the past, which we intend to continue doing in the future. Apart from digital transformations, we will also commit greater efforts to ESG and strive to accomplish sustainability goals by adopting new management mindsets and making optimal use of R&D capacity.

2022 has been an extremely challenging year for Kaori. From the spread of COVID-19 in the first half to the escalation of the Russia-Ukraine war in the second half, the Company was tested time and time again for its capacity to keep up with the increasing demand for heat supply and energy-saving equipment, as well as its ability to manage risks associated with carbon taxes and cross-strait tensions. Kaori's sustainability efforts in 2022 were driven by three main themes, namely "low carbon and emissions, people-centered, and sustainability":

Environmental (**E**)

In the environmental (E) aspect, we have placed emphasis on reducing emissions in our operations and adopted low-carbon practices. Our most prominent accomplishments during the year were the successful introduction of ISO 14064-1 Greenhouse Gas Inventory standards and obtaining verification from SGS Taiwan Ltd. (SGS), a third-party institution, ahead of the timeline stipulated by laws. In 2022, GHG emissions per unit of revenue were down 17% compared to the previous year. Furthermore, in response to the EU's Carbon Border Adjustment Mechanism (CBAM), the Company has been making pro-active use of the export carbon reduction counseling service offered by the Taiwan External Trade Development Council, and completed analysis of the composition of key products and raw materials exported to Europe and the US. After establishing a preliminary understanding of the carbon reduction controls implemented in the two markets, we devised two main action strategies. Strategy 1: Introducing product carbon footprint (ISO 14067) in the third quarter of 2022 and obtaining certification by the end of 2023. Once reliable data has been established, the Company will be able to devise carbon footprint reduction plans based on the emissions of a product's entire life cycle to conform with CBAM requirements. Strategy 2: Exploring energy-saving solutions for the vacuum furnace, a key piece of production equipment, to reduce the carbon emissions of the production process. Carbon reduction measures are being introduced to various parts of our operations, such as the use of environment-friendly tableware, air conditioning temperature adjustment, digital correspondence, digital signatures, and turning off unnecessary lighting. With respect to renewable energy, the 744.51 kW commercial rooftop photovoltaic system installed at Kaohsiung Plant began production in September 2022, which will enable the plant to power its own operations at times of electricity supply coordination in the future.

Social (S)

In the social (S) aspect, we have been adjusting our management approach in recent years to pay attention to human rights issues, following rising awareness for social and human rights topics. With regards to employee care, we hope to introduce and obtain certification for the ISO 45001 Occupational Health and Safety Management System as a way to enhance workplace safety and protect the physical and mental health of every Kaori employee. As for social care, Kaori encourages employees to take part in social, environmental, and charity activities with family members to make a greater impact.

Governance (

In terms of governance (G), we initiated a corporate governance evaluation improvement program in 2022 that increased the Company's ranking to the 4th tier, representing an improvement over 2021. In the third quarter of 2022, we introduced a sustainable supply chain system and held our first sustainable supply conference that successfully connected us with supply partners and demonstrated Kaori's resolve to enforcing ESG. We also created a new cybersecurity officer position in 2022 and expect to pass certification for the ISO 27000 Information Security Management System in 2023.

Kaori plans to take its sustainability efforts to the next level in 2023 by adopting the sustainable spirit of "For Earth. For Us." These sustainability efforts will revolve around five main themes: product/service innovation, low-carbon transformation of key processes, advancement of risk control, diversified workplace, and enhanced cybersecurity. The Company plans to implement these themes by maintaining good communication with stakeholders, learning the international ESG assessment criteria, and observing the United Nation's Sustainable Development Goals (SDGs). We hold the conviction that incorporating ESG values into our routine operations will greatly improve the resilience and global competitiveness of our operations and help us connect with the green transformation that is happening around the world.

Sustainability Statement

4E

For Earth. For Us.

Eco-friendly

Employability

Equity

Ethics

Hsien-Shou Han

Chairman and Chief of the ESG Committee



2022 Performance Overview

Topic Description

- Successfully assisted a European heat pump manufacturer in the development of heat pump heaters to replace natural gas boilers for energy transformation
- Launched the new product Z085D, the market's smallest dual-circuit cross-flow plate heat exchanger, featuring high pressure resistance, small size, environment-friendly coolant, micro channel design, and simplified piping
- Introduced the industry's first CO2 dual system brazed plate heat exchanger without bolted pressure plate, which can be used in multi-compressor transcritical CO₂ heat pump systems or refrigeration systems for optimal heat supply, cooling, and heat recycling
- Successfully assisted a US SOFC manufacturer in the development of 75 kW powergenerating equipment, which will commence mass production in 2023
- Acquired an invention patent certificate in Taiwan for a "Device and method of disposing and reusing organic waste fluids"
- Purified and recycled 70% of industrial waste hydrogen, eliminating concerns for hydrogen disposal and pressurized transportation and significantly reducing carbon emissions
- Replaced helium with hydrogen in weather balloons, reducing costs by approximately 90%
- Successfully validated immersion liquid cooling technology (with server, CPU, and coolant manufacturers), greatly improving the performance of electronic design automation (EDA) by at
- Completed performance and endurance validation of fluorinated liquid with many prominent server manufacturers
- Passed ISO 14064-1:2018 Greenhouse Gas Inventory on the organizational level and obtained third-party certification from SGS Taiwan Ltd.
- Lowered electricity intensity lowered by 16.9% in 2022 compared to 2021
- Lowered carbon intensity by 17% in 2022 compared to 2021
- Energy savings totaled 298,036 kWh in 2022, producing energy conservation benefits amounting to NT\$930 thousand



Low-carbon tech-

nology

Energy management

Welfare and care

06

- The Operations Headquarters/Zhongli 3rd Plant was among the first industry participants to support Taiwan Power Company's new power usage schedule, and made noticeable changes to its power usage to help reduce carbon emissions, saving NT\$210 thousand in electricity expenses
- The 744.51 kW photovoltaic system of Kaohsiung Plant has commenced production and is expected to generate 18,448,369 kWh of green energy over 20 years to reduce 9,390 tonnes of CO2 emissions
- Kaohsiung Benzhou Plant took part in Taiwan Power Company's electricity supply coordination
- Energy management officers from various plant sites were called to evaluate flexible load shedding solutions for the virtual power plant
- Pro-active efforts were taken to plan energy improvement solutions for the vacuum furnace
- Birth & child care subsidy, amounting to NT\$1.03 million
- Children's scholarships, exceeding NT\$610 thousand
- Employee health checkup, subsidized more than NT\$1.37 million
- Employee group insurance, subsidized more than NT\$3.57 million
- Employee shareholding trust, the Company subsidized 20%
- Education and training, held 444 training sessions, receiving 3,376 enrollments and delivering 21 training hours per employee; committed more than NT\$540 thousand in training expenses

Note: Electricity intensity (kWh/NT\$ thousand) = power usage (kWh) / standalone revenue (NT\$ thousand); carbon intensity = (Scope 1 + Scope 2) / standalone revenue for the year (NT\$ million)

Enforcement of UN SDGs

Sales planning

Sustainability aspect

Sub-goals

Developed high-quality, reliable,

products and technologies that

support economic development and

humanity's wellbeing, while placing

are fair and affordable to all people

focus on providing channels that

sustainable, and low-carbon

Kaori's actions/highlights in 2022

- Successfully assisted a European heat pump manufacturer in the development of heat pump heaters to replace natural gas boilers for energy transformation
- Successfully assisted a US SOFC manufacturer in the development of 75 kW power-generating equipment, which will commence mass production in 2023
- Purified and recycled 70% of industrial waste hydrogen, eliminating concerns for hydrogen disposal and pressurized transportation and significantly reducing carbon emissions
- Replaced helium with hydrogen in weather balloons, reducing costs by approximately 90%
- Successfully validated immersion liquid cooling technology (with server, CPU, and coolant manufacturers), greatly improving the performance of electronic design automation (EDA) by at least 50%
- Completed performance and endurance validation of fluorinated liquid with many prominent server manufacturers

Operating performance

Compliance

Compliance with environmental protection laws and socioeconomic regulations

- 0 ethics violations
- 0 integrity-related complaints

• Earnings per share of NT\$3.37

• Record-high revenue of NT\$2.844 billion

Innovative R&D

Invest into the development of energy/carbon reduction and green energy solutions, and strive to become a key supplier of lowcarbon technology and circular economy

- Launched the new product Z085D, the market's smallest dualcircuit cross-flow plate heat exchanger, featuring high pressure resistance, small size, environment-friendly coolant, micro channel design, and simplified piping
- Introduced the industry's first CO₂ dual system brazed plate heat exchanger without bolted pressure plate, which can be used in multi-compressor transcritical CO₂ heat pump systems or refrigeration systems for optimal heat supply, cooling, and
- Acquired an invention patent certificate in Taiwan for a "Device and method of disposing and reusing organic waste fluids"



Economic

Sustainability aspect	Sub-goals	Kaori's actions/highlights in 2022		
	Greenhouse gas emissions	Passed ISO 14064-1:2018 Greenhouse Gas Inventory on the organizational level and obtained third-party certification from SGS Taiwan Ltd.		
	Supported the United Nation's	 Lowered carbon intensity by 17% in 2022 compared to 2021 		
Environmen- tal	climate policy and reduce greenhouse gas emissions	 The 744.51 kW photovoltaic system of Kaohsiung Plant has commenced production and is expected to generate 18,448,369 kWh of green energy over 20 years to reduce 9,390 tonnes of CO₂ emissions 		
		 Lowered electricity intensity by 16.9% in 2022 compared to 2021 		
	Energy management Ongoing support for energy conservation projects and development of renewable energy	 Energy savings totaled 298,036 kWh in 2022, producing energy conservation benefits amounting to NT\$930 thousand 		
		 The Operations Headquarters/Zhongli 3rd Plant was among the first industry participants to support Taiwan Power Company's new power usage schedule, and made noticeable changes to its power usage to help reduce carbon emissions, saving NT\$210 thousand in electricity expenses 		
		 Kaohsiung Benzhou Plant took part in Taiwan Power Company's electricity supply coordination program 		
		 Energy management officers from various plant sites were called to evaluate flexible load shedding solutions for the 		

virtual power plant

• Pro-active efforts were taken to plan energy improvement solutions for the vacuum furnace

Sustainability aspect	Sub-goals	Kaori's actions/highlights in 2022		
Social	Child benefits	 Birth & child care subsidy, amounting to NT\$1.03 million Children's scholarships, exceeding NT\$610 thousand 		
	Workplace diversity and equality	 21.3% of managerial roles are female Employed 44 foreign employees, including 1 Korean sales representative, 1 Iranian R&D engineer, and 42 migrant workers 		
	Talent development Offered complete and diverse training options	 Education and training, held 444 training sessions, receiving 3,376 enrollments and delivering 21 training hours per employee; committed more than NT\$540 thousand in training expenses 		
	Workers' rights Complied with national regulations with regards to worker protection and welfare measures	 0 incidents of child labor, worker mistreatment, or human right violations Male-to-female compensation ration of 1 		
	Occupational safety and health Provided a safe workplace and enforcement of occupational safety training	 0 incidents of major occupational hazards 100% participation rate for employee annual health checkups 		
	Charity	Committed NT\$130 thousand to charity		



1.1 About Kaori Heat Treatment

Company Profile

Profile of Kaori Heat Treatment in 2022



Full name of the Compa-

Capital

Kaori Heat Treatment Co., Ltd.



NT\$890 million



Date of establishment October 11, 1970



Employee count

564 (in Taiwan as of December 31,



Main products and technologies Brazed plate heat exchangers, gasket plate heat exchangers, key components for solid oxide fuel cells (SOFCs), immersion server cooling technology, and hydrogen power technology (methanol-based hydrogen/heat generation, power generation, purification of industrial waste hydrogen)

Chairman Hsien-Shou Han



Vice Chairman Hsien-Fu Han



General manager

ger Chih-Hsiung Wu



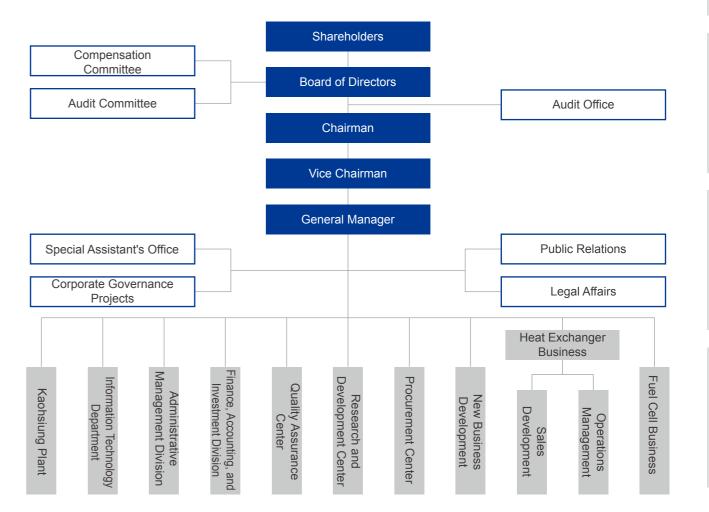
Headquarters No. 5-2, Jilin North Road, Zhongli District, Taoyuan City



Operating locations

Zhongli 1st Plant, Zhongli 2nd Plant, operating headquarters and Zhongli 3rd Plant, Zhongli Ziqiang Plant, Kaohsiung Benzhou Plant, Zhejiang Ningbo Plant

Organization



Department	Responsibilities
Special Assistant's Office	 Oversees the establishment, execution, communication, and coordination of the overall goals of the Company Research, establishment, execution, and tracking of projects and plans
Corporate governance projects	 Provides directors and supervisors with correct, useful, and timely information; assists directors and supervisors with duties and supervisory functions; and bridges communication between the Board of directors, business units, and the competent authority
Legal Affairs	Legal affairs, litigation, and patent management
Public Relations	 Communicates information relating to the organization; responsible for relationship management and the consultation, planning, implementation, and execution of matters relating to the corporate image Executes corporate sustainability projects and discloses annual sustainability performance to stakeholders
Audit Office	 Establishes and revises the internal audit system Examines and evaluates the internal control system; raises suggestions and tracks improvements as necessary
Information Technology Department	 Plans, maintains, controls, and implements the computerized processes within the Company and subsidiaries
Administrative Management Division	 Responsible for personnel and industrial safety management Assists business departments with equipment maintenance Assists business departments with engineering works
Finance, Accounting, and Investment Division	 Responsible for financial, accounting, and tax-related affairs within the Company and subsidiaries Responsible for budgeting, shareholder services, financial planning, and investment planning within the Company and subsidiaries
Quality Assurance Center	 Executes internal and external audits on the quality assurance system and document management Plans and executes certification tasks
Research and Development Center	 Researches and develops new products and new technologies Validates feasibility and plans commercialization of R&D results
Procurement Center	 Responsible for supplier/contractor management and ensuring balance between quality and occupational safety
Fuel Cell Business	Responsible for the production and processing of fuel cell components
Heat Exchanger Business	 Responsible for the production, sale, stamping, research, and development of brazed and gasket plate heat exchangers
New Business Development - Hydrogen Power	Responsible for the design, development, production, and sale of methanol fuel cell systems, methanol-based hydrogen/heat generation, and industrial waste hydrogen purification solutions
New Business Development - Thermal Energy	 Responsible for the research, development, manufacturing, and sale of server liquid cooling systems

Company Profile

Kaori Heat Treatment Co., Ltd. (TWSE code: 8996) was founded in 1970 with the mission to promote green energy. It is the only business in Taiwan that is concurrently involved in the "use", "conservation", and "generation of energy". Today, Kaori has successfully established its expertise in energy conservation and environmental protection, and markets products to more than 70 countries worldwide. The Company's operating headquarters are located at No. 5-2, Jilin North Road, Zhongli District, Taoyuan City; it has a total of 6 production sites: Zhongli 1st Plant, Zhongli 2nd Plant, Zhongli 3rd Plant, Zhongli Zigiang Plant, Kaohsiung Benzhou Plant, and Zhejiang Ningbo Plant. All of the group's core business activities revolve around energy conservation and green energy, with the main products including plate heat exchangers and critical components for stationary Solid Oxide Fuel Cell (SOFCs). Kaori also controls two main technologies, immersion liquid cooling and hydrogen power, that can be used to support the next generation of lowcarbon solutions and drive industry upgrades for conformity with the world's net zero, environmental, and sustainability trends.

Only a sustainable business is able to offer sustainable services. In November 2021, Kaori assembled the "ESG Committee" to enforce sustainability awareness and values and to take charge of sustainability tasks within the Company. Driven by its conviction of "low carbon and emissions, people-centered, and sustainability", the Company not only applies its core technologies, resources, capabilities, and advantages to the environmental, social, and governance aspects, but also takes the initiative to incorporate ESG values into operating procedures, so that the Company may develop sustainable practices in a more systematic and organized manner.

Main Products and Services

Kaori's key products include brazed plate heat exchangers, gasket plate heat exchangers, key components for SOFC fuel cells, immersion cooling tanks and elements, single/two phase immersion cooling tanks, liquid cooling cabinet modules, methanol fuel cell systems, methanol hydrogen generators, methanol-based thermal technology, organic solvent hydrocracking, and industrial waste hydrogen purification solutions.

1970 ► Company was Founded



Proprietary Development of Brazing Plate Heat Exchanger



Fuel Cell Battery Heat 2008 -Exchange Systems Fuel Cell Power **Generation Systems**



Established Energy Management Department Launched Immersion Liquid Cooling Systems



▶ Integrated Energy Solutions

2018

Significant Changes Regarding the Company's Size, Structure, Ownership, or Supply Chain in 2022

- Through integration, coordination, and control of cross-strait resources, the Group was able to manage production, supply chains, markets, and costs more effectively and ultimately improve operating performance.
- Enhanced supply chain management: Kaori has been diversifying its sources of suppliers, increasing
 the percentage of local purchases, promoting sustainability evaluation and governance, and assisting in
 carbon reduction efforts.
- Innovative R&D: Kaori has been exploring new technologies and applications within its area of expertise to support low-carbon and green energy solutions.
- The corporate organization has been optimized for more efficient management, teamwork, and execution.
- Key talent and key personnel training programs are being implemented.
- ESG practices are being enforced with an emphasis on reducing carbon in production and operating activities.

Engagement in Associations

For the pursuit of innovative breakthroughs and competitiveness, Kaori participates in technological conferences organized by peers and actively explores opportunities to cooperate and exchange with counterparts from within and outside the industry. Through diverse interactions and sharing, Kaori hopes to advance its know-how and bring positive changes to the industry as a whole.

Organization	Role (member/director/Chairperson of association)
Taiwan Thermal Management Association	Member
The Taiwan Society for Metal Heat Treatment	Member (founding Chairperson)
Taiwan Association of Machinery Industry	Member
Cloud Computing & IoT Association	Member
Open Compute Project (OCP)	Member
Taiwan Hydrogen & Fuel Cell Partnership	Member

Management Performance



ISO 14001 Environmental Management System certificate



ISO 9001 Quality Management System



Quality Management System Standard for Aviation and Space



ISO 14064-1 Greenhouse Gas Inventory

External Initiatives

Kaori acknowledges and supports the ten principles of the UN Global Compact concerning human rights, worker protection, environmental issues, and anti-bribery. The Company is dedicated to protecting the interests of employees, customers, suppliers, and relevant stakeholders.

Kaori did not suffer any human rights violations, whether in terms of discrimination, child labor, forced labor, freedom of association, or bribery, in 2022.

Key Milestones

Description Year Kaori hosted the "Immersion Cooling Technology Forum", during which it invited guest speakers from the industry, government agencies, and academia to deliver speeches on how low-emission, low-energy, and low-water technologies can be used to help businesses accomplish becoming "carbon neutral" (2022/03) Expansion of the Kaohsiung Plant was completed, adding 7,841 m² of factory premises for a total of 17,269 m² (2022/05) Passed third-party validation for the "ISO 14064-1 Greenhouse Gas Inventory" (2022/08) The 744.51 kW commercial rooftop photovoltaic system installed at the Kaohsiung Plant began production 2022 Convened the first sustainable supply conference (2022/09) Introduced the sustainable supply chain management system (2022/10) Acquired an invention patent certificate in Taiwan for a "Device and method of disposing and reusing organic waste fluids" (2022/11) Plate heat exchangers passed Water Regulations Advisory Scheme (WRAS) certification in the UK (2022/12) The Kaohsiung Plant passed the renewal of "ISO 14001 Environmental Management System" certification (2022/12)

The Kaohsiung Plant was expanded







1.2 Communication With Stakeholders

Communication With Stakeholders in 2022

Stakeholders	Significance for Kaori	Issues of concern	Communication methods and channels	Frequency of communication	Responses and outcomes for 2022
	Customers' recognitions and support are what drive us to grow; Kaori is dedicated to	Customer relations management Supplier sustainability management Product safety management	Business meetings and visits	Unscheduled	
			Quarterly business reviews	Quarterly	
			Product project meetings	Unscheduled	 Passed quality audits of major customers Passed Water Regulations
Customers	meeting customers' needs and expectations and		Customer satisfaction surveys	Q4 each year	Advisory Scheme (WRAS) certification in the UK • Assisted customers in the
	creating maximum value with top- quality products and		E-mails, documents, questionnaires	As needed	development of energy- saving products
. , .	services		Technology conferences	Unscheduled	
			Company website	Unscheduled	
Investors/ shareholders		Compliance Operating performance Corporate governance and commercial behavior guidelines	Annual general meetings	Once a year	Convened one shareholde meeting Convened one investor conference Engaged in face-to-face/ phone communication with nearly 50 investors in Taiw and abroad
			Investor conference	Once a year	
			Annual reports	Regularly	
			Investor mailbox	Unscheduled	
			Market Observation Post System (MOPS)	Unscheduled	
			Telephone	Unscheduled	
	promote awareness performar of government Occupation		Participation in corporate governance evaluation	Once a year	Ranked in the 4th tier (36-
Competent authority		Operating performance Occupational	Correspondence	Unscheduled	50%) of the 2022 Corporate Governance Evaluation
			Telephone	Unscheduled	(TWSE division) No significant occurrences have taken place. Any occurrences of material
			On-site audit	Unscheduled	
		safety and health	Seminars and public hearings	Unscheduled	impact will be disclosed in the annual report in a regula and transparent manner tha complies with laws.

Stakeholders	Significance for Kaori	Issues of concern	Communication methods and channels	Frequency of communication	Responses and outcomes for 2022
			Internal meetings	Monthly	
			Operational meetings	Once a month	-
			COO meetings	Once a week	-
	Driven by the core value of being "people-centered", Kaori attracts the world's best talents by providing them with comprehensive compensation, a robust training system, and a workplace where they can perform to their best potential and maximize their performance	Occupational safety and health Compliance Customer relations management	Labor-management meetings	Quarterly	
			Performance evaluation	Semiannually	
Employees			Training of professional skills	Carried out according to employees' annual training program	Average 21 training hours
			Training for new recruits	Carried out depending on new recruitment	per employee 100% of employees were subjected to performance evaluation 100% participation rate for
			Occupational Safety and Health Committee meetings Employee Welfare Committee meetings	Unscheduled	 employee annual health checkups 100% of employees reporte their personal health state 13 sessions of onsite physician service
			Bulletins	Ad-hoc	(general practitioners and occupational health
			Intranet announcements	Ad-hoc	specialists)
			Employee health checkups	Once a year	
			Reports of personal health states Announcements of disease control measures	Ad-hoc	
			Health knowledge	Unscheduled	
			Employee grievance mailbox	Ad-hoc	
Suppliers	suppliers to assess potential risks and opportunities based on global sustainability trends		Supplier conferences	Unscheduled	Introduced the sustainable supply chain management
			Supplier sustainability performance assessment	Once a year	supply chain management system and identified 57 critical suppliers • Hosted the first sustainable
			Supplier sustainability audits	Unscheduled	supply conference with 100 attendance rate Held 2 sustainability
		-	Sustainable supply conferences	Once a year	 course training sessions for procurement employees Completed sustainability self-assessment document reviews for 30 suppliers Completed sustainability on site audits for 1 supplier

1.3 Analysis and Management of Material Issues

Analysis of Material Issues

Material Issue Identification Procedures and Methodology

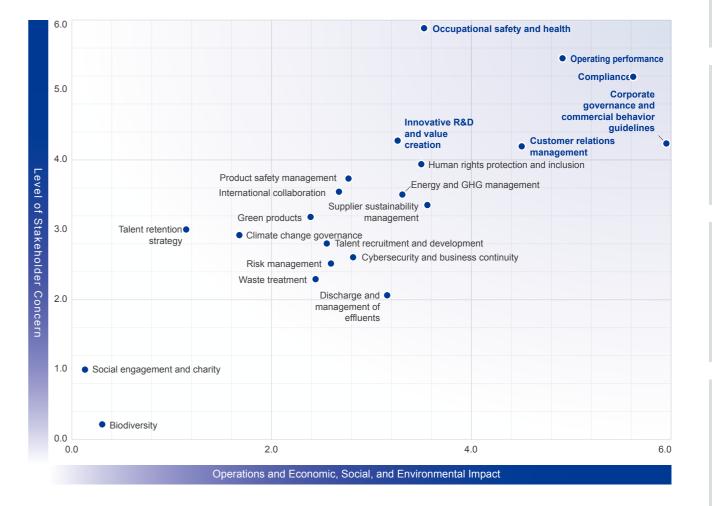
This report has been prepared in accordance with the 2021 GRI Standards issued by the Global Reporting Initiative (GRI). Through the steps of identification, ranking, confirmation, and examination, we were able to analyze material issues, determine the disclosure scope of the report, highlight major sustainability challenges both internal and external, and evaluate sustainability performance on a full scale. We also examine material issues and matters that are relevant to stakeholders each year, and make adjustments depending on the circumstances.

Procedures	Description		
Identification of stakeholders	Kaori follows the AA1000 SES stakeholder engagement principles and identifies stakeholders that are of high relevance to Kaori using the five-aspect assessment approach.		
2. Identification of sustainability issues	Kaori compiles a list of relevant sustainability issues by taking into consideration local and foreign sustainability standards and guidelines and issues that are of concern to sustainability investors and industries. A total of 21 sustainable development-related issues have been shortlisted to help identify material topics for this report.		
3. Ranking by level of concern	Using the materiality principles defined in the 2021 GRI Standards, the Chairman, general manager, and members of Kaori's governance team used questionnaires to establish how each of the 21 sustainability issues affect the Company's operations, and evaluated the positive as well as negative impacts of each sustainability issue from economic, environmental, and social perspectives. The level of concern that Kaori's stakeholders have for the sustainability issues was also surveyed. A total of 117 valid stakeholder identification questionnaires were recovered. Based on the senior management's and stakeholders' responses on the impact of sustainability issues, a matrix analysis was conducted to shortlist material issues that have significant impact.		
4. Confirmation of material issues	To ensure conformity with the GRI Standards and strengthen the association between material issues and core business activities, six issues from the preliminary assessment have been identified that are of "critical concern". The ESG Committee then conducted its own examination and identified "Energy and GHG management" and "Human rights protection and inclusion" as two issues of "secondary concern" after taking into account sustainability trends and development strategies. From the 21 sustainability issues shortlisted for 2022, we have identified eight issues that were of "critical concern" and "secondary concern" and designated them as material issues to be disclosed in this report. Given the nature of each material issue, we have associated them with the relevant GRI standard and made appropriate responses in this report. The material issues identified in 2022 were: "Corporate governance and commercial behavior guidelines", "Compliance", "Operating performance", "Customer relations management", "Occupational safety and health", "Innovative R&D and value creation", "Energy and GHG management", and "Human rights protection and inclusion". Compared to 2021, we have added "Corporate governance and commercial behavior guidelines", "Customer relationship management", and "Human rights protection and inclusion" to the list and removed "Risk management".		
5. Review and approval of material issues	The material issues identified by Kaori's ESG Committee were further examined to ensure that they meet the sustainability context and completeness requirements, and management approaches have been devised for each material issue identified. All of the above conclusions have been reviewed, confirmed, and approved by the Chair of the ESG Committee.		

