# ENVIRONMENTAL REPORT 2023



Scenery of Mt.Oyama from Isehara Plant

# ICHIKOH INDUSTRIES, LTD.



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Report Year FY2022 Scope Isehara plant, Fujioka plant, Mirror plant, Nagoya Technical Center, Atsugi plant

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# 1. Message from Chief Executive of Environmental Management

Nowadays, it is recognized that the action for environmental protection is the corporate responsibility for sustainable economic growth. Companies are required to achieve both economic growth and solution of the issues such as climate change, drain on resources and energy and biodiversity conservation.

We Ichikoh Industries is working on technological development such as reduction of the thickness and weight of products, development of resin materials that reduce the amount of raw materials used, development of products of LED light source that aim at the low price and at improvement of dismantability, and development of paints that aim at lower solvent and at reducing drying time of coating. Regarding facilities, we are promoting further energy saving and resource recycling by renewal of electric molding machines to more energy– efficient one, conversion from heavy oil boilers to heat pumps and expanding the recycling of resin waste.

All of our manufacturing sites in Japan acruired ISO50001 certification for energy management system in April 2022, and are promoting voluntary reductions in energy consumption and carbon dioxide emissions.

To realize a sustainable society, we will continue to develop technologies for a safe and environmentally friendly autonomous driving era that will come in the future , and strive for "Monozukuri that is people/environment-friendly and creates safety and comfort".

December 2023



Chief Executive of Environmental Management Managing Executive officer

Tetsuya Shida

# 2. Environmental Policy

As environmental policy of Ichikoh, the environmental philosophy is posted in the working place, and each employee is educated to declare their own "behavioral objective" based on the basic policy and to act consciously about the environment anytime in awareness training.

### **Environmental Philosophy**

For the customer satisfaction, Ichikoh group, based on the management policy 5 Axes(\*), considers the global environmental conservation as one of the most important issues and promotes *"Monozukuri* that is people/environment-friendly and creates safety and comfort" through the development, design and production of head lamps/mirrors for cars considering life cycle including the supply chain.

### Basic Policy

- 1. We will strive for carbon neutral through our business activities and products.
- 2. We will strive for efficient use and recycling of resources including water.
- 3. We will strive for management of chemical substances contained in products and packaging materials.

4. We will strive not only for prevention of environmental problems but for biodiversity preservation and creating society in harmony with nature

with nature.

5. We will strive to comply with environmental laws and other requirements we agree to.

6. We will strive for periodic review and continuous improvement of environmental activities.

\*5Axes are five basic philosophies for customer satisfaction

Total Quality
Constant Innovation
Supplier Integration
Production System
Involvement of Personnel

# 3. Environmental Action System

We supervise environmental activities of the all plants under the direction of the Chief Executive of Environmental Management who is also the head of environmental system of the whole company supporting the activities, with the assistance of Overall Environmental Manager.

The Site Environmental Management Committee is held once a month for activity reports and the direction of a lot of environmental protection activities inside the plant is discussed and defined in it. The special committee, substructure of the Site Environmental Management Committee, mainly patrols the work site and instructs from the professional point of view.



# 4. Production Process and Environmental Impacts

The production process of the main products of Ichikoh such as head lamp, rear combination lamp and mirror etc. starts from resin molding and is composed of painting, vapor deposition and assembly. In these processes, we are working on a lot of activities focusing on the management of energy, chemicals and waste called "3 management items for environmental protection", to minimize environmental impact by reducing the use of energy and raw materials, emission of carbon dioxide and waste.



# 5. Activities to Prevent Environmental Accidents

### (1) Drills for environmental accidents/emergency

We conduct drill assuming environmental accidents every year as activities for emergencies.

Also, assessment of the environmental impact from operation is conducted based on "Guideline for Environmental Impact Assessment", and in case such operation is above a certain level, it is specified as an operation that may cause emergency and periodic trainings is conducted based on the "Guideline for emergency correspondence".

In case an environmental accident occurs, it is immediately reported based on the communication route for industrial accidents and emergency, and emergency

### (2) Disaster prevention activities

To prepare for a large-scale earthquake and to confirm basic actions necessary on the occurrence of earthquake, we conduct evacuation drills in all plants every year.