Questionnaire Recovery Statistics for 2022

Stakeholders	Required number of valid question- naires	Number of valid questionnaires recovered
Customers	20	23
Investors/shareholders	20	24
Competent authority	1	1
Employees	20	21
Suppliers	10	31
Internal senior managers	15	17
Total	86	117

Material Issues Matrix for 2022



Material Issue Impact Evaluation

	Corresponding material			Impact		
Material issue	topic	Significance for Kaori	Aspect of impact	Description of impact	Actual or potential	Timeframe
Corporate governance and commercial behavior	General disclosures	Protection of shareholders' interests, enhancement of the composition and duties of the board of directors, improvement of information transparency, and	■ Positive impact ■ Negative impact	Positive: Sound governance practices and compliance with regulations are favorable to the corporate reputation and may increase investment/financing opportunities	□ Actual ■ Potential	□ Short-term (1 year) ■ Medium-term (1-3 years)
guidelines		implementation of corporate social responsibility guidelines and measures.		Negative: Compromise of corporate credit rating and diminished reputation among external parties and stakeholders		□ Long-term (3-5 years)
Occupionos	General disclosures (Environmental compliance)	Honesty and business integrity are the foundation for corporate sustainability. In addition to complying with laws,	■ Positive impact	Positive: Gain customers' trust and enhance the positive image of the Company	□ Actual	□ Short-term (1 year) ■ Medium-term (1-3
Compliance	General disclosures (Socioeconomic compliance)	Kaori upholds high standard of self-discipline and strives to deliver on shareholders' expectations	■ Negative impact	Negative: Deterioration in the level of compliance and stakeholders' confidence and penalties from the competent authority	■ Potential	years) □ Long-term (3-5 years)
Operating performance	Economic performance	Profit maximization is a goal that Kaori persistently strives for, as it helps strengthen the trust of shareholders,	■ Positive impact	Positive: Gain investors' confidence and support and boost employee morale	■ Actual	Short-term (1 year) Medium-term (1-3
31	·	employees, and value chain participants in the Company and is critical to sustaining future growth	■ Negative impact	Negative: Loss of market share and investors' support	□ Potential	years) □ Long-term (3-5 years)
Customer relations		A business draws competitiveness from its consistent and close working relationships with customers.	■ Positive impact	Positive: Improved customer satisfaction and sales volume	■ Actual	■ Short-term (1 year) □ Medium-term (1-3
management	Customer privacy	Kaori has business continuity and social responsibility management systems in place to strengthen customers' trust	■ Negative impact	Negative: Deteriorated customer satisfaction and sales volume	□ Potential	years) Long-term (3-5 years)
Occupational actaty and	Occupational patety and	Driven by the goal of sustainability, Kaori is fully committed to developing a culture of safety and self-management and	- Desitive impact	Positive: Earn customers' trust, improve social image, promote unity among employees, and increase the retention rate	= Actual	Short-term (1 year)
Occupational safety and health	Occupational safety and health	has set goals to reduce occupational safety and health hazards	■ Positive impact ■ Negative impact	Negative: Influence of sales orders, penalties from the competent authority, injuries to employees or contractors, and production disruptions due to fire/chemical accidents	□ Actual ■ Potential	□ Medium-term (1-3 years) □ Long-term (3-5 years)
Innovative R&D and value	Innovative R&D and	By incorporating the concept of sustainability at the design phase, Kaori introduces new sustainable practices with		Positive: Improvements in product technology raise competitiveness, revenue, and customers' trust	□ Actual	□ Short-term (1 year) ■ Medium-term (1-3
creation	value creation	innovation and reduces the environmental impact of its products	■ Negative impact	Negative: Deterioration in product technology results in a loss of competitiveness and market share	■ Potential	years) □ Long-term (3-5 years)
Energy and GHG	F	Kaori actively introduces energy conservation and carbon reduction measures to reduce overall carbon footprints,	■ Positive impact	Positive: Lowered pollution to the environment, strengthened corporate image, and improved customer satisfaction	□ Actual	□ Short-term (1 year) ■ Medium-term (1-3
management	Emission from energy	increase competitiveness, and ultimately realize sustainable development	■ Negative impact			years) Long-term (3-5 years)
Human rights protection and	General disclosures	By focusing on people, Kaori takes actions to enforce	■ Positive impact	Positive: Improved employee satisfaction, lowered attrition rate, strengthened corporate image, conformed with customers' expectations, and stronger employee unity	□ Actual	□ Short-term (1 year) ■ Medium-term (1-3
inclusion	Diversity and equal opportunity	employees' human rights and diversity within the workplace	■ Negative impact	Negative: Violations that lead to penalties or even disruptions of operations; damage to corporate reputation; illegal violations at the workplace	_ □ Actual ■ Potential	■ Medium-term (1-3 years) □ Long-term (3-5 years)

Responses and Management Policy and Measures for Material Issues (short-term: within 1 year; medium-term: 1-3 years; long-term: 3-5 years)

Material issue	Responses and management policy and measures for material issues	Qualitative/quantitative goals and attainment for 2022	Short-/medium-/long-term goals	Resources committed by Kaori to the material issue (e.g., finance, personnel)	Grievance channels established for the material issue and other available actions (e.g., processes and projects)
Corporate governance and commercial behavior guidelines	1. Ensure open and transparent disclosure of operational information, uphold business integrity, and shape a compliance culture 2. Comply with laws and legal requirements; actively support corporate governance and sustainable growth 3. Enhance communication with stakeholders and commit to meeting stakeholders' expectations about sustainable growth	 Kaori initiated a corporate governance evaluation improvement program in 2022 that increased the Company's ranking to the 4th tier, representing an improvement over 2021 The "ESG Committee" was assembled in December 2021 A "corporate governance officer" was appointed by the Board of directors in November 2021 to oversee corporate governance-related matters The Information Technology Department has been designated as the unit responsible for cybersecurity; it collectively oversees cybersecurity and the establishment, execution, risk management, and compliance audit of protection policies Kaori has completed the 2022 performance evaluation for the Board of directors and functional committees Kaori was invited to take part in various corporate governance evaluations, such as S&P Global; the indicators used in various evaluations have been incorporated into corporate governance planning Kaori has been publishing annual reports in both Chinese and English since June 2022 to make information available to foreign institutional investors and for better transparency 	Short-term: Organize a diverse range of courses for directors and senior managers; enforce the Board diversity policy; improve the quality of decisions made and empower directors Medium-term: 1. Create non-mandatory committees 2. Create a dedicated unit for promoting business integrity 3. Establish an intellectual property management plan Long-term: 1. Board diversity 2. Director succession plan 3. Board assessment (once every three years by an external institution) 4. Directors' and managers' performance evaluation and association with compensation	A corporate governance officer has been assigned to oversee corporate governance-related matters, including assistance with compliance and improvement of information transparency	 Kaori has a spokesperson, acting spokesperson, and contact person for investor relations in place to handle shareholders' suggestions or disputes; communication with stakeholders is reported regularly to the Board of directors Arrangements are made to have the chief internal auditor communicate with independent directors and present reports on internal audits during Board meetings; audit plans for the subsequent year are approved at the end of each year
Compliance	Kaori closely monitors changes in environmental/socioeconomic laws and consults legal advisors regularly; adjustments are made to operating procedures and internal policies to ensure compliance with legal requirements	The Kaohsiung Plant passed assessment for the renewal of ISO 14001 Environmental Management System certification for the third year, and no violations of environmental regulation were reported There were no violations of socioeconomic regulations	Short-term: Introduce and obtain ISO 45001 Occupational Health and Safety Management System certification Medium-term: Plan for total adoption of the ISO 14001 management system Long-term: Expand the scope of environmental protection management to help suppliers and contractors improve safety and health performance	 Engage legal advisors Assign relevant personnel to participate in external training courses to familiarize them with regulations and policies Courses will also be arranged whenever employees require further knowledge on work- related laws 	 Retain relevant data and records Encourage employees to learn more about new laws and to participate in training courses when necessary Arrange education and training
Operating performance	Kaori has devised short-term, medium- term, and long-term sustainability strategies that are relevant to the economic performance, environmental protection, and social engagement aspects of the Company's operations	 Kaori reported a record-high revenue of NT\$2.844 billion and earnings per share of NT\$3.37 in 2022 Automated production lines were introduced into plants for improved production efficiency 	Short-term: 1. Enhance supply chain management 2. Refine production procedures 3. Innovate product design capabilities Medium-term: 1. Integrate, coordinate, and control resources across plant sites for more effective management of production, supply chains, markets, and costs 2. Actively search for new plant premises for expansion 3. Plan for key talent: including talent for the electromechanical integration of automated equipment, production management, industrial engineering, and quality assurance Long-term: Strategic integration and medium-/long-term planning	Kaori manages and optimizes business performance through annual planning, performance tracking, internal communication, and external resource integration. At least 10% of the annual revenue is committed to ensure the attainment of short-, medium-, and long-term goals.	Weekly business department COO meetings are held to set and review operational goals Monthly business department meetings are held to review operating performance and inventory management
Customer relations management	Kaori adopts a "customer-centric" business approach and maintains strong relationships with customers in order to learn their needs and make appropriate adjustments. The Company also cooperates in customers' audits and makes improvements where necessary to ensure that customers' needs are satisfied, which in turn enables profit maximization and mutual benefit.	Customer satisfaction surveys: maximum score of 5 1.1 Plate heat exchanger: 4.04 1.2 Fuel Cell Business: 4.20 1.3 New Business Development - Hydrogen Power: 4.82 No complaints concerning violations of customers' privacy or confidential information Passed quality audits of major customers Passed Water Regulations Advisory Scheme (WRAS) certification in the UK	Short-term: 1. Total improvement of customers' satisfaction; enforce ISO 9001 Quality Management System 2. Introduce ISO 27000 Information Security Management System certification Medium-term: 1. Assist customers to enhance their competitiveness 2. Maintain long-lasting relationships with customers Long-term: Implement an organizational structure and management system that create value	For prominent customers, arrange special meetings that facilitate coordination between the procurement, R&D, production management, quality management, and manufacturing departments.	 Business meetings Quarterly business review meetings Product quality improvement meetings Customer product development meetings Provide professional training courses that are relevant to employees' duties

Material issue	Responses and management policy and measures for material issues	Qualitative/quantitative goals and attainment for 2022	Short-/medium-/long-term goals	Resources committed by Kaori to the material issue (e.g., finance, personnel)	Grievance channels established for the material issue and other available actions (e.g., processes and projects)
Occupational safety and health	To promote and execute safety and health-related tasks with an emphasis on respect for life, discipline, full participation, and persistent improvements	 0 major occupational accidents <5 industrial accidents 0 high-risk operation hazards/accidents involving contractors 	Short-term: 1. Further improve occupational safety and health performance and keep the number of industrial accidents below 5. (Excluding traffic accidents) 2. Introduce the ISO 45001 Occupational Health and Safety Management System. Medium-/long-term: Expand the scope of safety and health management to help suppliers and contractors improve safety and health performance	Enforce occupational hazard and safety education for employees	 Bulletins: available at the common areas of each plant site; announcements are posted for about two weeks Worker Safety and Health Committee: discusses worker safety and health issues, including discussion of improvement measures to areas of weakness and review of safety and health facilities and equipment Environmental safety and health topics are addressed during monthly general assemblies
Innovative R&D and value creation	Invest into the development of energy/ carbon reduction and green energy solutions, and strive to become a key supplier of low-carbon technology and circular economy	 Acquired an invention patent certificate in Taiwan for a "Device and method of disposing and reusing organic waste fluids" Kaori's 3-in-1 plate heat exchanger for high capacity refrigerant air dryers has completed technological and pressure resistance certification Clean energy study involving use of ammonia as hydrogen fuel carrier As a server parts supplier, the Company completed performance and endurance validation for fluorinated liquid Development of immersion liquid cooling products 	Short-term: 1. Establish a reward policy for patent applications 2. Invest in R&D talent Medium-term: 1. Gather information on customers' product emphasis and market trends 2. Enhance industry-academia collaboration Long-term: Strategic integration and medium-/long-term planning	The sales team is actively engaging clients engaged in manufacturing for development and implementation	Kaori discusses product specifications with customers using video conference and e-mail and makes samples to be tested and validated by customers
Energy and GHG management	Kaori evaluates environmental impact throughout the entirety of its operations. The Company is dedicated to reducing pollutants generated from the value chain and making optimal use of resources; each plant site has an energy management officer and implements its own power conservation measures	 Passed ISO 14064-1 Greenhouse Gas Inventory and Validation Carbon intensity was down by 17% compared to 2021 Energy savings totaled 298,036 kWh, producing energy conservation benefits amounting to NT\$930,000 Plant sites averaged a power conservation rate of 1% per year Reduced waste by 1%: Kaori recycles and reuses 100% of its protective materials and containers The Kaohsiung Plant used 13% less gasoline and diesel compared to the previous year 	Short-term: 1. Continue increasing energy efficiency and replacing energy-intensive equipment 2. Set annual power conservation targets Medium-term: Implementation of solar power system Long-term: 1. Implementation of a UPS system 2. Energy storage system	Assemble energy management teams at all plant sites; construct a 744.51 kW commercial rooftop photovoltaic system at the Kaohsiung Plant	Annual energy management reports Energy conservation project tracking meetings
Human rights protection and inclusion	Kaori maintains interaction with employees and continues to provide them with a caring work environment supported by complete training and a transparent retention system that enforces the Company's human rights protection philosophy	No violations against human rights occurred in 2022 Organized communication meetings between the management team and migrant workers	Short-term: 1. Devise human rights protection policies and management solutions based on international human rights conventions 2. Ensure proper labeling of the work environment and translate work handbooks 3. Improve the dining environments in all plant sites Medium-term: 1. Enforce human rights policies and management solutions 2. Increase the percentage of female employees or ethnic minorities Long-term: Maintain a multi-lingual and diversified work environment	Head of plant site, human resources unit, interpreters for migrant workers	 Labor-management conference policy Labor-management meetings, once every 3 months Grievance mailbox Official website







2.1 Corporate Governance

Kaori has always prided itself for having adopted an accountable and transparent corporate governance framework. The Company holds the conviction that a strong Board of directors provides the foundation for sustainable growth. To enforce these values, the Company has implemented the Corporate Governance Code of Conduct and the Business Integrity Code of Conduct throughout the organization. Through the implementation of governance principles and policies, the Company hopes to develop a culture of integrity, enforce accountability in corporate governance, and empower the Board of directors to the best interest of all stakeholders.

Functionality of the Board of Directors

Kaori has established its Board of directors system using standards that are more stringent than what the laws require. The Board of directors serves as the ultimate governance body of the Company; its main responsibilities are to supervise and strengthen the management, devise operating plans, establish key policies, and make decisions on major investments.

Board of Directors Nomination and Election Procedures

Carried out according to the Company's "Directors Election Policy".

- Director election is held during shareholders' meetings
- All shareholders of adequate capacity within the Company are eligible to be elected as the Company's directors
- Election of the Company's directors shall proceed using the candidate nomination system, where shareholders will elect from a list of director candidates using the cumulative voting system. The shareholder account number printed on the ballot shall be used as the identifier for registered votes. Each share is vested with voting rights equal to the number of directors to be elected. These voting rights may be concentrated on a single candidate or spread across multiple candidates.
- Candidates who receive the highest number of votes are assigned the role of director, until the number of
 director seats mentioned in the Articles of Incorporation are fully filled. If two or more candidates receive
 the same number of votes, thereby resulting in more electees than the number of seats available, the
 candidates who receive an equal number of votes shall draw for the remaining seats available. The Chair
 will draw on behalf of those who are absent during the meeting.

The Chairman is elected by the Board of directors. The Board has functional committees such as the Compensation Committee and the Audit Committee assembled under it to support its duties. Internally, the general manager devises business plans and coordinates departments for execution depending on current market circumstances and the competitive landscape. The roles of Chairman and general manager are not undertaken by the same person.

The Board has nine directors (including three independent directors) who are elected to serve a three-year term. The Board convenes meetings at least once a quarter; a total of five Board meetings were held in 2022, in which Board members had an average attendance rate of 100%. Kaori has rules in place to ensure that independent directors are selected from diverse professional backgrounds and that they individually possess the adequate knowledge, insight, and commercial judgment needed to carry out their duties independently. Three of the nine Board members are independent directors: Fan-Hsiung Chen (Emeritus Professor of Tatung University Department of Materials Engineering), Hsiang-Wen Hung (Consultant of Li Mei Jia Investment Co., Ltd.), and Chun-Ying Wu (Director of Commercial Development of YuanTsun Plastic Co., Ltd.). Independent directors currently represent one-third of the Board.

20	22	Age Distribution of Members of the Governance Body			
20	22	30 and below	31-50	51 and above	Subtotal
	Female	0	0	0	0
Gender	Male	0	2	7	9
	Subtotal	0	2	7	9

Honor and integrity

Execution of Board of Directors' Meetings

The Board of directors convenes meetings on a regular and irregular basis. The general manager is responsible for issues concerning economic performance and management, and briefs the Chairman or the Board of directors either regularly or irregularly depending on the materiality of the issue in question. The purpose of the meeting is to review business performance and discuss ESG issues as well as major concerns including economic, environmental, and social impacts and risks and opportunities associated with business activities. A responsible unit will be designated for each of the issues discussed during meeting and tasked with the responsibility of making follow-up reports in the next meeting.

Major Resolutions of the Board of Directors in 2022

Date	Resolution
2022.01.21	 Proposal to apply for credit limit and engage financial institutions for credit-related matters out of operational requirements Passed the company-wide year-end and performance bonuses for 2021 Passed the managers' year-end and performance bonuses for 2021 Passed the Company's 2022 budget Passed the amendments to the "Corporate Social Responsibility Code of Conduct" Passed the amendments to the "Corporate Governance Code of Conduct"
2022.03.25	 Proposal to apply for credit limit and engage financial institutions for credit-related matters out of operational requirements Passed the 2021 business report and financial statements Passed the 2021 earnings appropriation Passed the employee and director remuneration for 2021 Passed the issuance of the 2021 "Declaration of the Internal Control System" Passed the details concerning the 2022 annual general meeting Passed the independence and appropriateness assessments for the Company's financial statement auditors Passed the amendments to the Company's "Internal Control System" Passed the amendments to the Company's "Articles of Incorporation" Passed the amendments to the Company's "Shareholders' Meeting Rules" Passed the Company's "Asset Acquisition and Disposal Procedures" Passed the amendments to the Company's "Corporate Governance Code of Conduct"
2022.05.06	 Passed the 2022 Q1 financial statements Passed the greenhouse gas inventory and validation timelines for the Company
2022.08.05	 Proposal to apply for credit limit and engage financial institutions for credit-related matters out of operational requirements Passed the 2022 Q2 financial statements Passed the employee and director remuneration for 2021
2022.11.04	 Proposal to apply for credit limit and engage financial institutions for credit-related matters out of operational requirements Passed the 2022 Q3 financial statements Passed the 2023 audit plan Passed the amendments to the Company's "Board of Directors' Meeting Rules" Passed the amendments to the Company's "Material Insider Information Handling Procedures"

Board Performance Evaluation Procedures and Frequency

The Company has established a "Board Performance Evaluation Policy" and discloses assessment outcomes in its annual report. Evaluation of the Board of directors is conducted regularly at least once a year by way of internal self-assessment, in which directors are asked to perform assessments on several aspects such as functionality and culture of the Board and functional committees, management of internal/external relationships, and individual performance. The Board meeting organizer then consolidates the outcomes and reports them in a Board of directors' meeting along with proposed improvements. The 2022 Board of directors and functional committee performance evaluation has been completed, and the results indicate "Excellent performance from the Board of directors and functional committees".

Education of Board Members

To support the Board of directors with its duties, Kaori arranges to have its directors undergo training from time to time on economic, environmental, and social issues that are relevant to Kaori's operations. Through the publications and courses issued/organized by relevant associations, directors are given the resources they need to obtain new knowledge and expand professional capacity. Feedback collected from independent directors during the annual self-assessment is used to improve the content of external reports. Kaori organizes directors' training courses based on the needs of independent directors and emphases of the annual development strategy. Directors were encouraged to participate in the courses organized by the Taiwan Corporate Governance Association in 2022. Under the leadership of a trustworthy and experienced Board of directors, Kaori is confident about the success of its path to sustainability.

Directors' Attendance in Board Meetings and Training Progress

Designation	Name	Gender	Current main role	Board meeting attendance rate	Courses taken in 2022
Chairman	Hsien-Shou Han	Male	Chairman of the Company	100%	Mindset and strategies in periods of inflation Implementation of corporate governance and controlled foreign corporation system
Vice Chairman	Hsien-Fu Han	Male	Vice Chairman of the Company	100%	Mindset and strategies in periods of inflation Implementation of corporate governance and controlled foreign corporation system
	Chih-Hsiung Wu	Male	General Manager of the Company	100%	Mindset and strategies in periods of inflation Implementation of corporate governance and controlled foreign corporation system
Director	Chun-Liang Chen	Male	LPI Precision Inc. Vice General Manager of the Corporate Affairs Division	100%	Mindset and strategies in periods of inflation Business Integrity Code of Conduct and Avoidance of Violation by Directors/ Supervisors
	Hung-Hsing Huang	Male	International Bills Finance Corporation Investment Manager	100%	Mindset and strategies in periods of inflation Implementation of corporate governance and controlled foreign corporation system
	Hsin-Wu Wang	Male	Vice General Manager of the Company	100%	Mindset and strategies in periods of inflation Implementation of corporate governance and controlled foreign corporation system
	Fan-Hsiung Chen	Male	Emeritus Professor of Department of Materials Engineering, Tatung University	100%	Mindset and strategies in periods of inflation Implementation of corporate governance and controlled foreign corporation system
Independent Director	Hsiang-Wen Hung	Male	Consultant of Li Mei Jia Investment Co., Ltd.	100%	Mindset and strategies in periods of inflation Implementation of corporate governance and controlled foreign corporation system
	Chun-Ying Wu	Male	Director of Commercial Development, Yuan Tsun Plastic Co., Ltd.	100%	Mindset and strategies in periods of inflation Implementation of corporate governance and controlled foreign corporation system

Note: For details on directors, please see Chapter Three. 2. Corporate Governance Report - Background information of directors, supervisors, the general manager, vice general managers, assistant managers, and heads of various departments and branches of the 2022 annual report.

Corporate Governance Practices and Future Plans

The Company has established and disclosed its own Corporate Governance Code of Conduct in accordance with the "Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies" and is committed to enforcing a sound corporate governance philosophy and practices throughout the organization. During the meeting held in November 2021, the Board of directors passed the resolution to appoint one corporate governance officer and made short-, medium-, and long-term plans to enforce sound governance practices. The Company will continue making amendments to relevant policies, enhancing information transparency, and empowering the Board of directors in ways that support sound corporate governance. Kaori initiated a corporate governance evaluation improvement program in 2022 that increased the Company's ranking to the 4th tier (36-50%), representing an improvement over 2021.

Functional Committee

The Company has always been transparent about its operations and valued shareholders' interests. We believe that sound corporate governance is possible only with a strong and efficient Board of directors. This is why the Board of directors has assembled and delegated part of its authority to functional committees such as the Audit Committee and the Compensation Committee, whose responsibilities are to assist the Board of directors with supervisory duties. All committees have had their charters approved by the Board of directors, and the chief of each committee makes regular reports to the Board regarding activities and resolutions. The Audit Committee and Compensation Committee consist entirely of independent directors.

Audit Committee

The Audit Committee assists the Board of directors by supervising the quality of internal practices such as accounting, auditing, financial reporting, and financial controlling. Outcomes of assessments are raised for discussion by the Board of directors. The Audit Committee consists entirely of independent directors and was assembled directly under the Board of directors following the approval of Audit Committee Charter. The committee has one member serving as the convener and at least one member who possesses accounting or financial expertise. The Audit Committee convenes meetings at least once a quarter; a total of five meetings were held in 2022.

Kaori has also established channels to facilitate communication between the Audit Committee and CPAs and the chief internal auditor. The CPAs make irregular reports to the Board of directors on a number of issues including the Company's financial position, financial and operating performance of overseas subsidiaries, and audit findings concerning internal control. The CPAs also communicate with the Company on major adjustments to accounting entries and how regulatory changes affect accounting practices. The Company's audited consolidated financial statements and CPAs' independent auditor's report are reviewed by the Audit Committee. The chief internal auditor makes regular reports to the Board of directors concerning the execution of internal audits and regular follow-ups on improvement measures.

Functionality of the Audit Committee

1. Attendance rate in 2022:

Name of committee mem- ber	Meetings held	No. of in-person attendanc- es	Attendance %
Fan-Hsiung Chen	5	5	100%
Hsiang-Wen Hung	5	5	100%
Chun-Ying Wu	5	5	100%

- 2. Communication between independent directors and internal/external auditors
 - (1) Communication with CPAs:

Time	Venue	Matters communicated	Outcome
		 Explanation of the 2022 corporate governance evaluation indicators (2.15 and 2.30) Report on the professional training of audit personnel in 2022 	Opinions exchanged
	3F, No. 43, Section 1, Zhongxiao West	2023 audit planCorrection of internal control defects in 2022 up until August	No objections
2022.11.04	Road, Taipei City (Cosmos Hotel Taipei)	 Explanation of the key audit focus of the consolidated financial statements and recent regulatory updates ESG timeline: Kaori discloses the carbon inventory according to the FSC's ESG guidelines; given the size of Kaori's share capital, the Company is currently ahead of schedule The FSC requires a cybersecurity officer and cybersecurity personnel to be assigned before the end of 2023 	Opinions exchanged

(2) Meetings held in 2022:

Date	Motion details and resolution	Any objections or reservations expressed by members of the audit committee, whether on-record or in writing	Audit committee's suggestions that are rejected or amended by the Board of Directors
2022.01.21	 Passed the amendments to the "Corporate Social Responsibility Code of Conduct" Passed the amendments to the "Corporate Governance Code of Conduct" 	None	None
2022.03.25	 Passed the 2021 business report and financial statements Passed the 2021 earnings appropriation Passed the issuance of the 2021 "Declaration of the Internal Control System" Passed the independence and appropriateness assessments of the Company's CPAs Passed the amendments to the Company's "Internal Control System" Passed the Company's "Asset Acquisition and Disposal Procedures" Passed the amendments to the Company's "Corporate Governance Code of Conduct" 	None	None
2022.05.06	Passed the 2022 Q1 financial statements	None	None
2022.08.05	Passed the 2022 Q2 financial statements	None	None
2022.11.04	Passed the 2022 Q3 financial statements	None	None

Compensation Committee

Kaori has complied with the requirements of the "Regulations Governing the Appointment and Exercise of Powers by the Remuneration Committee of a Company Whose Stock is Listed on the Taiwan Stock Exchange or the Taipei Exchange" by having the Board of directors approve a Compensation Committee Organizational Charter and assembling a Compensation Committee. More than half of the Compensation Committee members are independent directors. The committee exercises the duty of care as a prudent manager to establish and regularly review policies, systems, standards, and procedures concerning directors' and managers' performance evaluation as well as compensation. The committee has authority over the assessment of directors' and managers' compensation and raises proposals for discussion by the Board of directors. The committee held a total of three meetings in 2022; all motions discussed were of general nature and did not concern major issues.

Compensation Policy

Directors' individual compensations are disclosed in Section Three. Compensation paid to directors, supervisors, the general manager, and vice presidents in the last year.