### Drill in Mirror plant (October 2022)

Fire extinguisher training and water discharge exercise were conducted by the self-defense fire brigade assuming occurence of fire.





Drill in Fujioka plant (November 2022) After the evacuation was completed, usage of a fire extinguisher was explained and representatives practiced the training. Drill to confirm the status of building damage in the event of a disaster was also conducted.

### (3) Reduction of energy load

In order to reduce the energy load, calendar timer for material dryer was installed to Atsugi Plant in March 2022. This made it possible to stop using electricity on weekends when manufacturing is not performed and to reduce CO2 emissions by 238 tons in the year.

We also achieved steam valve opening/closing in conjunction with production facility shutdowns in order to reduce propane gas usage and reduced CO2 emissions by 119 tons in the year.

These activities are launched horizontally to each site by the company-wide sustainability committee as best practices, and are linked to activities for further reduction of energy consumption.

### (4) Legally qualified person

To properly promote operations regarding management of environment and energy, we control qualified persons based on "Guideline for Execution of Operation of Qualified Person in Charge".

The main qualifications and the number of qualified persons are as below. Environmental Manager(plant general manager) assigns the official qualified person from those who have the qualifications, and the person controls daily operations with responsibility and authority.

	Whole company	Isehara	Fujioka	Mirror	Atsugi
Name of Qualification	Total	Number (Number of notification)	Number (Number of notification)	Number (Number of notification)	Number (Number of notification)
Qualified energy manager	5(4)	1(1)	1(1)	1(1)	2(1)
Pollution control manager (water)	4(2)	2(1)		2(1)	
Pollution control manager (air)	3(2)		2(1)	1(1)	
Special industrial waste control manager	6(4)	1(1)	1(1)	2(1)	2(1)
Disaster protection manager	1(1)	1(1)			
Class-A fire prevention manager	5(4)	1(1)	1(1)	1(1)	2(1)
Licensed electrician	5(5)	2(2)	1(1)	1(1)	1(1)

# 6.Environmental Management Program

Ichikoh promotes environmental preservation activities based on following five initiatives;

1.Reduction of CO2 emission 2.Reduction of total emission aiming zero emission

3.Reduction of environmental impact in each production process

4.Compliance with law, regulation and standards 5. Communication with outside

### FY2022 Activity Result

No		Environmental Objective	FY2022 Target	FY2022 Result	Asse ssme nt	Methods/Measures		
		* Annual target is a coefficient of total manufacturing energy budget of each plant for FY2022 divided by total number of product(total emissions / total number of product)	Whole Compa ny	0.717	0.768	×	① Horizontal dissemination of good examples to each site ②Improvement of production yield in production line ③Energy saving by thoroughly management of	
1	Reductio n of $CO_2$		Isehara	0.951	1.089	×	temperature of air conditioners ④Energy saving by turning off unnecessary lighting ⑤Promotion to switchover from fluorescent lights to LED	
			Fujioka	1.029	1.108	×	Energy consumption increased due to the trial and relocation of facilities by	
				0.287	0.291	×	shifting the production from Isehara Plant to Atsugi Plant. Chronic defects and defects in new products also occurred.	
			Atsugi	0.564	0.618	×	The target was not achieved due to inefficient production at some plants due	
			Whole Compa ny	0.042	0.061	×	Management of defective product emissions by product design that leads to improvement of production yield, construction of production system, and improvement of production yield in	
2	Reductio n of total emission	Reduction of total emission Divide the accumulated emissions of the previous year by the total number of product (total emissions /total number of product) as a coefficient	Isehara	0.089	0.114	×	production line ②Promoting recycling by promoting garbage separation	
	aiming zero emission		Fujioka	0.020	0.052	×	The trial and relocation of facilities by shifting the production from Isehara	
			Mirror	0.025	0.039	×	Plant to Atsugi Plant, chronic defects, and defects in new products occurred. In addition, emission from molding machine	
				0.078	0.056	0	increased and the target was not	
		Development of environmentally friendly ma and processes	terials	100%	100%	0	Execute and deploy based on the annual plan	
		OProduct design which reduces environmental impact	al	100%	100%	0	each department	
	Reductio	3Reduction of usage of paint, sinner and IPA	0.035	0.034	0	①Development of production technologies not using paint ②Management of quantity of solvente used by		
	n of environm	* Annual target is a factor of FY2021usage budget for each plant divided by total number of product (usage / total number of product)	Isehara	0.026	0.023	0	improvement of production yield at production line(Paint / Washing thinner / Diluting thinner / IPA)	
3	impact in each		Fujioka	0.020	0.020	0	Inefficient production of small lots	
	producti on		Mirror	0.075	0.078	×	continued at Mirror Plant. Company-wide, we were able to reduce	
	process			0.043	0.039	0	the use of paint, cleaning thinner, diluting thinner, and IPA used by improvement of	
		④Activities for reducing environmental risk	100%	100%	0	Execute and deploy based on the annual plan of		
		⑤Countermeasures for environmentally hazar substances	100%	100%	0	each department		
4	Compliance with law, regulation and standards	No case surpassing restrictions/standards	100% compliance	100% compliance	0	Executed based on procedures and guidelines		
5	Communi cation with outside	Interaction with local community	Participation based on the plan	Participation based on the plan	0	Participated (Fujioka)		