With regards to independent directors' compensation, the Board of directors is authorized under Article 20-1 of the Articles of Incorporation to set an amount of up to NT\$1 million and determine the standards for monthly payment per person. Payment of directors' remuneration is linked to corporate profit and performance; according to Article 28 of the Articles of Incorporation, no more than 5% of profit concluded in a year is appropriated for directors' remuneration.

A "Performance Bonus Policy" has been established to provide incentives for senior managers to pursue growth and profit targets while paying attention to the Company's long-term competitiveness and continuity.

Functionality of the Compensation Committee

1. Attendance rate in 2022:

Name of committee mem- ber	Meetings held	No. of in-person attendanc- es	Attendance %
Fan-Hsiung Chen	3	3	100%
Hsiang-Wen Hung	3	3	100%
Chun-Ying Wu	3	3	100%

2. Meetings held in 2022:

Date	Motion details and resolution	Any objections or reservations expressed by members of the compensation committee, whether on-record or in writing	Compensation committee's suggestions that are rejected or amended by the Board of Directors
2022.01.21	 Passed the company-wide year-end and performance bonuses for 2021 Passed the managers' year-end and performance bonuses for 2021 	None	None
2022.03.25	Passed the employee and director remuneration for 2021	None	None
2022.08.05	Passed the employee and director remuneration for 2021	None	None

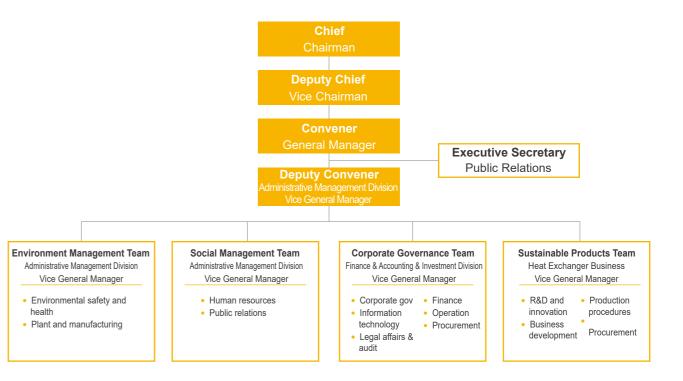
ESG Committee

Headed by the Chairman, the committee not only outlines Kaori's ESG visions and long-term strategies, but also coordinates with senior managers from different fields to interact with customers, government agencies, and members of society on four aspects, namely environmental management, social management, corporate governance, and sustainable products. By increasing the level of transparency, the committee contributes to the fulfillment of sustainable responsibility throughout the organization. Kaori envisions itself as an ethical and responsible business and is committed to fulfilling its social and environmental responsibilities as a corporate citizen while maximizing profit performance. At Kaori, we embrace sustainability as a source of inspiration and competitiveness.

The ESG Committee held a total of 35 meetings in 2022 to discuss project execution progress, changes in domestic and foreign laws, and issues concerning CBAM. Furthermore, Kaori observed the "Sustainability Development Roadmap for TWSE/TPEx-Listed Companies" and managed to complete a greenhouse gas inventory and obtain third-party verification at the parent company level ahead of schedule in August 2022. Progress is reported to the Board of directors on a quarterly basis, and a total of three reports were made in 2022. Plans for greenhouse gas inventory and validation at the subsidiary level will be presented for resolution during the Board of directors' meeting scheduled for the first quarter of 2023.

With regards to stakeholder communication, Kaori follows the AA1000 SES stakeholder engagement principles and identifies stakeholders that are of high relevance to Kaori using the five-aspect assessment approach. The Company has implemented open and effective communication channels on the Stakeholders section of its website (https://www.kaori.com.tw/tw/modules/investors/stakeholder)

Kaori encountered no major abnormalities relating to stakeholder communication in 2022.



2.2 Operating Performance

Sustainability is one aspect that businesses have to commit attention to given the highly competitive environment today. For this reason, Kaori constantly examines its strategies and plans and makes adjustments where appropriate to align with sustainable development goals. The Company remains dedicated to its core business activities and pays particular attention to product quality as well as workplace health and safety as a way to uphold the Company's brand reputation. Despite the fact that COVID-19 has wreaked havoc on the global economy for two years since 2020, Kaori still managed to deliver strong results in 2022 owing to its professional team and management, and reported NT\$2.844 billion in revenue and earnings per share of NT\$3.37 for the year. See the financial statements or the latest annual report for the financial data of the Company.

Financial Information

Unit: NT\$ million

Item/year	2020	2021	2022
Operating revenue	2,076	2,231	2,844
Gross profit	528	594	786
Operating expenses	358	363	439
Operating profit	170	230	346
Non-operating income and expenses	16	35	44
Pre-tax profit (loss)	155	196	390
Net income (loss)	113	149	301

2022 Performance and Future Prospects



- 1. Improve production procedures and enhance product
- 2. Expand the portfolio of profitable products
- global market share
- 1. Kori continues to commit R&D resources to the development of new products and technologies to support the production capacity of new products
- 3. Expand the distribution and sales network and increase 2. Products for special industry applications are being developed for entry into niche markets
 - 3. Kaori continues to increase brand visibility through overseas exhibitions and social networks and strives to collaborate with foreign equipment manufacturers and major distributors

- 1. Enforce sustainable supply chain governance, relationship management, and resilience enhancement measures to ensure the timeliness and stability of supply
- 2. Expand the distribution and sales network for heat exchangers, and diversify business activities and the categories of steel materials sold to increase global market share
- 3. Strengthen customer relations, improve the value chain, and strive for mutual growth
- 4. Engage in strategic integrations and make medium/long-term plans to cooperate with world-class steel makers through joint ventures, thereby expanding overseas business



- 1. Enhance supplier management
- 2. Vertically integrate factories in China to increase production capacity
- 3. Develop heat pump-exclusive products for a full-scale launch

- 1. Kaori continues to search for potential suppliers and enforce supply chain integration
- 2. Streamlining of production management processes: improved production efficiency and production utilization; maintenance of high quality of products
- 3. New industry exposure, overseas market expansion, optimized inventory structure, and coordinated production

- 1. Invest business resources in key industries such as heat pumps, new energy, and data equipment
- 2. Ongoing development of products needed by new industries
- 3. Invest in new production equipment; expand production capacity and lower production cost



1. Support international customers in the promotion of solid oxide fuel cells (SOFCs); provide production services featuring advanced tungsten inert gas (TIG)

2. Contribute R&D capacity by taking part in customers' new product development and assisting in the energy transformation of major industries

welding technology for key components

- 1. Parts for 2,025 fuel cell reactors were shipped during
- 2. Core reactor parts for applications including hydrogen power, biofuel (reuse of march gas), ships, and electrolysis were shipped during the year

- 1. Implementation of six main operating strategies: cost reduction, timely delivery, quality excellence, leading innovation, persistent improvement, and production expansion
- 2. The three action plans:
 - (1) Production expansion: recruit talent, expand plant premises, acquire new vacuum furnace production equipment, and speed up certification of continuous furnace production procedures
 - (2) Optimization and streamlining of production management: plan semi-automated production processes, optimize component production procedures, and optimize production scheduling
 - (3) Business continuity management: develop responses for volatility of raw material prices, implement supplier management, refine production procedures, reduce inventory turnover days, and recycle packaging materials



New Business Development - Hydrogen Power

1. Develop hydrogen power technologies in response to carbon tax and end users' demand for carbon neutrality

- 2. Apply hydrogen production technology in diverse markets in response to the global movement toward net zero emission
- 3. Patent viable technologies

- 1. Kaori has developed technologies for waste hydrogen recycling, ammonia cracking and hydro power, and CO₂ solidification
- 2. Methanol hydrogen generators (30, 5, and 2.5 m³) were shipped during the year for applications such as weather stations, industrial hydrogen production, and hydrogen fuel stations
- 3. Acquired an invention patent certificate in Taiwan for a "Device and method of disposing and reusing organic waste fluids" (2022/11)

- 1. Goal: develop consistent, efficient, and low-cost hydrogen production, hydrogen purification/recycling, carbon capture, and hydrogen power technologies and products for industrial application
- 2. Strategy: develop the technologies and products needed by customers based on existing knowledge on the design and manufacturing of high-temperature reactors and system integration capabilities



New Business Development - Thermal Energy

Strategy

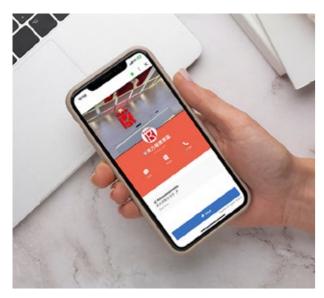
- As a server parts supplier, obtain performance and endurance validation for fluorinated liquid
- 2. Development of immersion liquid cooling products
- 1. Completed in 2022 Q4
- Completed planning of the development schedule for standard products

Future Prospects

- 1. Obtain server validation and performance and endurance validation for insulating oil
- 2. Obtain CE&UL certification and commence mass production of standard immersion liquid cooling products

Impact of COVID-19 and Response

COVID-19 has changed the landscape of the global economy in an unprecedented and profound way. Judging by the severity of the impact and how the world has adapted in the post-pandemic era, it is essential for Kaori to adopt a more robust business continuity model featuring semi-automated production and a higher level of digital transformation that conforms with future trends.



perating locations

- (1) Adopted quarantine measures that were more stringent than government standards and provided employees with leaves that were more favorable than what the government required.
- (2) Supported the government's disease control policy with work segregation arrangements for minimal contact; any confirmed infection would trigger antigen rapid tests to be conducted on all local employees; employees were encouraged to be vaccinated to lower the infection rate.
- (3) Depending on the severity of the disease, the Company suspended customer and supplier visits and held meetings using telephone or video conference instead.
- (4) Workers were divided into teams and produced in a segregated manner; nevertheless, they produced according to schedule and delivered goods to customers on time.
- (5) A "Kaori Health Section" was created on the social network account to provide updates on disease control measures and to be used as a reporting platform for infected persons.

Products and Services

- (1) Kaori diversifies its sources of suppliers and increases the percentage of local purchases to minimize risks of shortages in imported materials.
- (2) Kaori engages several transportation and logistics partners simultaneously to diversify risks of uncertainty and potential costs.
- (3) Responses for the volatility of raw material prices have been developed, and the Company actively monitors price
- (4) More attention is being paid to customers' needs and the supply of raw materials, while actions are being taken to help customers plan production and delivery schedules over the long term.

2.3 Business Integrity

Kaori has implemented a business integrity policy with the Board of directors' approval and developed its own accounting policies and internal control system to enforce business integrity. Internal auditors have been assigned to audit compliance on a regular basis. Kaori has clearly stated its core values of innovation, quality, responsibility, and honor in external communications and established business integrity policies that all directors, supervisors, senior managers, employees, and the controller must obey when carrying out their duties. The Company has established the "Business Integrity Code of Conduct", "Business Integrity Procedures and Behavioral Guidelines", "Ethical Conduct Guidelines", "Investor Relationship Management Policy", and "Risk Management Policy" in accordance with the "Ethical Corporate Management Best Practice Principles for TWSE/TPEx Listed Companies".

The Company has designated the Special Assistant's Office as the unit responsible for the amendment, execution, interpretation, and consultation of the procedures and behavioral guidelines, as well as the supervision of regulatory reporting and filing works. The Special Assistant's Office operates under the supervision of the Audit Office, which is an independent unit created directly under the Board of directors. The Audit Office conducts regular audits on business integrity and compliance and is responsible for monitoring internal operations and presenting audit reports to the Board of directors.

The Company convenes "monthly general assemblies" to convey the importance of avoiding dishonest conduct in all business activities. Employees are also encouraged to undergo internal and external training on a regular basis. Kaori encountered no financial losses from lawsuits relating to bribery or corruption in 2022. It received one report on breach of integrity and ethics that resulted in no material impact. The incident has been handled according to internal policies with preventive measures taken.

Building an Integrity Culture

Kaori upholds "innovation, quality, responsibility, and honor" and recognizes integrity as the core of its corporate culture. By implementing a set of ethical behavior guidelines, the Company enforces values such as fair trade, avoidance of improper gains, protection of business secrets, human rights, and compliance in all aspects of business operations. The Company has implemented rigorous preventive and disciplinary measures to enforce high ethical standards among employees and prevent violations when engaging in business activities. Misconduct reporting channels have also been set up, and any employee that violates the behavioral guidelines will be disciplined according to the Work Rules.

In addition to tracking yearly internal control self-assessments conducted by various departments and making adjustments to policies and laws that affect corporate operations, Kaori also reiterates the importance of corporate governance and ethics to employees from time to time. Employees who commit violation against the law, safety rules/regulations, employment contracts, or commercial ethics will be subject to legal consequences and disciplinary measures. These violations are taken into consideration as part of employees' performance evaluation. No training was organized on this topic in 2022. Plans have been made to have the COO take an "Anti-Bribery Procedures and Communication" course in Q1 2023. In an attempt to build up integrity awareness among employees, Kaori has assigned the human resources department of its Administrative Management Division to plan courses on commercial ethics and key regulations, thereby creating a culture of integrity.

Complete Grievance Systems, Channels, and Investigation Procedures

Kaori upholds integrity in all business activities and prohibits corruption and all forms of fraud. All reports of suspicious activities or violations against ethical behavior guidelines that involve Kaori's employees or any personnel related to the Company are handled in secrecy unless otherwise specified by law, for which the Company will assign relevant departments to investigate in a timely manner. An Investors Section has been created on the corporate website to disclose the contact number and e-mail of service personnel for institutional customers and shareholders and to handle investors' suggestions, queries, and disputes. The Company has open communication channels in place to maintain productive interaction with investors, suppliers, customers, and stakeholders. Interactions with the above-mentioned parties are carried out with the utmost integrity and in conformity with the Company's internal control system and management policy.

Employees are required to report, using the following channels, any violations of laws, policies, or contract terms or any attempts to exploit the vested authority for improper gains against the Company's interests:

 Physical Mailbox
 No. 5-2, Jilin North Road, Zhongli District, Taoyuan City 32030

Kaori Heat Treatment Co., Ltd. - Special Assistant's Office

E-mail csr@kaori.com.tw Website "Integrity - Grievance mailbox".



Misconduct reports are handled by the Special Assistant's Office under the supervision of the Audit Office. Employees who are found to have violated the Company's behavioral or ethical guidelines will be disciplined and instructed to make improvements within a given period of time. Incidents of high severity may be referred to judicial institutions. The Company has zero tolerance for criminal behavior and takes legal action against all violations. Whistleblowers' identities, the information they provide, and subsequent progress are kept strictly confidential so that whistleblowers may communicate with the management free of concern for retaliation, threat, and harassment.

Investigation Procedures:

Misconduct reports that involve general employees are escalated to the heads of departments, whereas misconduct reports that involve directors or senior managers are escalated to the independent directors.

Upon receiving a report, the responsible unit and the head or staff of the appropriate department shall proceed to investigate the facts immediately, and they may seek help from compliance or other departments if necessary.

If the reported misconduct is verified to constitute a violation of the law or the Company's business integrity policy or rules, the violator will be ordered to cease and desist such conduct and subjected to disciplinary action and claims through legal proceedings if necessary to protect the Company's interests and reputation.

Details including the misconduct report, investigation process, and findings must be maintained in written or electronic form and retained for five years. Should any litigation arise in relation to the reported misconduct before expiry of the retention period, the above documents will have to be retained until the litigation is concluded.

For every verified misconduct report, the department concerned is required to examine the internal control system and operating procedures and propose improvement measures to prevent similar occurrences in the future.

The responsible unit shall report to the Board of directors the reported misconduct along with details on how they are handled and the improvement measures undertaken. Violators may also be reported to the competent authority or judicial institutions if necessary.

Enhancement of Integrity Awareness Within the Value Chain

Kaori exerts ESG influence by requiring all suppliers to sign a "Supplementary Anti-Corruption Clause to Procurement Contract" that outlines the integrity principles as well as the environmental, labor, human rights, and occupational safety regulations that suppliers are bound to comply with during production activities. 100% of suppliers have signed the commitment to the clause to date.

Integrity Management Approach

- Incorporating integrity and moral values into the Company's operating strategies and establishing integrity assurance and fraud prevention measures in accordance with laws.
- 2. Implementing measures against dishonest conduct, including standard operating procedures and behavioral guidelines.
- Planning internal organization and duties and implementing checks and balances for business activities that present higher risks of dishonest conduct.
- 4. Coordinating integrity policy awareness and training programs.

Ethical Behavior Guidelines

- 1. Offering and acceptance of bribes.
- 2. Offering of illegal political donations.
- 3. Inappropriate donation or sponsorship.
- 4. Offering or acceptance of inappropriate gifts, treatment or benefits.
- Infringement on business secrets, trademarks, patents, copyrights, and other intellectual property rights.
- 6. Engagement in unfair competition.
- 7. Direct or indirect damage to consumers' or stakeholders' interests, health or safety during research, development, procurement, manufacturing, offering, or sale of products and services.



2.4 Risk Management

Kaori is well-aware of the challenges that risks may pose to business operations. To minimize the influence of the external environment, managers of various business segments within the Company have identified and defined risks that are relevant to operations, so that they can be properly managed to ensure continuity. By taking risk identification, risk assessment, risk management, and risk response measures, Kaori aims to minimize potential risks and even turn them into opportunities. The PDCA cycle has been incorporated into risk management to facilitate real-time corrections and improvements and thereby protect the interests of the Company, employees, shareholders, customers, and suppliers.

Risk Management Process



Risk Identification

Identify potential risks based on internal and external environment analysis.

Risk Assessment

Department employees make quantitative assessments of the identified risks, with weights assigned to the outcome.

Devise risk management strategies based on risk assessment outcome, and develop corresponding responses.

Risk Response

Ongoing **Improvement**

Regular performance tracking and implementation of ongoing improvements.



Risk Analysis Outcome and Response/Management Strategies For 2022

Risk type		Risk description	Management measures
	Interest rate changes	The Company's interest rate risks arise mainly from operation-related liabilities and treasury investments. Interest income and expenses of the Company are mainly affected by fluctuations of TWD and USD interest rates. To minimize interest rate risk, the Company mainly depends on cash receipt from operations and short-/medium-/long-term bank borrowings for working capital requirements. With regards to financial investment, the Company mainly invests in fixed income bond funds or equity funds of high liquidity and strong rating for capital security and marketability.	• The Company actively manages interest rate risks by constantly monitoring market rate movements, gathering interest rate quotes, evaluating borrowing rates, and maintaining positive relationship with banks. We pay particular attention to maintaining good credit records with banks, which entitles us to more privileged borrowing rates. If a financing requirement arises, the Company will evaluate capital requirements and credit history with banks to borrow at a preferential rate. If a financing requirement arises, the Company will undertake short-term or long-term borrowing depending on capital needs and in such a way that minimizes the risks of interest rate fluctuations and funding costs on the Company's operations. With regards to financial investment, the Company mainly invests in fixed income bond funds or equity funds of high liquidity and strong rating for capital security and marketability. However, this hedging practice only mitigates part of the risks and cannot fully eliminate the financial impacts of interest rate fluctuations.
Financial risk	Exchange rate changes	• More than 80% the Company's raw material purchases are paid in currencies other than TWD, such as USD and EUR. Considering that the Company exports most of its products and that more than 80% of its revenue is also denominated in USD and EUR, much of the risk exposure is mitigated through natural hedging, but a significant change in exchange rates may still have an adverse impact on the Company's financial position. However, since the Company prohibits the trading of financial derivatives, exchange rate risks can only be mitigated by adjusting the level of USD and EUR denominated assets and liabilities.	 The Company prohibits the use of derivatives (including currency forwards) and can therefore only mitigate exchange risks of recognized or highly probable transactions by adjusting the level of USD and EUR denominated assets and liabilities; this practice cannot fully eliminate exchange rate risks. The financial department constantly monitors exchange rate information and maintains close communication with our main banking partners to keep track of exchange rate fluctuations, so that managers are adequately informed of exchange rate changes to make adjustments at appropriate times.
	Inflation, deflation, and market volatility	Sudden changes in the market's expectation of inflation and deflation tend to have significant impact on the global economy. Hyperinflation and deflation both have the potential to undermine market efficiency and affect investment decisions. Market volatility caused by these economic changes may substantially affect the Company's operating costs, but the overall impact on operations is still considered manageable. For this reason, the Company does not foresee any significant changes to its products and services due to the expectation of inflation or deflation or market volatility.	 Kaori pays constant attention to changes in raw material prices and takes responses immediately as soon as a trend is identified. Due to the Company's ability to transfer risks for the types of products and services offered, the Company does not foresee any significant changes due to the expectation of inflation or deflation or market volatility.
	Financing risk	 The Company has been incorporated for more than 50 years, and except for the small losses suffered one year after the 2008 global financial crisis, the Company reports profit each year and maintains strong relationships with banking partners. Kaori is currently a publicly-listed company and has minimal financing risks due to unrestricted access to direct finance. 	 The Company evaluates the amount of capital it needs to sustain daily operations, support capacity expansion, and maintain external investments based on annual plans and budgets.
	Trading of derivatives	• None	Prohibited

Kaori supports the government's sustainability



Change of key policies and laws

Industry

and market

changes

caused by

changes in

technology

Risk of

technological

and industrial

changes

Legal risk

policies, such as the FSC's 2020 "Corporate Governance 3.0 - Sustainability Roadmap", the 2022 "Sustainability Development Roadmap for TWSE/TPEx-Listed companies", the National Development Council's "Taiwan 2050 Net Zero Roadmap and Strategy", and the Environmental Protection Administration's "Greenhouse Gas Reduction and Management Act (Climate Change Response Act)", and continues adopting practices that enhance the transparency of sustainability information and promote sustainability in line with

- A broad diversity of legal awareness campaigns is being organized to promote employees' compliance
- Information such as compliance requirements guidelines, tips, and FAQs has been made available on the Intranet, whereas educational documents are sent via e-mail to keep employees up-to-date on the
- Training courses of different attributes: The Company offers training courses on important regulations and policies: each course is tailored to the needs and duties of different employees to ensure proper understanding of applicable regulations and policies.
- Kaori invites outside experts to host seminars or assigns employees to participate in external training courses from time to time to keep up-to-date on regulatory developments.

Heat Exchanger Business

global trends.

 Stainless steel and copper are the main raw materials used in heat exchangers; they account for a high percentage of costs. There are competing products that are made with new. lightweight materials and sold at low prices, and the Company has no similar offering to match the competition.

Fuel Cell Business

• In light of the severity of climate change, the global commitment to reducing carbon emissions, and customers' demand for SOFC products. Kaori has undertaken a pro-active transformation and directed resources into the research and development of hydrogen fuel cells and electrolysis equipment.

New Business Development - Hydrogen Power

The rising trend of net zero emissions combined with improvements in electrolysis conversion efficiency and advancements in renewable energy technologies in recent years has increased the demand for energy integration solutions. However, the hydrogen market still exhibits the following challenges:

- Low economic yield and conversion efficiency
- · High cost of storing and transporting hydrogen, and wide variety of technologies used in the hydrogen supply chain.

New Business Development - Thermal Energy

- Changes in the global energy supply have driven up electricity prices, and the government's ESG policy causes major businesses to become more mindful of energy efficiency.
- The conventional air cooling approach yields low energy efficiency, and a significant amount of energy is used to power air conditioning systems in data centers. For this reason, data center operators have begun exploring cooling solutions that consume less power

Heat Exchanger Business

- Keep track of competing products and evaluate whether they are comparable or superior to the Company's offerings
- Conduct market research and develop products

Fuel Cell Business

 Increase R&D capacity, support customers' transformations, and cooperate with customers on the development of hydrogen power fuel cells, electrolytic hydrogen generators, as well as mass production procedures to help customers gain an early advantage in the green energy industry.

New Business Development - Hydrogen Power

- Green hydrogen does not offer cost advantage in the absence of subsidies or carbon taxes and is not expected to replace gray hydrogen until 2050. For this reason. Kaori will continue working with customers to develop blue hydrogen technology.
- Develop green ammonia as a fuel or carrier.
- Develop green hydrogen/green power supply stations that are low-cost, small or medium size, and distributed

New Business Development - Thermal Energy

- Develop less energy-intensive cooling solutions to accommodate industry changes.
- Join major industry associations and form alliances with data center and server operators.

Plant expansion risks Business risk Raw material procurement

 The Company uses large volumes of raw materials in its production, such as stainless steel plates, special steel plates, copper foil, and stainless steel bars. The surge in nickel prices in March 2022 forced suppliers to suspend quotations.

Heat Exchanger Business

implement

Fuel Cell Business

slowed down product demand.

• Changes in heat pump policies in Europe have

experiences for quick expansion or to adopt cost-

effective production methods that take time to

• The Company runs the risk of suffering losses if it

and overhead incurred on plant expansion.

New Business Development - Hydrogen Power

New Business Development - Thermal Energy

Increased operating costs

Increased operating costs

cannot generate additional revenue from increased

customer demand to cover additional depreciation

Dilemma whether to replicate successful

• The COVID-19 pandemic caused port congestions around the world, which led to temporary delays in shipment and delivery.

Some raw materials are overly concentrated in few suppliers, which poses the risk of being unable to source adequate supplies. The Company may encounter a decline in revenue and profit if it is unable to source the needed materials in a timely manner or if it cannot transfer the additional costs associated with rising raw material prices directly to customers. For this reason, the Company diversifies its purchases to secure access to raw materials and to minimize risks of concentrated purchase

Heat Exchanger Business

- · Sign long-term contracts with customers, and confirm volume forecasts with customers on a regular basis.
- For short-term expansion projects, the Company will take into consideration the potential of market saturation and adopt next-generation technologies.

Fuel Cell Business

- Kaori confirms with customers and obtains reliable estimates on the potential increases in demand for
- Kaori avoids dependency on the demand of any single major customer and takes into consideration the demand of other external as well as internal customers to maximize utilization of equipment and personnel capacity.

New Business Development - Hydrogen Power

Develop validation sites at the customer end.

New Business Development - Thermal Energy

- Adopt the use of multi-functional and multi-purpose production equipment in response to the fastchanging industry.
- Progressively develop automated and semiautomated production lines.

different regions.

- Diversity supply sources and secure the supply of raw materials by making purchases from suppliers in
- Sign long-term supply contracts with suppliers to control cost, given the volatility of raw material
- Make localized purchases of raw material where possible to shorten the supply chain and minimize risk of shipment delay caused by logistics shortage.