### CO<sub>2</sub> Emission per million yen of sales



Waste Emission per Number of Production



Paint/Thinner Usage per Number of Production

# 7. Reduction of Waste

We are working on reducing waste as one objective of ISO 14001. We count the amount of defectives from production line and waste from all departments to manage the target of total waste, and promote recycle activities.

Resin is collected separately and is recycled internally or by professional companies in accordance with waste type. Although we did not meet the target for FY2021, we will continue our activities to further reduce waste.

### FY2022 Target and results

Total	Target	Coefficient		
Emission	Coefficient	result		
	0.042	0.061		

(Total emission[t]/Total number of production[thousand])

# 樹脂ダンゴ(混載)

### Defectives are separately collected using flexible container bags





### **Recycled by professional companies**

**Crushed and reused** for products



<Recycle program of resin and lens>

# 8. Communication

### (1)Environmental cleanup activities for local community

Ichikoh HQ and Isehara plant are located in the Isehara region which is rich in nature with a view of Tanzawa-Oyama Quasi-National Park. Ichikoh is a member of Isehara liason council for environment conservation.

In Fujioka, many activities aiming environmental preservation of the local area are carried out. Ichikoh would like to interact with local community by supporting the activities and actively participating in Fujioka Environmental Committee.

In the Fujioka Environmental Committee held on December 21, 2022, Ichikoh discussed a wide range of fields such as reduction of waste and carbon neutral.

### (2)Countermeasures against COVID-19

As a countermeasure against the COVID-19, we distributed non-woven masks to employees for free, installed partitions in the office, and installed alcohol for disinfection in order to prevent the occurrence of clusters in the company.

We established and implemented rules for thorough infection prevention measures, such as request for hand washing and social distancing, early detection of infected person by daily temperature control, working from home, encouraging web meetings and commuting by car.

# 9. Safety and Health Activities

### Company Philosophy

We consider safety and health as one of important issues of the management, and make effort for  $\langle Monozukuri \rangle$  which gives the highest priority to safety and health $\rangle$  through the development/design/production of lamps, mirrors and accessories for cars.



# 10. Environmental Data

Region	Substance	Emission	YoY	Recycle	YoY	Note
Isehara	Xylene	810	-74%	3,200	-6%	The amount of xylene and toluene used decreased because of the
	Toluene	4,900	-55%	19,000	-21%	integration of painting booths. Styrene usage decreased because of a
	Ethylbenzene	660	144%	2,600	117%	decrease in reflector production. On
	Styrene	960	-26%		/	ethylbenzene increased.
	Xylene	5,700	-5%	900	-10%	The amount of emissions
Fujioka	Toluene	24,000	-4%	4,900	-2%	and recycling almost the same and showed the same
	Ethylbenzene	5,200	4%	1,700	0%	trends as last year.
	Xylene	3,500	0%	2,500	0%	The amount of emissions
Mirror	Toluene	8,000	0%	6,000	0%	and recycling were the same as last year.
	Ethylbenzene	2,800	0%	200	0%	
	Xylene		/		/	Atsugi Plant started to
Atsugi	Toluene	1,200	/	6,400		independently calculate emission and transfer from
	Ethylbenzene					this fiscal year (2022 result).
	Styrene					

(1)Emission and transfer of class I designated chemical substances (kg/year)

\*Atsugi Plant was reported together with Isehara Plant until FY2022 (2021 results).