 The Company has to expand production capacity persistently in order to support the growth of its operations. However, COVID-19 has created such a global chip shortage that equipment suppliers have been forced to postpone production timelines and now have difficulties delivering equipment and related services in a consistent manner

- Delivery timelines for relevant production equipment have been extended to 12 months, and the Company is currently exploring opportunities to work with local equipment suppliers.
- Equipment maintenance is just as important as acquiring new equipment, which is why the Company has assembled a dedicated repair team to ensure that its equipment functions properly to generate revenue



Supply chain

material risk

Losses due to disasters

- The Company's production activities are susceptible to risks such as occupational hazards. fires, leakage of pressurized gas, natural disasters and leakage of chemicals, all of which are potentially harmful to employees' safety and health as well as the integrity of equipment and plant facilities. For this reason. Kaori has created an exhaustive list of possible hazards and developed emergency response guidelines for each hazard.
- Due to the threat of COVID-19, Kaori has devised disease control plans to protect employees and ensure the continuity of business operations: control measures such as environment sanitation. contact tracing, contractor management, plant worker management, and employee health surveys were carried out depending on the severity of the pandemic.
- Hazard identification and risk assessment/ management procedures
- **Emergency Response Protocol**
- Pressurized Gas Leakage Response Guidelines
- Earthquake Response Guidelines
- Typhoon Response Guidelines
- Fire and Explosion Response Guidelines
- Chemicals Leakage Prevention and Response Guidelines
- Biological Hazard Prevention Plan



Hazard risk

Risk type Risk description Management measurement meas

- The Company's website, Internet portal, and employees' access to the Internet or the mail system all present vulnerabilities for computer viruses and Trojan horses, which may cause disruptions to the Company's operations.
- Employees may be unaware of their obligations to protect internal business secrets acquired through work, which results in business secrets being handed to other employees that do not have authorized access. This occurrence is especially likely among the staff of the Company's managers and insiders, and any leaks of information currently under development may result in losses of competitiveness, missed opportunities to surpass competitors, or even manipulation of share prices, posing compliance risks
- Kaori introduced a new cybersecurity officer position in 2022, whose responsibilities are to evaluate cybersecurity requirements and allocate resources with an administrative and governance mindset.
- Kaori has made plans to obtain certification for ISO 27000 Information Security Management System, expecting to execute the project in 2023 and pass certification in the 4th quarter.
 - To avoid network attacks, the Information Technology Department not only outsources management of the Company's website to an external service provider in coordination with the Public Relations Department, but has also adopted the use of a new-generation firewall to replace the conventional firewall and antivirus combination. The Information Technology Department even introduced the latest XDR hack prevention technology, implemented triple backups for critical data (local/cloud/off-site), developed an HA infrastructure for important systems, and added a hyper-converged infrastructure (HCI) on top of the conventional VM environment to create a dual infrastructure that ensures the ability to recover from disasters.
 - Kaori implements cybersecurity control from three different perspectives: system, policy, and management. Despite the fact that the Information Technology Department has implemented robust systems and policies and is actively promoting awareness, it is up to the management to take effective disciplinary actions to ensure compliance from employees and thereby deter any potential losses of business secrets.



and crisis

management

Cybersecurity

risk

Corporate reputation corporate image

 Risk of damage to business reputation due to certain decisions or commercial practices Risk of damage to business reputation due to certain decisions or commercial practices

Internal Audit and Correction

Network

attacks and

protection

of business

secrets

Kaori has implemented internal controls in accordance with the "Regulations Governing Establishment of Internal Control Systems by Public Companies" and the competent authority's instructions, and taken steps to ensure that they remain effective at supporting the operational goals of the Company. Annual audit plans and special audits are organized as requested by the competent authority or the Board of directors or as suggested by the management.

The Company has an Audit Office that carries out audit tasks according to the annual audit plan and on specific issues. Findings are compiled into official reports and distributed to the respective auditees. The Audit Office executed audit tasks according to Kaori's audit plan and issued a total of 61 audit reports in 2022 (subsidiaries in China were audited by way of document review due to COVID-19). These reports were distributed to the respective auditees. All audit reports were presented to the Audit Committee for review and reported in Board of directors' meetings. For any defects or abnormalities discovered during the audit, the auditee will be instructed to rectify or make improvement plans, and progress will be tracked on a quarterly basis until improvements have been made.

2.5 Compliance

Compliance is the most fundamental requirement in business management. For the protection of stakeholders' interests and for the continuity of business operations, Kaori has established internal policies in accordance with the laws of relevant authorities and enforced them to serve as guidance for business decisions. Kaori did not commit any anti-competitive, anti-trust, or monopolistic practices in 2022, nor did it suffer financial losses due to violations or lawsuits concerning anti-competitive behavior.

Management System

- 1. Corporate governance aspect
 - Functional committees have been assembled to supervise financial performance and internal
 control within the Company. Furthermore, corporate governance guidelines and Board performance
 assessments have been implemented to enhance the Board's supervisory role over important decisions,
 their ability to offer professional opinions, and increase the level of information transparency.
 - Kaori observes TWSE's corporate governance evaluation and corporate governance best practices as guidelines for improving corporate culture and compliance.

2. Personnel aspect

- Development of integrity rules and regular audit Ethics and compliance are the foundation of business integrity; at Kaori, we enforce these values through policy implementation, self-evaluation, whistleblowing, and whistleblower protection. The management leads by example and requests every employee to observe laws and internal policies that are relevant to their duties. Compliance is examined through yearly internal control self-assessment; the outcomes are reviewed by the Audit Office. The Audit Office executed audit tasks according to Kaori's audit plan and issued a total of 61 audit reports in 2022 (subsidiaries in China were audited by way of document review due to COVID-19). Kaori has established a set of guidelines that employees must obey when conducting business activities. All employees are required to duly comply with the "Business Integrity Code of Conduct" regardless of their role, rank, or location and to compete for business in an
- Regular education and training
 Kaori provides employees with a variety of training options based on the types of duties assumed
 to keep them informed about business ethics and compliance requirements. Orientation, classroom
 courses, internal seminars, and external training are some examples of the training offered.

honest, fair, and compliant manner that supports Kaori's corporate culture.

3. Environmental safety and health aspect

Policies and measurements have been implemented to ensure that all business activities, products, and services comply with occupational safety, health, and environmental regulations. Meanwhile, performance of the environmental management system is monitored so that effective corrective and preventive measures can be taken in a timely manner.

Assessment System

Kaori has several effective controls in place to ensure compliance. The Company checks new regulatory amendments on a monthly basis and conducts compliance audits on all plant sites on a yearly basis. Kaori did not commit any violations of safety, health, environmental protection, or fire safety rules in 2022. There were, however, two incidents where the Company had violated or failed to comply with applicable laws, for which it was fined a sum of NT\$236,333. Both incidents have been improved upon according to the instructions of the competent authority. Aside from the above, no major compensations or losses were reported in annual internal audits.

Item No.	Description	Amount of loss (NT\$)
1	Land-related dispute: Removal of superficies located on the odd lot land in the rear part of Zhongli 1st Plant at No. 204-2, Zhonggong Section, Zhongli District	131,996
2	Violation of building regulations: With regards to the expansion of the Kaohsiung Plant, Kaori was found to have demolished or constructed factory facilities without prior approval, without timely reporting/inspection, and without change of design schematics, and was fined as a result	104,337

 14 45



3.1 Innovative R&D

Kaori prides itself for being able to persistently innovate and support the industry's transition to net zero



The Four Main Business Segments

Enforcement of UN SDGs



Heat Exchanger Business Unit









Fuel Cell Business Unit









Hydrogen Energy Business Unit









Energy Managemert Business Unit











Sustainable Products



Brazed Plate Heat Exchangers

Featuring wave patterns stamped on 304 or 316 stainless steel materials, Kaori's brazed plate heat exchangers are made through multi-point brazing of stainless steel with copper or nickel in a vacuum furnace, thereby allowing them to operate under extreme pressure in a very small chassis while making them especially suitable for refrigeration and air conditioning systems. Meanwhile, the wave patterns stack on top of each other to form conduits that create a turbulent flow of the coolant even at low flow speeds. This enables the heat exchangers to achieve high thermal conduction efficiency in a small heat transfer area. In systems that require high efficiency, the use of brazed plate heat exchangers may further increase the coefficient of performance (COP) and reduce the overall space needed to install the modules, which in turns lessens the need for fluorinated greenhouse gases (F-GHG) and is a more efficient and environmentfriendly design.

Industry Applications

Air conditioning

Transportation

Semiconductors and electronics

Medical equipment

- Refrigeration
- Energy and utilities

Machinery

Technological Highlights in Environmental Sustainability

B series heat exchangers reduce coolant requirements and increase the COP of heat pumps and chillers.

Data centers

- Double-wall plate heat exchangers have been developed for use as heat pumps in European and American homes. Using a patented plate design, a special drainage is created within the heat exchanger so that any internal leakage of fluid on one side can be drained directly without mixing with fluid on the other side, which may damage important components or pose harm to the user. The product also offers multiple advantages such as low coolant requirement, high COP, and suitability for next-generation environment-friendly coolants and natural coolants.
- Kaori's 3-in-1 plate heat exchanger for high capacity refrigerant air dryer has completed technological and pressure resistance certification, and has the potential to save energy and reduce coolant requirements in high capacity units.



Gasket Plate Heat Exchangers

Offers better heat conduction in a smaller size compared to spiral type or shell and tube type heat exchangers. With proper design, gasket plate heat exchangers can be more efficient at transferring heat and easier to clean, maintain, disassemble, and install while retaining the potential for capacity expansion.

Industry Applications

- Petrochemical plants Oil refineries Steel Power generation Metal processing
 - Food Refrigeration
- Freight
- Semiconductors

Technological Highlights in Environmental Sustainability

Energy efficiency and conservation:

The special pattern design enables a high level of turbulent flow even at low flow speeds, therefore delivering a number of advantages including efficient heat transfer, reusability, and a longer lifespan of at least 10 years.

Heat recycling:

Data centers, for example, may use a combination of immersion liquid cooling and gasket plate heat exchangers to recycle heat and increase overall energy efficiency by more than 40%.



Critical SOFC Components High-efficiency Fuel Cell Recuperators

Heat-resistant nickel-base superalloys are assembled using Kaori's proprietary brazing technology in conjunction with advanced TIG welding to allow heat transfer under high temperatures. The material achieves a thermal cycle efficiency of 60%. This demonstration of exceptional brazing and TIG welding techniques has gained recognition from green manufacturers worldwide and made Kaori a long-term strategic partner.

Industry Applications

A solid oxide fuel cell (SOFC) is a form of distributed energy system which involves generating and supplying power directly to local users based on their requirements. Kaori's solutions offer a high degree of versatility that make them suitable for medium- and small-size energy conversion systems of various purposes. Ships, for example, may install fuel cell power systems to replace diesel power.

Technological Highlights in Environmental Sustainability

- Advantages such as high performance, stability, low emissions, zero pollution, waterless, and long lifespan have been validated through commercial operation by reputable customers for more than 10 years.
- Thermal reactors for high capacity SOFCs increase power generation efficiency to 65% from the previous generation.
- Thermal reactors have been developed for hydrogen generation and energy storage.
- Application in vessels helps the shipping industry achieve energy and carbon reduction goals.



Reformed Methanol/Hydrogen PSA System

The hydrogen generator takes in a methanol solution and applies a process called pressure swing absorption (PSA) to purify and generate high-purity hydrogen (99.999%). It is widely used in industrial processes that make use of the gases generated, such as hydrogen reduction furnaces, heat treatment furnaces, semiconductors, and optoelectronics.

- 30-4.5 m³/hour
- Generates hydrogen at low pressure (<5 kg/cm²) with rigorous safety protection
- Uses methanol (<59%) as the raw material; the hydrogen produced can be used immediately and does not require a hydrogen storage tank
- Replaces pressurized hydrogen canisters; equipment investments can be recovered in as little as six months



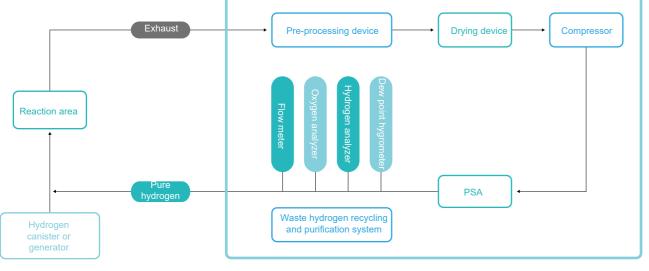
Reformed Methanol/Proton Exchange Membrane (Pem) Fuel Cell System/Ammonia Fuel Cell (AFC) System

- System size is 30-50% smaller compared to products of equivalent grade
- Energy consumption ≤0.5 kW and noise≤ 65 dB (at 5 kW output)
- CO emission ≤20 ppm (low exhaust; no NOx and SOx)
- Safe and stable: Overall power and thermal efficiency >85%; continuous operation for >72hr
- Applications: Backup power for remote areas or disaster sites; reserve power for critical facilities



Industrial Waste Hydrogen Purification/Recycling System

- Recycling and reuse: eliminates the need to remove hydrogen or transport hydrogen in pressurized form; approximately 70% is recycled, which lowers carbon emissions
- Greatly reduces the need to supply hydrogen through tankers/canisters;
 can be replaced with Kaori's methanol hydrogen generators
- Recovery period of equipment investment is about 2.5 years





Organic Solvent Hydrocracking System

By treating organic solvent waste, hydrogen can be recycled and reused to generate base load power. Waste silicon from semiconductors and solar panels can be processed to produce hydrogen at 99.9% purity; using Kaori's purification system, the level of purity can be increased to 99.999%, which makes the hydrogen usable for industrial and power generation applications.

Industry Applications

- Supports hydrogen-based production procedures or by-product hydrogen: for example, hydrogen reduction furnaces, heat treatment furnaces, semiconductors, optoelectronics, powder metallurgy, metal wires, and steel industries.
- Organic solvent waste fluids of the electronics industry (semiconductors, circuitry, LCD panel, etc.) can be preprocessed and cracked at high temperature to separate hydrogen for power or heat.

Technological Highlights in Environmental Sustainability

 Ammonia cracking and hydro power
 Clean energy research involving the use of ammonia as hydrogen fuel carrier has gained popularity around the world in recent years due to the ease of storage, ease of transportation, and better economic viability of ammonia compared to hydrogen.



Immersion Liquid Cooling System

Kaori's Thermal Energy Business has come up with an immersion liquid cooling system to cool the increasing number of cloud data center servers worldwide. When used in data center servers, immersion liquid cooling system is able to quickly disseminate heat buildup from high performance computing, and when used in conjunction with Kaori's plate heat exchanger, power usage effectiveness (PUE) can be kept below 1.1.

Industry Applications

•Cloud services/5G communication
•Edge computing
•Data centers
•Semiconductor EDA
•Artificial intelligence
•Blockchain
•Cryptocurrency (mining)
•Electric vehicle battery cooling

Technological Highlights in Environmental Sustainability

Power usage effectiveness (PUE) is an internationally accepted measurement for the power efficiency of data centers. PUE is calculated by dividing the "total data center power draw" by the "total IT equipment power draw". A low PUE indicates that the data center requires less power for cooling, which suggests lower power consumption and greater environmental friendliness.

China's first data center with 5A green rating uses single-phase immersion cooling technology with insulated coolant
to achieve high-efficiency cooling without the need for fans, air conditioners, or chillers. The solution reduces power
used in cooling by 70% and lowers the PUE to 1.09.

Strategic Goals for New Products and Technologies



Brazed Plate Heat Exchangers

- For the growing heat pump market, Kaori will introduce asymmetric flow design into different models to support a greater range of heat pump applications, thereby reducing the use of both natural and HFO coolants while increasing equipment COP.
- More attention will be directed to improving the plate pattern design for optimal flow resistance, which increases heat exchange efficiency in less surface to achieve better performance.



Hydrogen Power Clean Energy

- Kaori cooperates with customers on various projects to increase product performance and is committed to promoting *hydrogen power circular economy*, so that customers may realize the energy and carbon reduction potential of SOFCs.
- 2. **Hydrogen application is an important step to reducing carbon**. Kaori hopes to first demonstrate the viability of the technology within the domestic market, and then export whole systems over the medium and long term while placing emphasis on the development of the hydrogen supply chain and potential applications on a global scale to create a new industry altogether.
- 3. Kaori is exploring ways to use hydrogen power for carbon reduction using existing resources and the foundation of the industry. *Attention will be paid to using zero/low-carbon fuel* and scaling the production of green hydrogen and blue hydrogen as means to achieve carbon reduction goals.
- 4. Fuel cells are the mainstream solution of the future. They will grow in popularity in household use and backup power over the short term and make their way into cogeneration over the long term.



Immersion Liquid Cooling Technology

- 1. Engage *critical CPU/GPU partners* in more in-depth collaboration.
- 2. Seek *technology certification* with server manufacturers.

Industry-Academia Partnerships

- Industry-academia collaboration:
 - 1. Kaori cooperates with National Central University and National Yang Ming Chiao Tung University to simulate and optimize the flow field and heat transfer within plate heat exchangers. A simulation model was developed in 2021 based on research data, and simulations on single-phase flow field were completed and validated in 2022. Kaori expects to progress into the simulation and validation of vaporization and condensation in two-phase heat transfer between 2023 and 2024.
 - 2. In 2022, Kaori cooperated with National Yang Ming Chiao Tung University on a study commissioned by the Ministry of Science and Technology titled "Experiment and analysis of two-phase flow data in brazed plate heat exchangers", in which the researchers simulated and validated heat transfer in a two-phase flow setup in an attempt to improve the accuracy of measurements.
 - 3. In 2022, Kaori cooperated with National Central University on the study of boiling heat transfer in hybrid pattern plate heat exchangers, in which the researchers used different methods of flow resistance to increase the evenness of the boil.
 - 4. With regards to the optimization of new coolant systems, Kaori expects to test and determine a segregation design that achieves optimal distribution using different flow resistance in 2023, which will help improve the efficiency of plate heat exchangers.

Professional talent:

Development of liquid CDUs for vertical-type and horizontal-type cloud data server cabinets requires professional knowledge in heat flows, mechanical engineering, and system control. Kaori was able to acquire seven R&D employees possessing the above expertise in 2021, two in heat flows, three in mechanical engineering, and two in system control.

Intensive training:

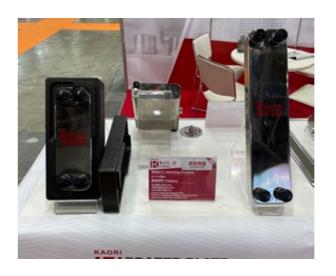
Kaori invites professors from National Yang Ming Chiao Tung University and National Central University to organize professional courses according to product development needs.

Professional associations:

Kaori assigns R&D personnel to take part in forums organized by the Taiwan Thermal Management Association and the Cloud Computing & IoT Association on a regular basis, so that they can keep up-to-date with industry trends and obtain the latest information.

Marketing Campaigns/Product Exhibitions in 2022

2022 HVAC&R Japan (02/01-02/04)





Data Center Low Energy Development Trend - Immersion Cooling Technology Forum (03/18)
 In response to the high energy consumption of data centers, Kaori Heat Treatment (8996) held an
 "Immersion Cooling Technology Forum" today (March 18) at its Zhongli office to discuss how the
 Company's low carbon, low energy, and low water consumption technologies can be used to help
 businesses save power and lower carbon emissions for "carbon neutrality". The event saw hundreds of
 participants comprising industry representatives, government officials, and academic scholars.







▲ Chairman Hsien-Shou Han of Kaori Heat Treatment (5th from the left) invited Chief Shu-Fang Kao of Energy Conservation Team, Bureau of Energy, Ministry of Economic Affairs (4th from the left), and Commissioner Yu-Hsin Kuo of Economic Development, Taoyuan City Government (5th from the right), along with several industry experts and scholars, to unveil the technology forum.

• D Forum 2022 (05/12)





• Chillventa 2022 (10/11-10/13)





• TaipeiPLAS 2022 (09/27-10/01)



• Energy Taiwan 2022 (10/19-10/21)



Data Centre World Asia 2022 (10/12-10/13)





Patent Applications in 2022

Submitted one application and was awarded an invention patent for a "Device and method of disposing and reusing organic waste fluids".



Collaborative Development

Technology Development Procedures

Kaori actively gathers the voices of customers and involves customers in the early stage of product development as a way to continually improve product creativity, design, and technological capacity. These involvements are useful for gaining insights into customers' core requirements, so that the Company can focus its development efforts on solving customers' problems. It has been a key factor to the success of the Company's product and technology development efforts. Customized solutions currently take up the majority of Kaori's development resources. As national policies and industry standards evolve, the Company will be able to introduce standardized product development processes and automated production lines.

Standard product development procedures:



Outcomes of Collaborative Projects in 2022

Plate Heat Exchanger Business

In terms of product applications, the department coordinates with raw material suppliers to develop suitable materials or brazing alloys to meet customers' needs, market requirements, and legal standards. For individual customers, the department designs heat exchangers with exclusive sizes and features, and produces samples that work with customers' form factors before commencing mass production.

Projects developed:

In 2022, the department worked with European heat pump manufacturers to develop the exclusive products B076, B080/B081, and B110 that offer advantages such as low coolant requirement, dual circuit design, and less installation space. The customer has decided to incorporate Kaori's solutions into its next-generation heat pumps.

Future projects:

For fuel cell, residential heating, and water heating applications, the department will direct its R&D focus toward high temperature resistant plate materials and brazing alloys with low ion release and use them to develop high-efficiency heat exchangers.

Fuel Cell Business

By making adjustments according to customers' needs and contributing its own vacuum brazing technology, the department was able to improve the current fuel cell systems for more efficient power generation at lower costs. Adjustments have also been made so that the existing fuel cell systems are readily convertible into cogeneration systems. In the future, the department will continue contributing its own technology and working with suppliers as well as customers to develop products of greater diversity and higher commercial value.

New Business Development - Hydrogen Power

Backed by ten years of technical experience, the department has been successful in the development and production of reforming reactors and catalysts. The department is the ideal partner for customers with respect to hydrogen power due to the fast, high-quality, and cost-effective services it provides. The department also provides additional services such as installation of long-term test stations, performance testing, trial production, and procedure improvements according to the requirements of customers' systems.

Projects developed:

The department completed validation of its first-generation organic solvent hydrocracking system in 2022 and helped customers acquire green power certificates.

- Future projects:
- 1. Kaori has been helping customers plan for the 2.0 version of the organic solvent hydrocracking system and build modularized equipment capable of processing 30 tons of organic solvent a month and chemical oxygen demand in the 1.5 million range, in two 20-foot containers.
- 2. The types of organic solvent waste processed have been increased and the sorting technology has been improved.

New Business Development - Thermal Energy

In a collaboration with a customer, the department contributed its advantages in metal brazing technique, heat exchanger design, and system control, and worked with upstream (metal parts/electronic parts suppliers) and downstream (server/electromechanical integrators) partners to successfully develop an immersion liquid cooling system for low-energy servers in data center applications. This vertical integration and development not only increased overall power efficiency, but also shortened the product validation timeline.

- Projects developed:
- 1. As a server parts supplier, Kaori completed performance and endurance validation in the 4th quarter of 2022 for products featuring fluorinated liquid
- 2. Development of immersion liquid cooling products

Future Development Plans

Plate Heat Exchangers

- Heat exchangers for fuel cell-related applications
- Heat exchangers for fresh water supply
- Heat exchangers for heat pumps
- Electric vehicle battery cooling modules and heat pumps/exchangers

For some of the above projects, the department will work with suppliers to develop materials and brazing alloys, and it will take advantage of the special characteristics of new materials to resolve issues when used in certain industries. For one of the projects above, the department will cooperate with the customer on a special design to improve heat pump efficiency, increase COP, and lower coolant requirements.

Hydrogen Power Clean Energy

- Thermal reactors for high-capacity SOFCs
- Thermal reactors for hydrogen generation
- Development and validation of pre-processing, cracking, and purification systems for hydrogen generation from industrial organic solvent waste
- Clean energy research involving the use of ammonia as hydrogen fuel carrier

Immersion Liquid Cooling Systems

Cooperate with server manufacturers and upstream parts suppliers for product validation

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3.2 Quality Management

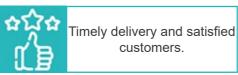
Kaori has developed its own quality management system in accordance with ISO 9001 Quality Management System, and implemented a series of management procedures and operational guidelines to guide quality management practices throughout the Company. Furthermore, Kaori has open communication channels in place to gather customers' opinions, quality feedback, audit findings, etc., for ongoing improvements. The Company will continue listening to customers' voices and adopting total quality management to satisfy customers' needs.

All product business departments of the Company are committed to obtaining and maintaining certification for international quality management systems for all products developed and produced. The Fuel Cell Business passed certification for AS9100D:2016, the latest quality management system standards for the aerospace industry, in February 2022, whereas other business departments all passed certification for ISO 9001:2015, the latest international quality management system standards, in 2020. At Kaori, we make persistent improvements to provide customers with the best quality and most trusted products and services. Kaori remains committed to its customer-centric service philosophy and refrains from all actions that compromise product quality or endanger customers' safety. By making quality a part of our corporate culture and employees' conviction, we strive to become customers' trusted partner and work with customers and suppliers toward sustainability. The Company encountered no product recalls due to safety concerns or otherwise in 2022 and suffered no financial losses from lawsuits concerning product safety.

Quality Policy



Quality excellence at reduced costs.



The Ultimate Guiding Principles on Quality

- Offer safe and reliable products and services in conformity with customers' needs and the requirements of
- Establish preventive controls from a risk perspective to minimize adverse impacts.

control after the occurrence of risk events for business continuity.

 Adopt a process-oriented approach toward improving the effectiveness and efficiency of processes across departments.

Quality Management Procedures

To ensure the quality of products and services offered, Kaori adopts the process-oriented approach of the International Organization for Standardization (ISO) as a way to improve the quality performance of various departments. By implementing the Plan, Do, Check, and Act (PDCA) cycle and setting improvement targets, the Company continues to optimize its processes and enforce preventive control with a risk focus.

- Process-oriented approach: From order taking, production, inspection to shipment, Kaori applies standardized procedures and
- persistently delivers products and services to customers' satisfaction. Ensure that every process is supported with adequate resources and is properly managed and improved
- upon on an ongoing basis. Risk perspective: Adapt to changes in the internal and external environments, minimize probability of decision errors, and prevent possible losses; aim for total anticipation of opportunities and risks, and perform effective damage

Promotion of Quality Awareness

Quality awareness is defined as how the employees, leaders, and managers of a business perceive and act in relation to the quality of their offerings. It is a common language that employees use to communicate in daily work activities, a value that inspires our behavior to the outside world, and a standard by which we measure our performance. By changing how employees perceive the work they do from within, we help them develop proper habits, which in turn contributes to the further strengthening of the quality culture.

Quality is key to the continuity of a business. It requires contribution from all employees and takes persistence in making improvements in order to satisfy customers' needs and accomplish corporate targets. There are also many aspects to quality, and under-performance in any aspect will compromise customer satisfaction and threaten business survival.

The Company holds the conviction that workforce competence is critical to the quality of products and services offered. Through education and training, the Company aims to develop strong quality awareness and consistent quality goals across employees. Kaori organizes a variety of training courses to improve the quality of products and services provided; progress for 2022 is summarized below:

- 100% of new recruits passed general knowledge training
- 100% of employees completed training for ISO 9001, AS 9100, and ISO 14001 quality systems
- 100% of employees completed specialist training; training courses were organized to educate employees on instrument calibration, ionizing radiation protection, legal requirements, etc., and to qualify those that require professional certification.

Quality Assurance

To bring traceability into the products manufactured, Kaori has adopted an enterprise resource planning (ERP) system and a manufacturing execution system (MES) that digitally integrate all processes from material purchase, storage, production, and quality management to financial management. These systems record the details of every production stage and ensure that accurate data can be generated quickly to support Kaori's commitment to quality assurance.

Site Management

- Safety management
- 1. Zero hazard activities: safety rules, safety education, and safety inspection standards have been outlined.
- 2. 5S management:





Separate useful items from useless items, and dispose of useless items.



SEITON

Place useful items neatly and in the appropriate quantity, and label clearly.



SEISO

Clean the workplace and prevent pollution.



SEIKETSU

Implement standards All members of the and rules for the 3S above, and enforce accordingly to deliver develop proper results.



SHITSUKE

organization shall follow rules and habits.

Operations management

- 1. Standardized operations: standard operating procedures.
- 2. Skill training: skill training and evaluation; skill evaluation standards, skill development program, and skill training standards.
- 3. Improvements: A suggestion system has been implemented to encourage improvement plans for accomplishing business goals.

Quality management

- 1. Management during normal circumstances: Quality assurance standards have been implemented for operational staff and managers.
- 2. Responses in the event of abnormal occurrences (whether discovered internally or externally): The Company has standard responses in place to respond to abnormal occurrences of which all employees have been made aware.

Equipment management

Total productive maintenance (TPM): includes equipment inspection standards, inspection charts, inspection cycles, responses to equipment malfunction, and training materials for operators (work commencement checks, inspection standards, training data, etc.).

On-Site Education and Training

- On-site education: Kaori highlights and discusses abnormal issues in daily morning meetings and takes improvement measures and follows up on progress afterwards
- Special-purpose training: abnormal occurrences are analyzed and shared internally as case studies
- Specialist training: instrument calibration, internal audit, pre-brazing preparations, post-brazing test, incoming quality control (IQC), final quality control (FQC), etc.



Quality Improvement Highlights for 2022

Kaori encourages all employees to participate in making persistent improvements and promotes quality awareness as a way to unite and motivate employees. An incentive program called "Quality Improvement Proposal" has been implemented to guide and encourage employees toward innovative thinking. The program invites all employees to contribute new ideas on ways to improve quality and business management, whether in terms of processes, products, or the organization, so that the organization can strive toward excellence and ensure continuity. A total of 28 improvements were proposed in 2022.

Plate Heat Exchanger Business

1. Document digitalization toward the paperless goal

As the businesses grow, the organization finds itself having to handle increasing volumes of trade documents and internal correspondence, which has led to nuisances such as delays in interdepartmental sign-off and business trip approval, build-up of physical documents, time-consuming searching during retrieval, and so on, thereby making document management a pressing matter across all departments. This was why the Plate Heat Exchanger Business made the first attempt to adopt digitalized management of documents, correspondence, and files, and took steps toward accomplishing the paperless goal.

2. Persistent improvement to production procedures and lowering costs
 For small, standardized products, Kaori introduced new production procedures that eliminate the
 need for screws after the products have been pressurized in the vacuum furnace. This reduces the
 weight load and space previously taken up by screw molds, thereby allowing more products to be
 put into the furnace at one time, shortening the operating hours of the vacuum furnace, reducing
 costs, and increasing production capacity.

Fuel Cell Business

Ceramic fiber paper cutter 3.0: a show of insistence on improvements and quality production

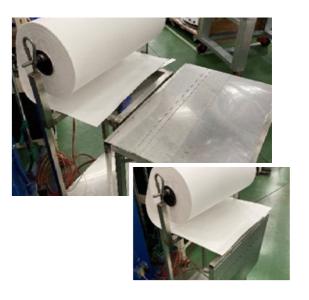
Before improvement

When cutting ceramic fiber paper, it was difficult to keep the roll and the work bench still and aligned throughout the process, and workers were at risk of cutting fingers



- 1. Adopted a foldable workbench design to save space
- 2. The new workbench has a groove, and workers can simply slide the blade along the groove to cut the material
- 3. The length of the cut stays consistent





3.3 Customer Relations Management

Kaori adopts a "customer-centric" business approach and maintains strong relationships with customers in order to learn their needs and make appropriate adjustments. The Company also cooperates in customers' audits and makes improvements where necessary to ensure that customers' needs are satisfied, which in turn enables profit maximization and mutual benefit. We pay particular attention to product quality and aftersales service to achieve the above goals. In terms of marketing and promotion, we comply with relevant regulations and refrain from selling disputable products that do not meet environmental protection standards.

Kaori values every one of its customers. To ensure the quality of service to customers, the Company frequently gathers customers' opinions through satisfaction surveys and makes adjustments accordingly.

Customer Satisfaction Survey Process

We have placed our focus on offering top-quality products and services to key customers and working with their strategic partners to develop high-end, specialized materials. This is why Kaori pays particular attention to customers' satisfaction and organizes satisfaction surveys on product quality, product delivery, service quality, and professionalism in the fourth quarter of each year. A dedicated unit has been assigned to gather and analyze satisfaction scores and present them for discussion during meetings. For aspects that do not meet the required scores, the Company conducts in-depth discussions with customers and has the Quality Assurance Center provide relevant information such as customers' monthly supplier evaluation sheets, complaints, or records of returned goods to help identify the causes of dissatisfaction and verify the survey results.



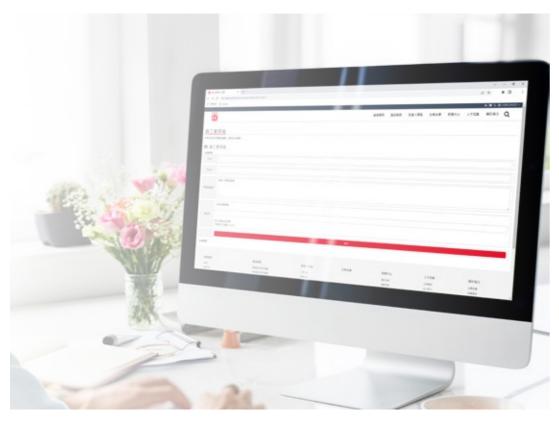












Results of the Customer Satisfaction Survey for 2022

Kaori observes the customer satisfaction clause of ISO 9001 Quality Management System and conducts a customer satisfaction survey in the 4th quarter of each year (to be completed before the end of year) to ensure that data is not skewed due to the timing of the survey. The survey can be carried out via e-mail, phone interview, fax, and other channels, and respondents' responses are recorded in the "Customer Satisfaction Survey Form". The survey questions are designed based on the characteristics of the products offered by the respective business department. Using a scale of 1 to 5, satisfaction is rated with 5 being most satisfactory and 1 being least satisfactory, whereas importance is rated with 5 being most important and 1 being least important. Employees have been instructed to determine accountability immediately for any unsatisfactory response or any score of 2 and lower indicated in the survey. The accountable employees then have to analyze the underlying causes and explore improvements according to the "Company's Correction and Prevention Procedures".

Brazed Plate Heat Exchanger Department

Survey subjects:

Based on the amount of sales accumulated from January to September, the Company shortlists its top 20% customers and picks the top 20 customers to survey.

Survey coverage:

Product quality, delivery timing, service, professionalism, competitiveness

Survey results:

- 1. Questionnaire recovery rate of 96.67%
- 2. Overall average score for 2022 of 4.04
- 3. "Product delivery" was an aspect in which Kaori received a rating of 2 or lower in 2022. The Company has since followed up and analyzed the underlying causes and provided feedback to customers about the improvement measures that have been taken.

Fuel Cell Business

Survey subjects:

Customers ranking top 3 or top 20% in the amount of goods delivered

Survey coverage:

Product quality, product delivery, service quality, professionalism

Survey results:

- 1. Questionnaire recovery rate of 100%
- 2. Average customer satisfaction of 4.2 in 2022
- 3. No aspects rated 2 or lower in 2022

New Business Development - Hydrogen Power

Survey subjects:

Customers ranking top 3 or top 20% in the amount of goods delivered

Survey coverage:

Product quality, product delivery, service quality, professionalism

Survey results:

- 1. Questionnaire recovery rate of 100%
- 2. Average customer satisfaction of 4.82 in 2022
- 3. No aspects rated 2 or lower in 2022

New Business Development - Thermal Energy

The department currently has less than 5 main customers, and it convenes weekly meetings to keep customers up-to-date on project progress. A platform has also been created to facilitate realtime interaction.

Customer Data Confidentiality

Privacy has become an important issue at a time when technology plays a dominant role in our lives. Due to our relationships with business partners, department employees often come into contact with product secrets and customers' personal information. Kaori received no complaints concerning violations of customers' privacy or secrets in 2022. Kaori has restricted access to its document management system by project relevance. For example,

- Only the system administrator may create and modify customer profiles, and sales representatives may
 make requests for creating or changing profiles only after submitting application forms and seeking proper
 approval.
- Documents furnished by customers are managed according to the "Document and Record Management Procedures". Schematics furnished by customers are placed on the server inside department-exclusive folders and made accessible only to authorized personnel.
- Supplies provided by customers are stored in a dedicated warehouse; all placements and withdrawals are controlled using the ERP system and forms.
- Confidentiality agreements are signed as required by customers or the Company. Parties that the
 Company discloses confidential information to for the performance of duties are prohibited from revealing
 such information to others or using it for purposes outside of work. The same applies after employees
 resign.
- The Company values intellectual property rights and is committed to protecting its intellectual properties
 and those of others (including patents, trademarks, copyrights, and business secrets), particularly during
 the transfer of know-how and production experience.

Customer Complaints and Improvements in 2022

The speed at which customers' complaints are addressed is key to raising customers' satisfaction. In addition to implementing customer sales policies and complaint procedures, Kaori also assigns dedicated personnel to maintain communication with customers and to investigate the underlying causes and accountability of all complaints raised. All complaints received are followed up quickly with effective solutions and improvement measures to prevent recurrence. Through productive communication, the Company is able to maintain good customer relations and ensure the quality of products delivered. Furthermore, transparent and efficient consumer grievance channels have been implemented to cater to customers' requirements for the products and services offered.

Customers are able to raise complaints to various departments using the contact number or e-mail disclosed in the Stakeholders section of Kaori's portal. We have made the number customer complaints one of our key performance indicators (KPI). Complaints are analyzed by cause and customer type and raised for discussion during annual management review meetings to serve as reference for next year's quality improvement goals. A total of 14 customer complaints and 11 customer service requests were received in 2022; all of which have been improved upon with preventive measures taken.

3.4 Sustainable Supply Chain Management

As the general public and global partners have become increasingly aware of corporate social responsibilities, they now require suppliers/contractors to exert social influence and act in the interest of social issues, environmental protection, and social responsibilities, in addition to meeting conventional performance measurements such as product quality, technological capacity, delivery, collaboration, and other factors directly associated with service and production. Kaori requires new suppliers/contractors and existing suppliers to comply with social, environmental, economic, and ethical regulations, thereby responding to the public's expectations.

Suppliers are important partners in Kaori's operations, and in order to promote green products, it is especially critical for the Company to manage the supply chain at the source. In addition to quality, delivery, and collaboration, Kaori has also begun assessing suppliers for issues such as worker rights and socioeconomic contributions. By exerting influence over suppliers, the Company hopes to promote the sustainable growth of the entire supply chain and enforce sustainability to the benefit of all parties involved.

Overview of Supply Chain Partners

Kaori had a total of 667 supply chain partners in 2022 and made purchases amounting to NT\$2.225 billion. Of the purchases made, 77.84% were for raw materials, followed by outsourced manufacturing. The percentage of localized purchases (from local suppliers in Taiwan) was reported at 38.57%. Suppliers can be classified into six main categories: sundry services, outsourced manufacturing, raw materials, consumables and spare parts, equipment, and components. The upstream consists of steel mills or customer-designated material suppliers, whereas the downstream consists of small, direct processing plants. Kaori's suppliers include steel mills and foreign providers of advanced technologies and products, all of which are capital-intensive businesses and have imposed high standards on environmental protection, green energy, and public interest. Kaori operates in the midstream of the industry and provides end customers with products that are processed and assembled from the above-mentioned materials.

Major Procurement Incidents in 2022

The price of nickel surged by more than 300% in March alone, forcing raw material suppliers to suspend quotations, which negatively affected the production schedule. In response, Kaori has taken the initiative to sign long-term procurement contracts with local suppliers for enhanced resilience.

For the identification of key suppliers, Kaori first examined the amounts purchased according to the various categories of suppliers and then determined the cutoff point based on supplier count and amount purchased. Using this cutoff point, a total of 57 key suppliers were identified for 2022.

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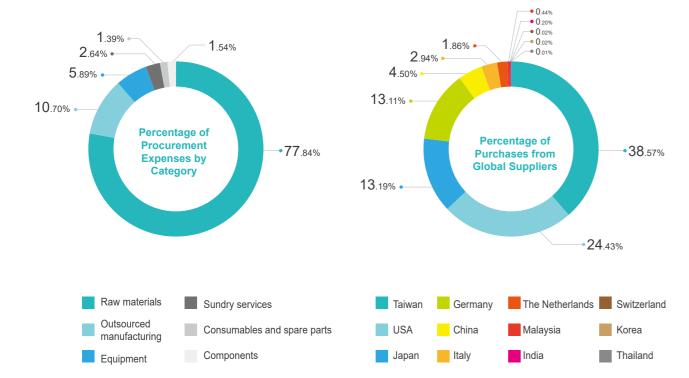
Supplier Regional Distribution and Procurement Percentage

There was no material change compared to 2021

Supplier region	Category	Purchase amount
Taiwan	Raw materials	411,809,857
	Outsourced manufacturing	238,023,181
	Equipment	121,895,818
	Sundry services	58,771,375
	Consumables and spare parts	18,449,298
	Components	9,223,453
	Raw materials	510,538,568
	Components	14,937,979
USA	Consumables and spare parts	12,112,041
	Equipment	6,089,837
	Raw materials	306,355,406
Japan	Equipment	3,092,555
- 1	Consumables and spare parts	83,661

Supplier region	Category	Purchase amount
Germany	Raw materials	288,192,488
	Components	3,459,114
China	Raw materials	93,662,728
	Components	6,403,949
	Equipment	10,521
Italy	Raw materials	65,373,214
The Netherlands	Raw materials	41,362,079
Malaysia	Raw materials	9,837,254
India	Raw materials	4,404,045
Switzerland	Raw materials	521,288
Korea	Consumables and spare parts	366,090
Thailand	Components	218,341

Unit: NT\$



Supplier Management Policy

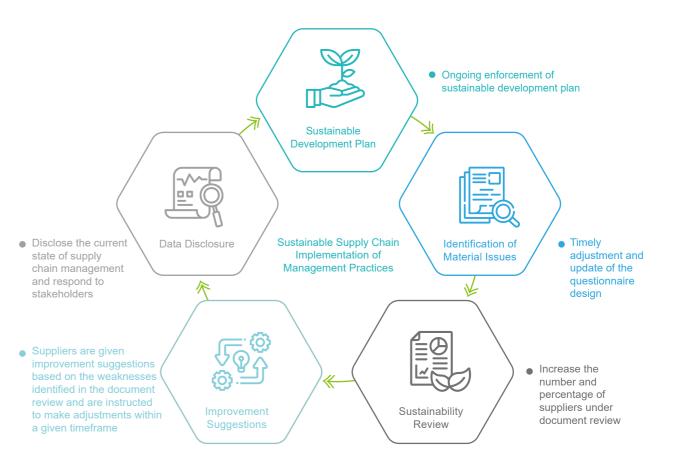
Procurement policy:

Select business partners primarily based on the quality, timeliness, and consistency of goods/services supplied and their willingness to commit to long-term relationships.

Supplier selection system:

Kaori conducts annual supply audits for effective management and maintenance of relationships with qualified suppliers. Suppliers are evaluated on product quality, delivery timing, service, technological background, and the quality management system. Furthermore, Kaori requires suppliers to present quality system certificates issued by independent third parties, and to complete questionnaires on the management of hazardous substances. All raw material suppliers are required to sign a commitment to ethical conduct and anti-bribery. Suppliers are evaluated not only for the prices they offer, but also for their overall contribution to Taiwan as well as their ability to complement the Company's role and position. With the introduction of the sustainable supply chain management system in 2022, Kaori will gradually replace suppliers that are found to be incompetent, thereby creating a more resilient and sustainable supply chain.

Steps of Sustainable Supply Chain Management



Sustainable Supply Chain Management System

Kaori introduced a sustainable supply chain management system in the 4th quarter of 2022 and held a supplier conference in September 2022 to convey its philosophy on sustainable governance and to teach suppliers on the completion of self-assessment questionnaires, which had an attendance rate of 100%. In October, Kaori held two internal training sessions for procurement staff and conducted document review of sustainability self-assessments on 30 suppliers immediately afterwards, including one on-site inspection.

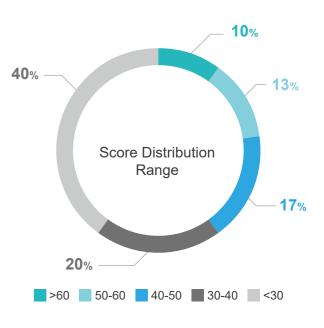
• Implementation of the sustainable supply chain management system After taking a comprehensive inventory of documents used in the procurement system, Kaori added five new documents: "Supplier Sustainability Management Policy", "Supplier Behavior Guidelines", "Supplier Statement on Sustainability Development", "Sustainability Evaluation Sheet for New Suppliers", and "Supplier Sustainability Review and Improvement Suggestion Form". One document was amended: "Supplier Control Procedures". A set of key performance indicators has been developed based on the aforementioned procurement system while taking into consideration the industry standard and the Company's current practices to enforce sustainability management over suppliers.



Supplier Sustainability Review for 2022

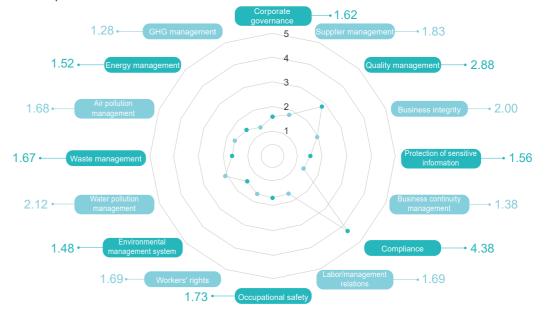
Score Overview

- 100% of supplier questionnaires were reviewed.
- Suppliers averaged a score of 40.0; a total of 3 suppliers (10%) scored above 60. 40% of suppliers were in the lowest score range, indicating that most suppliers willing to participate in the survey did not know how to complete the questionnaire properly. 23% of suppliers scored 50 or higher, all of which have implemented some form of ESG system.



- Governance, social, and environmental issues
 Suppliers scored highest in the governance aspect and lowest in the environmental aspect
- Score distribution by category

"Compliance", "Quality management", and "Water pollution management" were the categories that suppliers scored the highest in, indicating that suppliers have undertaken robust management practices with regards to compliance, quality, and industrial effluents. "Greenhouse gas management", "Business continuity", and "Environmental management system" were the categories that suppliers scored the lowest in. Many scores in the environmental aspect were lower than average, indicating room for improvement; occupational safety is an issue that all manufacturing suppliers must pay attention to, and it will be at the top of Kaori's requirements.



Supply chain

Future Improvement Plans

- For non-responding suppliers
- 1. Kaori will engage them in greater depth so that they will be able to understand and appreciate the importance of issues concerned and become more willing to take part in the survey
- 2. Introduce rewards/incentives/penalties
- For the low score group (below 40)
- 1. Kaori will help respondents understand the content of the questionnaire and guide them through the instructions while answering whatever queries they may have.
- 2. Respondents will be given more time to reply, as well as reminders and assistance to prepare supporting information.
- 3. Additional resources (such as external courses and materials) will be provided to help suppliers develop relevant systems.
- For the medium score group (40 or higher)
- 1. Sustainability performance awards will be introduced to serve as encouragement for suppliers.
- 2. Suppliers will be offered suggestions to devise development plans over several stages and to improve documentation or practices in areas of weakness identified through the scoring exercise.

Future Sustainability Supply Chain Management Roadmap

- 1. Enhance sustainability performance, make transparent disclosures, and respond to stakeholders
- 2. Introduce a supplier ESG risk evaluation and tracking system

tracking system

3. Increase coverage of supplier ESG review

disclosure

- 4. Introduce the ISO 20400 management framework
- 5. Coordinate with suppliers to achieve the circular economy and supply chain carbon reduction. Draw product life cycle charts and identify emission hot spots through carbon footprint surveys, and make preparations for the circular economy and low-carbon products.



Response to stakeholders

Draw product life cycle charts, identify emission hot spots through carbon footprint surveys and make preparations for the circular





Diversity and Inclusion
A Promoter of People Values





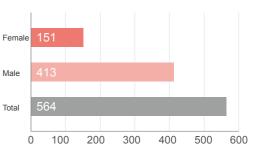




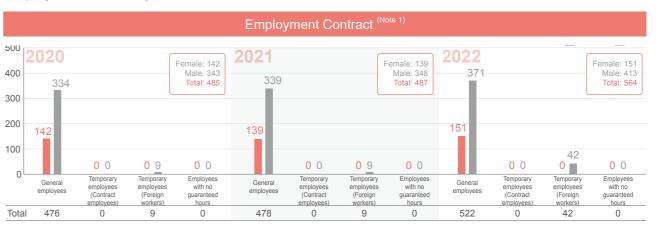
4.1 Diverse and Inclusive Workplace

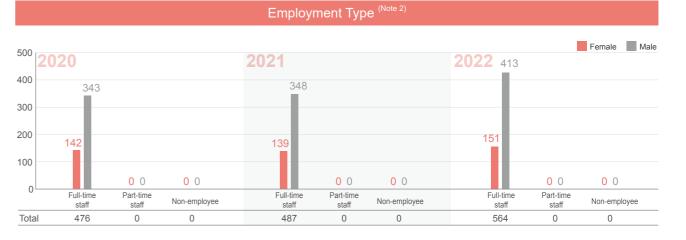
Kaori recognizes employees as important partners for building global first-rate organization and sustainable practice. We are committed to creating a friendly and healthy workplace, one that is free of discrimination and inequality. Kaori provides employees with comprehensive compensation and benefits and offers diverse training programs to help employees grow. By giving employees a safe and healthy place to work, we look forward to creating a sustainable corporate culture that is unique to Kaori.

Kaori reported a total number of employees of 564 in 2022; 413 (73%) of whom were male and 151 (27%) of whom were female. All managers of the Company were of R.O.C. nationality, and 100% of senior managers were locally hired. Kaori supports requirements of the "People with Disabilities Rights Protection Act" and takes the initiative to offer equal employment opportunities for the underprivileged. A total of three people with disabilities were hired in 2022.



Employee Structure by Gender





Note 1: The workforce can be distinguished by employment contract into permanent employees (with undefined service duration) and temporary employees (with defined service duration, including foreign workers and interns but excluding temporary workers).

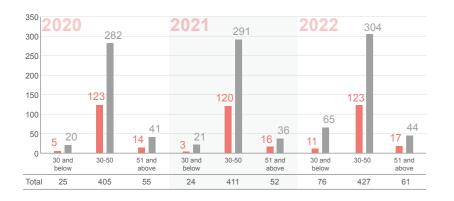
Note 2: The workforce can be distinguished by employee type into full-time staff (that work above the statutory hours a week), part-time staff (that work partial and less than the statutory hours a week), and non-employees (including contractors, interns, apprentices, and volunteers).

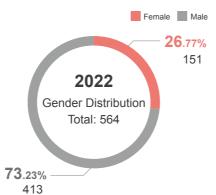
2022	Head count
No. of senior managers	16
No. of locally hired senior managers	16

Note: "Local" is defined by nationality

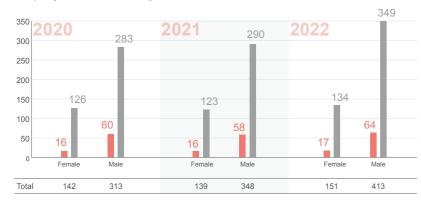
Diversi

Employees' Age Distribution





Employee Counted by Grade and Gender

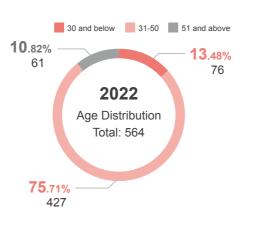




Note: managerial role refers to section chief and above

Employee Counted by Grade and Age





Note: managerial role refers to section chief and above

Other Diversity Indicators

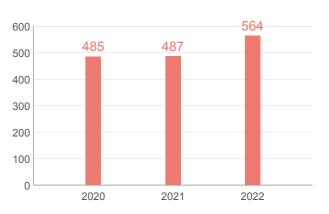
Statistics for Taiwan	No. of persons with disabilities hired	No. of foreign (non-Taiwanese) employees hired	No. of minority peoples (indigenous) hired
2020	3	13	4
2021	3	12	4
2022	3	46	4

Percentage of New Permanent Employees and Attrition Rate for 2022

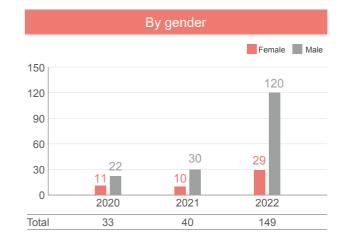
Kaori had 149 new recruits in 2022 that represented 26.42% of the total workforce; 120 of the new recruits were male and 29 were female. 73 employees resigned during the year, representing an attrition rate of 12.94%; 52 or the resigned employees were male and 21 were female. By analyzing data on new recruits and resignees, the Company evaluates the appropriateness of its existing salaries and benefits and determines whether it has met its goal of creating a friendly workplace. For resignees, the Company surveys the cause of resignation and take their responses into consideration for future improvements. Employees' resignation requests are handled strictly in accordance with the Labor Standards Act; employees who wish to terminate their employment contract are required to serve advance notice of no more than 30 days depending on seniority, which complies with prevailing laws.

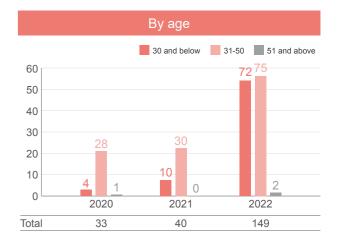
Growth of Employee Size in the Last Three Years

Owing to the ongoing energy transformation in Europe and increasing demand for SOFC thermal reactors in the US, Kaori has been recruiting additional workforce to support the growth of its expansion.



No. of New Permanent Employees

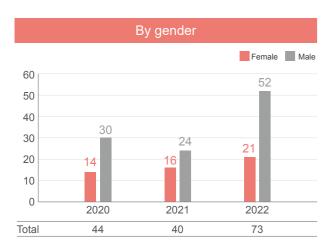


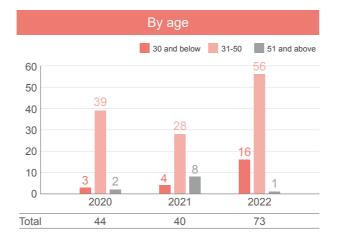


New recruitment rate

Employees	Ge	nder		Age			
(including interns)	Female	Male	Total	30 and be- low	31-50	51 and above	Total
2020	2.27%	4.54%	6.80%	0.82%	5.77%	0.21%	6.80%
2021	2.05%	6.16%	8.21%	2.05%	6.16%	0.00%	8.21%
2022	5.14%	21.28%	26.42%	12.77%	13.30%	0.35%	26.42%

No. of Permanent Employees Resigned





Attrition rate

Employees	Ger	nder			Age		
(including interns)	Female	Male	Total	30 and be- low	31-50	51 and above	Total
2020	2.89%	6.19%	9.07%	0.62%	8.04%	0.41%	9.07%
2021	3.29%	4.93%	8.21%	0.82%	5.75%	1.64%	8.21%
2022	3.72%	9.22%	12.94%	2.84%	9.93%	0.18%	12.94%

Note: the percentage of new recruits is calculated by dividing the total number of new recruits for the year by the total employee count at the end of the year, multiplied by 100%; the attrition rate is calculated by dividing the total number of resignees for the year by the total employee count at the end of the year, multiplied by 100%.



4.2 Talent Recruitment and Development

Kaori adopts a fair, open, just, and efficient recruitment system that emphasizes recruiting the best and most suitable talent. The recruitment system pays attention to basic human rights, including equal employment opportunities, and is supported by talent selection, education, and retention measures to ensure the quality of new recruits, the stability of the workforce, and that competent talent is assigned to suitable roles. Kaori places great emphasis on unity. Aside from recruiting people that share common values, the Company offers favorable compensation, comprehensive benefits, and open communication channels to create a friendly, harmonious, safe, and mutually beneficial work environment that attracts and retains talent.

Equal Employment Opportunities

The Company values workers' rights and assigns employees to suitable positions depending on their skill sets and competence. In terms of recruitment, salary, performance, promotion, training, and benefits, the Company does not discriminate by gender, religion, nationality, or ethnicity. In addition to prohibitions against child labor, Kaori adopts a fair recruitment principle that discourages all forms of unreasonable restriction (such as withholding ID cards/passports or collecting inappropriate gains). Furthermore, employment contracts are drafted in languages and texts that employees can easily understand.

Recruitment Channels

Kaori continued to recruit employees primarily using online platforms in 2022, and it empowered the heads of various recruiting departments to set up interviews with potential candidates as needed. Kaori also sourced talent through other channels such as employment service stations, campus recruitment programs, the Workforce Development Agency, and professional training institutions. Kaori currently engages Cheng-kung Senior Industrial Commercial Vocational School and Lunghwa University of Science and Technology in a series of industry-academia collaborations to bring fresh graduates into the professional field.