(2) Measurement result at the boundary based on offensive odor control law

	Odor index	Odor concentration
Region	(Target Value)	(Measurement value)
Isehara	15 or less	Less than 10
Fujioka	21 or less	Less than 10
Mirror	21 or less	Less than 10
Atsugi	15 or less	Less than 10

Odor index =  $10 \times Log(Odor concentration)$ 

Odor concentration is the multiple when diluted until it no longer smells

(3) Measurement result at exhaust duct based on Kanagawa prefecture ordinance

Magguram	Regulation standard	Iseh	nara	Ats		
ont itom		Measurem	ent result	Measurem	Unit	
entitem		Maximum	Average	Maximum	Average	
Toluene	100	22	3.3	5.7	2.6	vol ppm
Xylene	150	4.1	0.46	<0.5	<0.5	vol ppm

(4) Measurement result of gas exhaust of heavy oil boiler facility

Boilers in Isehara were completely changed to propane gas boiler in July 2012. Atsugi uses gas boiler.

	Measuremen	Fujioka				Measureme	Mirror		
	t item	Regulation standard	Measurement	Unit		nt item	Regulation standard	Measurement	Unit
	Dust	0.3	0.005	g/m <sup>3</sup> <sub>N</sub>		Dust	0.3	0.005	g/m <sup>3</sup> <sub>N</sub>
Machine 1	Sulfur oxides	1.1	0.097	m³ <sub>N</sub> ⁄h	Machine 1	Sulfur oxides	1.1	0.08	m³ <sub>N</sub> /h
	Nitrogen oxides	180	110	ppm		Nitrogen oxides	180	110	ppm
	Dust	0.3	0.005	g/m <sup>3</sup> <sub>N</sub>		Dust	0.3	0.005	g/m³ <sub>N</sub>
Machine 2	Sulfur oxides	1.1	0.095	m³ <sub>N</sub> ⁄h	Machine 2	Sulfur oxides	1.1	0.013	m³ <sub>N</sub> /h
	Nitrogen oxides	180	140	ppm		Nitrogen oxides	180	130	ppm
	Dust					Dust			
Machine 3	Sulfur oxides	Re	moved in 2	013	Machine 3	Sulfur oxides	Removed in 2		018
	Nitrogen oxides					Nitrogen oxides			
	Dust	_				Dust	_		
Machine 4	Sulfur oxides	Re	moved in 2	2020	Machine 4	Sulfur oxides	Rre	moved in 2	018
	Nitrogen oxides			. 2		Nitrogen oxides			
	Dust	0.3	0.005	g/m° <sub>N</sub>					
Machine 5	Sulfur oxides	0.7	0.047	m³ <sub>N</sub> ∕h					
	Nitrogen oxides	180	85	ppm					
	Dust	0.3	0.015	g/m <sup>3</sup> <sub>N</sub>					
Machine 6	Sulfur oxides	0.7	0.073	m³ <sub>N</sub> /h					
	Nitrogen oxides	180	92	ppm					
	Dust	0.3	0.007	g/m <sup>3</sup> <sub>N</sub>					
Machine 7	Sulfur oxides	0.7	0.072	m³ <sub>N</sub> ⁄h					
	Nitrogen oxides	180	92	ppm					
	Dust	0.3	0.005	g/m³ <sub>N</sub>					
Machine 8	Sulfur oxides	0.7	0.035	m³ <sub>N</sub> /h					
	Nitrogen oxides	180	78	ppm					
	Dust	0.3	0.005	g/m³ <sub>N</sub>					
Machine 9	Sulfur oxides	0.7	0.030	m³ <sub>N</sub> /h					
·	Nitrogen oxides	180	86	ppm					