Salary Policy

The Company sets salaries at levels that reflect employees' skills, professional capacity, experience, and individual performance. The promotion system has also been designed to be fair and open to employees. The Company strives to maintain equality between genders and offer equal compensation for employees with the same job role. The Company does not differentiate by gender, ethnicity, religion, political association, or marital status. Kaori regularly examines the salaries offered by industry peers to ensure that its compensation and welfare policy remains competitive at attracting and retaining talent. For new recruits, salary is determined based on professional capacity, technical know-how, experience, and work-related skills. Existing employees, also have salary levels and benefits determined according to performance. The Company calculates compensation and benefits in accordance with the laws of Taiwan, and entry-level employees are offered salaries that are higher than the local minimum wage on average.

Annual Total Compensation Ratio and Variation

Year	2020	2021	2022
Annual total compensation ratio (Note 1)	5.7460:1	5.1955:1	5.1303:1
Variation of annual total compensation ratio (Note 2)	N/A	0.1330:1	0.7875:1

Note 1: Formula for annual total compensation ratio: Annual total compensation for the organization's highest-paid individual / the median annual total compensation across all employees (excluding the highest-paid individual)

Note 2: Variation of annual total compensation ratio is calculated as: Percentage increase in annual total compensation for the organization's highest-paid individual / percentage increase in the median annual total compensation across all employees (excluding the highest-paid individual)

Compensation Distribution by Gender for 2022

Salary ratio	Managerial role	Non-managerial role
Female	1	1
Male	1	1

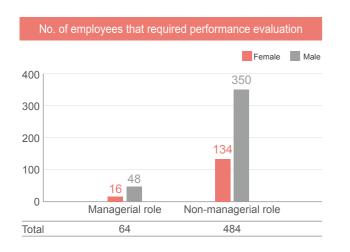
Note: managerial role refers to section chief and above; salary adjustments were consistent across employees and were not discriminated by gender

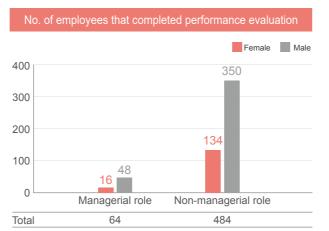
Performance Evaluation

Employees undergo performance evaluation two times a year and are entitled to promotional opportunities and rewards according to the performance evaluation policy. The Company hopes to see every employee realize their full potential and have the best talent lead the teams in taking responsibility, making decisions, coordination, execution, and collaboration toward accomplishing corporate goals.

In 2022, 100% of Kaori employees underwent performance evaluation. Employees' annual performance evaluations are conducted by their respective line managers. The evaluation covers work performance, attendance, work attitude, and other work-related aspects. The Company also requires all managers to pay particular attention to the fairness of the performance evaluation and to avoid all forms of discrimination and unfair treatment whether due to gender, age, or other factors unrelated to work.

Number of Employees Receiving Regular Performance and Career Development Reviews in 2022





Percentage of employees that completed performance evaluation in 2022

Percentage	Managerial role	Non-managerial role	Subtotal
Female	100%	100%	100%
Male	100%	100%	100%
Subtotal	100%	100%	100%

Note: managerial role refers to section chief and above



Retention Incentives

For senior employees, the Company has a talent retention program that offers special benefits such as life insurance, full health checkup, and trust subsidies. Employees that exhibit outstanding performance are entitled to extraordinary salary adjustment as encouragement.

Talent Development

The Company has "Training Management Procedures" in place to help employees expand knowledge and skills in ways that contribute to the organization's competitiveness. Kaori strongly believes knowledge and skills to be the key to improving work efficiency and quality, which in turn contributes to the Company's sustainable development goals.

The Company offers diverse training methods and opportunities and implements training programs that are closely aligned with employees' duties and corporate strategies. Employees are subsidized for taking on-the-job training and external training to improve professional and language skills. It is the Company's intention to support employees with the training resources needed.

Department heads and employees have the opportunity to take part in company or department-level training courses and seminars to prepare themselves for future trends and projects. Employees are encouraged to take advantage of the complete range of training options the Company has to offer to grow their professional capacity and competitiveness. All new recruits are required to undergo complete general knowledge training and orientation when commencing duty. Through a combination of manuals, practices, and exams, new employees are quickly brought up to speed and readied for the tasks on hand. We provide all permanent employees with a training roadmap that they can follow to advance their careers within their respective departments and make persistent improvements to training resources within and outside the organization. By having managers participate in various meetings, we help them develop adequate understanding of how each department functions and applicable company policies, so that they may grow to undertake greater responsibilities in the future.

Short-, Medium-, and Long-Term Focus of Employee Training and Succession Plans

Kaori has implemented different training durations based on employees' performance evaluation:

Shortterm In addition to providing a general introduction and description on human resources, work safety, quality, and the Employee Welfare Committee, each business department arranges its own orientation training to help new employees familiarize themselves with the products offered, the technologies involved, and the application scopes.



Kaori has developed its own training roadmap and annual training plan; through capacity analysis and performance evaluation, employees are assigned to internal and external training courses that are suitable for them.



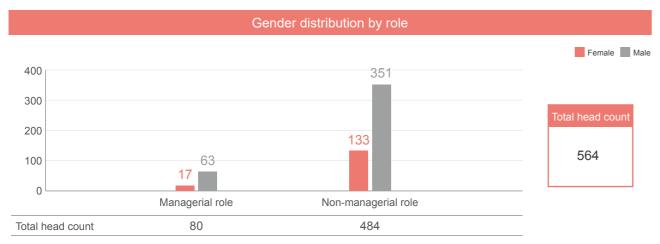
Kaori offers educational subsidies to help employees learn skills in their own capacity, grow careers, and improve work performance. The Company also adopts an internal instructor system that turns individual knowledge into a corporate resource, thereby helping employees improve competence and progress beyond their limits.

Kaori organized a total of 444 training sessions in 2022, which received 3,376 enrollments and delivered 11,595 hours of training in total, averaging 21 hours per employee. More than NT\$540 thousand in training expenses was committed.

Training and Certifications Completed by Employees in 2022:

- Internal auditor
- Occupational safety and health officer
- Occupational safety and health manager
- Training for stationary crane operators and operators of forklifts weighing 1 tonne or more
- Fire safety manager
- First-aid personnel
- Radiation protection training

Training Overview for 2022



Note: managerial role refers to section chief and above



Note: managerial role refers to section chief and above

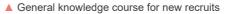


Note: managerial role refers to section chief and above

Outcomes of Training Conducted in 2022

#	Item	Course sessions	Total enrollments	Total training hours	Total expenses (NT\$)
1	Training of managerial skills	3	10	31	29,560
2	Self-inspiration training	8	8	1,422	165,670
3	Specialist training	351	2,355	6,011	228,634
4	General knowledge training	25	309	2,234	0
5	Worker safety and health	57	694	1,897	118,070
	Total	444	3,376	11,595	541,934







▲ Insider Prevention for Directors and Senior Managers; Legal Responsibilities and Case Studies

4.3 Occupational Health and Safety

Kaori values the safety of its workplace and is committed to providing a safe, comfortable, and healthy work environment for stakeholders including employees, customers, and business partners. The Company has begun planning for the introduction of ISO 45001 Occupational Health and Safety Management System to support future operations and capacity expansion. Construction activities are expected to commence in 2023 to further improve the safety of the work environment, lessen or even eliminate workplace hazards and illnesses, and accomplish the Company's goals toward business continuity and social responsibility.

With regards to risk assessment, the Company assesses plant premises regularly for potential risks, and it conducted a total of 5 special risk assessments in 2022:



New business development hydrogen ower Risk assessment of lead (Pb) operations



Assessment of COVID-19 infection measures



Assessment of the implementation



In-plant work safety investigation

By eliminating hazards and making ongoing improvements, the Company takes steps toward preventing accidents. The Company has also assembled an Occupational Safety and Health Committee that consists of plant managers, occupational safety personnel, and worker-elected representatives. Kaori has a total of 18 committee members in the Zhongli Site, including seven in the Zhongli 1st Plant, four in the Zhongli 2nd Plant, and seven in the Zhongli 3rd Plant (including worker health service personnel), as well as 8 committee members in the Kaohsiung Plant. The Occupational Safety and Health Committee convenes meetings regularly to discuss, promote, review, supervise, and resolve issues concerning occupational safety, health, and environmental protection. Through regular supervision and execution of improvement plans, the committee is able to promote work safety awareness among plant workers and take steps toward reducing the injury rate and contributing to the Company's zero hazard vision.

Occupational Safety and Health Committee

·	afety and health committee nbers	Total worker represe	entatives in committees
Zhongli Site	Zhongli Site Kaohsiung Plant		Kaohsiung Plant
18	8	8	2

Note: The Zhongli Site includes the Zhongli 1st Plant, Zhongli 2nd Plant, and Zhongli 3rd Plant

Overview of Occupational Safety and Health Committee Meetings in 2022:

Safety and health committee meetings/year	4 sessions
Key resolutions and actions	 Installation of security system at the Zhongli Site On-site service by occupational health specialist at the 1st Plant Fire safety investigation - in-plant private appliance survey COVID-19 monitoring and survey The Kaohsiung Plant has a nursery room for use by female employees

Organizational Chart of the Occupational Safety and Health Committee



Professional Certification and Training

Zhongli Site

Certified occupational safety and health officers: 11

- Class-C occupational safety and health managers: 2
- Class-C occupational safety and health managers (construction industry): 1
- Class-A occupational safety and health managers: 4
- · Class B occupational safety and health officers: 1
- Class A occupational safety and health officers: 2
- Professional nurses: 1

Employees subjected to relevant safety and health training: 208

- Fire safety managers: 4
- Organic solvent operations managers: 4
- Dust operations supervisors: 1
- Hypoxia operations supervisors: 3
- Pressurized gas supply and consumption supervisors: 4
- Pressurized gas production safety officers: 2
- Special chemical substances supervisors: 2
- 1-tonne+ forklift operators: 34
- First-aid personnel: 24

- Oxy-fuel welding operators: 3
- Crane operators: 55
- Crane operators for loads of 3 (5) tonnes or more: 3
- Stationary crane operators (for loads less than 3 tonnes): 52
- Radiation protection training in place of Radiation Safety Certificate: 3
- Pressurized gas equipment operators: 14

Kaohsiung Plant

Certified occupational safety and health officers: 2

· Class-A occupational safety and health managers: 1

Occupational safety and health officers: 1

Employees subjected to relevant safety and health training: 33

- Forklift operators: 7
- Stationary crane operators: 18

- Pressurized gas equipment operators: 3
- Training for first-aid personnel: 4 persons

Worker Health Service Nurses (Stationed Nurses)

Primary tasks:

- Complete employee health checkups (for general and special operations).
- Apply tier-based management for general and special health checkups and offering health guidance and knowledge.
- 3. Suitability assessment and reinstatement of new recruits and existing employees.
- **4.** Implement and evaluate the four main programs (abnormal workload, ergonomic, maternity, and overstress).
- **5.** Implement and evaluate the senior program, respiratory protection program, and hearing protection program.
- 6. Organize first-aid personnel training programs.
- 7. Create the Company's health promotion account on LINE, which is intended to provide employees with useful health information.

• Future plans:

- 1. Improve and prevent occupational illness at plant sites:
 - By leveraging the expertise and knowledge of both general practitioners and medical specialists, Kaori aims to identify hazards associated with the workplace and operations and provide employees with the knowledge and recommendations needed to avoid occupational hazards and accidents.
- 2. Enhance emergency response and first-aid skills at plant sites:
- Kaori will train first aid personnel on a monthly basis and organize courses that other employees may take part in from time to time. These training efforts will help improve emergency response and crisis awareness of plant workers, and strengthen employees' knowledge on emergency aid.
- 3. Improve employees' health consciousness:
 - Health-related articles will be disseminated to strengthen employees' health knowledge.
- **4.** ESG practices and social responsibilities:
 - Plan and organize blood donation events in line with the Company's sustainability philosophy and mobilize employees toward supporting the cause.



Responsibilities and Future Plans for Worker Health Service Personnel

• Duties:

- 1. Organize health checkups.
- 2. Enforce tier-based management for general and special health checkups.
- 3. Select and assign new recruits; assign and reinstate existing employees.
- 4. Organize health promotion activities.
- **5.** Annual worker health promotion campaigns.
- **6.** Execute the four main programs (abnormal workload, ergonomic, maternity, and over-stress), the middle/senior age program, and the respiratory protection program according to guidelines.
- 7. Organize first-aid personnel training programs.

Future plans:

Kaori values the health and safety of its employees. In addition to annual health checkups, the Company is progressively enhancing health management and skill training for employees through the following measures:

- 1. Improvement and prevention of occupational illness at plant sites: Instead of general practitioners, the Company is starting to engage physicians specialized in occupational medicine to station at plant premises, where they contribute their expertise by evaluating the employees' work environment and work practices and raising suggestions that help improve the work environment and prevent occupational illness.
- **2.** Enhancement of emergency response and first-aid skills: The Company helps medical personnel develop professional skills and attain certification for EMT-1 emergency medical technician. The certified personnel then organize internal training for plant workers.
- **3.** Promotion of employees' self-health awareness: The Company organizes health seminars and distributes articles on health to raise employees' health awareness.

Safety and Health Policy

Driven by its goal toward sustainability, Kaori is fully committed to developing a culture of safety and self-management. The Company has implemented the following "Occupational Safety and Health Policy" as a way to reduce occupational safety and health hazards:



Respect for life



Safety discipline



General participation



Ongoing improvement

. .

Commitments of the Occupational Safety and Health Policy:

- To adopt practices that are appropriate given the nature and scope of the organization's safety and health risks
- To prevent injuries and illnesses and make ongoing improvements to safety and health management and performance
- To comply with the regulations that are relevant to the organization's safety, health, and hazards, as well
 as other requirements that the organization is bound to comply with
- To provide a framework for setting and reviewing safety and health goals
- To implement and ensure proper documentation of the occupational safety and health management system
- To properly communicate with all personnel within the organization, so that they are made aware of individual safety and health responsibilities
- To communicate openly with stakeholders
- To review policies on a regular basis and ensure that they remain relevant and appropriate for the organization
- To gather opinions from employees and their representatives and encourage them to actively take part in all activities of interest under the occupational safety and health management system

ISO 14001 Environmental Management System

- Scope of the management system:
- The certification covers the manufacturing of plate heat exchangers at Kaori's Benzhou Plant (No. 3, Bengong 2nd Road, Benzhou Industrial Park, Kaohsiung City).
- To ensure that all requirements of environmental management are met, the Company conducts a total investigation and evaluation of possible risks that may pose environmental concern before the establishment or implementation of an environmental management system. Past and current environmental management performance are also examined and evaluated to provide reference for new environmental policies, goals, and systems. These practices help improve the efficiency of management practices and allow Kaori to better conform with environmental standards while making persistent improvements.
- Kaori examines its products, activities, and services on a yearly basis for issues that may impact the environment, such as waste, noise, effluents, pollutants, storage/transfer/use of chemicals or supplies, use of energy sources, work environment, etc. These assessments also cover suppliers and business partners that are relevant to the Company's operations and include both direct and indirect impacts. Based on the outcomes of environmental assessments, Kaori convenes meetings to discuss and select issues of material concern in line with environmental policies and commitments, while taking various factors into consideration such as costs, laws, technologies, finances, market requirements, and other requirements of stakeholders. Improvements are made in conformity with applicable laws and principles of persistent improvement, whereas environmental goals and management solutions are devised and executed accordingly. If the actual performance differs significantly from the goals or if the environmental targets cannot be achieved, the Company may convene review meetings to adjust target values or execution plans and decide whether to follow the "Correction and Prevention Procedures" depending on the level of deviation. Meanwhile, the Company adopts its quality management PDCA cycle to facilitate ongoing improvements.
- Preparation and response to emergency events:
 Kaori has the "Emergency Response Protocol" in place that requires analyses to be performed on the most likely plant incidents. Outcomes of the analyses are used to plan responses and training, so that employees know how to react to incidents and what actions to take to minimize damage and loss.

Prominent Outcomes for 2022 - Work Safety and Identification of Systematic Risks

Kaori has developed and implemented occupational safety and health procedures to address safety and health issues on the plant premises. Some of the prominent accomplishments made in 2022 include:

- Assessment of work safety and systematic risks:
 - 1. Monthly compliance audits:

Kaori adopts the PDCA concept and regularly inspects plant premises for compliance with safety, health, and fire regulations while correcting non-compliant issues. The 2022 audits found full compliance with regulations.

2. Production procedure safety evaluation and management:

All new production procedures and equipment have to be evaluated for possible risks and adjustments. In 2022, evaluations were performed on the experiment and manufacturing of ammonia power generator by the New Business Development - Hydrogen Power and the improvement of high temperature processes involving continuous furnace for fuel cell production.

3. Assessment of potential risks:

Considering how COVID-19 affected employees' health, Kaori took a more favorable approach than what the laws required and instructed infected employees who had served their quarantine to return to work only if the rapid test showed a negative result, thereby preventing spreading disease to others. These off-work days were treated as official leave.

4. Testing of respiratory protection gear:

Respiratory protection gear is employees' final line of defense, and the incorrect choice or use of gear may still expose workers to potential risks. For this reason, Kaori organized a fit test in 2022, during which it instructed emergency response personnel, such as the rescue team and cleanup team, to test the fit of their respiratory protection gears, thereby ensuring the safety of rescue and response team members. Fit tests are organized at least once a year. The test involves using instruments to measure the fit of protection gear. Adjustments are made to the size or the method by which gear is worn in the case of poor fit.

5. Creation of the Kaori Health Section on LINE:

This approach takes advantage of LINE's popularity and responsiveness for COVID-19 surveys, infection reports, safety alerts, and dissemination of health information.



Employee Health Checkups

Kaori has long been committed to "protecting the safety, health, and welfare of workers and stakeholders, preventing occupational hazards, and promoting employees' physical and mental health", and has implemented policies that are more stringent than what the laws require. The Company organizes employee health checkups once a year. An organization-wide health risk assessment is conducted after each checkup report to highlight high-risk employees for consultation and regular follow-up with physicians and to identify medium-risk employees for health-related discussions. A total of 312 employees underwent health checkup in 2022, for which the Company paid more than NT\$434 thousand in subsidies.

- Execution of employee care programs in 2022:
- No. of employees consulted under the maternity health protection program: 8
- No. of employees evaluated by physicians under the respiratory protection program: 12
- No. of new employees consulted for abnormal checkup results: 20
- No. of employees subjected to occupational hazard follow-up (commuting accident): 3
- Employees subjected to general injury/illness follow-up: 13
- Employees subjected to reinstatement evaluation: 2
- Middle-age and senior employees subjected to health management: 3
- Employees with hypertension subjected to regular testing and follow-up: 33
- No. of high-risk employees surveyed through ergonomic hazard prevention questionnaires: 44
- No. of high-risk employees surveyed through abnormal workload questionnaires: 16
- No. of employees subjected to health checkup risk management interviews: 150

Health Promotion

Kaori has committed significant resources to the prevention of occupational illness as well as health promotion activities in an attempt to alleviate employees' concerns toward occupational safety while providing better care for their physical and mental health. The Company has also been actively promoting a smoke-free workplace for health reasons and compliance with the Tobacco Hazards Prevention Act.

- Measures taken for promoting employees' health and safety in 2022
- Improvement of high temperature operating environments:
 Installed barriers and insulation for thermal radiation from continuous furnaces.
- 2. Health risk management:
 - 16 high-risk employees and 137 medium-risk employees were identified, all of whom had completed health consultation and guidance.
- 3. COVID-19 monitoring and survey:
 - Kaori surveyed COVID-19 infections and disseminated government-subsidized rapid test kits on a daily basis.
- **4.** All stamping presses purchased by the Occupational Safety and Health Administration were certified with the TS mark (a safety certification for machinery)

- Measures taken for promoting employees' health in 2022
- Sports clubs:
 - Kaori has established a yoga club and a fitness boxing club and hired professional instructors to teach and improve employees' state of health.
- 2. The Company also engages qualified caterers to manage employee cafeterias and invites professional nutritionists to design menus that are aimed at correcting the irregular, high-fat, high-salt, and high-sugar diets of the modern population, thereby improving employees' state of health.
- 3. Health-related articles are disseminated on a weekly basis.
- 4. Arrangements are made to have physicians provide medical advice at plant sites on a regular basis.







Occupational Safety and Health Training and Promotion

Kaori plans to introduce ISO 45001 Occupational Health and Safety Management System in 2023 as a solution to minimize occupational hazards, strengthen management practices, and enforce supporting measures. This system not only contributes to the safety and health of the entire industry, but raises Kaori's overall competitiveness as well.

- Themes and focuses of occupational safety-related training in 2022:
- Occupational hazard awareness at plant sites:
 Through case studies, employees were reminded to stay alert and check the safety of their work activities.
- Training for supervising personnel:
 Help employees develop the ability to check work safety and enhances safety awareness.
- Training on hazard identification:
 The ability to anticipate hazards ahead of time minimizes potential damage.
- **4.** Training on prevention of physical or mental abuse while performing duties: Incidents of workplace violence were lessened through training.
- **5.** Awareness of machinery safety, use of fire safety equipment, escape routes, and safe use of chemicals.







- Safety and health-related training organized for employees in 2022 included:
- Training for new recruits
- Training for occupational safety and health managers
- Training for fire safety officers
- Fire safety drills
- Training for forklift operators
- Organic solvent operations managers

- · Training for first-aid personnel
- Training for stationary crane operators
- Training for pressurized gas equipment
- Training for hypoxia operations supervisors
- Training for special chemical substances supervisors
- Training for respiratory gear fit tests





Contractor Occupational Safety Management

Kaori maintains close relationships with suppliers and contractors, as they are essential business partners for the Company's continuity. This is also why we have directed significant attention to the work safety of our business partners. To assure the safety of Kaori employees and contractors, the Company has directed special attention to work safety planning and work supervisor training and made sure that safety is supervised throughout entire projects.

Management of Transportation Vehicles

All employees who drive transportation vehicles are properly certified and licensed. Vehicle inspections and repairs are arranged on a regular basis. All transportation vehicles (trucks) used in the Kaohsiung Plant have been fitted with digital video recorders and vision-based driver-assistance systems. Furthermore, Kaori imposes eligibility requirements on suppliers' truck drivers and requires the use of temporary permits for hazardous supplies. Suppliers are audited on a yearly basis; the 2022 audit found no illegal conduct and assured the legitimacy of suppliers' transportation vehicles.

Promotion of Work Injury Prevention

The following measures have been taken to promote employees' awareness of work injury prevention:

- Unscheduled promotion during monthly meetings
- Occupational hazard awareness at plant sites
- Training for first-aid personnel
- Training for supervising personnel:
- Training on hazard identification: employees are trained on the prevention of physical or mental abuse while performing duties.



Work Injury Statistics and Reporting

Kaori investigates each incident of occupational hazard according to its accident reporting, resolution, and investigation procedures (SH-P-00-0009). Findings have been reported in the 2022 In-plant Hazard Report (including Occupational Traffic Accidents). The report not only records the occurrence of occupational incidents, but also includes detailed analysis of statistical data. Meanwhile, occupational hazard data is reported on the Ministry of Labor's safety and health resume intelligent cloud website on a yearly basis. A total of seven occupational injuries were reported for permanent employees and no cases were reported for contract workers in 2022. As for the types of injury suffered, two were from falling objects, one was from crushing, one was from accidental kicking, and two were commuting accidents. The Company will continue promoting awareness and enhance safety training and audits to prevent accidents.

Occupational Injuries for the Year

Employ-	Year	Total work hours -	Deaths by occupational injury		No. of people suffering severe occupational injury	
ment type		nours -	Head count	Percentage	Head count	Percentage
Permanent	2022	1,048,508	0	0.00	7	6.68
employees	2021	963,984	0	0.00	3	3.11
Contract	2022	34,728	0	0.00	0	0.00
workers	2021	2,880	0	0.00	0	0.00

4.4 Human Rights Protection and Employee Welfare

Labor-Management Communication

Good labor-management communication helps the Company improve weaknesses and develop the solid foundation needed to raise competitiveness. The Company provides a broad diversity of communication channels that employees can use to express opinions. Kaori believes that effective communication and bilateral interaction between labor and management is a useful way of uniting employees.

Employees who have physical or mental disabilities are offered assistance from a variety of sources; meanwhile, efforts are made to learn and adjust their workload and to provide care, support, and assistance where possible.

Employees are able to express opinions through the Employee Welfare Committee, labor-management meetings, the grievance mailbox, and the grievance hotline. Kaori has the "Regulations for Implementing Labor-Management Meeting" in place to support a harmonious work environment. Labor-management meetings are held once every three months to facilitate communication and cooperation between labor and management for the benefit of both sides. The Company also ensures that all of the employees' opinions, suggestions, and feedback are handled by dedicated personnel. Meanwhile, systems have been implemented to protect employees from all forms of retaliation and threat. Although the Company has not established a union or signed a collective bargaining agreement, it convenes labor-management meetings on a regular basis. A total of four such meetings were convened in 2022, and each meeting had 20 participants. No complaints were raised internally but one misconduct report was raised externally during the year. Kaori handled the report according to relevant policies and will continue following up on subsequent progress while taking preventive measures.

Grievance Channels





Human Rights Protection

Kaori values human rights and enforces labor policies and a proper work spirit in a fair and respectful manner. The Company is committed to creating a culture of fairness, inclusivity, and open communication as well as shaping a work environment that protects human rights; it goes to great lengths to incorporate relevant values into employees' work activities and corporate culture. In addition to complying with national laws, the Company protects workers out of respect for their human rights and observes international conventions regarding gender equality, prohibition against all forms of discrimination, forced labor, child labor, and avoidance of long work hours. We do not tolerate any form of harassment, discrimination, or any behaviors that are against employment laws. Kaori committed no human rights violations in 2022. The Company expects to introduce a human rights protection system and establish its own human rights policies in 2023.

 Foreign worker engagement - Creating a culture of diversity, fairness, and inclusivity
 The Company places great emphasis on communication with foreign workers. The management communicates with workers faceto-face and encourages them to raise opinions, feedback, or queries, if any.



Employee Benefits

Kaori arranges Labor Insurance and National Health Insurance coverage for employees as required by laws and ensures that employees are paid the benefits they are entitled to. By promoting a harmonious labor-management relationship and catering to employees' wellbeing and health, the Company aims to help employees grow in life and at work. In 2022, Kaori paid birth and child care subsidies totaling NT\$1.03 million. More than NT\$610 thousand in children's scholarships was paid to a total of 223 beneficiaries.

Benefit Details

Unit: NT\$

Benefits/year	2020	2021	2022
Life insurance	2,491,223	2,366,086	2,477,760
Health insurance	1,380,290	1,160,914	1,103,105
Club subsidies	1,838,300	2,241,900	2,788,357
Childbirth and childcare subsidies	1,130,000	1,060,000	1,030,000
Wedding subsidies	359,800	293,800	285,000

Key Benefit Measures

Benefit category	Benefit details
Life insurance	Life insurance, accident insurance, medical insurance, cancer insurance, occupational hazard insurance
Health insurance	Health insurance
Pension subsidies	Shareholding trust (subsidized 20%)
Health checkup	Health checkups once a year
Employee catering	Establishment of employee cafeterias (subsidized 50%)

Pension Plan

Contribution plan	Description
Pension fund contribution plan	Old scheme: The employer makes contributions equal to 2% of workers' monthly salaries into a labor pension fund account New scheme: Contributions equal to 6% of employees' monthly compensations are made into their individual accounts held with the Bureau of Labor Insurance
Percentage of contribution relative to salary	7%

Other Benefit Measures

The Company's Employee Welfare Committee ensures that 0.15% of the operating revenue and 20% of the income from the sale of scrap are contributed to the benefits pool on a monthly basis. The Employee Welfare Committee continues to organize activities that aim to relieve stress and promote interactions between employees. Below are some of the key benefits arranged by the committee:

- 1. Domestic and foreign group trips
- 2. Childbirth, wedding, funeral, hospitalization, and military 4. Children's scholarships service subsidies
 - 2.1 Childbirth subsidy:

Applicable to children below the age of 6 that are registered in the same household as the Company's employee.

- Single birth: NT\$50 thousand
- Twins: NT\$100 thousand
- Triplets: NT\$150 thousand
- Additional births are calculated at a proportional rate
- 2.2 Childcare subsidy:

Applicable to children below the age of 6 that are registered in the same household as the Company's employee; paid at NT\$10 thousand per child, per household, per year.

- 3. Emergency relief
- **5.** Festival bonuses
- 6. Sports and recreational equipment
- 7. Birthday celebrations: birthday cake, birthday cash
- 8. Club activities: yoga, fitness boxing







Childcare Benefits

Employees who have childcare needs are entitled to apply for unpaid parental leave according to laws. Kaori not only offers childbirth subsidies in response to the government's birth incentives, but also tends to the needs of working mothers with the establishment of nursery rooms that cater to employees' individual and family needs. In 2022, seven male employees and seven female employees applied for unpaid parental leave, and five female employees were reinstated at the end of their unpaid parental leaves during the year, representing a reinstatement rate of 50%.



Unpaid Parental Leave in the Last Three Years

Item		2020			2021			2022	
item	Female	Male	Total	Female	Male	Total	Female	Male	Total
No. of employees eligible to apply for unpaid parental leave	8	12	20	8	9	17	7	7	14
No. of employees who applied for unpaid parental leave	5	1	6	4	0	4	9	1	10
No. of employees due to be reinstated from unpaid parental leave (A)	1	0	1	3	1	4	10	1	11
No. of employees due for reinstatement and restated from unpaid parental leave (B)	0	0	0	2	1	3	5	1	6
No. of employees reinstated from unpaid parental leave in the current year (C)	2	1	3	1	0	1	3	0	3
No. of employees reinstated in the current year who worked for one full year in the previous year (D)	2	1	3	1	0	1	1	0	1
Unpaid parental leave reinstatement rate % = B/A	0%	N/A	0%	67%	100%	75%	50%	100%	55%
Unpaid parental leave retention rate % = D/C	100%	100%	100%	100%	N/A	1	33%	N/A	33%

4.5 Social Engagement

As a Taiwanese business, Kaori is grateful for the opportunities that have been bestowed upon it by Taiwan, and it has made a commitment to exert social influence by sharing this positive energy with more people. Driven by care for society, Kaori gives back by making charity donations and providing aid to underprivileged organizations. The Company will continue committing resources to supporting local cultural activities, such as promoting or sponsoring events of local performance groups or arts/cultural activities. A sum of NT\$130,000 was committed to this cause in 2022. By providing appropriate support to parties in need, Kaori hopes to contribute what it can to create a better, more friendly environment.

Donee	Amount (NT\$)/items donated
Eden Social Welfare Foundation	10,000
Shing Sha Social Welfare Foundation	10,000
Taiwan Thermal Management Association	100,000
Taitung Christian Medical Foundation, Taitung Christian Hospital	10,000
National skill competition - Refrigeration and air conditioning Kaori has been donating heat exchangers for three consecutive years between 2020 and 2022 to be used for competitions and courses on energy conservation technology	20 heat exchangers

Environmental Education - Coastal Cleanup



On August 13, 2022, Kaori followed Taiwan RE-THINK Environmental Education Association to the estuary of Xinjie River, Taoyuan, and took part in the "2022 RE-CONNECTED" Coastal Cleanup event. It was comforting to see so many employees and family members supporting the coastal cleanup. The event has been meaningful in the way that we took action to promote a green lifestyle, and that by cleaning up the ocean, we helped restore nature to its beauty.





Blood Donation

On November 2, 2022, Kaori organized its first blood donation event out of respect for ESG and corporate social responsibility, during which it mobilized employees to help those in need and contribute to decency within society.

"Make your day and make their day by donating blood" has been the first slogan used in the initial stages of our blood donation efforts.







Academic Exchange

On December 22, 2022, at Chung Yuan Christian University Department of Mechanical Engineering (Heat Exchanger Systems Course) with a total of 36 students. Visitors were taught the principles of plate heat exchangers. Through introductions to the design and development of heat exchangers, Kaori hopes to inspire students' interest in handson practice.



















5.1 Management of Climate Change Risks and Opportunities

According to the "Global Risks Report" that the World Economic Forum (WEF) has been publishing on a yearly basis since 2005, environmental risks have emerged to become the dominant risk category in the world, with Climate Action Failure and Extreme Weather ranking first in the top-10 list for an extended period of time. Following the enactment of the Paris Agreement, which aims to control the global temperature increase within 1.5°C, governments around the world have followed up with their net zero targets and introduced new regulations in an attempt to mitigate the impact of climate change. The ongoing climate change has made global warming and extreme weather two of the most prominent issues for businesses. In 2021, Kaori voluntarily adopted the guidelines of the Task Force on Climate - related Financial Disclosures (TCFD) and followed the four core elements of "governance", "strategy", "risk management", and "metrics and targets" recommended by the TCFD to identify significant risks and opportunities that climate change may have on Kaori Heat Treatment and propose response strategies.

In addition to closely monitoring climate change, Kaori has made climate change one of the major issues for sustainable development and taken the initiative to disclose relevant information according to the requirements of the report preparation guidelines mentioned above. Through inter-departmental communication, discussions are made on the possible scenarios, the likely impacts, and the timing of impacts on Kaori. Each of the scenarios identified is further evaluated to facilitate proper control and response to the associated risks and opportunities. By adopting a more pro-active governance approach toward climate change, Kaori takes pragmatic steps to fulfill its sustainability vision.

Procedures for Identifying Climate Change-Related Risks and Opportunities

Kaori devotes ongoing attention to the climate policies and action plans of various industries at home and abroad and conducts thorough surveys on possible impacts from a number of perspectives including extreme weather, regulations, and market requirements. By analyzing past experience, the timing and possibility of future occurrences, and the degree of impact on business operations, reputation, personnel, financial position, etc., the Company requires all responsible units to propose their own response strategies and make corresponding adjustments internally while maintaining open and transparent communication with all stakeholders. Kaori identifies risks and opportunities of climate change by constructing at least two scenarios and hosts studies and discussions on climate change in the form of workshops. Procedures for identifying climate change-related risks and opportunities are explained below:



Set climate change scenarios

Two climate change scenarios have been constructed: SSP5-8.5: temperature increased to 6°C SSP1-2.6: temperature increased to 2°C



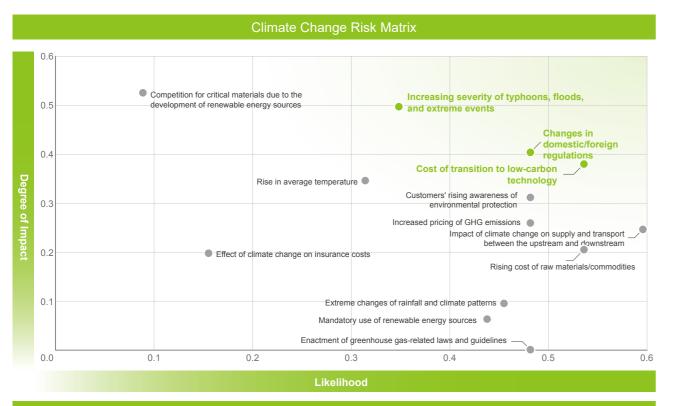
Evaluate impacts on the operating environment

Evaluate how climate change affects and impacts the operating environment and stakeholders



Identify climate risks and opportunities

Create a risk and opportunity matrix and confirm climate change risks and opportunities From the climate change risks and opportunities identified, Kaori further analyzed the "Likelihood" and "Degree of impact" and shortlisted three high-risk factors and three high-opportunity factors for 2022. Kaori's climate change risk and opportunity matrix for 2022 is presented below:





Explanation of Climate Change-Related Risks

List of identified climate change risks

Risk ranking	Risk No.	Risk category	Risk factor	Estimated time of occurrence
1	001	Transition risk - technology	Cost of transition to low-carbon technology	Medium-term
2	002	Transition risk - policies and regulations	Changes in domestic/foreign regulations	Medium-term
3	003	Physical risk - immediate	Increasing severity of typhoons, floods, and extreme events	Short-term

Note: Definition of timeframes: short-term: 2023-2024; medium-term: 2024-2026; long-term: 2026-2028

Risk 001 - Cost of transition to low-carbon technology

Impact scenario:

The Company will be required to develop products that feature lower carbon footprints to meet the market's demand, and the transition to lower carbon materials, production procedures, and technologies would require more resources, manpower, and time to be committed to research and development. Any attempt to transition to low-carbon products would incur additional investments of R&D resources or capital or give rise to uncertainties that ultimately increase product costs and reduce revenue.

Risk impact assessment	 Uncertain access to raw materials: Kaori has plans to make use of low-carbon materials, but there are limitations associated with the development and access to low-carbon materials such as eco-friendly steel and copper. Any uncertainty in the supply would make product delivery timelines more difficult to control. Low-carbon transformation increases costs: In an attempt to conform with low-carbon requirements, the Company will have to commit R&D personnel and capital to low-carbon products, which in turn increases the costs and compromises the competitiveness of the Company's products.
Evaluation of financial impact	Increased operating costs and reduced revenue

Risk 002 - Changes in domestic/foreign regulations

Impact scenario:

The Company is compelled to acquire new machinery and equipment that conforms with the low-carbon and environmental protection requirements that governments have enforced through policies and regulations, and it therefore has to renew existing equipment prematurely. A drastic change of policy or law would have to be met with additional capital expenditure and incur additional costs on equipment acquisition and employee training, thereby increasing the costs of the Company.

Risk impact assessment	 Domestic and foreign carbon taxes: Carbon pricing systems are taking shape at increasing rates at home and abroad. The Company may incur additional carbon taxes and see costs rise over time. Energy management requirements: New energy regulations demand higher energy efficiency from production equipment, for which the Company is required to invest in energy conservation and carbon reduction equipment, and the additional expenditures incurred on fixed assets, talent development, or certification will
Evaluation of financial impact	ultimately increase product costs. Increase in operating costs

Risk 003 - Increasing severity of typhoons, floods, and extreme events

Impact scenario:

Increasing severity of extreme weather causes weather conditions such as typhoons to occur at stronger intensities, which results in prolonged floods and power outages that affect factory operations. Bad weather has the potential to disrupt production activities, reduce capacity, damage equipment, hinder transportation, disrupt raw material supply, decrease revenue, and increase costs.

Risk impact assessment

Delayed delivery: Extreme weather affects factory operations and causes disruptions to production activities, raw material supply, and transportation. Delivery may be delayed by several days to one week.

Impacts to the upstream and downstream: Extreme weather affects the number of parts delivered by suppliers and causes Kaori to underdeliver and delay shipments of goods to customers. Customers' production activities may be halted as a result.

Evaluation of financial impac

Increased operating costs, reduced revenue, loss of credibility

Explanation of Climate Change-Related Opportunities

• List of identified climate change opportunities

Opportunity ranking	Opportunity No.	Opportunity category	Opportunity factor	Estimated time of occurrence
1	001	Opportunities - Markets	Entry into new markets	Short-term
2	002	Opportunities - Products and services	Development and expansion of low- carbon products and services	Medium-term
3	003	Opportunities - Products and services	Changes in consumers' preferences	Short-term

Opportunity 001- Entry into new markets

Impact scenario:

The need to meet energy and carbon reduction requirements presents the Company with exposure to new markets and different customers, such as the application of fuel cells on ships, hydrogen generation and energy storage for thermal reactors, and recycling of residual hydrogen for power generation. Kaori will actively explore the potential of the new markets and expand the range of products offered as well as customers served for improved revenue and reputation.

	·
	 Access to new opportunities: In light of the carbon reduction trends around the world, Kaori will engage customers in greater depth to expand the applications of plate heat exchangers, such as in heat pumps. Exposure to new customers and new markets offers the potential for increased revenue and improved reputation.
Opportunity impact assessment	2. Entry into the hydrogen power market: Kaori invests persistently into the development of hydrogen power products and has been assisting customers with their entry into the hydrogen power market. In light of customers' needs for hydrogen power products, the Company has assigned its Fuel Cell Business to work with customers on the development of production procedures for SOECs, hydrogen power solutions, and fuel cells for ships, and to make samples as deemed necessary. Given the significant increase in shipments and revenue, Kaori is optimistic about the prospect of hydrogen power.
	3. Development of immersion cooling modules/systems: As servers/data centers draw more power, liquid cooling presents a viable solution over the long term. Kaori's immersion cooling modules/systems offer the potential to increase energy efficiency, and their persistent development efforts have increased the level of sophistication of the products, bringing them closer to mass production, which will benefit new markets and customers.
Financial impact assessment	Increased revenue and new collaborative opportunities

Opportunity 002 - Development and expansion of low-carbon products and services

Impact scenario:

The Company continues to expand its low-carbon product lines to include new products such as SOFCs, carbon capture solutions, and new fuel cells in line with carbon reduction trends around the world. This additional offering of low-carbon products will improve market competitiveness, increase market share, and raise revenue in the future.

Opportunity
impact
assessment

1. Exploration of low-carbon opportunities:
Kaori's heat exchanger and fuel cell businesses have begun introducing low-carbon products to the market, whereas other businesses are also actively developing new products and new green solutions for customers.

2. Development of low-carbon technology:
Introducing green design into production procedures and technologies helps lower carbon footprints and increase market competitiveness.

3. New investment opportunities:
Some of the hydrogen power technologies have matured and are ready for mass production.
Given their high relevance to green energy and international trends, these technologies are very likely to attract capital from the banking sector and government agencies.

Financial impact assessment

Cost reduction, increased revenue, and attraction of capital

Opportunity 003 - Changes in consumers' preferences

Impact scenario:

The escalating energy crisis and carbon reduction requirements have increased consumers' preference for energy conservation products, such as heat pumps. This change in market trend and consumers' preference increases demand for the Company's products, which ultimately contributes to revenue and business growth.

Opportunity impact assessment	Increased product demand: Carbon reduction trends around the world have turned the market's attention to energy conservation solutions. Kaori is in a good position to capitalize on the increasing demand due to the energy and carbon reduction potential of the products offered and due to the early market advantage it has secured to date.
Financial impact assessment	Increased revenue

Response Strategies to Climate Change Risks and Opportunities

Risk Response Strategies

- Response strategies for the cost of transitioning to low-carbon technology:
- » Diversity of suppliers: Kaori maintains relationships with several suppliers to reduce uncertainties associated with the cost of and access to low-carbon materials.
- Acquisition of green loans/financing:
 Kaori will negotiate with banks and source green financing at preferential rates to lower operating costs.
 Cover risky businesses with consistent product revenue:
- If Kaori's low-carbon products fail, other departments that generate consistent revenue from OEM services, such as the Fuel Cell Business, will try to increase revenue in an attempt to cover the potential loss of revenue associated with transition risks.
- Response strategies to changes in domestic/foreign regulations:
- » Monitoring of regulations and trends:
- A dedicated team will be assembled to keep track of new product regulations and trends on a regular basis. Regular training will be organized to discuss current trends and to evaluate the needs for product re-modification and re-certification.
- » Introduction of energy-saving equipment: A comprehensive energy management system will be developed to monitor equipment energy efficiency, so as to facilitate the replacement of energy-intensive equipment. Additional investments will also be made for the installation of green power generation and storage equipment at plant sites and offices. Furthermore, the Company will introduce automated production equipment as a way to improve production and energy efficiency, which in turn will reduce the frequency of equipment renewal and allow digital solutions to be used for the optimization of production procedures.
- » Termination of high-carbon emission production processes and services: Kaori sold two pieces of energy-intensive copper brazing equipment in the 4th quarter of 2022 and expects to move the equipment out of plant site before the 1st quarter of 2023.
- Response and strategy to increasing severity of typhoons, floods, and extreme events:
 - » Reducing the risk of supply chain disruption: Kaori engages a diversified group of suppliers to secure the sources of its raw materials and the consistency of supply. Negotiations are made to have suppliers increase the level of inventory and turnover and store inventory near customers' locations to minimize the risk of transport disruption.
 - » Compensating production capacity with efficiency:

 If work is suspended due to typhoons, Kaori will evaluate the extent of the delay and ask suppliers to increase production efficiency to make up for capacity shortfall, thereby averting production halt due to supply disruption.

Cost of Risk Response

- ✓ Increased operating costs
- ✓ Adjustment to capital expenditure and capital allocation

Execution Strategies for Opportunities

- Execution strategies for entry into new markets:
- » Development of exclusive products: Exclusive products will be developed for heat pumps to capitalize on the current market trend and increase market share, whereas exclusive heat exchangers for air dryers will be developed to expand product lines and engage customers in broader, more frequent interactions.
- » Development of hydrogen power: Kaori continues to develop hydrogen power products and engage technology partners in various innovations to bring technologies to broader applications, thereby satisfying the needs of customers and markets.
- » Ongoing development of immersion cooling modules/systems: Kaori continues to make modular designs and obtain technological certification for its liquid cooling and immersion products, while at the same time maintaining the flexibility needed to customize products according to the needs of different markets. By accumulating data on product design, the Company aims to stay competitive in the market.
- Execution strategies for development and expansion of low-carbon products and services:
 - » Developing products with low carbon footprints: Kaori will improve production procedures by incorporating green designs such as the use of low-carbon materials, designs with low material requirements, adoption of product recycling mechanisms, reuse of raw materials or parts, and adoption of low-carbon transport and packaging materials to lower product carbon footprints.
 - » Development of new low-carbon solutions: Hydrogen power technology will be incorporated into carbon neutral solutions and new forms of fuel will be developed to capitalize on new opportunities associated with climate mediation.
 - » Investment into the circular economy: Technologies relating to the circular economy, such as treatment of waste organic solvents and reuse of waste/residual hydrogen from production activities, will be developed in the future.
- Execution strategies for changes in consumers' preferences:
 - » Establishment of marketing plans: Plans will be made to have business units engage existing as well as new customers on a regular basis to ensure that product features do satisfy customers' requirements and are adjusted at appropriate times. Attention will also be directed toward exploring new markets and customers, such as tier-A
 - » Consistent supply in response to the market's needs: Kaori will increase the number of stamped plate and stainless steel suppliers for capacity expansion. An ERP system will be used to monitor all stages of the production process for improved product quality and delivery timing.

Cost of Opportunity Response

✓ Increased operating costs

customers in Europe.

✓ Adjustment to capital expenditure and capital allocation

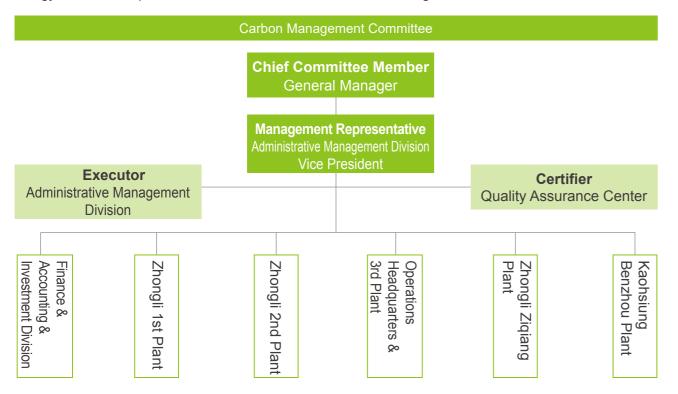
→ Goals and Indicators

Kaori conducted a greenhouse gas inventory covering all plant sites in Taiwan in 2022 according to the ISO 14064-1:2018 standard and was able to obtain third-party validation for the inventory outcome. The Company plans to conduct greenhouse gas inventories on a yearly basis going forward to keep track of emissions and trends. Details of the greenhouse gas emissions for 2021 and 2022 are disclosed in section 5.2 Environmental and Energy Management. Aside from exploring ways to reduce carbon emissions, Kaori also plans to include its subsidiary in Ningbo, China, into the inventory starting from 2023 for a more comprehensive understanding of greenhouse gas emissions, so that short-/medium-/long-term reduction goals can be set to guide reduction efforts.

Kaori expects to complete its first product carbon footprint (ISO 14067) survey in 2023, through which it intends to gather data that is useful for carbon footprint reduction plans. The Company also plans to survey carbon footprints for a wider range of products in the future. By learning the level of emissions at various stages of product life cycles, the Company will be able to better respond to carbon reduction trends and needs of the market and the rest of the world. Kaori will continue committing resources and manpower to the research of low-carbon products and new technologies, while taking the initiative to increase the percentage of low-carbon products offered for greater market exposure and improved competitiveness.

5.2 Environmental and Energy Management

Climate change has emerged to become one of the most critical issues in the 21st century. Extreme weather, floods, and droughts in recent years have prompted government agencies, businesses, and private organizations to undertake more active mitigations of the risks. Meanwhile, Kaori contributes its part to environmental protection and social values by enforcing energy management throughout its operations and by investing into the research and development of new materials and production procedures. A Carbon Management Committee has also been assembled to oversee GHG reduction, energy/resource conservation, water conservation, waste recycling, and mitigation of environmental impact. At the same time, Kaori continues to invest into environmental protection facilities and incorporate green management and energy conservation practices into business activities for sustainable growth.



Environmental Management System

Kaori (Kaohsiung Benzhou Plant) passed certification for ISO 14001 Environmental Management System in 2019. From greenhouse gases, air pollution, and effluent discharge to waste treatment, Kaori is fully committed to making improvements and minimizing environmental impact. As a result, no major violations of environmental regulations have occurred in the year of the report.

Through the introduction of ISO 14001 Environmental Management System, Kaori has been able to implement environmental management policies along with effective management processes at plant sites to enforce environmental compliance, order, safety, training, and so on to lessen the impact of organizational activities on the environment, while at the same time ensuring the safety of products and services offered as well as employees' health and safety at work.

In the early stages of ISO 14001 adoption, Kaori requested a series of reviews to ensure compliance with environmental protection laws (including air, water, waste, soil, and noise). After making improvements in accordance with the opinions of the Environmental Protection Bureau, Kaohsiung City Government, the Company was deemed to have fully complied with legal requirements.

Environmental Policy







Execution of Environmental Tests, Methods of Environmental Risk Assessment, and Outcomes

- 1. Drinking fountains in plant areas are tested for E. coli every 3 months
- 2. Kaori reports effluent volume to Benzhou Service Center every 6 months, and engages a certified environmental protection service provider to conduct tests
- 3. Effluent values and reporting
- 4. The effluents meter is calibrated (by certified service providers) on a regular basis each year Kaori passed all above tests in 2022 and continues to execute them.

Environmental Management Aspect

Energy Management

The Company introduces new energy conservation measures on a yearly basis, such as purchasing energy-efficient models, replacing outdated machinery, and optimizing production schedules. Kaori draws on the wisdom of many to achieve energy and carbon reduction goals. In the future, more attention will be directed toward improving production procedures and reducing energy consumption and promoting Kaori as a green, sustainable business. Electricity intensity was lowered by 16.9% in 2022 compared to 2021.

- Management goals and attainment:
 - » 1% energy conservation:

The Company's vacuum furnace capacity enhancement project aims to increase production capacity of each furnace by at least 50%, which has the potential to reduce excess vacuum furnace cycles and operating time by at least 50%, thereby lowering the cost of electricity and the volume of energy used in production.

- » Saving of energy in lighting: Stair areas and motorcycle parking areas are installed with sensor tube lights; plant workers turn off lights during lunch hours and break times.
- » 1% waste reduction: Kaori recycles and reuses 100% of its protective materials and containers.
- » The Kaohsiung Plant has set goals to reduce gasoline and diesel by 5% from the previous year.

Energy usage	Unit	2021	2022	YOY
Gasoline and diesel	Liter	16,585	14,357	-13%

Energy Usage

Kaori persistently monitors the energy consumption of its equipment and makes appropriate adjustments to increase energy efficiency, reduce waste, and lower energy consumption. The photovoltaic system at the Kaohsiung Plant commenced production in September 2022 and currently generates about 1.06% of the total energy used in the year. Kaori expects to retire diesel-based forklifts in 2023 and is currently evaluating the feasibility of using electric forklifts as a way to reduce carbon emissions and air pollution to implement sound energy management.

Unit: Gigajoules (GJ)

				0	5 5.gajaa.ss (55)		
	Year	2021		202	2022		
Equipment name	Energy source	Energy usage	Weight	Energy usage	Weight		
Plant power usage	Purchased electricity (excluding green power)	49,823.64	2.56%	52,916.17	95.28%		
Company vehicles	Gasoline	1,040.47	0.05%	1,056.51	1.90%		
Forklifts							
Emergency generators	Diesel	611.04	0.03%	437.88	0.79%		
Company vehicles							
Production processes	Natural gas (NG)	1,895,678.35	97.36%	1,129.68	2.03%		
Production processes	Acetylene	0.43	0.00%	0.00	0.00%		
	Total	1,947,153.93	100.00%	55,540.24	100.00%		

Note: Kaori ceased high carbon production services in the 4th quarter of 2022 by selling off two pieces of energy-intensive copper brazing equipment, which significantly reduced the volume of natural gas used.

Energy Efficiency and Electricity Intensity

Year	2020	2021	2022
Electricity intensity	6.50	6.62	5.50
Energy efficiency value	153.94	151.10	181.74

Calculation:

Electricity intensity (kWh/NT\$1,000) = power usage (kWh) / standalone revenue (NT\$1,000) Energy efficiency (NT\$/kWh) = standalone revenues (NT\$) / power usage (kWh)

Energy Conservation Targets

Short-term (within 1 to 3 years)

- Replace diesel forklifts with electric forklifts
- Replace mercury vapor lamps with LED lights at the Zhongli 1st Plant
- Replace conventional air compressors with variable-frequency air compressors at the Zhongli 1st Plant
- Replace air conditioners with variable-frequency models for heat pumps at the Zhongli 2nd Plant

Medium-term (3 to 5 years)

- Progressively replace 7.5-horse power reciprocating air compressors with energy-saving, variable-frequency air compressors at plant sites
- Replace air conditioners with variable-frequency models at plant sites
- Implementation of solar power system

Long-term (over 5 years)

Implementation of energy storage systems



Progress of Energy Conservation and Improvement Solutions in 2022

Kaori invests pro-actively into projects that aim to reduce electricity, energy consumption, and carbon footprints. Energy savings totaled 298,036 kWh in 2022, which produced energy conservation benefits amounting to NT\$934,609.

Item No.	Energy conservation measure	Execution outcome	Before improvement	After improvement	Energy conservation benefits (NT\$)
I	Energy-saving air compressors	Location: Zhongli 1st Plant - Replacement of air compressors near high-voltage substations Equipment: In-plant air compressors Practices: Replacement of conventional air compressors	• The plant currently has three air compressors installed (A, B, and C); A and B are the main units used, whereas unit C serves as a backup. All three units are conventional air compressors with 3-phase 220V, 30A, and 7.5 horse power (HP).	 Replaced with 15 HP/7.5kW air compressors Total power saved: 4,500 kWh 	NT\$ 54,000
II	Increased batch volumes of small, mass-produced products	Location: Zhongli 2nd Plant - Production area for vacuum furnaces Equipment: The project targets small plate products Practices: The number of small-size plate heat exchangers produced per furnace session was increased from 56 to 75	A total of 32,000 small- size products were produced in 2022 The old process produced 56 small plate heat exchangers per furnace, and it would take 32,000/56= 571 batches	The new process produces 75 small plate heat exchangers per furnace, and it takes 32,000/75= 426 batches Doing so can save 145 furnace sessions Total power saved: 128,325 kWh	NT\$384,975
III	The vacuum furnace has internal and external circulating pumps operating persistently during standby while running the external circulating pump without heat source, which increases production cost and energy consumption	Location: Kaohsiung Benzhou Plant - Front part of Area 1 in the 2nd Plant Equipment: VA-14 vacuum furnace Practices: By modifying the "equipment wire control", the Company is able to shut off the external circulating pump and cooling fans when the vacuum furnace has finished production activities (i.e., in "standby" mode), and thereby effectively reduce power usage	 External circulating pump operates 5,976 hours a year Cooling fan operates 5,976 hours a year Total power consumption = 78,883.2 kWh 	 External circulating pump operates 4,980 hours a year Cooling fan operates 4,980 hours a year Total power consumption = 65,736 kWh Total power saved: 13,147.2 kWh 	NT\$ 39,442
IV	Improvement of production processes for vacuum furnace VA-11	Location: Kaohsiung Benzhou Plant - Rear part of Area 1 in the 2nd Plant Equipment: VA11 vacuum furnace Practices: Shutdown of diffusion pumps	 The heating element of a diffusion pump has a power rating of 24 kW; using it 6,336 hours a year draws 152,064 kWh of power 	Total power saved after shutdown: 152,064 kWh	NT\$ 456,192

Power Conservation Rate by Plant

All plant sites comply with the laws of the Bureau of Energy, Ministry of Economic Affairs. As a major energy user that Taiwan Power Company has signed a contract with to supply at least 800 kW of power, the Company reports annual energy performance and improvement plans in accordance with Article 9 of the Energy Administration Act. The Company has set goals to achieve an "annual power conservation rate" or "average annual power conservation rate" of more than 1%. The Zhongli 2nd Plant and Kaohsiung Benzhou Plant have appointed dedicated energy management officers to enforce energy conservation plans and achieve an average annual power conservation rate of more than 1%.

Year Plant	Power conservation rate 2021 (%)	Power conservation rate 2022 (%)	Average power conservation rate 2015-2022 (%)
Zhongli 1st Plant	1.97	0.17	2.09
Zhongli 2nd Plant	1.75	3.03	1.39
Kaohsiung Benzhou Plant	1.19	3.05	3.05

GHG Management

Kaori passed ISO 14064-1:2018 Greenhouse Gas Inventory certification of SGS Taiwan Ltd. (SGS) on August 10, 2022, and obtained certificate for ISO 14064-1:2018 that indicated 100% attainment rate. Furthermore, the subsidiary in Ningbo, China, has made plans to initiate its own inventory in sync with the parent company starting from 2023.

Greenhouse Gas Inventory

Unit: tonnes CO₂e

The Company conducts greenhouse gas inventories covering all plant sites in Taiwan in a manner that conforms with the ISO 14064-1:2018 standards. By developing a comprehensive understanding of greenhouse gas emissions, the Company is able to set short-/medium-/long-term reduction goals to guide reduction efforts. Scope 1 and Scope 2 emissions aggregated to 7,762.9435 tonnes of CO_2e in 2022; the carbon intensity was 17% lower compared to 2021.

		0 1000 0020
Type of emissions	2021	2022
Scope 1 + Scope 2 (A)	7,358.1998	7,762.9435
Unit of measurement (B)	2,087	2,684
Greenhouse gas emissions Intensity ratio (A)/(B)	3.5	2.9

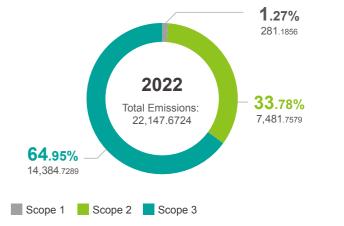
Note: Unit of measurement (B) is defined as standalone revenue (NT\$ million) in the current year

GHG Emissions

Unit: tonnes CO₂e

Scope	2021	2022
Scope 1	326.6783	281.1856
Scope 2	7,031.5215	7,481.7579
Scope 3	8,594.9524	14,384.7289
Total volume	15,953.1522	22,147.6724

Remarks: The 2022 inventory was carried out in accordance with ISO 14064-1:2018. Internal assurance was completed in May 2023, and third-party assurance is scheduled to proceed in September.





Carbon Management Plans for CBAM

The European Union expects to enact the "Carbon Border Adjustment Mechanism (CBAM)" in 2023 as a support for the world's first "carbon tax" scheme, whereas the US is also introducing its Clean Competition Act (CCA). Kaori plans to introduce product carbon footprint (ISO 14067) in the third quarter of 2022 and obtain certification by the end of 2023. Once reliable data has been established, the Company will be able to devise carbon footprint reduction plans based on the emissions of a product's entire life cycle to conform with CBAM requirements. Furthermore, the Company has been making use of the export carbon reduction counseling service offered by the Taiwan External Trade Development Council since November 2022 and completed analysis of the composition of key products and raw materials exported to Europe and the US in order to establish a preliminary understanding of the carbon reduction controls implemented in the two markets. According to the opinions of the consultancy team, stainless steel—a raw material used in brazed plate heat exchangers—is one of the controlled materials outlined in the EU's CBAM, whereas the equipment and raw materials used in the production of external casings for fuel cells are not regulated by the US CCA. Based on this knowledge, the Procurement Center is currently coordinating with raw material suppliers in the upstream to explore ways to reduce carbon.

Plans for Green and Renewable Energy Sources

The net zero movement has become the world's most important issue today, and all leading businesses with strong sustainability awareness are starting to adopt green energy as the first step. The 744.51 kW commercial rooftop photovoltaic system installed at Kaori's Kaohsiung Benzhou Plant began production in September 2022. It is expected to generate 18,448,369 kWh of green power over 20 years to reduce 9,390 tonnes of CO₂ emissions, which is 23 times the CO₂ absorption capacity of Da'an Park. The amount of power generated between September and December 2022 was approximately 1.06% of the total energy usage for the year. The Company continues to promote energy transformation as a way to reduce GHG emissions and contribute to Earth's environment.



Air Pollution Management

Kaori did not emit any nitrogen oxide (NOx), sulfur oxide (SOx), or other gases of significant impact.

5.3 Water Resource Management

Kaori has developed an environmental management system along with water resource management practices based on ISO 14001. Through data monitoring, the Company keeps track of water used as well as the water resource management practices adopted at various plant sites on a daily basis. Any abnormal change in water volume is met with appropriate inspection and response. Meanwhile, Kaori organizes campaigns from time to time to promote employees' awareness of the conservation and use of water.

All major operating sites draw water entirely from the municipal water supply system (i.e., tap water). Most of the water drawn is used for employees' living activities and kitchen equipment, and any effluents generated from living activities are either treated using appropriate treatment facilities or discharged into the municipal water treatment system, and therefore should have no significant impact on the local water body. Furthermore, Kaohsiung Benzhou Plant has installed its own water treatment facilities to treat wastewater in a legal manner. No incidents of illegal pollution occurred in 2022, and the Company's business activities had no significant impact on water sources.

Total Water Drawn

Unit: million liters

Environmental protection and inclusion

			2021	2022		
	Year	All locations	Locations prone to water stress	All locations	Locations prone to water stress	
	Surface water (total volume)	0	0	0	0	
	Fresh water (total dissolved solids ≤1,000 mg/L)	0	0	0	0	
	Other water sources (Total dissolved solids >1,000 mg/L)	0	0	0	0	
	Groundwater (total volume)	0	0	0	0	
Water	Fresh water (total dissolved solids ≤1,000 mg/L)	0	0	0	0	
withdra	Other water sources (Total dissolved solids >1,000 mg/L)	0	0	0	0	
Wal	Seawater (total volume)	0	0	0	0	
Water withdrawal by source	Fresh water (total dissolved solids ≤1,000 mg/L)	0	0	0	0	
rce	Other water sources (Total dissolved solids >1,000 mg/L)	0	0	0	0	
	Water from third parties (total volume)	21.31	0	26.97	0	
	Fresh water (total dissolved solids ≤1,000 mg/L)	21.31	0	26.97		
	Other water sources (Total dissolved solids >1,000 mg/L)	0	0	0	0	
Total water drawn	Surface water (total volume) + groundwater (total volume) + seawater (total volume) + water from third parties (total volume)	21.31	0	26.97	0	

Note: There were errors in the total volume of water drawn by Kaohsiung Plant in 2021, and the errors have since been corrected.

Water Discharge

Unit: million liters

			2021	2022	
	Year	All locations	Locations prone to water stress	All locations	Locations prone to water stress
	Surface water	15.46	0	20.88	0
	Groundwater	0	0	0	0
Water discharge by	Seawater	0	0	0	0
destination	Water from third parties (total volume)	0	0	0	0
	Water from third parties supplied to other organizations	0	0	0	0
Total water discharge	Surface water + groundwater + seawater + water from third parties (total volume)	15.46	0	20.88	0
Water discharge by	Fresh water (total dissolved solids ≤1,000 mg/L)	0	0	20.88	0
fresh water and others	Other water sources (Total dissolved solids >1,000 mg/L)	0	0	0	0
	Untreated	9.86	0	20.88	0
Water discharge by	Level 1 treatment	5.60	0	0	0
level of treatment	Level 2 treatment	0	0	0	0
	Level 3 treatment	0	0	0	0

Note: There were errors in the total volume of water drawn by Kaohsiung Plant in 2021, and the errors have since been corrected.

Water Consumption

Unit: million liters

Year 2021		2022		
Location	All locations	Locations prone to water stress	All locations	Locations prone to water stress
Total water consumption	5.85	N/A	6.095	N/A
Change in water storage	N/A	N/A	N/A	N/A

5.4 Waste Management

Kaori observes the ISO 14001 standard and has created a dedicated unit to track the sources and volumes of waste and adopted waste management practices that aim to maximize resource utilization and minimize waste generation. All departments are committed to minimizing waste volumes from production activities, increasing the life cycles of raw materials used, and promoting circulation and reuse of resources and waste for total waste reduction. Kaori engages qualified service providers to dispose of waste and uses appropriate forms to audit waste handlers, thereby ensuring the appropriateness of waste treatment and that the waste generated does not pose a significant impact on the nearby environment. There were no violations of environmental laws in 2022.

Waste Reduction Measures

Kaori reduces the volume of waste by recycling waste iron, carton boxes, and waste glass and reusing waste pallets. Waste pallets are handed over to qualified service providers for reuse, thereby minimizing environmental impact. Driven by the mission of a responsible producer, Kaori duly reports how waste generated from plant sites is handled and retains complete documents to ensure that waste is properly treated.

- Establishment of employee cafeterias and use of environment-friendly tableware
- Total recycling of paper containers
- Use of kitchen waste recycling bins



Total Waste

Unit: tonnes

		2021			2022	
Waste Composition	Waste generated	Waste diverted from disposal	Waste directed to disposal	Waste generated	Waste diverted from disposal	Waste directed to disposal
General Waste	66.44	0.00	66.44	85.15	0.00	85.15
Scrap - Waste stainless steel	0.49	0.49	0.00	0.00	0.00	0.00
Scrap - Waste black steel	0.83	0.83	0.00	0.00	0.00	0.00
Scrap - Waste INCO601	0.78	0.78	0.00	0.00	0.00	0.00
Scrap - waste INCO625	6.68	6.68	0.00	25.61	25.61	0.00
Scrap - Waste HS230	0.65	0.65	0.00	0.40	0.40	0.00
Scrap - Waste INCO800	9.75	9.75	0.00	23.74	23.74	0.00
Scrap - Waste mix	0.30	0.30	0.00	0.83	0.83	0.00
Scrap - Waste inco600	0.03	0.03	0.00	0.39	0.39	0.00
Scrap - Waste sus446	1.11	1.11	0.00	0.69	0.69	0.00
Scrap - Swarf from machining	0.00	0.00	0.00	0.94	0.94	0.00
Scrap - Waste 304 + copper	0.00	0.00	0.00	76.11	76.11	0.00
Scrap - Waste 316 + copper	0.00	0.00	0.00	241.92	241.92	0.00
Scrap - Waste aluminum	0.00	0.00	0.00	0.26	0.26	0.00
Scrap - Waste copper	0.00	0.00	0.00	4.57	4.57	0.00
Scrap - Pure 304	0.00	0.00	0.00	50.61	50.61	0.00
Scrap - Pure 316	0.00	0.00	0.00	66.50	66.50	0.00
Scrap - Waste 304 swarf	0.00	0.00	0.00	118.99	118.99	0.00
Scrap - Waste 316 swarf	0.00	0.00	0.00	30.31	30.31	0.00
Waste wooden materials (R-0701)	0.00	10.39	0.00	70.48	70.48	0.00
Waste oil mixture (D-1799)	0.00	0.00	2.21	7.50	7.50	0.00
Night soil (D-0104)	0.00	0.00	3.82	4.01	0.00	4.01
Waste plastic (R-0201)	0.00	0.00	0.00	18.64	18.64	0.00
Total waste	87.05	31.00	72.47	827.64	738.48	89.16

Note: There were errors in the total volume of waste generated by the Kaohsiung Plant in 2021. The errors have since been corrected.

Waste Diverted from Disposal

Unit: tonnes

Waste Composition		2021			2022		
		On-site	Off-site	Total volume	On-site	Off-site	Total volume
	Preparation for reuse	0.00	0.00	0.00	0.00	0.00	0.00
Hazardous waste	Recycling	0.00	0.00	0.00	0.00	0.00	0.00
	Other recovery	0.00	0.00	0.00	0.00	0.00	0.00
	Total volume	0.00	0.00	0.00	0.00	0.00	0.00
	Preparation for reuse	0.00	20.61	0.00	0.00	0.00	0.00
Non-hazardous	Recycling	0.00	10.39	0.00	0.00	719.84	719.84
waste	Other recovery	0.00	0.00	0.00	0.00	0.00	0.00
	Total volume	0.00	31.00	0.00	0.00	719.84	719.84

Waste Directed to Disposal

Unit: tonnes

Waste Composition –			2021			2022	
		On-site	Off-site	Total volume	On-site	Off-site	Total volume
Hazardous waste	Incineration (including recycling of energy sources)	0.00	0.00	0.00	0.00	0.00	0.00
	Incineration (excluding recycling of energy sources)	0.00	0.00	0.00	0.00	0.00	0.00
	Landfill	0.00	0.00	0.00	0.00	0.00	0.00
	Other methods of disposal	0.00	0.00	0.00	0.00	0.00	0.00
	Total volume	0.00	0.00	0.00	0.00	0.00	0.00
Non-hazardous waste	Incineration (including recycling of energy sources)	0.00	0.00	0.00	0.00	85.15	85.15
	Incineration (excluding recycling of energy sources)	0.00	84.84	84.84	0.00	0.00	0.00
	Landfill	0.00	0.00	0.00	0.00	0.00	0.00
	Other methods of disposal	0.00	6.03	6.03	0.00	0.00	0.00
	Total volume	0.00	90.87	90.87	0.00	85.15	85.15

Appendices

Appendix 1. GRI Comparison Chart

Item Number	Disclosure Item	Main Chapter	Sub-Chapter
GRI 2: Ge	neral Disclosures 2021		
2-1	Organizational details	Sustainability and Development - The Leader in Sustainable Practices	1.1 About Kaori Heat Treatment
2-2	Entities included in the organization's sustainability reporting	About the Report	Scope and Boundary
2-3	Reporting period, frequency and contact point	About the Report	Contact Information
2-4	Restatements of information	About the Report	Basis of the Report
2-5	External assurance	About the Report	Basis of the Report
2-6	Activities, value chain and other business relationships	Innovation and Quality - A Pioneer in Carbon/Energy Reduction	3.4 Sustainable Supply Chain Management
2-7	Employees	Diversity and Inclusion - Promoting People- Centered Values	4.1 Diverse and Inclusive Workplace
2-8	Workers who are not employees	Diversity and Inclusion - Promoting People- Centered Values	4.1 Diverse and Inclusive Workplace
2-9	Governance structure and composition	Honor and Integrity - A Devotee of Sustainable Values	2.1 Corporate Governance
2-10	Nomination and selection of the highest governance body	Honor and integrity - A Devotee of Sustainable Values	2.1 Corporate Governance
2-11	Chair of the highest governance body	Honor and integrity - A Devotee of Sustainable Values	2.1 Corporate Governance
2-12	Role of the highest governance body in overseeing the management of impacts	Honor and integrity - A Devotee of Sustainable Values	2.1 Corporate Governance
2-13	Delegation of responsibility for managing impacts	Honor and integrity - A Devotee of Sustainable Values	2.1 Corporate Governance
2-14	Role of the highest governance body in sustainability reporting	Honor and integrity - A Devotee of Sustainable Values	2.1 Corporate Governance
2-15	Conflicts of interest	Honor and integrity - A Devotee of Sustainable Values	2.1 Corporate Governance
2-16	Communication of critical concerns	Honor and integrity - A Devotee of Sustainable Values	2.1 Corporate Governance
2-17	Collective knowledge of highest governance body	Honor and integrity - A Devotee of Sustainable Values	2.1 Corporate Governance
2-18	Evaluation of the performance of the highest governance body	Honor and integrity -A Devotee of Sustainable Values	2.1 Corporate Governance
2-19	Compensation policy	Honor and integrity - A Devotee of Sustainable Values	2.1 Corporate Governance
2-20	Process to determine remuneration	Diversity and Inclusion - Promoting People- Centered Values	4.2 Talent Recruitment and Development
2-21	Annual total compensation ratio	Diversity and Inclusion - Promoting People- Centered Values	4.2 Talent Recruitment and Development
2-22	Statement on sustainable development strategy	Message from the Chairman	
2-23	Policy commitments	Honor and integrity - A Devotee of Sustainable Values Diversity and Inclusion - Promoting People- Centered Values	2.3 Business Integrity 4.4 Human Rights Protection and Employee Welfare
2-24	Embedding policy commitments	Honor and integrity - A Devotee of Sustainable Values	2.3 Business Integrity2.4 Risk Management
2-25	Processes to remediate negative impacts	Honor and integrity - A Devotee of Sustainable Values	2.3 Business Integrity 2.4 Risk Management
2-26	Mechanisms for seeking advice and raising concerns	Honor and integrity - A Devotee of Sustainable Values	2.3 Business Integrity
2-27	Compliance with laws and regulations	Honor and integrity - A Devotee of Sustainable Values	2.5 Compliance
2-28	Membership associations	Sustainability and development - The Leader in Sustainable Practices	1.1 About Kaori Heat Treatment
2-29	Approach to stakeholder engagement	Sustainability and development - The Leader in Sustainable Practices	1.2 Communication with Stakeholders
2-30	Collective bargaining agreements	Diversity and Inclusion - Promoting People- Centered Values	4.4 Human Rights Protection and Employee Welfare

Appendices

Item	Disclosure Item	Main Chapter	Sub-Chapter
Number GRI 3: Ma	terial Topics 2021		
3-1	Process to determine material topics	Sustainability and Development - The Leader in Sustainable Practices	1.3 Analysis and Management of Material Issues
3-2	List of material topics	Sustainability and Development - The Leader in Sustainable Practices	1.3 Analysis and Management of Material Issues
3-3	Management of material topics	Sustainability and Development - The Leader in Sustainable Practices	1.3 Analysis and Management of Material Issues
GRI 201: I	Economic Performance 2016		
201-1	Direct economic value generated and distributed	Honor and integrity - A Devotee of Sustainable Values	2.2 Operating Performance
201-2	Financial implications and other risks and opportunities due to climate change	Environmental Protection and Low Carbon - An Advocate of Environmental Friendliness	5.1 Management of Climate Change Risks and Opportunities
201-3	Defined benefit plan obligations and other retirement plans	Diversity and Inclusion - Promoting People- Centered Values	4.4 Human Rights Protection and Employee Welfare
GRI 202: I	Market Presence 2016		
202-2	Proportion of senior management hired from the local community	Diversity and Inclusion - Promoting People- Centered Values	4.1 Diverse and Inclusive Workplace
GRI 204: I	Procurement Practices 2016		
204-1	Proportion of spending on local suppliers	Innovation and quality - A Pioneer in Carbon/ Energy Reduction	3.4 Sustainable Supply Chain Management
GRI 205: A	Anti-corruption 2016	Hanna and Interests A Devet	
205-2	Communication and training about anti- corruption policies and procedures	Honor and Integrity - A Devotee of Sustainable Values	2.3 Business Integrity
205-3	Confirmed incidents of corruption and actions taken	Honor and Integrity - A Devotee of Sustainable Values	2.3 Business Integrity
GRI 206: A	Anti-competitive Behavior 2016		
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Honor and Integrity - A Devotee of Sustainable Values	2.3 Business Integrity
GRI 302: I	Energy 2016	For the constant Depth at the condition of the condition	5.0 Faring and and Faring
302-1	Energy consumption within the organization	Environmental Protection and Low Carbon - An Advocate of Environmental Friendliness	5.2 Environmental and Energy Management
302-3	Energy intensity	Environmental Protection and Low Carbon - An Advocate of Environmental Friendliness	5.2 Environmental and Energy Management
302-4	Reduction of energy consumption	Environmental Protection and Low Carbon - An Advocate of Environmental Friendliness	5.2 Environmental and Energy Management
GRI 303: \	Water and Effluents 2018		
303-3	Water withdrawal	Environmental Protection and Low Carbon - An Advocate of Environmental Friendliness	5.3 Water Resource Management
303-4	Water discharge	Environmental Protection and Low Carbon - An Advocate of Environmental Friendliness	5.3 Water Resource Management
303-5	Water consumption	Environmental Protection and Low Carbon - An Advocate of Environmental Friendliness	5.3 Water Resource Management
GRI 305: I	Emissions 2016		
305-1	Direct (Scope 1) GHG emissions	Environmental Protection and Low Carbon - An Advocate of Environmental Friendliness	5.2 Environmental and Energy Management
305-2	Energy indirect (Scope 2) GHG emissions	Environmental Protection and Low Carbon - An Advocate of Environmental Friendliness	5.2 Environmental and Energy Management
305-4	GHG emissions intensity	Environmental Protection and Low Carbon - An Advocate of Environmental Friendliness	5.2 Environmental and Energy Management
305-5	Reduction of GHG emissions	Environmental Protection and Low Carbon - An Advocate of Environmental Friendliness	5.2 Environmental and Energy Management
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	Environmental Protection and Low Carbon - An Advocate of Environmental Friendliness	5.2 Environmental and Energy Management
GRI 306: \	Waste 2020		
306-3	Waste generated	Environmental Protection and Low Carbon - An Advocate of Environmental Friendliness	5.5 Waste Management
306-4	Waste diverted from disposal	Environmental Protection and Low Carbon - An Advocate of Environmental Friendliness	5.5 Waste Management
306-5	Waste directed to disposal	Environmental Protection and Low Carbon -	5.5 Waste Management

Item Number	Disclosure Item	Main Chapter	Sub-Chapter
GRI 401: I	Employment 2016		
401-1	New employee hires and employee turnover	Diversity and Inclusion - Promoting People- Centered Values	4.1 Diverse and Inclusive Workplace
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Diversity and Inclusion - Promoting People- Centered Values	4.4 Human Rights Protection and Employee Welfare
401-3	Parental leave	Diversity and Inclusion - Promoting People- Centered Values	4.4 Human Rights Protection and Employee Welfare
GRI 402: I	Labor/Management Relations 2016		
402-1	Minimum notice periods regarding operational changes	Diversity and Inclusion - Promoting People- Centered Values	4.1 Diverse and Inclusive Workplace
GRI 403: (Occupational Health and Safety 2018		
403-1	Occupational health and safety management system	Diversity and Inclusion - Promoting People- Centered Values	4.3 Occupational Health and Safety
403-2	Hazard identification, risk assessment, and incident investigation	Diversity and Inclusion - Promoting People- Centered Values	4.3 Occupational Health and Safety
403-3	Occupational health services	Diversity and Inclusion - Promoting People- Centered Values	4.3 Occupational Health and Safety
403-4	Worker participation, consultation, and communication on occupational health and safety	Diversity and Inclusion - Promoting People- Centered Values	4.3 Occupational Health and Safety
403-5	Worker training on occupational health and safety	Diversity and Inclusion - Promoting People- Centered Values	4.3 Occupational Health and Safety
403-6	Promotion of worker health	Diversity and Inclusion - Promoting People- Centered Values	4.3 Occupational Health and Safety
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Diversity and Inclusion - Promoting People- Centered Values	4.3 Occupational Health and Safety
403-9	Work-related injuries	Diversity and Inclusion - Promoting People- Centered Values	4.3 Occupational Health and Safety
GRI 404: 7	Training and Education 2016		
404-1	Average hours of training per year per employee	Diversity and Inclusion - Promoting People- Centered Values	4.2 Talent Recruitment and Development
404-2	Programs for upgrading employee skills and transition assistance programs	Diversity and Inclusion - Promoting People- Centered Values	4.2 Talent Recruitment and Development
404-3	Percentage of employees receiving regular performance and career development reviews	Diversity and Inclusion - Promoting People- Centered Values	4.2 Talent Recruitment and Development
GRI 405: I	Diversity and Equal Opportunity 2016		
405-1	Diversity of governance bodies and employees	Honor and integrity - A Devotee of Sustainable Values Diversity and Inclusion - Promoting People- Centered Values	2.1 Corporate Governance 4.1 Diverse and Inclusive Workplace
405-2	Ratio of basic salary and remuneration of women to men	Diversity and Inclusion - Promoting People- Centered Values	4.2 Talent Recruitment and Development
GRI 406: 1	Non-discrimination 2016		
406-1	Incidents of discrimination and corrective actions taken	Diversity and Inclusion - Promoting People- Centered Values	4.4 Human Rights Protection and Employee Welfare
GRI 418: (Customer Privacy 2016		
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	Innovation and Quality - A Pioneer in Carbon/Energy Reduction	3.3 Customer Relations Managemen

Appendix 2. SASB Comparison Chart

Topics of Disclosure and Accounting Metrics

Торіс	Indicator Code	Accounting Metric	2022 Disclosure/Corresponding Chapter
	RT-EE-130a.1	(1) Total energy consumed	5.2 Environmental and Energy Management
Energy management		(2) Percentage grid electricity	5.2 Environmental and Energy Management
		(3) Percentage renewable	5.2 Environmental and Energy Management
	RT-EE-150a.1	Amount of hazardous waste generated	0 tonnes/5.4 Waste Management
		Percentage of hazardous waste recycled	0 tonnes/5.4 Waste Management
Hazardous waste management	RT-EE-150a.2	Number of reportable spills	N/A
		Aggregate quantity of reportable spills	N/A
		Quantity of reportable spills recovered	N/A
	RT-EE-250a.1	Number of recalls issued	0 recalls/3.2 Quality Management
D 1 10 f 1		Total units recalled	0 units/3.2 Quality Management
Product Safety	RT-EE-250a.2	Total amount of monetary losses as a result of legal proceedings associated with product safety	NT\$0/3.2 Quality Management
	RT-EE-410a.1	Percentage of products by revenue that contain IEC 62474 declarable substances	N/A
Product lifecycle management	RT-EE-410a.2	Percentage of eligible products, by revenue, meeting ENERGY STAR® criteria	N/A
	RT-EE-410a.3	Revenue from renewable energy-related and energy efficiency-related products	N/A
Materials sourcing	RT-EE-440a.1	Description of the management of risks associated with the use of critical materials	Signing of long-term procurement contracts with local suppliers for enhanced resilience/3.4 Sustainable Supply Chain Management
	RT-EE-510a.1	Description of policies and practices for prevention of corruption and bribery	2.3 Business Integrity
		Description of policies and practices for prevention of anti-competitive behavior	2.5 Compliance
Business ethics	RT-EE-510a.2	Total amount of monetary losses as a result of legal proceedings associated with bribery or corruption	NT\$0/2.3 Business Integrity
	RT-EE-510a.3	Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations	NT\$0/2.5 Compliance

